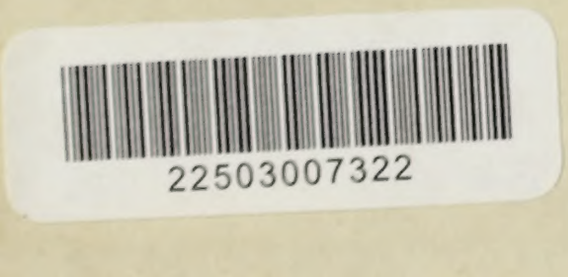
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Christmas, 1911

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JACK'S REFERENCE BOOK

FOR HOME AND OFFICE

AN ENCYCLOPÆDIA OF GENERAL INFORMATION

A MEDICAL, LEGAL, SOCIAL, EDUCATIONAL, AND COMMERCIAL GUIDE

AN ENGLISH DICTIONARY



LATE PANNELL'S REFERENCE BOOK

NEW AND ENLARGED EDITION

LONDON: T. C. & E. C. JACK
16 HENRIETTA STREET, W.C.
AND EDINBURGH
1911

FOR
DIRECTIONS FOR REFERRING
TO THIS WORK
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GENERAL PREFACE.

THIS Book of Reference is the result of an endeavour to provide in one volume of moderate dimensions such information as is likely to meet the ordinary demands of persons of all classes. It aims, in fact, at becoming *Everybody's Everyday Reference Book*. It does not pretend to satisfy the requirements of the student devoted to some particular branch of study, or of the man in search of some minute technical details connected with his own particular occupation, but it aims at supplying just that kind of information, and just that amount of it, which the ordinary man wants in order to clear up any question that may arise in the course of his reading or conversation, or to settle any point of dispute that may occur in the course of friendly discussion. It is intended for the general reader who wishes to be posted up in facts of every-day life, to ascertain the meaning of scientific and technical terms in common use, to learn something about the names and topics that often occur in current literature, and to get some useful hints of a practical kind on matters of general interest.

Accordingly, no attempt has been made to treat any subject minutely, but rather to give the broad features in clear and concise terms, avoiding everything of an abstruse or highly technical character, and excluding all facts and details that to the great majority of persons are void of interest. In this way it has been possible, *within the limits of a single volume*, to present the general reader with a store of knowledge adequate to all his ordinary requirements. And being in one compact volume, which may be always kept within easy reach, when one is reading or writing, this work may justly be regarded as a *handy* book of reference, ready at any moment to be consulted at a small expenditure of time and trouble.

We do not, of course, pretend that as a book of reference it altogether supersedes the use of larger works consisting, it may be, of many volumes. But we *do* think that a comprehensive book, in small compass, like the one before us, does away in most cases with the necessity of wading through a bewildering mass of information in search of a single fact or simple explanation. We therefore venture to hope that those who have access to large books of reference will find this smaller work a great saving of time and trouble, and that to those who have no such access it will prove invaluable and come to be regarded as indispensable.

Further, this work is much more than a handy book of reference. Unlike an ordinary Encyclopædia, in which the subjects are arranged without any link of connection

other than that which the alphabet affords, it claims to serve a double purpose, both as a book of reference to supply this or that particular at short notice, and also as a book which is largely suited for continuous reading and study.

Moreover, it claims to be a book equally suited for the Home and the Office. In it, for instance, the man of business will find, in the Legal and Commercial sections, much that will be of service to him, from time to time, in the course of his business; whilst the same man in his home will find in the Social Guide much that will aid him in the discharge of his social duties, and in the chapters on Local Government much that will help him in the performance of his duties as a citizen. It aims, in fact, at being in many important matters a good *practical* Guide. For example, in the "Medical Guide" the parent is directed how to act in cases of illness, accidents, and other emergencies; while in the section on Education and the Professions he may learn how, with the least expense, to secure a good education for his children, and what steps he should take to enter them on a career best suited to their talents and circumstances.

Nor have the special needs and interests of women been forgotten. They will find here information helpful in nursing the sick, many particulars respecting women's education and openings for employment, much interesting matter on the correct mode of speaking and writing, and suggestive hints that will aid them in playing their part becomingly in society.

PREFACE TO NEW AND ENLARGED EDITION.

The extraordinary favour with which this Book of Reference has been received has induced the Publishers to make the work still more valuable by enlarging and revising its contents. By the addition of about a hundred pages, it has been possible to include a considerable number of new topics, care being taken to select such as are of general interest from their bearing on modern life and thought. These additional topics are distributed over the whole book, but the greater number find a place in the Dictionary of General Information, the Medical Dictionary, and the Legal Guide. In these Dictionaries are many new articles on men and matters much talked about in recent times; whilst of the four parts of the Legal Guide, the one that treats of "Parliament and Administrative Government" forms a new feature of special interest. The section entitled *Miscellaneous Facts and Figures* has also been greatly extended, admitting, in particular, of a prominent place being given to the record of "Sports and Pastimes."

Advantage has been taken of the issue of a new edition to improve the arrangement of the several sections of the work, to bring all details up to date, and to correct certain inaccuracies. We hope, as the result of the steps taken to enhance the value of the work, that we may confidently look forward to a success even greater than that already achieved.

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A DICTIONARY OF GENERAL INFORMATION.

PREFACE.

THIS Dictionary comprises a series of Short Articles on well-known names in History, Biography, Geography and Mythology. It also treats of topics of general interest, especially the wonderful inventions and discoveries of recent times. It is in fact a kind of condensed Encyclopædia, only it should be remembered that many topics find no place in it, because adequately dealt with elsewhere in the book, namely, Medical matters in the Medical Dictionary, questions relating to Law in the Legal Guide, and those bearing on Commerce in the Commercial Guide.

This Dictionary offers to the ordinary reader two advantages which a large Encyclopædia does not possess: it is easy for a person to find a particular name or topic, and when found to get at the salient facts without wading through a mass of minute details. In glancing through an ordinary Encyclopædia, one is struck by the great number of subjects it contains to which reference is seldom or never likely to be made; on the one hand, subjects which rarely occur in conversation or literature, and on the other hand, subjects so familiar as practically to place them beyond the need of reference. By omitting the subjects which for these reasons are not likely to be missed, it has been found practicable to treat the more likely subjects of reference in a comparatively few pages. Further, in order to make the most of the space at our disposal we omit altogether such subjects as require exhaustive treatment to be of any service to the reader, whilst admitting topics of less importance but of more curious interest; for example, the "Horse" is excluded, whilst *Bucephalus*, the Arabian *Darley*, and *Eclipse* find a place. So with respect to Geographical names; small places find an entry, if noted for their cathedrals, old abbeys, ruined castles, or historical associations, whilst many simply populous places are unmentioned.

N.B.—When a person fails to find what he wants in this Dictionary, he should at once turn if he seeks for information on Medical matters to the Medical Dictionary, for the explanation of Commercial terms and transactions to the Commercial Dictionary, and in every other case to the INDEX.

A DICTIONARY

OF

GENERAL INFORMATION.

AACHEN, the German name of Aix-la-Chapelle (which see).

AAR, a Swiss river which rises in the Bernese Oberland, flows through lakes Brienz and Thun, and joins the Rhine.

AARON, the first high priest of the Jews, the brother of Moses, and his spokesman before Pharaoh. He died on Mount Hor, on the borders of Edom.

ABACUS. (1) The upper part of the capital of a column. (2) An instrument for aiding in arithmetical calculations.

ABADDON = Apollyon (Rev. ix. 11.), the angel of the bottomless pit. Also used to designate the lowest depth of Hell.

AB'ATTIS, a simple kind of entrenchment formed of trees cut down and arranged side by side, with the branches interlaced outwards and the stems inwards.

ABBAS, uncle of Mohammed, founder of the family of the Abbassides, who ruled as caliphs at Bagdad (750-1258).

ABBAS THE GREAT, a famous Shah of Persia, who reigned 1586-1628 and greatly extended that kingdom. When he died his dominions stretched from the Tigris to the Indus.

ABBEVILLE, TREATY OF, A treaty concluded by Henry III. in 1259, by which he surrendered his claims to Anjou, Normandy, and other provinces, to Louis IX. of France.

ABBEY, a monastery of the highest rank ruled by an abbot or abbess. A church always formed the nucleus of the abbey, and close to it a group of buildings, with cloisters, containing a *refectory* or dining hall and dormitories or sleeping places. There were also *guest-rooms* for the reception of travellers and pilgrims, and an *almonry* where the poor were relieved. At the back were a granary, a laundry, a bakehouse, a brew-house, an infirmary, and sometimes a mill, with workshops for smiths, wrights, shoemakers, weavers, etc. The most famous abbeys in England were Westminster, St. Mary's of York, Fountains, Kirkstall, Tintern, Clairvaux, Netley, and St. Albans.

ABBOT, GEORGE, a native of Guildford, Surrey, appointed Archbishop of Canterbury in 1611. He was one of the translators of the authorised version of the Bible.

ABBOT OF UNREASON. See *Unreason, Abbot of.*

ABBOT, THE, a novel by Sir Walter Scott, founded upon incidents in the life of Queen Mary of Scotland.

ABBOTSFORD, residence of Sir Walter Scott, near Melrose.

ABDALLAH, father of Mohammed.

ABD-EL-KADER was the heroic leader of the Arabs in their wars with the French in Algiers. At length he was compelled to surrender (1847), and, having spent five years in honourable captivity in France, was released by Louis Napoleon (1852). He spent the rest of his life as a pensioner of the French Government; *d.* 1883.

ABDUL-AZIZ, Sultan of Turkey (1861-76). Endeavouring to introduce reforms, in consequence of what he had seen in France and England, he was deposed and probably assassinated.

ABDUL HAMID II., Sultan of Turkey, began his reign in 1876. In consequence of the "Bulgarian Atrocities," Russia went to war with Turkey in 1877, and by the treaty of Berlin, in 1878, Turkey lost Bulgaria and other provinces. After reigning as a despot for thirty-two years, he conceded with apparent willingness, in 1908, a Constitution to his people, but secretly planning for its withdrawal, was deposed, 1909.

ABDUL-MEDJID, *b.* 1823, *d.* 1861; was Sultan of Turkey from 1839 to his death. He just managed, with the aid of the Christian powers, to avert the ruin that had threatened his father at the hands of Mehemet Ali and the Egyptians. His promised reforms gained him the support of France and England in the Crimean War, but that over, he did little to show his gratitude.

ABDUR RAHMAN, made Ameer of Afghanistan in 1880, as a friend and ally of the British, after General Roberts had, by his victory at Kandahar, crushed all who were hostile.

ABECEDARIANS, a sect of German Anabaptists of the 16th century, who despised all learning as a hindrance to religion, and regarded even the "A, B, C." with contempt. They hoped to bring in the rule of righteousness by destroying all existing governments.

À BECKET, THOMAS, a celebrated Archbishop of Canterbury, who tried to make the clergy independent of the civil powers. Refusing his consent to the constitutions of the Council of Clarendon, he was driven by Henry II. into exile. On reconcillation with the king he returned to England and was soon afterwards assassinated by four knights in Canterbury Cathedral (1170). He was canonised by the Pope, and regarded by the people in general as a martyred saint. Down to the reformation many thousands annually made pilgrimages to his shrine, and many miracles were supposed to be wrought there.

ABELARD, PETER, a famous French scholar and theologian. The story of his relations with Héloïse, a French Abbess, whom he secretly married, is well known; *d.* 1142. [See *Héloïse*].

ABEL, SIR FREDERICK AUGUSTUS, *b.* in London, 1827, *d.* 1902; a great chemist, more especially in that branch which relates to explosives. He was chemist to the War Department from 1854 to 1888, did much towards perfecting the manufacture of gun-cotton, and shares with Professor Dewar the honour of inventing cordite. He also invented the present system of testing the flash-point of petroleum, and wrote many books dealing with his special subjects. His services gained him a baronetcy in 1893.

ABERBROTHOCK, same as Arbroath, a seaport in Forfarshire Scotland.

ABERCROMBIE, JAMES, a British general who commanded an expedition against Canada when held by the French. He was defeated by Montcalm at Ticonderoga, 1758.

ABERCROMBY, SIR RALPH, a famous British General, who was mortally wounded in the hour of victory when fighting with the French, near Alexandria, 1801. A few months later the French evacuated Egypt.

ABERDEEN, capital of Aberdeenshire, and principal town in the north of Scotland. It is the seat of a flourishing university. Being built mostly of granite, it is often called "The Granite City." It includes Old and New Aberdeen, the former on the Don, the latter on the Dee.

ABERDEEN, EARL OF, *b.* 1784, *d.* 1860, a British statesman. He was Foreign Secretary (1) under Wellington, 1828–30, and (2) under Peel, 1841–46. He was Premier, 1852–55, and was, therefore, responsible for *drifting* into war with Russia, 1854, and for the mismanagement that caused our troops in the Crimea so much needless suffering.

ABERNETHY, JOHN, *b.* in London, 1764, *d.* 1831; a clever English surgeon; did great service to medical science by insisting on the connection between local diseases and the general health, especially with regard to the alimentary system. First as assistant, and afterwards as principal surgeon to St. Bartholomew's, he attracted crowds of students to his lectures. He had also a large private practice, and was noted for the unceremonious treatment he accorded his patients.

ABERRATION OF LIGHT, a remarkable phenomenon by which stars appear to deviate a little in the course of a year from their actual places in the heavens. This is owing to the fact that the observer is being carried onwards, by the motion of the earth in its orbit, whilst the light is travelling from the stars to the earth. The discovery of the aberration of light was made by Dr. Bradley, 1727.

ABERYSTWITH, a small town on the coast of Cardiganshire, Wales, with a University College rising into importance.

ABHORRERS. In 1679, while the agitation in favour of the Exclusion Bill was at its height, many petitions were presented to Charles begging him to summon Parliament to meet in January, 1680. In reply, many addresses were presented by the Court party expressing "abhorrence" of such interference with the royal prerogative. Hence the Court party were called "abhorrers."

ABIGAIL. (1) After the death of her husband, Nabal, she became the wife of David, while wandering as an outlaw in the reign of King Saul. (2) A common name for a lady's maid, originating in the name given by Beaumont and Fletcher to a waiting woman in their play of "The Scornful Lady."

ABIOGENESIS is the origin of a living creature from non-living matter. In the present state of science we have no reason to think that this phenomenon has ever occurred in our own planet through the operation of natural law.

ABNEY, SIR WILLIAM de WIVLESLIE, *b.* at Derby, 1844, was educated for the army, and went through the R.M.A., Woolwich. He devoted himself to chemistry and astronomy, and was for some years Chemistry Instructor to the Royal Engineers. He is an authority on chemistry as applied to photography and astronomy, and has had a great hand in directing the scientific education of the country for some years.

ABO, the former capital of Finland. Here was signed a treaty between Sweden and Russia (1743), by which the latter acquired the southern part of Finland.

ABOLITION OF SLAVERY. The shameful trade in negro slaves began in the reign of Elizabeth. John Hawkins was the first Englishman to buy slaves in Africa, and to take them across the seas to the West Indies. So great did the trade become, that between 1750 and 1760 no less than 70,000 negro slaves were imported in Jamaica alone. The Quakers were the first to take active measures against slavery. The following persons took a prominent part in the movement: *Thomas Clarkson*, who wrote a "Prize Essay" on slavery; *Granville Sharp*, who presided over an Anti-Slavery Committee; *William Wilberforce*, who devoted himself in Parliament to the suppression of the slave trade; and *Zachary Macaulay*, father of Lord Macaulay. An act for the *Abolition of the Slave Trade*, passed in 1807, and an act for the *Emancipation of Slaves* in British colonies took effect on 1st August, 1838. On that day 800,000 negroes were set at liberty. Twenty millions of money were voted by Parliament as compensation to the masters for the loss of their slaves. [See *American Civil War*].

ABOUKIR BAY, scene of the battle of the Nile, in which Nelson defeated the French, 1798.

ABRACADABRA, an eastern word formerly in high repute as a charm in the case of agues and fevers. The word was written in triangular form, and the paper or parchment on which it was written was folded in the form of a cross, suspended from the neck by a strip of linen, worn for nine days, and then cast into a stream. It is now used as a term of contempt to designate a useless formula.

ABRACADABRA
BRACADABR
RACADAB
ACADA
CAD
A

ABRAHAM, the father of the Jews, whose faith in God's promises that his seed should become a great nation, and inherit the land of Canaan, caused him to leave Ur of the Chaldees, and lead a nomadic life in Palestine and the neighbouring countries. (Gen. xi.-xxv.).

ABRAHAM'S BOSOM, a Jewish expression for a place of perfect happiness; the same as Paradise.

ABRAHAM, HEIGHTS OF, a plateau near Quebec, Canada, on which the British, commanded by Wolfe, defeated the French under Montcalm, 1759.

ABRASION BY RIVERS, the wasting and wearing away of the land by the mechanical action of river currents. The amount of this depends on the rapidity of the stream, the volume of water, and the quantity of rock-débris carried along. The water-worn material is transported by the river and deposited in valleys, in lakes, or in the ocean, as layers of mud, sand, and gravel. [See *Alluvium.*]

ABRUZZI, DUKE OF THE, *b.* 1872, Italian prince, scientist and explorer. He ascended Mount St. Elias, Alaska, 1896; in 1900 got 20 miles nearer to the North Pole than Nansen; in 1905 ascended the highest peak (16,815 ft.) in the Ruwenzori range.

ABSALOM AND ACHITOPHEL (ch=k), a poem by John Dryden, published 1681. It is a political satire. Absalom represented the Duke of Monmouth, and Achitophel the Earl of Shaftesbury of the time.

ABSINTHE, a powerful liqueur distilled in the Swiss Canton of Neufchâtel and in France, from an infusion of wormwood and other herbs in alcohol, and largely consumed in the latter country. Its habitual use, even in small quantities, is injurious to health.

ABU-KLEA, in the Soudan, the scene of Sir H. Stewart's victory over the Mahdi's forces, 1885.

ABY'DOS. (1) An ancient Greek town on the Asiatic side of the Hellespont (Dardanelles), famous as the home of Leander, and also as the place whence Xerxes crossed into Europe by means of a bridge of boats, 480 B.C. (2) An ancient city of Upper Egypt, near the west bank of the Nile.

ABY'DOS, BRIDE OF, a poem by Lord Byron, which refers to the story of Leander swimming across the Hellespont to visit his lover Hero.

ABYSSAL ANIMALS are those restricted to the ocean depths. These animals are distantly related to those at the surface, but in no case are they of the same species. This fact is due to the totally different conditions under which the animals of the deep sea live. Below 200 fathoms all is inky darkness, and plant life, therefore, absent. The animals below this depth are thus restricted to a carnivorous diet. At 2000 fathoms the pressure of water is two tons to the square inch, the temperature is only just above freezing point, whilst life is further handicapped by the small quantity of air which water at these depths holds in solution. These difficulties are overcome through many strange modifications of structure and habit. The scarcity of food is compensated for by a throat and stomach so distensible that one fish can swallow another larger than itself, and thus can feed on almost anything that comes in its way; the deficiency of air is met by unusually large gills; the darkness is dealt with, in most cases, in one of two ways: either by long feelers and a keen sense of smell, which render the animal independent of sight, or by huge eyes and phosphorescent organs in the skin which emit a faint light that enables the animal to find its prey. In certain fish this light can be turned on or off at will; the fish can thus hunt for food by the aid of its own search lights, but if itself attacked, it can put out the light and vanish into darkness.

ABYSSINIA, often called the "African Switzerland," a country nearly as large as France, in the north-east of Africa. It consists of an elevated plain crossed by ranges of lofty mountain chains, and possesses three distinct climatic zones. (1) the "Hot Lands," (2) a region, from 5,000 to 9,000 ft. above sea-level, with a climate resembling that of Italy, and (3) the highest belt up to 12,000 ft., capable of producing oats and barley, and pasturing large herds of cattle and sheep. The chief rivers are the Blue Nile and the Atbara. The Abyssinians are of South Arabian origin, profess a form of Coptic Christianity, and are governed by an emperor known as the Negus, or "king of kings." Lord Napier of Magdala led a successful expedition against a former ruler, King Theodore, 1868.

ACADEMY, a public garden adorned with statues, fountains, and groves, near Athens, in which Plato and other Greek philosophers taught. In modern times the name has been applied to societies formed for the study of literature, art, or science. The French Academy of forty members, founded by Richelieu in 1635, for the study and improvement of the French language, has included in its ranks most of the leading authors of France. In England, the Royal Academy for the encouragement of painting, designing, and sculpture was founded in 1768, and the Royal Academy of Music in 1822.

ACADEMY (THE ROYAL) OF ARTS. See *Royal Academy, The.*

ACADIA, a name of Indian origin, applied by the French to the district which now comprises Nova Scotia and New Brunswick.

ACCOLADE, a slight blow of a sword on the cheek or shoulder, given by the sovereign when conferring the honour of knighthood.

ACCUMULATORS. See *Electric Motor Cars.*

ACETIC ACID is obtained in an impure state in preparing vinegar from alcohol by the action of a special microbe, the *mycoderma aceti*. Acetic acid is also obtained by the destructive distillation of wood. When pure, it is a colourless crystalline solid, readily absorbing moisture, and then giving a colourless liquid. It is used as vinegar, and also in medicine and in many manufacturing processes.

ACETYLENE, a gaseous compound of carbon and hydrogen, which has a most offensive smell, but burns with a brilliant flame.

ACHAIA, at first a long narrow strip of territory extending along the south of the Gulf of Corinth, but later the whole of the Peloponnesus.

ACHA'TES, (a-tes), the attendant of Æneas during his wanderings after the fall of Troy. His fidelity was so great that "Fidus Achates" has become a proverb.

ACH'ERON. (1) A river of the lower world, and sometimes used to signify hell itself. (2) The name of two small rivers in Greece, and of one in Southern Italy, all of which, at one time or another, were thought to communicate with Hades.

ACHIEVEMENT. See *Hatchment.*

ACHIL'LES, the hero of the Iliad and the bravest of the Greeks in the Trojan War. In infancy he was dipped by his mother Thetis in the river Styx, and thus rendered invulnerable, except at the heel by which he was held. A wound in this vulnerable spot by an arrow shot by Paris is said to have caused his death.

ACHROMATIC GLASSES, lenses which produce a definite image of an object, and one that is free from a coloured border. This is attained by the combination of a double convex lens of crown glass with a concave-convex of flint glass, cemented together by Canada balsam.

ACIDS, chemical compounds of hydrogen with an element or group of elements,

which usually possess a sour taste, and have the property of turning blue colours of vegetables to red.

ACIS AND GALATE'A, an operatic work by Handel, founded on the story of Acis, a Sicilian shepherd who was passionately loved by Galatea, and was crushed to death under a mass of rock by his rival Polyphemus. At the prayer of Galatea, his blood was changed by the gods into a limpid stream.

ACOLYTE, an attendant or servant: the name given in the Roman Catholic Church to those assistants who light the candles, carry tapers, and assist the priest generally in the performance of the ceremonies.

ACONCAGUA. (1) A volcanic peak in the Southern Andes, and the highest mountain in South America. (2) A province of Chile. (3) The largest river of the province.

ACONITE, wolf's bane, or monk's hood, a poisonous plant of the Ranunculus order. See "Poisonous Plants" in *Med. Dict.*

ACOUSTICS, the science of sound. It deals with the production, nature, and transmission of sound-waves, and their translation by means of the mechanism of the ear into the sensation of sound.

ACRE, (1) A standard British measure of land, consisting of ten square chains or 4,840 square yards. (2) A seaport in Palestine on the Bay of Acre. It was captured by the Crusaders in 1104, and was the last stronghold in Palestine held by them. It was successfully defended by Sir Sidney Smith, in 1799, against Napoleon.

ACROLITHS, ancient Greek statues of wood, with the head, arms, and feet of marble, and often decorated with gold.

ACROPOLIS, the lofty citadel which formed the nucleus of, and defended ancient Greek cities; now specially applied to the rocky eminence at Athens upon which the remains of the Parthenon stand.

ACROSTIC, a poem of which the first or last letters of each line, read in order, form a name, motto, or sentence. If the arrangement extends to both the first and last letters, it is called a double acrostic.

ACTÆON, a famous hunter who watched Diana and her attendants bathing. As a punishment, he was changed into a stag, and devoured by his own dogs.

ACTINOZOA is the name of a group of animals of the Sea-anemone class.

ACTIUM, a town and promontory on the western coast of Greece, the scene of the naval victory gained by Augustus over Antony and Cleopatra, B.C. 31.

ACTON (John Emerich) **LORD,** *b.* at Naples, 1834, *d.* 1902; a distinguished historian and literary man, one of the most gifted and scholarly men of his time. Though a zealous Roman Catholic, he was opposed to the doctrine of Papal Infallibility and other extreme views. He was raised to the peerage in 1869, and became professor of modern history at Cambridge in 1895. His writings are not numerous, but display great thought and erudition. He left his valuable library to Mr. John Morley, who presented it to Cambridge University.

ACT OF SETTLEMENT, 1701, provided that, if William III. died childless, his successor should be Anne, second daughter of James II., and after her the next heir that was a Protestant. This was Sophia, wife of the Elector of Hanover, a grand-daughter of James I., and the mother of George I.

ACT OF UNIFORMITY, an act passed in 1662, which required all holders of benefices to be ordained by a bishop, to use only the Book of Common Prayer in public worship, and to declare that it was unlawful to take up arms against the king under any pretext.

ADAM'S APPLE is the projection in the front of the neck visible in men, due to the thyroid cartilage, which develops rapidly when the voice breaks. In women and children it is small. Tradition has it that when Adam attempted to swallow the apple, it stuck in his throat, and gave rise to this swelling, which all adult men have since retained.

ADAMS, JOHN, the first ambassador of the United States to the English Court, and the second president of the republic. Previously he had strongly opposed the claims of the English Parliament to impose taxes on her colonists. He seconded the motion for the declaration of independence, and was a member of the committee which drew it up. He died July 4th, 1826, the fiftieth anniversary of the Declaration of Independence. His writings contain valuable memorials of the revolution.

ADAMS, JOHN COUCH, 1819-92, a famous English mathematician and astronomer, who shares with Leverrier the honour of the discovery of the planet Neptune.

ADAM'S BRIDGE, a chain of coral reefs and sand banks which almost connects Ceylon to India.

ADAM'S PEAK, a high conical peak in the interior of Ceylon, having on its summit a natural depression roughly resembling a foot-print, which is ascribed by Brahmans to Siva, by Buddhists to Buddha, and by Mohammedans to Adam.

ADDER or **VIPER,** the only British poisonous snake. It frequents open copses, dry heaths, and sandy spots, both in England and Scotland, but is not found in Ireland.

ADDISON JOSEPH, *b.* 1672, *d.* 1719; a famous English Essayist, whose style was described by Lord Lytton as "the most perfect form of English." He contributed regularly to the *Tatler*, *Spectator*, and *Guardian*. Though it is his prose writings that are now most admired, among his contemporaries he held high rank as a poet and dramatist. His tragedy "Cato" was a successful production, and his poem, "The Campaign," on the victory of Blenheim, was rewarded by an office in the government, and he finally became one of the principal secretaries of state, retiring on a large pension. He died at Holland House, Kensington.

ADDLED PARLIAMENT, the second parliament of James I., which met 1614, and was dissolved without passing a single bill.

AD'ELA, the fourth daughter of William the Conqueror, wife of Stephen, Earl of Blois, and mother of Stephen, King of England; *d.* 1137.

ADELAIDE, QUEEN, *b.* 1792, *d.* 1849, the consort of William IV., distinguished for her virtues and acts of beneficence. Her Court was a model of purity.

ADELAIDE, the capital of South Australia, named after Queen Adelaide. Its shipping port is Port Adelaide, about seven miles distant.

ADELER, MAX, the pen-name of a popular American humorist, Charles Heber Clark, *b.* 1841. "Elbow Room," and "Out of the Hurly-Burly" are his two most popular works.

ADEN. Refer to *Index.*

ADIRONDACKS, a mountainous district in the North of New York State, U.S.A., stretching from near Lake Champlain half-way to Lake Ontario. Its scenery being remarkably picturesque, and the climate delightful, it forms the pleasure-ground of the surrounding States.

AD'JUTANT, a military officer acting as an assistant to the commanding officer of a garrison, regiment, or battalion. He promulgates the orders of his chief, receives reports intended for him, and is responsible for the routine of discipline in the body of troops to which he is attached.

ADJUTANT BIRD, a gigantic crane, standing about five feet in height, a native of the warmer parts of India, where it acts as a public scavenger, devouring offal of all kinds. Marabou feathers are obtained from beneath its wings and tail.

ADLER, HERMAN, son of Nathan Marcus Adler; he succeeded his father as Chief Rabbi on the latter's death in 1890. He has greatly distinguished himself by his labours to champion the cause of his co-religionists, and to promote the welfare of the poor Jews. He has also done much to promote education and social progress generally.

ADMIRABLE CRICHTON, James Crichton, a Scotch gentleman, educated at St. Andrew's University, who travelled in France and Italy, and was admired by all for his strength and skill in athletic exercises, and for his cleverness in debate. Killed in the streets of Mantua, 1585. The name is now applied to one who combines beauty of person with extraordinary bodily strength and brain power.

ADMIRAL, the highest rank of naval officer, of which the grades are:—Admiral of the Fleet, Admiral, Vice-Admiral, and Rear-Admiral, ranking respectively with Field-marshal, General, Lieutenant-General, and Major-General.

ADONA'I, "the lord," a name used by the Jews in place of Jehovah, which they considered too sacred to be spoken.

ADO'NIS. (1) A youth, the favourite of Aphrodite (Venus), famous for his beauty. He was killed by a boar which he had wounded, and then changed by Venus into the flower, *anemone*. (2) A plant, the *Pheasant's Eye*, belonging to the same natural order as the buttercup and anemone.

ADORATION OF THE MAGI, the worship of the infant Christ by "the wise men from the east" (Matt. ii.). Tradition says the wise men were three, Melchior, Kaspar, and Balthazar.

ADRIAN or **HADRIAN, EMPEROR,** proclaimed by the Roman legions on the death of Trajan, 117 A.D. He spent some years of his reign in visiting all the provinces of his empire, including Britain, where he caused a wall to be built, A.D. 120, between the Solway and the Tyne, to secure the Roman provinces to the south from the incursions of the Caledonians.

ADRIAN, POPE, a name borne by six occupants of the Papal chair. Adrian IV. (1154-1159), Nicholas Breakspeare, is the only Englishman who has attained to that dignity. He conferred the sovereignty over Ireland upon Henry II. of England.

ADRIAN, SAINT, one of the numerous saints martyred under the Romans. As one of the Pretorian guards, he had to superintend the execution of some Christians, and their steadfastness converted him. He was cruelly tortured in the presence of his Christian wife Natalia, who died soon afterwards (300 A.D.).

ADRIANOPLE, on the Maritza, the second largest town in European Turkey, and the capital of Eastern Roumelia. The plains around produce the famous "attar of roses."

ADRIATIC SEA, a long narrow arm of the Mediterranean, separating Italy from the western shores of Turkey, Dalmatia, and Illyria.

AD VALOREM. See *Commercial Dictionary.*

ADVOCATE, LORD, or King's advocate, a legal functionary of Scotland, with no exact counterpart in England. He combines the functions of Attorney-General and Public Prosecutor with many other powers that in England belong only to a judge; as the issuing of warrants of

arrest and imprisonment. He has also the appointment to many legal offices. He goes out of office with his political party.

ADVOCATES, FACULTY OF, the body of lawyers in Scotland answering to our barristers in England. Admission to the Faculty involves only two examinations, but they are difficult, and between them the candidate is expected to attend classes in law. Having passed these, and paid about £330 in fees, the young advocate is free to plead in any Scottish Court.

ADVOCATUS DIAB'OLI,—the devil's advocate—a functionary in the Roman Catholic Church whose duty it is to bring forward all the weak points in the character and life of a deceased person proposed for canonisation. The other side is represented by the *Advocatus Dei*—God's advocate.

ADVOWSON, the right of presentation to a "living" in the Church of England. Originally the right belonged to the lord of the manor, but as time went on it got transferred with or without part of the manorial property, so that in many cases the owner of the advowson has no territorial connection with the parish it refers to. See "Patronage" in *Index*.

ÆDILES, Roman magistrates who supervised the national games and spectacles, public buildings, markets, and the cleansing and draining of the city.

ÆGE'AN SEA, or **ARCHIPELAGO,** a branch of the Mediterranean washing the shores of Greece, Turkey, and Asia Minor. It contains numerous islands.

ÆGIS, a shield; especially the one made by Vulcan for Jupiter. Hence to protect any one is often figuratively called "throwing the *Ægis* over him."

ÆGRO'TAT, a Latin word signifying "he is ill." A word often used at the Universities to signify that a person is excused from lectures or examination on account of illness.

ÆNE'AS, a Trojan prince, the fabled son of Anchises and Venus, who fought bravely in defence of Troy, and, on its destruction fled from the ruins bearing his father on his shoulders, and leading his son Julus. He finally settled in Italy, and, according to tradition, was the ancestor of the Julian family, and of Romulus and Remus.

ÆNE'ID, THE, Virgil's epic poem, in which, imitating the style of Homer, he describes the life and wanderings of Æneas.

ÆOLIAN HARP, a musical instrument made of catgut strings, stretched over a wooden sound box. Sweet sounds are produced by the playing of the breeze across the strings.

Æ'OLUS is represented in Homer as the happy ruler of the Æolian Isles to whom Jupiter had given the dominion of the winds which at his will he kept confined in a cave till he sent them forth to do his bidding.

AERATED BREAD, bread made without the aid of yeast. The sponginess is produced by carbonic acid gas supplied artifically.

AERATED WATERS, beverages prepared by impregnating water with carbonic acid gas, and the addition, in some cases, of small quantities of fruit syrups.

AEROLITES (Gr. *air-stones*), a name given to masses of stony or metallic matter falling from the sky and glowing like a star on coming into contact with our atmosphere. Most aerolites are covered with a dark glaze as if fused in passing through it. Many specimens may be seen in the British Museum.

AERONAUTICS, the art of floating or sailing in the air by means of balloons and flying machines. All craft used in aerial navigation may be divided into two divisions, i.e., the "heavier than air," and the "lighter than air." Flying machines which are not lifted by gas come under the first category, whilst balloons, dirigible and otherwise, belong to the second category. Dirigible balloons are usually known as airships. The first aeronauts or balloonists were the brothers Montgolfier of France. The first ascent in a balloon was made in 1783. Balloons were inflated with hydrogen until 1821, when coal-gas came into use for the purpose. The greatest height ever attained was 37,000 ft. in an ascent by Glaisher and Coxwell in 1862. In October, 1900, Comte de la Vaux sailed by balloon from Vincennes in France to Korosticheff in Russia. 1,193 miles, in 35¾ hours, the longest distance on record. See *Aeroplanes, Airships*.

AEROPLANES. Flying machines consisting of one or more planes which are driven by motor at a certain angle through the air. The most successful flights have so far been accomplished with "monoplanes" and "biplanes." The Bros. Wright and Mons. Santos Dumont were the first aviators to make successful aeroplane flights of any distance. Within the last two years many aviation records have been established. M. Bleriot crossed the Channel from Calais to Dover on his own monoplane July 25th. 1909, and M. Paulhan won the Daily Mail £10,000 prize for the first flight from London to Manchester, April, 1910. On June 2nd, 1910, the Hon. C. S. Rolls performed the record feat of flying across the Channel from Dover and back without landing on the other side. The career of this brilliant young aviator was brought to a tragic close at the Bournemouth Aviation Meeting in July, 1910, when his aeroplane collapsed whilst he was taking part in one of the competitions, and he was thrown to the ground and instantaneously killed.

ÆSCHINES, *b.* 389, *d.* 314. B.C.; the second greatest of the Athenian orators. He opposed Demosthenes in his efforts to get the Athenians to adopt a forward policy against Philip of Macedon. After events had proved Demosthenes to have been only too correct, Æschines had to quit Athens, and he retired to Rhodes.

Æ'SCHYLUS, an Athenian soldier and poet, "father of the Greek drama." He is said to have composed seventy tragedies—seven of which are extant—and to have been rewarded with the public prize on thirteen occasions; *d.* 456 B.C.

ÆSCULAPIUS, the god of medicine in ancient mythology.

ÆSOP, a famous Greek fabulist who flourished about the middle of the sixth century, B.C. His fables were probably delivered orally and not written.

ÆSTIVATION is the summer sleep undergone by many tropical animals and plants during the height of the summer.

AFGHANISTAN. This country, to the north-west of India, is important as a buffer state between British India and the Russian Empire. The inhabitants are a stubborn, brave, and arrogant race, under the despotic rule of a prince with the title of *Ameer*. It is a mountainous country bordered by the Hindu Kush (25,000 ft.), and the Sulaiman Mountains (11,000 ft.). The principal passes between it and India are the Khyber and the Bolan. Its chief towns are Kabul, Kandahar, Herat, and Ghazni.

Afghanistan has been the scene of much fighting with the British. In 1842, British troops, in withdrawing from the country, were massacred in the Kurd-Kabul Pass. A fresh army under General Pollock, having retaken Kabul and released our prisoners, then retired. In 1879 war again broke out. After a defeat of British troops at Maiwand, General Roberts restored British prestige by gaining a brilliant victory near Kandahar. Having placed Abdur Rahman on the throne as Ameer, General Roberts returned with his army to India. Since then the Ameer has remained our faithful ally, looking to us for assistance, if need be, against Russia.

AFRICA, one of the great continents, is a vast peninsula, compact in form, with no inlets opening an easy way into the interior. It is largely within the Torrid Zone, the Equator passing almost through its centre. It is 5,000 miles long from North to South, and 4,600 miles broad from West to East. Of its physical features the most remarkable are its vast deserts and large lakes. Its two chief deserts are the Sahara in the north, and the Kalahari in the south. Among its lakes are the Victoria Nyanza, Albert Nyanza, Albert Edward Nyanza, Tanganyika, Nyassa, Bangweolo (or Bemba), Chad and Ngami. It has also four rivers of great size, namely, the Nile, the Niger, the Congo, and the Zambesi.

Africa has been to a great extent parcelled out among the European Powers, especially Great Britain, France, Germany and Portugal. British possessions occupy large portions of the south, west, and east of Africa: (1) In South Africa—Cape Province, Orange Free State, Transvaal, Natal, British Bechuanaland, Rhodesia, and Nyassaland. (2) In East Africa—the country from Mombasa on the coast to Victoria Nyanza, and the other lakes that form the head-waters of the Nile, including the districts of Uganda and Unyora; also the islands of Mauritius, Zanzibar, and Pemba. (3) In West Africa—Gambia, Sierra Leone, the Gold Coast Colony, including Ashanti, Lagos and Nigeria; also the islands of St. Helena and Ascension.

AFRICA, ISLANDS OF. On the west coast—the Canaries and Fernando Po belonging to Spain; Cape Verd and Madeira groups to Portugal; St. Helena and Ascension Islands to Great Britain. On the east coast—Mauritius, Seychelles, and Socotra, Zanzibar and Pemba, forming parts of the British Empire; Reunion or Bourbon, and Madagascar under the dominion of France.

AFRICAN EXPLORERS. Refer to "Explorers" in *Index*.

AFRICANDER, a person of European descent, but born and having his domicile in South Africa. For years both English and Dutch Africanders had felt that some sort of union of the various States in South Africa was desirable, but mutual jealousy long stood in the way. In 1909, however, a federal union was formed, called "The Union of South Africa."

AFRIDIS, a warlike tribe, or rather collection of tribes, inhabiting the valleys south of the Khyber Pass. The Indian Government subsidises these tribes to guard the Pass, but in 1897 they rose in rebellion and seized all the forts and commanding positions. An expedition under Sir William Lockhart marched into the Tirah Valley, and thence sent punitive forces into the surrounding valleys, destroying the villages and forts. The campaign is the greatest in Indian history since the Mutiny, and well fulfilled its purpose.

AFTER-DAMP. See *Choke-Damp*.

AGAMEMNON. (1) Sovereign of the Peloponnesus, and commander-in-chief of the Grecian army at the siege of Troy. On his return he was assassinated by his wife Clytemnestra. (2) A tragedy of Æschylus.

AG'APÆ, the love feasts of the primitive Christians. It was customary to give the kiss of peace as a token of Christian Brotherhood.

AG'ASSIZ, JEAN LOUIS, (1807–73), an eminent Swiss naturalist, especially in the department devoted to the life-history of fishes—ichthyology. He also devoted time to the study of glaciers. He became professor of natural history in the Univer-

sity of Cambridge, United States of America, 1847, which from that time became his adopted country.

AGATE, an ornamental stone used in jewellery, capable of receiving a high polish. It is sometimes called *Scotch Pebble.* It is found in Scotland, Germany, India and Brazil.

AGATHA, SAINT. A Sicilian virgin who suffered martyrdom at Palermo, 251, A.D. She is usually represented in art holding a pair of shears. Festival, February 5th.

AGA'VE, (a-ve), or American aloe, sometimes known as the "false aloe," is a native of Mexico, but has been naturalised in Southern Europe. The plant takes from ten to seventy years to arrive at maturity, flowers once, and then perishes.

AGHRIM, or **AUGHRIM,** a village in County Galway, Ireland, famous for the victory of the forces of William III., under General Ginkel, over those of James II., commanded by the French general St. Ruth, July 12th, 1691. This victory was followed by the complete submission of Ireland.

AGINCOURT, a village in the north-east of France, the scene of the victory of Henry V. of England over a greatly superior French force, October 25th, 1415.

AGIO. See *Commercial Dictionary.*

AGNES, SAINT. (1) A Roman maiden who suffered martyrdom when 12 or 13 years of age, in the reign of the Emperor Diocletian, A.D. 303. She is said to have been first exposed to the flames and afterwards beheaded. Her festival is held on January 21st. (2) The most southerly of the Scilly Isles, Cornwall.

AGNOSTICISM, a doctrine which teaches that we can have no knowledge except that acquired through the senses, and that we can know nothing of spiritual matters or of the deity; that, in fact, "we know nothing of what may be beyond phenomena." (Huxley.)

AGNUS DEI, (the Lamb of God). (1) The name of a prayer in the Mass of the Roman Catholic Liturgy. (2) A medal with the device of a lamb bearing a cross as a symbol of Christ. (3) A round piece of wax, remaining over from the Paschal candles, blessed by the Pope, and impressed with the figure of the sacred Lamb. (4) A cloth ornamented with the same figure, used to cover the communion cup in the Greek Church.

AGONY COLUMN, the portion of a newspaper devoted to secret correspondence and special advertisements, especially those for missing friends and the like.

AG'ORA, THE, the market-place or forum of an ancient Greek town.

AGRA, a town on the Jumna in the North-West Province of India, celebrated for the exquisite beauty of the Taj-Mahal, a mausoleum of pink sand stone and white marble, erected to the memory of his wife, by Shah Jehan, at a cost of three millions sterling.

AGRAM, a university and cathedral city near the left bank of the Save, and the capital of Croatia and Slavonia, Hungary.

AGRAPHIA. See *Med. Dict.*

AGRIC'OLA, JULIUS was a famous Roman statesman and soldier, who, after serving in various parts of the Empire, became governor of Britain 78 A.D. He gradually subdued the whole of the country south of the Highlands, built a chain of forts between the Forth and the Clyde, and made his victories secure by introducing much of the Roman civilisation, including the education of the sons of the British chiefs. Soon after his final victory over Galgacus near the Grampians, 84, he was recalled by Domitian, and retired into private life; *d.* 93, A.D.

AGRICULTURE, BOARD OF. Refer to *Index.*

AGRIPPA I., HEROD. A grandson of Herod the Great, over whose dominions he ruled, under the Romans, on the disgrace of his uncle Antipas. He was responsible for the martyrdom of Saint James and the imprisonment of Saint Peter; *d.* of a disease of the intestines, A.D. 44 (Acts xii).

AGRIPPA II., HEROD. Son of Agrippa I. He was present when Saint Paul made his defence before Festus at Jerusalem. Driven from the city by the revolting Jews, he joined the forces of Vespasian, and aided Titus in the reduction of Jerusalem; *d.*, probably at Rome, 94, A.D.

AGRIPPI'NA, daughter of Agrippina the Elder, and mother of Nero. Her third husband was her uncle, whom she poisoned after having persuaded him to adopt her son, and then had the latter proclaimed emperor by the army. She was murdered by the orders of Nero, A.D. 59.

AGUINALDO, EMILIO, the leader of the Philippine revolt against the Spaniards, and later of the resistance to the United States forces in their endeavours to pacify the Philippines. Having got himself proclaimed "President of the Philippine Republic" the day the Americans landed at Cavite, he wanted to co-operate with them against the Spaniards, but was not recognised. After peace was signed between Spain and America in December, 1898, he became the soul of the resistance to the latter till his capture in March, 1901.

AGULHAS, CAPE (the Needles), the most southerly point of Africa.

AHAB, the seventh king of Israel, ruled over Samaria 22 years. He married Jezebel, daughter of Ethbaal, king of Sidon, under whose influence he greatly encouraged the worship of Baal and Astarte. He was killed in a battle against the Syrians, 897 B.C.

AHITH'OPHEL, the evil adviser of Absalom in his rebellion, and the former friend and counsellor of his father David. On his counsel being rejected by Absalom, he hanged himself (2 Sam. xvii.).

AH'RIMAN, the destroying spirit to whom the Zoroastrians ascribe the origin of all evil, and all the destructive powers of nature.

AHURA MAZDA or **ORMUZD,** the spirit of good and of light, engaged in a conflict with Ahriman which is to last 12,000 years and end in the triumph of Ormuzd.

AIDAN, SAINT, the "Apostle of Northumbria," and founder of the monastery of Lindisfarne, came as a missionary from Iona on the invitation of King Oswald; *d.* 651.

AIDE-DE-CAMP, a military officer whose duty it is to convey the general's orders to any part of his command on the field of battle, and at other times to act as his secretary.

AIDS, sums paid by vassals to their feudal lords on specified occasions, the chief of which were the knighting of his eldest son, the marriage of his eldest daughter, and the ransoming of his person if taken prisoner in war.

AIKIN, LUCY, *b.* 1781, *d.* 1864, the authoress of "Memoirs of the Court of Queen Elizabeth," and other similar works.

AINOS, a small and primitive tribe of Japan, found chiefly in the islands of Yezo and Shanklin.

AINSWORTH, WILLIAM HARRISON, was a popular writer of novels of antiquarian and historical interest. His works include "Jack Sheppard," "Tower of London," "Beau Nash" and "The Flitch of Bacon"; *d.* 1882.

AIR, a mechanical mixture of gases surrounding the earth, and extending to a height estimated at from 120 to 200 miles. The two chief constituents are oxygen and nitrogen, in the ratio of nearly 21 parts of the former to 79 of the latter by volume. Oxygen is necessary to maintain all forms of animal life, and for combustion: the nitrogen acts as a diluent of the oxygen. In addition, small quantities of carbonic-acid gas, water-vapour, ammonia, and, in sea or mountain air, ozone are present. In 1894 Lord Rayleigh and Professor Ramsay announced the discovery of a new constituent, argon, resembling nitrogen in many properties, but having a greater density. The amount of carbonic-acid gas is relatively small, about ·04 per cent. of the whole. Air containing ·06 per cent. is dangerous to health. This gas is constantly being produced by the respiration of animals, and by combustion. Plants have the power of breaking it up into its constituent elements, fixing the carbon, which assists in the formation of vegetable tissues, and setting free the oxygen. The quantity of water-vapour varies from time to time, warm air being capable of holding more than air at a lower temperature. This vapour is the source of dew, fogs, clouds, rain, hail, and snow.

Air, being a material body, has weight, and therefore exerts a pressure on everything with which it is in contact. At the sea-level this pressure amounts to 15 lbs. on the square inch, and is sufficient to balance a column of mercury 30 inches or 760 m.m. in height. The pressure decreases as we ascend, owing to the fact that the upper layers of air are less compressed by the layers above them, and are therefore less dense.

AIRD, SIR JOHN, *b.* 1833, son of the founder of the firm of John Aird and Sons, the great contractors. He assisted his father in the building for the Great Exhibition, Hyde Park, 1851, and in its reconstruction as the Crystal Palace at Sydenham. He is the inventor of a "steam navvy," a machine employed with excellent results in the construction of the Manchester Ship Canal. He is a "Man of Mark" in the West of England as the constructor of the Royal Edward Dock at Avonmouth; but his fame is world-wide for the successful performance of the colossal task of damming the Nile (See *Assouan*). He was created a baronet in 1901.

AIR-SHIP. A dirigible balloon which owes its rising power to gas and is driven by motor. Experiments in the use of airships for military purposes have been conducted by all the Great Powers. Germany has expended large sums of money in this direction, and airships have been used with success in the German military manœuvres. A noteworthy flight from Aldershot to St. Paul's and back was accomplished by the British Army airship "Beta," in July, 1910. In 1909 the British Government appointed a permanent Aeronautical Advisory Committee to investigate problems arising out of the practical work of the naval and military aeronauts. See *Aeronautics, Aeroplanes.*

AIRY, SIR GEORGE (*b.* 1801, *d.* 1881); English astronomer-royal, was the first to state the complete theory of the rainbow.

AIX-LA-CHAPELLE, in Rhenish Prussia, one of the oldest cities in Germany, and the capital of the Empire founded by Charlemagne. Its cathedral contains his tomb.

AIX-LA-CHAPELLE, PEACE OF, between England, France, Holland, Austria, Spain, and Sardinia, brought the War of the Austrian Succession to a close, 1748.

AJACCIO, the capital of Corsica, and the birth-place of Napoleon the Great, 1769.

AJAX, the name of two Greek heroes in the Trojan War. (1) *Ajax Oileus* suffered shipwreck on his homeward voyage. (2) *Ajax Telamonius* lost his reason and com-

mitted suicide when the arms of Achilles were awarded to his rival Ulysses.

AKBAR (THE GREAT), a famous Mogul Emperor of India, distinguished for his strict impartiality, magnanimity, and toleration. A considerable part of his reign (1542–1605) was occupied in extending his kingdom, or in repressing rebellions at home, several of which were headed by his brothers and sons.

Á KEMPIS, THOMAS. See *Kempis*.

AKENSIDE, MARK, *b.* at Newcastle, 1721, *d.* 1770; an English physician, author of "The Pleasures of the Imagination," a poem in blank verse.

AKKA, a tribe of pigmies discovered by Schweinfurth in Central Africa, between the rivers Nepoko and Aruwimi. They are expert hunters, live in temporary grass huts of beehive shape, keeping no domestic animals except fowls.

AKRA, OR ACCRA, capital and chief port of the British Gold Coast Colony.

AKUPARA. In Hindu mythology, the tortoise on whose back the world rests.

ALABAMA, THE. A wooden, screw steam-vessel built at Birkenhead, 1862, for the Confederates during the American Civil War. Her destination was kept secret until she was nearly completed. The Government were so slow in acting on the information supplied by the United States' ambassador that she left Birkenhead on the day appointed for her seizure, proceeded to the Azores, where she took in guns, ammunition, and stores, received her commander, Captain Semmes, on board, and was christened the Alabama, having been known until then simply as No. "290." She then began to harass American shipping, capturing and burning merchant ships in all parts of the world. Many fast cruisers were sent after her, but she continued her destructive career for nearly two years, when she was engaged and sunk by the Kearsarge, off Cherbourg, June 19th, 1864. Americans held that their loss in shipping was due to British negligence. After considerable diplomatic correspondence it was decided to submit the matter to arbitration. The Arbitrators met in Vienna, September, 1872. The claims for indirect losses were disallowed, but the court finally awarded America 15½ million dollars (rather more than 3¼ million pounds) for actual damage done by the Alabama and two other ships, the Florida and the Shenandoah.

ALABASTER, a name given to two compounds of lime used for ornamental purposes. The alabaster mentioned in the New Testament is a carbonate of lime, is hard, and of a yellowish milky colour. The other variety is a sulphate of lime, is softer and of a pure white colour. It is much used by sculptors for making close joints in marble.

ALADDIN, the hero of the best-known tale in the "Arabian Nights." He obtains a magic lamp, builds a wonderful palace, and marries the Sultan's daughter. His lamp is the term metaphorically used as the power to do everything, and his palace as the ideal of a task hopeless to attempt.

ALAIS, PEACE OF. A treaty (1629) which put an end to the religious wars with the Huguenots in France, after La Rochelle, their stronghold, had been taken by the Catholic party under Richelieu.

ALAMEDA [Sp.: a grove of poplar trees], a name now applied very generally in Spanish America to a park or pleasure ground.

ALAND ISLANDS, a group of some 300 islands (80 of which are inhabited), at the entrance to the Gulf of Bothnia, fortified by Russia. During the winter they are connected to the mainland by ice.

AL ARAF, according to the Koran, the partition between heaven and hell, reserved for those who are neither morally good nor morally bad, or whose good and evil deeds balance each other.

AL'ARIC, a king of the West Goths, who at the end of the fourth century and the beginning of the fifth, ravaged Greece, invaded Italy, and three times besieged Rome itself. Twice he was bought off by promises of ransom, but on the third occasion, 410 A.D., he entered the city, and for six days gave it over to pillage by his followers, but sparing all buildings of a religious character; *d.* 412.

ALASKA, a mountainous district more than six times the area of Great Britain, lying to the extreme north-west of North America. The territory was purchased by the United States from Russia in 1867 for £1,440,000. The coast is broken up into fiords, here known as "canals," protected by numerous islands. The chief river is the Yukon, which rises in Canadian territory. The climate is severe, but is modified in the west, where the rainfall is excessive, by the warm Japan current. The inhabitants are chiefly Indians and Esquimos. Timber, (including yellow cedar), ice, and salmon are exported, and the seal fisheries of the Pribilov Islands to the north of the Aleutians are the most valuable in the world. Gold has been worked in the latter archipelago for many years, and in 1896 rich deposits were discovered at Klondike in the Yukon Valley, just within British territory. See *Klondike*.

ALBA LONGA ("the long white city") a city of Latium, which, tradition says, was founded by a son of Æneas 300 years before Rome. It derived its name from its position on a long narrow ridge of white limestone.

ALBANI, MADAME (née Marie Lajeunesse), the daughter of a Canadian musician, was born in 1851 near Montreal. She appeared in public at the age of twelve, and then studied at Paris and Milan. She made her début in Opera at Messina in 1870, and since then has been one of the leading sopranos both in Opera and Oratorio in Europe and America. She married Ernest Gye, the Impresario, 1878.

ALBAN, SAINT, a Roman soldier who was the first Christian martyr in Britain, 304.

ALBANIA, a mountainous district of Turkey in Europe, extending along the Adriatic Sea from Montenegro to Greece, with a breadth varying from 50 to 90 miles. The Albanians are Slavs.

ALBANY. (1) The capital of New York State on the Hudson River, and the second oldest town in the United States. (2) A town on King George's Sound, which possesses one of the finest harbours in West Australia. (3) Old name of Scotland.

ALBATROSS, one of the largest of marine birds, its outstretched wings measuring from ten to twelve feet.

ALBEMARLE, DUKE OF. See *Monk*.

ALBERT, PRINCE CONSORT, second son of Duke Ernest of Saxe-Coburg-Gotha, and cousin to Queen Victoria. He was carefully educated, at first under the personal direction of his father, and later continued his studies at the University of Bonn, paying special attention to political and natural science, and philosophy. He visited England for the coronation ceremonies in 1839, and later in the year, Queen Victoria announced to the Privy Council her intended marriage with her cousin Albert. The marriage took place at the Chapel Royal, St. James's, February 10th, 1840. The Prince became naturalised, and from the first took a deep and active interest in the welfare of the people. He rendered important services in the advancement of science and art, and the success of the Great Exhibition of 1851 was largely due to his tact, energy, and perseverance. The formal title of Prince Consort was conferred upon him in 1857. He died at Windsor Castle from an attack of typhoid fever, December 14th, 1861, and was buried in Saint George's Chapel, whence his remains were afterwards removed to the Mausoleum built by Queen Victoria at Frogmore.

ALBERT EDWARD. See *Edward VII.*

ALBERT EDWARD NYANZA, a lake forming one of the head waters of the Nile, and draining into the Albert Nyanza by the river Semliki.

ALBERT MEDAL. (1) A decoration instituted in 1866 to reward acts of gallantry in saving life at sea, and afterwards extended to acts of gallantry on land in cases of mine explosions, fires, railway accidents, etc. (2) A medal awarded by the Society of Arts to distinguished men of science, notable inventors, engineers, etc.

ALBERT MEMORIAL, a handsome monument in Kensington Gardens, opposite the Albert Hall, erected in 1866 to the memory of Albert, Prince Consort, husband of Queen Victoria. It was designed by Sir Gilbert Scott, and consists of a bronze gilt statue of the Prince over which is a Gothic canopy, surmounted by a cross, the whole, with the approaching steps, reaching to a height of 175 feet. The cost was £120,000, raised largely by public subscription.

ALBERT NYANZA, a lake in Equatorial Africa, 50 miles long and 40 miles wide, discovered by Sir Samuel Baker in 1864. It lies to the north-west of Victoria Nyanza, from which it receives the Victoria Nile or Somerset; and from its northern end the White Nile issues. It abounds with fish and crocodiles, and hippopotami frequent its shores.

ALBERTA, a province of Canada, nearly as large as Italy, lying to the east of the Rocky Mountains, and possessing a fertile soil and many large forests. The mountains are rich in minerals; capital, Edmonton.

ALBERT VICTOR, PRINCE. See *Clarence*.

ALBERTUS MAGNUS, *b.* 1193, *d.* 1280, surnamed the "Universal Doctor," "the most illustrious of the schoolmen," lectured for many years at Cologne. His knowledge was so great that he was suspected of magic.

ALBIGEN'SES, a religious sect which appeared in the neighbourhood of *Albi* in the south of France in the twelfth century. The Church looked upon its disciples as heretics, and Pope Innocent III. proclaimed a crusade against them, by means of which, and the Inquisition afterwards, they were exterminated.

ALBI'NO, a person possessing unnaturally white skin, hair, and eye-brows, and pink eyes. *Albinism* is due to the absence of pigment cells, and is found in many species of animals, but rarely in fish, though the colour of the domestic goldfish is due to incipient albinism.

ALBION (White Island), the ancient name of Britain, probably given to it by the Gauls, on account of the white cliffs of the south-east coast.

AL BORAK, an imaginary beast on which, according to Moslem tradition, Mohammed journeyed through the heavens.

ALBUE'RA, a Spanish village near Badajoz, where General Beresford defeated Marshal Soult (May 16th, 1811).

ALBU'MEN, a nitrogenous substance which is found in both animal and vegetable tissues, and exists almost pure in the

white of eggs. It is used in photography, for fixing colours in yarns and cloths, and in the process of sugar-refining.

ALCAE'US, one of the most celebrated lyric poets of ancient Greece, imitated by Horace. He flourished in the seventh century, B.C.

ALCA'ZAR, the palace of the Moorish kings, and later of the Spanish sovereigns at Seville.

ALCESTER, (Frederick Seymour), **BARON**, *b.* 1821, *d.* 1895; was son of Colonel Sir Horace Seymour. He entered the navy at thirteen, and rapidly rose by dint of merit, services, and influence to the highest ranks. He will be best remembered as commander of the British fleet that bombarded Alexandria in 1882, to repress the rebellion under Arabi Pasha. For his services on that occasion he received a peerage, £25,000, and a sword of honour.

ALCES'TIS or **ALCESTE**, in Greek legend the daughter of Pelias. She and her sisters put their father to death that he might be restored to youth by Medea. The latter refused to keep her promises, and the sisters fled to Admetus, who married Alceste. She afterwards sacrificed her own life to save that of her husband, and was brought back from the lower world by Hercules, an episode which forms the subject of a tragedy by Euripides.

ALCHEMY, the art which has developed into modern chemistry. The *Alchemists* set themselves three tasks: (1) To transmute the baser metals into gold by means of the philosopher's stone. (2) To discover a universal panacea for disease. (3) To discover the elixir of life, the drinking of which would confer perpetual youth and energy.

ALCIBI'ADES, 450–404 B.C., an Athenian of noble birth, handsome person, and great wealth, was brought up by his uncle Pericles, and was for a time the pupil of Socrates. He involved his country in an expedition against Sicily, and was appointed to one of the chief commands, but was recalled. In the Peloponnesian War he, in turn, served and betrayed the Athenians. He went into exile in Asia, and was assassinated.

ALCOHOL. See *Med. Dict.*

ALCUIN or **FLACCUS ALBI'NUS**, *b.* 735, *d.* 804, a most distinguished English scholar of the eighth century, born and educated at York, who became the preceptor of Charlemagne, and assisted that monarch in his endeavours to civilise his people. He improved existing schools in France, and founded others, modelling them on the one at York.

ALDERMAN, an officer associated with the mayor of a city or borough in the administration of the municipal government. The London Court of Aldermen consists of twenty-six members, who form the bench of magistrates for the city. From their members the Lord Mayor is annually elected.

ALDERNEY, the third in size of the Channel Islands, celebrated for a very fine breed of cows.

ALDERSHOT. (1) A permanent camp situated on the borders of Surrey, Hampshire, and Berkshire, established in 1855 for the purpose of instructing British troops in military manœuvres. (2) A town in Hampshire which has sprung up to the south of the barracks, immediately beyond the government ground; pop. 31,000.

ALDHELM, SAINT, an early English churchman (about 650 to 709), who did much to spread Christianity and education among the fierce Saxons of the South and West. He was Abbot of Malmesbury, and afterwards first Bishop of Sherborne, and distinguished himself by his missionary zeal and his classical learning.

ALDRED, bishop of Worcester (1044–60), archbishop of York (1060–69). He was the first English bishop to make a pilgrimage to Jerusalem. He crowned William I, over whom he exercised considerable influence.

ALEPPO, one of the three government districts of modern Syria. (2) The capital of the former. Standing at the meeting-point of several trade routes, it is the chief caravan station between the Levant and the Euphrates; and, before the discovery of a sea route to India, was one of the greatest trading cities of the world.

ALESSANDRIA, a strongly fortified town on the river Tanaro, in Piedmont, northern Italy, and the terminus of eight railways. After the defeat of the Austrians by Napoleon at Marengo, 1800, an armistice was concluded at Alessandria, by which a large portion of Upper Italy and twelve fortresses were ceded to France.

ALETSCH GLACIER, the largest of the Alpine glaciers, descends round the south of the Jungfrau into the valley of the Upper Rhone.

ALEUTIAN ISLANDS, a group of volcanic islands enclosing the Behring Sea in the North Pacific.

ALEXANDER THE GREAT succeeded his father as king of Macedonia at the age of twenty. He had been instructed in every branch of learning by Aristotle, who inspired his pupil with military ardour by the study of the Iliad. He subdued the whole of Greece, and then had himself appointed to the command of the forces against Persia. Two years after his accession he crossed the Hellespont with an army of 30,000 infantry and 5,000 cavalry. He defeated the army of Darius, subdued Syria and Egypt, crossed the Euphrates and Tigris, and routed the Persians at Arbela. He advanced into India, marched through the district now known as the Punjaub, and established Greek colonies at various points. He wished to press on to the Ganges, but the murmuring of his troops at advancing further into an entirely unknown country caused his return to Babylon, where he died of fever after an illness of eleven days, B.C. 323, aged 32.

ALEXANDER I. OF RUSSIA, *b.* 1777, *d.* 1825, was the son and successor of Paul I. He did much to promote the prosperity and civilisation of his subjects, encouraged education, promoted manufactures, and extended commerce. He joined the coalition of 1805 against Napoleon, and was present at the battle of Austerlitz. After defeats at *Eylau* and *Friedland*, he concluded the peace of Tilsit. For a time he aided Napoleon, but again entered the coalition against him in 1812, took an active part in the field, often encouraging his troops by exposing himself to great dangers, and greatly facilitated the negotiations for peace when Paris fell into the hands of the Allies. Events in other parts of Europe led to a complete reversal of his home policy, and all his plans for reform and progress were given up. He died of a fever peculiar to the country, December 1st, 1825.

ALEXANDER II. OF RUSSIA, *b.* 1818, *d.* 1881, succeeded his father Nicholas March 2nd, 1855. He first ended the Crimean War by concluding peace with England, France, and Turkey, and then set himself to improve the internal administration of the country, and to extend and consolidate his empire. His greatest achievement was the emancipation of the serfs, 23,000,000 in number, by a *ukase* of March 3rd, 1861. In the war against Turkey (1877–8), on behalf of the Slavs, the Czar took the field in person. Towards the close of his reign the spread of *Nihilism* caused him great anxiety. Several attempts were made to assassinate him, and he was at length killed while driving in the streets of St. Petersburg, by a bomb thrown by a *Nihilist*.

ALEXANDRA, QUEEN, *b.* at Copenhagen 1st Dec., 1844, daughter of Christian IX. of Denmark. She was married to the late King Edward VII., then Prince of Wales, 10th March 1863. She has endeared herself to the nation by her genuine sympathy with all in distress, taking practical interest in hospitals visiting sick and wounded soldiers, and setting on foot subscriptions and agencies for the relief and employment of those unable to find work. She is now known as the "Queen Mother," a title she elected to adopt in preference to that of "Queen Dowager."

ALEXANDRIA, the chief port of Egypt, was founded by Alexander the Great, 332 B.C. It was at one time the chief centre of Greek learning, and possessed the finest libraries in the world. Its commerce has decreased since the opening of the Suez Canal. It was bombarded by the British fleet, 1882.

ALEXANDRINES are rhyming verses consisting each of twelve syllables or six feet. The last line of a Spenserian Stanza is an Alexandrine, but the only English poem of importance written entirely in this measure is Drayton's "Polyolbion."

ALFORD, HENRY, *b.* in London, 1810, *d.* 1871; Dean of Canterbury, theologian, critic and poet, had a distinguished career at Cambridge. His great work, the "Greek Testament, with Notes and Commentaries," was finished in 1861. He was the first editor of the "Contemporary Review." He wrote poems and hymns of some merit; "Come, ye thankful people, come!" is one of the latter.

ALFRED THE GREAT, born at Wantage, 849, reigned, 871–901, a grandson of King Egbert, succeeded his brother Ethelred. At his accession the country north of the Thames was completely overrun by the Danes. Alfred fought nine battles against them with varying success, but was at length compelled to take refuge in the Isle of Athelney. Seizing a suitable opportunity he fell upon his enemies suddenly, defeated Guthrum at Edington, in Wiltshire, and compelled the Danes to retreat to their fortified camp at Chippenham, and starved them into surrender. By the *Treaty of Wedmore* (878), Guthrum consented to be baptised as a Christian, and the *Danelagh* was limited to the part of England east of the Watling Street. The king now set about restoring order in his realm, rebuilt and fortified London and other cities, established a regular militia, built a fleet in order to meet the attacks of the Norsemen at sea, codified the laws, founded schools, introduced learned men into the country, translated several books into English, and made his own court a model of the life he wished his people to lead. All this was done in spite of the sufferings caused by a painful disease. Alfred died at the age of 52, and was buried at Winchester, his capital.

ALGÆ, plants of the simplest structure, which live in water, both sea and fresh, or clothe damp surfaces, such as rocks, walls, or the bark of trees. Unlike fungi all contain green colouring matter, and require light for their existence. Some consist of a single cell of microscopic size, others of long cellular filaments, while others again, such as the Laminariæ of South American seas, reach gigantic proportions, and are distinguished for their graceful branching. They have no true roots, but seem to absorb nourishment at all parts of their surface, from the water, or damp air with which they are surrounded. Diatoms, the gulf-weed, the brown sea-weeds, and Carageen or Irish Moss, may be mentioned as examples of Algæ.

AL'GEBRA, the art of performing calculations by means of symbols denoting operations, and letters which represent quantities, and may be replaced at the end of the operation by numbers.

ALGERIA, a French possession, slightly larger than Great Britain in area, in the north of Africa. The country consists of three distinct regions; the *Tell*, a broad band of extremely fertile land rising from the coast; the *Atlas Highlands*, and the *Sahara* district. Excellent crops of wheat, olives, tobacco, cotton, and rice are produced in the Tell, but the most valuable export is *Alfa*, a kind of esparto grass used for the manufacture of paper, which grows wild in abundance on the banks of the marshy lakes at the southern foot of the Atlas mountains. The chief towns are Algiers, the capital, known as the "Silver City;" Oran and Bône, two busy ports, and Constantine, the "Northampton of Algiers," the most important inland city.

ALHAM'BRA ("the red castle"), an ancient fortress and palace of the Moorish kings, built on a hill overlooking the city of Granada, Spain. It was begun in 1213 and completed in 1348. The palace is notable for the lightness and elegance of its columns and arches, the richness of its ornamentation, and its mosaic pavements.

ALI, the cousin of Mohammed, whose daughter Fatima he married, and the first convert to Mohammedanism. He became Caliph in 656, and was assassinated by a fanatic in the mosque at Bagdad, four years later. His tomb near Kufa is still a place of pilgrimage.

ALICE, PRINCESS, second daughter of Queen Victoria, nursed her father, the Prince Consort, in his last illness. She was married, 1862, to Prince Louis of Hesse-Darmstadt. In 1873 one of her children was killed by a fall from an open window. Five years later, her last great trial came. Of her six children, all except one were attacked with diphtheria, and her husband also. The princess nursed them all, and all recovered except the youngest child. At last she fell a victim to the same disease, caught by kissing her youngest boy, and died, 1878. By her special request she was buried with the English flag upon her coffin.

ALIEN. Refer to *Index*.

ALIEN IMMIGRATION. The question of alien immigration is not by any means a new one. How much we owe to the Flemish and French immigrants who taught us the woollen and silk manufactures should not be forgotten. But of late years the character and habits of many aliens in England have made it clear that some restriction is necessary to prevent paupers and criminals landing. The Alien Act, 1905, therefore, enacts that no immigrant (and the term immigrant is strictly defined) shall be allowed to land: (1) if he cannot show that he has, or can obtain, the means of supporting himself and his dependants; (2) if he is a lunatic or idiot; (3) if he is a criminal.

ALIMONY. Refer to *Index*.

ALISON, SIR ARCHIBALD, *b.* 1792, *d.* 1867; the son of a well-known Scottish Episcopal minister, was educated for the Scottish bar, where he soon made a name and fortune. His political and historical writings are his best title to fame. His "History of Europe," from 1789 to 1815, afterwards continued to the accession of Louis Napoleon, has gained world-wide repute, and his other writings are numerous.

ALIWAL, a village on the Sutlej in the Punjab, India, where Sir Harry Smith gained a brilliant victory over a superior force of Sikhs, 1846.

AL'KALI, a chemical compound of the metals sodium, potassium, or lithium, or of ammonia—the volatile alkali. It turns a litmus solution reddened by an acid, blue. All the alkalies are readily soluble in water, unite with acids to form salts, absorb moisture from the air, are extremely caustic, and, in a pure state, act as corrosive poisons.

ALKALOIDS, a series of bodies containing carbon, hydrogen, oxygen, and nitrogen, which are found in certain plants, and which possess alkaline properties in a slight degree. They are much used in medicine. Among the most familiar are morphia, quinine, strychnine, nicotine, and caffeine, the active principle of coffee and tea.

ALKMAAR, CONVENTION OF. A treaty concluded at Alkmaar, a town of North Holland, in 1799, by which the Anglo-Russian army, under the Duke of York, evacuated the Netherlands.

AL'LAH ("the one worthy to be adored"), the Arabic name of the one God worshipped by Mohammedans.

ALLAHABAD ("Abode of God"), situated at the confluence of the Jumna and Ganges, is the commercial centre of the Indian Empire. A celebrated place of Hindu pilgrimage, and an important railway centre.

AL'LEGHANY MOUNTAINS, a low range of mountains, forming part of the Appalachian System, in the East of the United States of America.

AL'LEGORY, a story which conveys a different meaning from that which is directly expressed. Parables and fables are forms of allegory. Sometimes whole works have an allegorical signification, e.g., Spenser's "Faerie Queen" in poetry, and Bunyan's "Pilgrim's Progress" in prose. Allegory is also made use of in painting and sculpture.

ALLEN, BOG OF. A name given to a series of peat bogs in King's County and County Kildare, Ireland. They stretch from within a few miles of Dublin, westward almost to the Shannon, and form the source of several rivers. The peat extends to a depth of 25 feet.

ALLEN, CHARLES GRANT, *b.* at Kingston, Canada, 1848, *d.* 1899; finished a varied education at Oxford. A brief scholastic career was the prelude to a strenuous literary life. As a popular exponent of strict science, he has few equals, and his ventures in sensational fiction had no small success. "The Woman Who Did" caused much angry discussion.

ALLEN, RALPH. An English philanthropist (1694–1764), known chiefly as the friend of Pope, Fielding, and Pitt. His memory is perpetuated by Pope's well known lines:—

> "Let humble Allen, with an awkward shame,
> Do good by stealth, and blush to find it fame."

ALLEYNE, EDWARD, born in London, 1566, a famous actor, the contemporary and friend of Shakespeare. According to Ben Jonson and other dramatists, he was the leading actor of his day, but he is best remembered as the founder of Dulwich College—"the College of God's Gift"—which was built 1613–1616, and was intended for the support and maintenance of a master, warden, four fellows, six poor men, and six women, and for the education of twelve boys. The college was reconstituted by an act of 1858, and new buildings were opened in 1870. Alleyne was also the founder of alms houses in Finsbury. He died 1626, and was buried in the College Chapel at Dulwich.

ALLIGATOR, a term applied to several species of crocodile peculiar to America. They vary in length from two to twenty feet, and abound in the lower Mississippi, and the lakes, rivers, swamps, and marshes of Louisiana and Carolina. In South America they are known as Caymans. They feed chiefly on fish. In cold weather they bury themselves in the mud, and become torpid, but are revived by a very little sunshine.

ALLITERATION, in prosody, is the recurrence of words or syllables beginning with the same letter, as in the well-known line "By apt alliteration's artful aid." (*Churchill*). Anglo-Saxon and Icelandic poetry were entirely alliterative, and Langland's "Vision of Piers Plowman" is of the same character. Indeed it was not until after the middle of the fourteenth century that the method fell into disuse. Modern writers make occasional use of alliteration with pleasing effect, e.g.,

> "With loads of learned lumber in his head."—(*Pope.*)
> "With wounded wing and bleeding breast."—(*Byron.*)

ALLOP'ATHY. See *Med. Dict.*

ALLOT'ROPY, the property possessed by a few elements, of existing in two or more forms quite distinct in outward characteristics, and often in physical properties, from one another. Thus the diamond is an allotropic form of carbon; ozone of oxygen; and sulphur, on being heated, passes into several allotropic forms.

ALLOY, a compound produced by smelting two or more metals together, the resulting product possessing properties not occurring in either of its constituents. Pure gold and silver are soft metals, but the addition of a small per centage of copper produces alloys sufficiently hard to be used as a medium of currency, or for the manufacture of articles of jewellery, etc.

Brass is harder than either copper or zinc, of which it is composed. *Bronze* is compounded of copper and tin; *Bell-metal* has the same composition with a larger proportion of tin; and *Type metal* consists of four parts lead and one of antimony.

ALLSPICE or **PIMENTO,** sometimes called Jamaica pepper, is the dried berry of a species of myrtle which grows in the West Indies. The name was given to it because it was supposed to combine the flavours of different spices, particularly cinnamon, nutmegs, and cloves. In addition to its use in cookery, it is used as an agreeable aromatic.

ALL THE TALENTS ADMINISTRATION, the coalition ministry formed by Lord Grenville on the death of Pitt, 1806. Fox was its leading member.

ALLUVIUM, a name given to the deposits of mud, sand, gravel, etc., carried down by running water, and spread over the lower lands; and also to the accumulations formed by the sea along the shore. [See *Abrasion by rivers*].

ALMA, a river in the south-west of the Crimea, which enters the Black Sea about twenty miles from Sevastopol. It is memorable for the battle, fought September 20th, 1854, in which the Russians, strongly posted on the river's steep left bank, were driven from their position at the point of the bayonet, by the British and French.

ALMACK'S, a suite of assembly rooms built in 1765 in King Street, St. James's, named after the proprietor. Admission to the dances and other functions held here was a mark of high social rank. The rooms are now closed.

ALMA MATER (L. "fostering mother") a name applied by a person to the university or college at which he has been educated.

ALMA-TADEMA, SIR LAWRENCE. Though born in the Netherlands, 1837, he may fairly be called a great British

artist, having become a naturalised British subject in 1873. Historical subjects, whether mediæval or classical, are his forte; of the former, "Fredegonda"; of the latter, "Sappho" and "The Conversion of Paula" are much admired. Received the Order of Merit, 1905.

ALMONDS. See *Med. Dict.*

ALNWICK, a market town, and strictly the county town of Northumberland, is 34 miles north of Newcastle. Its foundation goes back to the Roman period, and some of the ancient walls remain. Alnwick Castle, the home of the doughty family of Percy, is a grand baronial residence, and has seen much fighting.

ALOES. See *Med. Dict.*

ALPACA, a species of llama or American camel, which resembles a sheep in appearance, but is larger and has a long neck. It is found chiefly in Chile and Peru, and is domesticated for the sake of its long woolly hair, which has a soft, silky texture, and is used for the manufacture of shawls, linings, cloth called alpaca and umbrellas. Unsuccessful attempts have been made to naturalise the animal in Britain.

ALPHA AND OMEGA, the first and last letters of the old Greek alphabet. Thus the phrase "Alpha and Omega" signifies "the beginning and the ending" of anything; hence the sum total or "the real essence" of anything.

ALPHEGE, SAINT, *b.* 954, *d.* 1013, made Archbishop of Canterbury in 1006. The Danes, in 1013, made a raid on Kent and took Canterbury. The archbishop was seized by the marauders and held for ransom. Refusing to impoverish his people by exacting money for his ransom, he was barbarously slain by Danish soldiers.

ALPINE CLUB, founded in 1857, with a view to encouraging Alpine exploration, and of providing a centre for all interested in Alpine climbing and investigation. It numbers about 500 members, each of whom must give an account of his expedition, or of his contributions to Alpine knowledge in some form before election.

ALPS, the grandest mountain system in Europe, stretches from the Western Mediterranean to the Danube, and occupies portions of France, Italy, Switzerland, Bavaria, and Austria. The glaciers, snowfields, and lakes of the system form the greatest reservoir of fresh water in the continent, and give rise to the Rhine, Rhone, Po, and Adige. Considered vertically, the system is divided into the *Fore Alps*, extending to the limit of trees (from 5,000 to 6,000 feet); the *Middle Alps*, from that point to the snow line, containing the summer pastures of the flocks, and forming the home of the chamois, ibex, and marmot; and the *High Alps*, above the limit of perpetual snow, which varies from 8,000 to 9,500 feet. There are many chains. The grandest is the *Pennine Alps*, containing *Mont Blanc*, 15,732 feet, and *Monte Rosa*, 15,200 feet, the two highest peaks; but the chain most frequently visited is the *Bernese Alps*, the eastern half of which is known as the *Bernese Oberland*, and contains the *Finsteraarhorn* and the *Jungfrau*. The centre of the whole system is *Mt. St. Gothard*, through which has been constructed the longest tunnel in the world. Other tunnels piercing the main chain are those of *Mt. Cenis*, *Simplon* and *Arlberg*. Carriage roads traverse sixty of the Alpine passes, the best known of which are the Great St. Bernard, the Simplon, the St. Gothard, and the Furca.

ALSACE-LORRAINE, or **ELSASS-LOTHRINGEN,** a German imperial province lying along the left bank of the Rhine, and between the Moselle and the Saar, was ceded to France in 1648, and re-annexed to Germany by the treaty of Frankfort, which concluded the Franco-German war, 1871. It is a great wine producing country, and has important cotton manufactures. The chief towns are *Strasburg*, one of the strongest fortresses in the world, and containing one of the finest cathedrals in Europe, *Metz*, a strong fortress, and *Mühlhausen*, a manufacturing town.

ALSATIA, Whitefriars, London. The debtor's sanctuary which formerly existed here became the haunt of bad characters, and was abolished in 1697.

AL'TAI MOUNTAINS ("Gold Mountains"). An Asiatic range forming for some distance the boundary between Siberia and the Chinese Empire. Silver and copper are abundant on the Russian side of the chain, and gold, lead, zinc, and iron are also worked.

ALTO'NA, an important town and port in the Prussian province Schleswig-Holstein, on the right bank of the Elbe, immediately opposite Hamburg.

ALTORF, the cradle of Swiss liberty, stands on the right bank of the Reuss, at its entrance into Lake Lucerne, and is the capital of the canton of Uri. It was the scene of many of the exploits of William Tell, of whom a colossal statue was erected in the town in 1861.

ALTRUISM, the opposite of egoism, or selfishness, a word coined by Comte from the Italian *altrui*, "others," and introduced into English by his positivist disciples.

ALUM, one of a series of double salts which the sulphate of aluminium forms with alkaline sulphates. The most common is potash alum, which is composed of the sulphates of aluminium and potassium, and may be prepared by dissolving the two sulphates together, and allowing the compound salt to crystallize out. It is produced on an extensive scale near Whitby, in Yorkshire, and in Glasgow. It is employed as an astringent in medicine, and has, in addition, many commercial uses. Thus it is employed in the manufacture of fast colours, as a mordant in dyeing, in calico printing, paper making, and bookbinding. Other common alums are soda alum, and ammonia alum, the latter of which is extensively prepared from the ammoniacal waste of gas works, and is used as a substitute for potash alum.

ALUM'BAGH ("Beauty of the Soul"), a domain about four miles south of Lucknow, and containing a palace, mosque, temple, and beautiful gardens. On the outbreak of the Indian Mutiny it was converted by the rebels into a fort, but was captured by a small British force, who held it until finally relieved in March, 1858. Sir Henry Havelock was buried within the grounds.

ALU'MINA, the oxide of aluminium, occurs native as the ruby, sapphire, and amethyst, and, in a less pure state, as emery.

ALUMIN'IUM is one of the most abundant of all the elements, though it has never been found in a pure state. It occurs combined with silicon and oxygen in many of the older rocks which form the crust of the earth, and in clay and slate. It is a tin-white metal, very ductile and malleable, and is not tarnished by the air under ordinary circumstances. It is now manufactured on a large scale, and its lightness and lustre have led to its being used for the metallic portions of optical instruments, and for ornamental work. Did it admit of being soldered its usefulness would be still greater. *Aluminium bronze*, an alloy of one part aluminium and nine parts copper, resembles gold in appearance, takes a high polish, tarnishes but little when exposed to the air, and is as tenacious as steel. On account of these valuable properties it is used for a variety of purposes.

ALVA, DUKE OF, *b.* 1508, *d.* 1582, a famous general during the reign of Charles V. and Philip of Spain. It is said he never lost a battle, and was never taken by surprise. As the viceroy of Philip in the Netherlands, 1567–73, he acted with extreme cruelty, and was responsible for the execution of 18,000 men.

ALVERSTONE, (Richard Everard Webster), **LORD,** *b.* 1842, educated at King's College and Charterhouse Schools, gained honours both in Mathematics and Classics at Cambridge. Becoming a barrister, he soon made his mark, and in 1885 was appointed Attorney-General, and in 1900 Lord Chief Justice of England. He represented the "Times" before the Parnell Commission, and Britain at the Behring Sea Arbitration of 1893. He has done much to promote athletics.

AM'ADIS OF GAUL. In the Middle Ages, Amadis was a favourite name for a hero of romance, and many stories of chivalry and love had an Amadis for their chief character. The origin of the romance of Amadis of Gaul is uncertain. It tells how he, a prince of Gaul, sailed to Scotland, and afterwards travelled far, having various adventures. It had a great vogue in Spain, Italy, and France in the 15th and succeeding centuries.

AMALGAM, a combination of some metal with mercury, formed by direct combination of the two metals. Thus, if silver and gold come in contact with mercury, they at once dissolve and unite with it. This fact is made great use of in silver and gold mining. The back of our mirrors is an amalgam of tin. The constituents of an amalgam can be readily separated again.

AM'AZON, the largest river in the world, 4,000 miles in length, rises in the Andes, and flows through Brazil into the Atlantic Ocean. Its basin is nearly as large as Europe, and it receives an immense number of tributaries, many of which exceed a thousand miles in length, The two chief are the Madeira, 2,000 miles long, and the Rio Negro, 1,400 miles. Its mouth is 180 miles wide, and its current is felt 150 miles out at sea. The great rainfall, combined with a high temperature, renders the Amazon basin one of the most productive regions of the globe.

AMAZONS, according to Greek mythology, were a community of women warriors, who permitted no man to dwell among them. They killed their male offspring, or sent them to their fathers among the neighbouring nations, and educated the females to war. They are said to have cut off the right breast so that it should not impede them in the use of the bow. A force of amazons under their queen, Hippolyta, was vanquished by Hercules, and another, whose queen was slain by Achilles, assisted the Trojans against the Greeks.

AMBER, a substance found in great abundance on the German coast of the Baltic Sea, especially after a storm. It is believed to be the solidified resin of extinct coniferous trees, sometimes enclosing small insects, pine-needles, etc.

AMBERGRIS is a fatty material obtained from the alimentary canal of the cachalot whale, and consists of the half digested bodies of the cuttlefish, on which the whale feeds. It is used in perfumery.

AMBLYOPIA is a term denoting dimness of sight.

AMBLYOPSIS, a kind of fish found in the celebrated Mammoth Cave of Kentucky. Its chief interest lies in the light it sheds on the question of how environment affects development; its eyes

having, in the lapse of ages, practically disappeared, while its organs of hearing and feeling have correspondingly developed.

AMBOYNA, the most important of the Moluccas, or Spice Islands, in the East Indies, has long been famous for the cultivation of cloves. The Dutch took it in 1605 from the Portuguese, and have held it ever since, except from 1810 to 1814. The massacre of the British here in 1625 was a treacherous act. Amboyna, the capital (population 10,000), has a good harbour. Cloves, sago, mango, timber and cocoa-nuts are the chief products.

AMBROSE, SAINT, Bishop of Milan, and one of the Fathers of the Latin Church, was a strong opponent of the heresy of Arius. He excluded the Emperor Theodosius from his church on account of the massacre of the rebellious Thessalonians, and imposed a severe penance upon him, extending over a period of eight months.

AMBROSIA, the food of the gods. When given to favoured mortals, it gave them immortal beauty. It was also used as an unguent, whence we speak of Jove's ambrosial locks. Hence the adjective "ambrosial" may mean delicately flavoured, *or* delicately perfumed, according as the food or the unguent is referred to.

AMBRY or **ALMERY,** (1) In churches the niche or cupboard formed in the thickness of a wall to contain the altar vessels and other valuables. (2) In dwelling-houses, a chest for keeping plate, etc.

AMBULANCE, a word of French origin, sometimes loosely used in England as the name of a carriage for the conveyance of injured persons, but more properly applied to the whole of the arrangements made for the care of the sick and wounded in war time. The system includes *base hospitals*, placed in healthy situations at a distance from the seat of hostilities; *field hospitals* which move with the army, and are fixed a few miles in its rear, and on the line of communications; *bearer-companies*, and all the necessary appliances for moving the wounded with as little discomfort as possible. A staff of surgeons, dressers, nurses, and attendants is attached to every hospital, and all have an equipment of modern appliances, including the X-ray apparatus for tracing the course and locating the exact position of a bullet. The bearer companies follow the fighting line closely, and convey the wounded as speedily as possible out of the zone of fire, beyond which they receive such treatment as may be given on the actual field. The next movement is to the field hospital, and from thence serious cases are conveyed by trains of specially constructed carriages, or by specially built waggons, to the base hospital. The organisation was completed in the Boer war, by the provision of *hospital ships* and *convalescent homes*.

Accidents are fairly frequent in busy thoroughfares, in factories, and on railways. To spread a knowledge of how "first-aid" may be intelligently rendered in such cases, the St. John's Ambulance Association was founded in London in 1878, and the St. Andrew's Ambulance Society in 1882. Lectures are given and examinations held at centres in all parts of the country, and thousands, including the police of several of the larger towns, have availed themselves of the opportunities of making themselves of service to their fellows.

AMERICA, or the "New World," stretches through four zones, for a distance of more than 9,000 miles from north to south. It consists of two immense triangular masses of land, each narrowing towards the south, joined by the Isthmus of Panama, which is but 35 miles across. The out-standing physical features of the continent are the lofty mountain ranges, which, throughout its whole length, follow the west coast at varying distances, and contain many volcanic peaks; the extensive plains, and the gigantic rivers, to which, in North America, may be added numerous lakes of immense area.

AMERICA CUP. a cup given by the Royal Yacht Squadron in 1851, in order to afford the New York yacht "America" a chance of competing against English yachts. With a little luck she won, and her spirited owner made the prize a perpetual challenge cup for the yachts of all nations. Many English sportsmen, especially Sir Thomas Lipton, have since tried to win it back, but in vain.

AMERICA, DISCOVERY OF. Danish, Norwegian, and Icelandic manuscripts show that Scandinavian navigators reached and explored portions of the mainland of North America as early as the tenth century, and that a settlement of Danes existed in Greenland in 1266. Twenty years later Icelandic missionaries visited Newfoundland. These facts were unknown to Christopher Columbus and his contemporaries, and to the Genoese sailor is ascribed the honour of the discovery of the "New World." Aided by Spain, he set out in 1492 to find a sea-route to the East Indies. He first sighted Hayling Island, and afterwards discovered San Salvador, Hayti, Cuba, and other West Indian Islands, a name given to the group by Columbus from his supposing they were in the neighbourhood of India. On a second voyage he visited Jamaica, and on a third discovered Trinidad, and surveyed a portion of the northern coast of South America. Other intrepid explorers sailed westward. In 1497 an English vessel, commanded by Giovanni Cabot and his son Sebastian, Venetians settled in Bristol, explored a portion of the coast of North America, and a year later Sebastian visited Newfoundland. The first to publish an account of the discoveries was *Amerigo Vespucci*, and the land, of which he was supposed to be the discoverer, came to be called by his name. The first settlement on the mainland was made by Spain, on the Peninsula of Florida, 1512. The Spaniards were also first in conquest. Mexico was subdued by *Cortez*, and Peru by *Pizarro*. When these conquests became known, Francis I. of France sent out an expedition which surveyed more than 2,000 miles of the coast of North America, and *Jacques Cartier* sailed up the St. Lawrence almost to the site of Montreal. In 1520, *Magellan* a Portuguese, entered the Pacific Coast by sailing through the Strait which bears his name. More than two centuries elapsed before *Behring*, a Dane in command of a Russian expedition sent out by Peter the Great in 1728, by sailing through Behring's Strait, proved the separation of America from Asia; while the existence of a "North West-Passage" between the Atlantic and Pacific Oceans, was only definitely settled by *Sir Robert M'Clure* in 1850.

AMERICANISMS, words or phrases current in the United States, but not recognised as correct English on this side of the Atlantic. Under this heading we include first the words current in both countries before the separation in 1783, but which have since become obsolete in England, or have lost in England the meaning they now have in the States; and secondly, new words introduced into American speech since that event, but not yet naturalised in England. Thus, of the first class we may mention:—*chore*, little job or errand; *sick*, meaning ill; *creek*, small stream or river; *deck*, a pack of cards; *fall*, autumn. The second class, which of course grows every day, consists of words adopted from the foreign element or from Europe to meet a real need, or manufactured from Greek or Latin for that purpose: *baggage* is American for luggage; *elevator*, for lift; *section*, for district; *locate*, for place; *exposition*, for exhibition. Some of these Americanisms are puzzling to the Englishman, as they consist of common words used in a sense to which he is quite unaccustomed. Thus a German is called a *Dutchman*, the guard of a train is the *conductor*, the engine driver is the *engineer*, the servant is the *help*, and *candy* means sweetmeat of any kind.

The following list of every-day words may be useful: *Bee*, an assembly of persons for the joint performance of some task belonging to an individual, as an *apple-bee*, to peel and core apples for drying; *biscuit*, hot roll; *bug*, an insect; *carom*, cannon (at billiards); *the cars*, a train; *clerk*, shopman; *cracker*, biscuit; *cuspidor*, spittoon; *depôt*, railway station; *dry goods*, drapery, dress stuff; *gums*, overshoes, goloshes; *lunch*, any slight, hasty meal; *mail*, to post (letters); *notions*, small things; *recitation*, lesson, or lecture; *railway*, tramway; *rubbers*, overshoes; *stage*, stage-coach; *store*, shop; *ship*, to send by train (as well as ship); *vine*, any climbing plant; *wagon*, carriage.

AMERICA, NORTH, area about 8 million square miles, extends from the Arctic Circle to well within the Tropics. The east coast is deeply indented, while the west is comparatively regular. The *Rocky Mountains* run almost parallel to the west coast throughout its whole length, and a range of less elevation, the *Appalachian System*, is found in the east. Between the two is an immense plain, stretching from the Arctic Ocean to the Gulf of Mexico, reaching its greatest elevation, "the Height of Land," along the fiftieth parallel of latitude, and on the west, merging into a sloping table-land which leads to the foot hills of the Rockies. Most of the plain consists of undulating grass-covered prairie land, but portions are well-timbered. The rivers are among the largest in the world. The Mackenzie flows into the Arctic Ocean, the Nelson into Hudson Bay, the St. Lawrence into the Atlantic, and the Mississippi and the Rio Grande del Norte into the Gulf of Mexico. Few rivers of importance flow westward. The chief are the Yukon, flowing into Behring Sea, the Fraser, and the Columbia.

The lakes include many of the largest sheets of fresh water on the globe. The Mackenzie basin contains Lake Athabasca, Great Bear Lake, and Great Slave Lake; Lakes Manitoba and Winnipeg are drained by the Nelson; and Superior, Michigan, Huron, Erie, and Ontario swell the volume of the St. Lawrence. The Great Salt Lake has no effluent.

American Indians form but a small proportion of the inhabitants, who mostly consist of the descendants of European emigrants. French is chiefly spoken in the province of Quebec; English for the most part in the rest of Canada and the United States; Spanish in Mexico, Central America, and many of the West Indian Islands.

AMERICA, SOUTH, area about 7 million square miles, is a compact mass of land in the shape of a right angled triangle, three-fourths of which lies within the Tropics. Few inlets are found on its coast, but the enormous amount of river navigation compensates for the deficiency. The giant range of the Andes extends from the Isthmus of Panama to Cape Horn, keeping close to the west coast, and ranges of lower elevation are found in the east; but South America is pre-

eminently the continent of plains. These may be considered in connection with the three chief rivers, the Orinoco, the Amazon and the La Plata or Plate. *The Llanos* of the Orinoco are almost level, a desert in the dry season, but in the wet season affording pasturage for troops of horses and herds of cattle. *The Selvas* of the Amazon valley form an impenetrable forest, the largest in the world, which provides a greater variety of trees than is found elsewhere. The *Pampas* are wide grassy plains in the basin of the Parana which support great herds of horses and wild cattle. The *Desert of Attacama*, along the coast of Chile and Peru, is a rainless region.

Whites, generally Spaniards or of Spanish descent, form about one-third of the population. With the exception of Guiana, which consists of British, French, and Dutch possessions, the land is divided among a number of republics, the largest of which are Brazil, Argentina, Bolivia, Peru, Colombia, and Venezuela.

There are few islands, the chief groups being that of Tierra del Fuego in the extreme south, and the Falkland Islands, about 250 miles to the north-east, belonging to Britain.

AMERICAN CIVIL WAR, THE, arose principally out of disputes between the Northern and Southern States, on the question of Negro slavery. The Southern States favoured the extension of the area in which slaves were held, while the Northern States resolutely opposed such extension, and many people advocated the entire abolition of the system. When, in the autumn of 1860, it became clear that the northern States would carry the presidential elections, South Carolina formally seceded from the Union, and was soon joined by ten other States. After the election of Abraham Lincoln, the seceding States formed themselves into the Southern Confederation, February 4th, 1861, and elected Jefferson Davis as their president. A large army was soon organised to defend the independence of the new confederation, but the remaining States, under the name of the Federal States, resolved to maintain the Union at any cost. A war went on with varying success during the years 1861–64; but in April, 1865, Lee, the Confederate commander-in-chief, surrendered with all his men, and the other Confederate generals soon followed his example. At the end of the war every slave in the United States found himself free, President Lincoln having proclaimed the total and unconditional abolition of slavery.

AMERICAN INDIANS, the name usually given to the various tribes who peopled the New World at the time of its discovery, and to their descendants. The term "Indian" is a mistake, and arose from the error of Columbus and other early explorers, who thought the newly-discovered land near India. The various races are characterised by a copper coloured skin, lank black hair, high cheek bones, long deep set eyes, and prominent noses. They vary in stature and physical development. The finest specimens are found among the Patagonians of South America, and the Iroquois, Pawnees, and Sioux of the United States and Canada. When the whole country was at their disposal they were clever hunters, keen observers of nature and natural phenomena, brave warriors, capable of enduring great hardships, or any form of torture, without murmuring, but cruel to their prisoners, without consideration of age or sex. Many in North America are still in a semi-civilised condition. In the United States they dwell in portions of land set apart for them, known as "reservations." Their numbers are estimated with difficulty. In North America they do not exceed ten millions, and the number is decreasing; in South America there are probably seven millions, most of whom profess Christianity.

AMERICAN WAR OF INDEPENDENCE, 1775–1783. The Seven Years' War had been waged by Britain principally for the protection of her American colonies, and, at its close, it was necessary to maintain a protecting army of 10,000 men in America. It was felt that the colonists ought to bear their share of the burden of additional taxation, and, in 1764, Grenville, the Prime Minister, imposed duties on several articles of American trade. The colonists, while admitting their liability to be taxed, maintained that the duties should be imposed by their own colonial parliaments, and resolved not to pay. The king, supported by Parliament, refused their demands, and at length both sides prepared for war. George Washington was appointed commander-in-chief of the colonial forces to be raised. Before he took up his command, the British won a victory at Bunker's Hill (1775). The colonists still professed loyalty to the crown, and sent to the king a petition known as the "Olive Branch." This having failed in its object, the colonists drew up a formal *Declaration of Independence*, in which they declared themselves a Republic, with the title of the United States of America, July 4th, 1776. War now began in earnest, and lasted with varying fortune five years. The end came with the surrender of Cornwallis and his army at Yorktown, in 1781. By the *Treaty of Versailles*, 1783, England acknowledged the independence of the United States.

AMER'IGO VESPUCCI, a Florentine gentleman who, from 1499–1505, visited the New World four times, first under the auspices of Spain, and afterwards of Portugal. He was the first to publish an account of the discoveries. Portions of this work were translated into German, and many editions were printed, a circumstance which is said to have led geographical writers to give his name to the American continent.

AMETHYST, a precious stone of a violet or purple colour. It is a crystalline form of alumina, the colour being due to traces of metallic oxides, and is extremely hard. In Ancient Greece it was worn round the neck to prevent intoxication; hence the name, which means *unintoxicated*. The most valuable amethysts come from India, Ceylon, and Brazil, but the mineral is also found in Europe.

AMHERST, GENERAL, *b.* 1717, *d.* 1797, played an important part in the acquisition of Canada. In 1758 he assisted in the capture of *Louisberg*, which led to the submission of *Cape Breton Island* and *Prince Edward's Island*. The next year he led an expedition which was to reduce *Ticonderoga*, and then descend the St. Lawrence to assist Wolfe against Quebec. He accomplished the former, but was too late to form a junction with Wolfe. In 1760 he invested Montreal, and compelled the governor to capitulate, on condition that the French officers and soldiers should be sent home, and take no further part in the war. This left the English in possession of the whole of Canada.

AMIENS, on the river Somme, and on the railway from Boulogne to Paris, the old capital of Picardy, was the birth-place of Peter the Hermit. Its richly decorated cathedral, commenced in 1220, is a masterpiece of Gothic architecture.

AMIENS, TREATY OF, between England, France, Spain, and Holland, ended the War of the French Revolution, 1802. England restored to their former holders all her conquests during the war, except Trinidad and Ceylon; and France agreed to evacuate Naples and the Papal States.

AM'MERGAU. See *Ober-Ammergau*.

AMMON, an Egyptian deity, identified by the Greeks with Zeus, and by the Romans with Jupiter, whose worship spread over the whole of Egypt and parts of North Africa and Greece. He is represented as a ram, or as a human being with a ram's head or horns.

AMMONIA is a colourless, gaseous compound of nitrogen and hydrogen, having a powerfully pungent smell, by means of which it can be readily recognised. It is lighter than air and extremely soluble in water; the solution in water forms the liquid ammonia of the chemist. Ammonia is strongly alkaline, and unites with acids to form the various salts of ammonia. It is produced in the decomposition of organic matter containing nitrogen and hydrogen, and, for this reason, it is present in the air, but in small quantities, and usually in the form of the carbonate. The "ammoniacal liquor" of the gas works is now the source of all ammonia salts for commercial purposes.

AMMONITES. A genus of fossil shells, so named from their resemblance to the twisted horns in the representations of the god Ammon. The shells were chambered. Above two hundred species have been enumerated, varying in size, the largest reaching a diameter of from three to four feet.

AMOK (or *amuck*), a Malay word meaning "engaging furiously in battle"; only used in the phrase "to run amok," signifying to rush through the streets striking indiscriminately at the passers-by, an act not uncommon among the Malays when under the influence of "bhang" or opium.

AMOY, a seaport town of China, on a small island of the same name in the Straits of Fokien, possesses one of the finest harbours in the world. It was one of the ports thrown open to foreigners by the treaty of 1842, and now has a considerable trade, exporting tea and sugar, and importing opium and European goods.

AMPÈRE, the unit of measure of the strength of an electric current.

AMPÈRE, ANDRÉ, *b.* at Lyons, 1775. *d.* at Marseilles, 1836. A famous French mathematician and scientist, who distinguished himself by the application of mathematical analysis to investigations relating to electricity, magnetism, and light, and by his researches in electrodynamics, on which subject he published three separate works. He showed the connection between electricity and magnetism, and in 1821 pointed out the possibility of the construction of the electric telegraph.

AMPHIB'IA, (Gr. "having a double life"), vertebrate animals which breathe by means of gills during the process of development, but possess lungs in the adult stage. The Amphibia are arranged in four orders. In the first the body is snake-like, and without limbs, as seen in the blind worms of the Tropics; in the second, of which the newt is a type, the tail of the embryo persists throughout life; the third, which includes frogs and toads, possess neither tail nor gills when fully developed; the fourth order is extinct. In all existing species the young are produced from eggs, and all, at first, possess the form and organs of fish.

AMPHITHEATRE, a roofless building erected by the Romans for the purpose of gladiatorial combats and fights of wild beasts. The building was elliptical in

form. The central open space was the *Arena*, and was the scene of the various contests. Running round this were the vaults in which the wild animals were confined, and above these rose the gallery, with tiers of seats, and radiating gangways, which permitted easy access to all parts. The lower tiers were reserved for the senators and judges. Almost every important Roman colony bears indications of the existence of an amphitheatre. The largest is the *Coliseum* at Rome, begun by Vespasian and completed by his son Titus. The remains cover more than five acres. The second in size is the one at Verona, in which the whole of the internal architecture is well preserved, including the rows of concentric seats and the steps leading to them.

AMPHITRI'TE (tri-te), in classical mythology, daughter of Oceanus, and wife of Poseidon. She is represented as riding in a chariot of shells drawn by Tritons, or on a dolphin. The name is also used to denote the sea itself.

AMPHIT'RYON, king of Thebes. He avenged the deaths of the sons of Electryon, and in return received Alcmene, the daughter of the latter, in marriage. Zeus is said to have assumed his form in order to gain admission to his home, a story which has formed the basis of the plots of comedies by Molière and others.

AMRITSAR or **UMRITSIR,** the holy city of the Sikhs in the Punjab, N.W. India. It contains the Lake of Immortality and the Golden Temple. The former is a pond in which the Sikhs immerse themselves to be purified of sin, and the latter one of the most beautiful buildings in the world. The city is a place of great trade, and manufactures shawls and silks.

AMSTERDAM, commercial capital of Holland, at junction of the Amstel with the Y. The greater part of the city is built on piles, the town hall standing on 13,000. Many of the piles have slipped, and, as a consequence, some of the walls of the houses are out of the perpendicular, leaning forward, backward, or to either side; and no two houses are exactly alike. Canals cut the city into ninety islands, connected by 300 bridges. Amsterdam was once the first port in the world, but its trade has declined. The special industry is diamond-cutting; population upwards of 500,000.

AM'ULET, anything worn as a charm, to protect the wearer against disease, accident, evil spirits, or witchcraft. The idea and name are both eastern in origin, but belief in the efficacy of amulets has existed among almost every nation during some period of its history. They were common among the early Egyptians, the Greeks, and the Romans. The Jews were especially addicted to their use; their phylacteries were not only badges of piety, but were frequently regarded by them as possessing protective powers. Many Christians of the first century wore amulets marked with a fish, and the council of Laodicea forbade the clergy either to wear or manufacture them, and their use was again condemned by the Church in the eighth century. The Turks and many Orientals still deem amulets of service, and belief in their powers has not altogether died out among ignorant and uneducated people in Western Europe.

AMUR or **AMOOR,** the "Great River," one of the largest rivers of Eastern Asia, flows into the sea of Okhotsk. It forms, for some distance, the boundary between Siberia and China, but its lower course is wholly in Russian territory. Its basin is fertile, and contains large forests and pasture lands. It is navigable for 2,500 miles, but the navigation is impeded by ice for eight months of the year.

ANABAPTISTS, a fanatical sect that arose in Saxony during the Reformation, and took an active part in the Peasants' War. They insisted on adult baptism and the rebaptism of all persons joining their community, and acknowledged neither civil nor ecclesiastical authority. Severe laws were passed against them, and many were put to death, but attempts at suppression and persecution served only to spread their peculiar doctrines, and disciples arose in Switzerland, the Netherlands, and in England, where several were executed from 1535–1540. In 1532, under the leadership of John Matthias and John Boccoldt, they took possession of the city of Münster in Westphalia, and were guilty of great excesses. Matthias was killed in repelling troops sent against him, and, on the recapture of the city, Boccoldt was tortured to death. The sect is still numerous in Holland, Switzerland, and parts of Germany, but contains several divisions, separated from one another by their ideas on Church discipline; though all are now characterised by habits of useful industry and purity of life. The name is sometimes wrongly applied to English Baptists, who have no historical connection with the Anabaptists.

ANACHRONISM, a violation of chronological order in a story, play, or picture. Shakespeare, in Troilus and Cressida, makes Hector quote Aristotle; the latter lived B.C. 384-322, and the former is a hero of the Trojan war, which certainly took place before 1000 B.C.

ANACOLUTHON. Refer to *Index*.

ANACONDA, the largest of the boa family, and the largest serpent found in the New World, attaining a length of 20 feet. It is destitute of poison fangs, crushes its victims by means of the powerful folds of its body, and, having dilatable jaws, swallows them whole. It lives in or near the water, chiefly in the forests of the Amazon, and in Guiana, swims well, and can remain submerged for a long time. Its skin is made into shoes, oil is procured from its fat, and the natives eat its flesh.

ANAC'REON, a famous Greek Lyric poet, *b.* at Teos about 560 B.C., *d.* 475 B.C. Some of his odes were translated into English by Moore and Cowley, but many of those usually ascribed to him are of later date and inferior workmanship.

AN'AGRAM, a word or sentence formed by rewriting the letters of another word or sentence in a different order, thus *deliver, reviled; heat, hate;* are simple forms of anagram. At one time the making of anagrams enjoyed a wide popularity.

AN'AKIM, a race of giants descended from Arba, who dwelt in the southern part of Canaan. Their chief city was Hebron, "the city of Arba," which became the possession of Caleb after he had succeeded in driving out the sons of Anak (Num. xiii., Josh. xv.)

AN'ALOGUE, a term used in anatomy to indicate an organ which performs the same function as another, though it differs from it in structure. In fish, the blood is purified by means of the *gills*, which have their analogue in the *lungs* of more highly organised creatures. The wings of birds and butterflies are also analogous, performing similar functions, but having nothing in common in their structure.

ANALYSIS is the separation of a substance or an idea into its component parts, and is the opposite of *synthesis*, which is the putting together of constituent parts to form a whole. Thus, by means of an electric current, pure water may be separated into its constituent gases, oxygen and hydrogen, or, by passing an electric spark through a mixture of the two gases, they may be made to combine to form water. Chemical analysis is concerned in discovering the elementary constituents which enter into the formation of various compounds, and the proportion in which they are combined.

ANALYST, PUBLIC, an officer, attached usually to a local authority, whose duty it is to analyse samples of food, drugs, or water submitted to him, particularly in reference to adulteration in the two former, and of impurities in the latter, and to determine the nature and quantity of such adulterations or impurities.

AN'ARCHISM (Gr. "without government") a term used to include the doctrines held by an extreme wing of socialists. They aim at the abolition of all forms of government, and the establishment of a social system based upon the absolute freedom of the individual. To attain these ends, the destruction of life and property is, in their opinion, justifiable.

ANATH'EMA, the Greek equivalent of a Hebrew word meaning *the thing devoted.* Such an object could not be redeemed; if inanimate, it became the property of the priests, and if living, it had to be sacrificed, human beings being in ancient times no exception, e.g., Jephthah's daughter (Judges xi. 31). Since, in heathen countries, offerings were also dedicated to the powers of evil, the word came to be used in the sense of *accursed*, and is usually so translated when appearing in the New Testament. In the Roman Catholic and Greek Churches, *Anathema* signifies the most serious form of excommunication, and was freely used in the Middle Ages.

ANATOLIA, i.e., Land of the Sunrise or Eastern Land, the Greek and modern name of Asia Minor, a peninsula as large as France, in the south-west of Asia. Its shores are washed by the Black Sea, the Archipelago, and the Levant. The country is a plateau, crossed by lofty mountain ranges, and produces cotton, opium, fruits, wine and silk. The population is of various races; the Turks govern, but the commerce and the professional work of the country are in the hands of Greeks and Armenians. The largest towns are Smyrna and Trebizond.

ANAXAG'ORAS, *b.* 500 B.C., *d.* 428 B.C.; a great Greek philosopher. He went early to Athens, then in the zenith of its glory, and acquired fame as a philosopher and teacher, having Pericles and Euripides among his pupils. It is curious to mark how nearly he anticipated the present "Atomic" theory of the constitution of matter.

ANCÆUS, a son of Neptune, killed by a boar.

ANCESTOR-WORSHIP. Refer to *Index*.

ANCHI'SES, the father of Æneas. He was rescued by his son from the flames of Troy, and accompanied him in his wanderings as far as Sicily, where he died.

ANCHORITE or **ANCHORET,** from a Greek word signifying "to withdraw"; a religious devotee who passed his life in a cell, or other secluded retreat, without communication with the rest of mankind. He differed from the *hermit* in never moving from his cell, while the hermit, though avoiding mankind, ranged abroad.

ANCHO'VY, a small fish of the herring family, usually four to six inches long, found abundantly in the Mediterranean, and also on the coasts of England, Holland, and France. They have to be salted as soon as caught, as the flesh soon spoils. They are usually caught at night, a light being displayed to attract them, when they are surrounded with nets.

ANCIENT MARINER, THE, one of the best poems of Samuel Taylor Coleridge. It describes the penalties a sailor was imagined to suffer for shooting an albatross.

ANCO'NA, a seaport of Italy, possessing one of the finest harbours on the Adriatic. The triumphal arch of white marble, still standing on the ancient quay, was erected by the Roman senate in honour of Trajan.

ANDALUSIA, a province in the south of Spain, slightly larger than Ireland, celebrated for its fertility and beauty of scenery. It produces large grain crops, fruits, and wines, and possesses the richest mines in Spain, many of which are worked by English companies. Huelva in the west, the chief mining centre, contains the Rio Tinto copper mines. The chief ports are Cadiz and Malaga. Seville, called by the Spaniards the "Queen of Andalusia," "the Enchantress," contains many beautiful Moorish buildings, and is celebrated for its bull fights and its tobacco factories. Granada, a very beautiful city, was the capital of the kingdom of the Moors, and was named by them the "Queen of Cities."

AN'DERMATT, a Swiss village and high valley in the Canton of Uri. The four chief Alpine roads converge here and make Andermatt one of the chief tourist centres of Switzerland.

ANDERSEN, HANS CHRISTIAN, a Danish poet, novelist, dramatist, and story writer, *b.* at Odense, 1805, *d.* 1875. His "Fairy Tales" have been translated into almost every European language, and have made him world famous.

ANDERSON, ELIZABETH GARRETT, *b.* 1836, was one of the pioneers in opening the doors of the medical profession to women; qualifying in 1865, she has for many years been in practice as a West-end physician, and till comparatively recently, was Dean of the London School of Medicine for Women.

ANDES, the most important mountain chain in South America, stretches from the Isthmus of Panama to Cape Horn, a distance of 4,500 miles. The name is probably derived from *Anta*, an Indian word meaning silver. The *North Andes* consists of three parallel chains, in which are crowded many of the loftiest peaks in America, most of them volcanoes, including Chimborazo, Antisana, and Cotopaxi. The two parallel chains of the *Central Andes* enclose lofty tablelands, separated by transverse ranges. The *Southern Andes* is a single chain, and contains the highest mountain in the New World, the volcanic peak of Aconcagua, 22,400 feet. This peak was ascended by Mr. R. Rankin, though deserted by his guides, in December, 1902. He passed the night in the open, at an elevation of 22,000 feet. Earthquake shocks are frequent throughout the whole of the Andes Range.

ANDRASSY, COUNT, a Hungarian statesman and diplomatist, *b.* 1823, *d.* 1890. He was exiled from 1848 to 1851, and became prime minister in 1867.

ANDRÉ, JOHN, *b.* in London, 1751. He was adjutant-general to the British forces in America during the War of Independence, and was appointed by General Clinton to carry on the negotiations with Arnold, who had offered to betray his command at West Point. Major André was captured when returning from an interview with the traitor, and shot as a spy, 1780. A monument to his memory was erected in Westminster Abbey.

ANDRÉE, SALOMON AUGUST, *b.* 1854, a Swedish engineer, who conceived the idea of reaching the North Pole by means of a balloon. With two others he started from Danes Island on the north-west corner of Spitzbergen, July 11, 1897. A pigeon, one of thirty-two he carried, was shot on July 22, and found to bear a message dated July 13, saying that all was well, and that they had travelled 187 miles in the two days. Since then no news has been received.

ANDREW, SAINT, the patron saint of Scotland, was a brother of Simon Peter, and a native of Bethsaida. He was a follower of John the Baptist, and became one of the first disciples of Christ. He is said to have been crucified at Patræ, in Achaia.

ANDREWES, LANCELOT, *b.* in London, 1555, *d.* 1626, an eminent English prelate, who occupied in succession the sees of Ely, Chichester, and Winchester. He was a member of the Hampton Court Conference, and one of the translators of the Authorised Version of the Bible.

AN'DROCLUS or **ANDROCLES,** a runaway Roman slave who, on his recapture, was condemned to the lions in the circus. The animal let loose against him proved to be the same from whose paw he had extracted a thorn, and with which he had lived during his brief period of liberty. The animal fawned upon him; the story became known, and the slave received his freedom and permission to lead the lion through the streets of Rome.

ANDROM'ACHE (a-che), the wife of Hector, and the noblest female character in the Iliad. She is the chief person in tragedies by Euripides and Racine.

ANDROM'EDA, a beautiful Ethiopian princess, who, on the demand of Neptune, was offered as a sacrifice to a sea-monster, because her mother Cassiopeia had declared she was as beautiful as the Nereids. She was discovered, chained to a rock, by Perseus, who slew the monster, liberated Andromeda, and claimed her as his wife.

ANEMOM'ETER, an instrument for determining the force and velocity of the wind.

ANEM'ONE, (o-ne), "the wind-flower," a plant belonging to the order, Ranunculaceæ. It is also the name, in zoology, of a sub-class of actinozoa, frequently found in rock pools around the coast. They may be watched expanding their sensitive petal-like tentacles in search of the materials that form their prey. Uncovered by the water, they contract into a rounded, firm, jelly-like mass, attached to rocks and stones by means of a flattened disc which acts like a sucker.

ANEROID, a form of barometer invented by M. Vidi in 1844. It consists of a small box of metal, exhausted of air, and made perfectly air-tight. Variations in air-pressure cause a slight movement inwards or outwards, of the thin metallic plate forming the top. The movement is conveyed to a system of levers and springs in the interior, and registered on a dial.

ANGEL. (1) A divine messenger. (2) A gold coin current in England from the reign of Edward IV. to the end of that of Charles I. The obverse side was stamped with the figure of Michael, the archangel, standing on a dragon, and piercing him through the mouth with a spear. Its value varied at different periods from 6s. 8d. to 10s.

ANGEL'IC DOCTOR, a popular name for Thomas Aquinas.

ANGEL'ICO, FRA, was an Italian painter of religious and ecclesiastical subjects, *b.* at Mugello in Tuscany, 1381, *d.* in Rome, 1455. His work, in the form of fresco painting, is to be found in all parts of Italy, but the finest examples are in the Convent of St. Mark at Florence.

AN'GELO, MICHAEL. See *Michel-Angelo.*

ANGELO, CASTLE OF SAINT, originally Hadrian's mausoleum at Rome; it has been converted into a fortress, and is connected with the Vatican quarter by the Pont Sant' Angelo.

ANGELUS, a bell rung in Roman Catholic countries at morn, noon, and sunset, to remind the faithful to recite the *Ave Maria*, as the angel's salutation to the Virgin Mary is called.

ANGEVIN LINE, the kings of England from Henry II. to Richard II. inclusive. They are also called the Plantagenet line. The name "Angevin" arose from Henry II. being the son of Geoffrey, Count of *Anjou*, who married Matilda, daughter of Henry I.

ANGLER, is a curious fish which lies concealed and entices its prey within reach of its capacious mouth by means of two lures. The lures are two tentacles situated on the head; these tentacles are kept in constant vibration and thus simulate small water creatures; when fish approach, however, they find out their mistake to their cost. In the depths of the ocean, below the level to which light penetrates, species of angler occur provided with lures tipped with phosphorescent organs, so as to attract attention in the dark. The name is derived from the habit, above mentioned, of angling for their prey.

ANGLES, a German tribe from Schleswig who took part with their neighbours, the Saxons and the Jutes, in the conquest of Britain, in the fifth century, and gave their name to England.

ANGLESEY or **ANGLESEA,** "the island of the Angles," is an island and county, separated from the mainland of Wales by the Menai Strait. Its area exceeds 180 square miles, and its population (1901 census) is 34,808. Beaumaris is the county town, but the largest is Holyhead, a packet station for Dublin.

ANGLESEY, (Henry Paget), **FIRST MARQUIS OF,** *b.* 1768, *d.* 1854; son of the Earl of Uxbridge, distinguished himself as a soldier. He led the British cavalry at the Battle of Waterloo, and contributed much to the victory. He had succeeded his father in 1812 as Earl of Uxbridge, and his new title was the reward of his services in the great battle. As Lord Lieutenant of Ireland he gained the affections of the Irish.

ANGLIA, EAST, a kingdom founded by the Angles in the east of England, comprising the counties of Cambridge, Norfolk and Suffolk, a district to which the name is still applied.

ANGLICAN CHURCH includes the Church of England and all other churches in communion with it, namely, the Episcopal Church in Scotland, the Disestablished Church of Ireland, the Protestant Episcopal Church in America, and the Anglican Churches in India and the Colonies. In these various churches there are nearly 300 acting bishops.

ANGLO-JAPANESE TREATY. The effect of the first treaty (1902) between England and Japan was undoubtedly to give Japan a "free hand" in her contest with Russia. The aim of the second, signed on August 12th, 1905, is the maintenance of the rights acquired by the two Countries in Asia, the territorial integrity of China, and equal opportunity to all nations in trading with China and Corea. Each party guarantees aid to the other in case of any existing right of theirs in Eastern Asia or India being attacked, and undertakes not to make any agreement with a third power without consulting the other. The treaty is to continue in force for ten years, and after nine years to be terminable on either party giving one year's notice.

ANGLOMANIA, a term much in use in France, Germany, and the United States to denote admiration and imitation of things English. Such a tendency was very marked in Germany in the 18th

century, in regard to English literature, and in France, just before the Revolution. in regard to English free institutions, and at the present day in regard to all kinds of outdoor sports.

ANGLOPHOBIA, a term much used in newspapers to denote the dislike and dread of England sometimes displayed by Continental nations. This feeling was very manifest during the last Boer War, especially in France, Holland, and Germany, and led occasionally to regrettable incidents.

ANGLO-SAXON, the language spoken and written in England from the time of the Teutonic settlements in the country in the fifth century, until the middle of the twelfth. It forms the basis of modern English, but differs from it in being more highly inflected, in the absence of any Latin element, in the use of words that have become obsolete, and a considerable variation in the orthography of others still in use.

ANGO'LA, a Portuguese possession on the West of Africa, to the south of the Congo. The country is very fertile, but is still undeveloped. Chief towns are St. Paul de Loando and Lobito-Bay.

ANGO'RA, a town in the centre of Anatolia, in a district celebrated for its animals with silky, long-haired coats, including goats, cats, dogs, and rabbits, The cloth made of the hair of the Angora goat is called *mohair.*

AN'GRA PEQ'UENA, a port on the west coast of Africa, north of the Orange River. It is a small town in German South-west Africa.

ANGUS, ancient name of Forfarshire.

ANILINE, a colourless, transparent, oily liquid, obtained from coal-tar and benzine. Since 1856 it has been extensively used in the manufacture of dyes, in Great Britain, France, and Germany.

ANIMAL'CULE, a general name still popularly applied to many forms of microscopic animal life, though it is not now used by zoologists in classifying animals.

ANIMISM. Refer to *Index.*

ANISEED. See *Med. Dict.*

ANJOU was, before the Revolution of 1789, a French province, out of which has been formed the modern department of Maine-et-Loire, and portions of two others. Anjou was a possession of the English kings from the reign of Henry II., 1154, to that of John, who lost it in 1204.

ANNAM, a French possession, three times as large as England and Wales, lying along the east coast of Indo-China in south-east Asia. It is densely populated, has a fertile soil, but, on account of the humid heat, the climate is unhealthy to Europeans. Teak, gum trees, and dye-woods are plentiful in the forests; sugar cane, cotton, and indigo are grown; and the mines produce gold, iron, tin, rubies, and sapphires. Hué, the chief town, was fortified by the French as early as 1801.

ANNAP'OLIS. (1) A sea-port of Nova Scotia, on the Bay of Fundy, dates from 1604. (2) The capital of Maryland, U.S.A. Its trade has declined owing to the rise of Baltimore.

ANNATES, or "First fruits," in ecclesiastical law denotes a sum paid by a person on his presentation to a church living, and formerly fixed at a year's income. For centuries this was claimed by the Pope. Henry VIII. annexed the payments to the crown, but Queen Anne restored them to the church by devoting the money to the benefit of the poorer clergy. The fund is now managed by the governors of "Queen Anne's Bounty."

ANNE BOLEYN, *b.* 1501, *d.* 1536, was the second wife of Henry VIII. and the mother of Queen Elizabeth. Though few have doubted her innocence, she was found guilty of adultery and executed. During the three years she was the wife of Henry she endeared herself to many of his subjects by her charitable works, by helping the Reformers, and by aiding in the circulation of the Scriptures.

ANNE OF CLEVES, the fourth wife of Henry VIII. was recommended to the king's notice by Thomas Cromwell. Her appearance was not what Holbein's portrait of her led him to expect; within six months of the marriage, parliament granted him a divorce. Anne received a pension, and a palace at Richmond, where she lived on friendly terms with the Court. She is said to have been patient, charitable, and religious; *d.* at Chelsea, 1557.

ANNE OF DENMARK, *b.* 1575, *d.* 1619, the consort of James I. of England, took but a small part in public affairs, was characterised mainly by extravagance, fondness for amusement, and frivolity.

ANNE, QUEEN, *b.* at Twickenham, 1664, *d.* 1714, was the second daughter of James II. of England, and the last of the Stuart sovereigns. She succeeded William of Orange in 1702. Her reign is characterised by the part the country played in the war of the Spanish Succession, the victories of Marlborough, and the number of men eminent in literature and science who flourished at the time. The queen's amiability of disposition gained her the title of "Good Queen Anne"; her family virtues were many, but she was lacking in energy, and was easily influenced by favourites, of whom the chief were the Duchess of Marlborough at the beginning of the reign, and Mrs. Masham towards the end.

ANNEALING is a process by which glass and many metals are rendered less brittle, and which consists in heating the object, and allowing it to cool slowly. In glass annealing, the vessels, when formed, are placed on iron trays and drawn slowly through ovens, the temperature of which is gradually raised almost to the point of fusion of glass, and then as gradually lowered, until the vessels may be taken out cold. The *tempering* of steel is another example of annealing. Metals worked by the hammer, rolled into plates, or drawn into wires, become brittle. This is remedied by annealing, and in some cases the process has to be many times repeated.

ANNUAL REGISTER, a series of volumes commenced in 1759 by a bookseller named Robert Dodsley, and continued to the present day. Each volume records the principal events of the past year, with an account of the proceedings of Parliament, and obituary notices of the distinguished persons who have died. Edmund Burke had a large share in some of the early volumes.

ANNUNCIATION, THE, the announcement of the Incarnation of Christ to the Virgin Mary by the angel Gabriel. The festival is kept on March 25th, commonly called *Lady Day.*

ANNUS MIRABILIS ("Year of wonders"), (1) A poem by Dryden, descriptive of the War with Holland and the Great Fire of London, 1666. (2) It is sometimes applied to the year 1759, which saw the fall of Quebec, the sea fight of Quiberon Bay, and many British victories in the East and West Indies.

ANODYNE, a remedy to relieve pain. See *Med. Dict.*

ANSELM, *b.* at Aosta in Piedmont, 1033, *d.* 1109, succeeded Lanfranc as Archbishop of Canterbury. During the greater part of his primacy he was engaged in quarrels with William Rufus and Henry I., the first being caused by the refusal of the king to restore to the Church the lands he had appropriated to himself; and the second by the Archbishop refusing to be invested by Henry, or to do the same homage as his predecessor had done.

ANSON, LORD, *b.* 1697, *d.* 1762, was a British naval officer who combined skill, intrepidity, and prudence. With a squadron of six vessels, inefficiently manned, he left England in September, 1740, to act against the Spaniards in the South Seas. He lost many men from scurvy, but secured a number of prizes, and reached Spithead by way of the Cape, in June, 1744, with one ship, the *Centurion,* having captured Spanish treasure to the amount of half a million sterling. Of the other vessels, two, much storm damaged, had returned to England previously.

ANSTEY, the *nom de plume* of Thomas Anstey Guthrie, *b.* at Kensington, 1856, and educated at King's College School, and at Cambridge. Trained for a barrister, he never practised, contenting himself till 1882 with short stories in magazines. In that year his "Vice Versa" made an immense hit, and has been followed by "The Tinted Venus," "The Brass Bottle," and other successes. His writings in Punch have been much admired, especially "Voces Populi" and "Baboo Jabberjee."

ANT, an insect possessing a more highly organised nervous system than any other animal of the same size, and distinguished for its intelligence and industry. Ants live in colonies composed of three sorts of individuals, the winged males and females, and the wingless workers. The latter prepare the nest, excavate galleries for the reception of the young, procure food, and wait upon the larvæ. They appear to have the power of communicating to one another the results of their observations, and may frequently be seen co-operating in the performance of a task that had proved too much for the strength of an individual. The European red ants attack other species, and carry off the workers to their own nests, where they detain them as slaves. Other species keep little insects called *aphides* or plant lice, to minister to their wants. These aphides have been called the *cows* of the ant. On being gently stroked with the antennæ of an ant, the aphis yields to it a drop of limpid liquid. The *Termites,* or *White Ants,* of tropical regions belong to a different order of insects. They build ant hills of extraordinary size and hardness. Their workers are divided into ordinary workers and *soldiers,* the latter being provided with very strong jaws, and thus adapted for protecting their community from the attacks of their enemies.

ANTARCTIC OCEAN, THE, lies round the South Pole, and from it radiate the Pacific, Indian, and Atlantic Oceans. It is supposed to contain the coldest parts of the earth, and sends out an immense number of icebergs. An intensely cold current, the Antarctic Drift Current, proceeds from it. The centre of the ocean is supposed to be occupied by a circular continent, named by Sir James Ross, *South Victoria.* This continent is larger than Australia, devoid of vegetation, and covered with perpetual snow. A lofty range of mountains has been seen, containing two volcanic peaks, Mt. Erebus, almost constantly active, and Mt. Terror, extinct. Three expeditions for scientific observations have visited the Antarctic in recent years, a German, a Swedish, and a British. The Swedish expedition of 1902 was commanded by Dr. Otto Nordenskiold. He took with him a movable house in which he and his followers spent twenty months of solitude. Speaking of the Antarctic winter, Nordenskiold has said:—"To be outside the house was an impossibility, for one could not proceed

against the wind, which took away one's breath, while sharp crystals of frozen snow stung one's face beyond endurance."

In August, 1901, the "Discovery" under the command of Captain Scott, proceeded due south from New Zealand, reached the Antarctic Continent in January, 1902, and explored the coast. Sledge expeditions penetrated to a point in 82° 17′ south latitude, which is 207 miles nearer the Pole than had been reached previously. In 1902, the relief ship "Morning" took out fresh supplies of food, and brought home invalids. In 1903 the "Morning" and the "Terra Nova" sailed with the intention of releasing the "Discovery" from the ice. They were successful in this, and the three vessels reached Lyttelton, New Zealand, on April 1st, 1904.

In 1908. Lieutenant Shackleton who had sailed under Captain Scott, headed another expedition. In October he left his ship the *Nimrod* for a sledge journey southwards with three comrades, four ponies, four sledges and food for 91 days. Within a month Scott's furthest south was passed. Ascending the glacier of a mountain to an altitude of 9.820 feet they came to a great inland plateau stretching southwards, and over this they travelled until they had reached 88° 23′ south, being thus within 112 miles of the Pole, January 9th, 1909. Reluctantly turning back they reached the *Nimrod*, March 4th. Seams of coal were seen in 85° south. The South Magnetic Pole was located in 72° 25′ south. The famous explorer is now Sir Ernest Shackleton. Another expedition has been organized by Captain Scott, who will sail south from New Zealand in the "Terra Nova."

ANT-EATERS, a family of mammals found chiefly in South America and South Africa. The American species is toothless, but the African has molar teeth. They have a small circular mouth, and a long cylindrical tongue, which is covered with a viscid secretion. The tongue is thrust into the ant-hills, and withdrawn covered with the insects, which are then swallowed.

ANTELOPES are animals closely allied to the sheep and the goat, and in many cases, notably in that of the chamois of the Alps, closely resembling the latter in appearance and habits. The limbs are slender and graceful, and the hoofs small and cloven. The horns differ from the antlers of deer in being persistent.

ANTENNÆ are sense organs attached to the head of many crustaceans and most insects. They consist of feeler-like processes, two or four in number, furnished with sensory hairs. Their function varies in different animals, being used for touch in some cases, for smell and hearing in addition in others, whilst in some of the smaller crustacea they are used as oars for swimming.

ANTHOL'OGY, the name given to a book containing an unconnected series of gems of thought, briefly and poetically expressed.

ANTHONY, SAINT, *b.* at Koma, in Upper Egypt, 251, *d.* 356, was the founder of monachism. He spent many years of his life in retirement in a lonely ruin, and strange stories of his temptations by fiends during this period, and of miracles worked by him, are related by Athanasius. Early in the fourth century several hermits united with him, and formed the first community of monks.

ANTHRACITE, also known as blind coal and glance coal, differs from the ordinary variety in that it contains but little hydrogen, in fact Welsh anthracite contains more than 94 per cent. of pure carbon. It is much more difficult to light than other coal, burns slowly and without flame, and is used where a smokeless fire is necessary. Large deposits occur in South Wales, near Kilkenny, in Ireland, and in parts of Scotland. but the most extensive beds are those of the Pennsylvania coal fields, U.S.A.

ANTHRAX, an infectious disease to which cattle, sheep, horses, and other animals are liable, due to the presence in the blood of a disease germ known as the *anthrax bacillus*. The disease is communicable to man through the poison entering the blood, and is popularly known as *wool sorter's disease* (which see in *Med. Dict.*)

ANTHRO'POID APES, literally, "man-like apes," comprise a small group of animals which approach man closely so far as their mere anatomy is concerned. At the present day they include the gorilla and chimpanzee of West Africa, the orang of Borneo, and the gibbons of Eastern Asia. Man presents certain peculiarities in his structure which enable him to stand erect. These peculiarities are shared by these apes to some extent, and a semi-erect posture is often adopted; the gibbon alone, however, commonly walks erect, balancing itself by the aid of its outstretched arms. The structure of the brain, especially in the orang, is remarkably human, but the ape's brain is far smaller. Believers in palmistry may be interested to know that the chief lines from which they infer so much are present also in the palm of the ape. The apes are fairly intelligent animals, but when compared with the lowest savage, they are hopelessly outclassed. If man and ape have ever had a common ancestor, it must have been in the remote past. Wallace still maintains that however true evolution may be in the animal and vegetable world, it required, in addition, a separate creative act to change an ape into a man.

ANTHROPOMOR'PHISM, the representation of the Deity under the form of man, and the ascription to God of human affections and passions. The Scriptures apply many terms to God which properly relate to human beings; thus we read of the hand, arm, eye, and ear of God, and of his forgetting or remembering. He is also represented as a richly attired king, seated upon a throne, surrounded by his attendants and messengers. The Greeks and Romans imagined their gods as possessing human forms, and differing from men in their immortality only. The Egyptians included the forms of animals, which they sometimes combined with those of men. The whole subject of anthropomorphism arises from the difficulty of forming conceptions of spiritual matters except by analogy from natural experiences.

ANTHROPOMETRY, the science which has for its object the systematic measurement of the height, girth, lung capacity, weight, muscular development, and other physical characteristics of the human body. Since the appointment by parliament of a committee to enquire into the alleged physical deterioration of English people, it has been suggested that an anthropometric census of the country should be taken, with the object of discovering districts and callings that fall below the average standard, so that efforts might be made to improve the physical well-being of the people concerned. In France, since 1880, a branch of anthropometry has been applied to the identification of criminals. A series of measurements is taken of every person sentenced for crime, and a record kept. The system has been much improved by the use of finger impressions, as suggested by M. Bertillon. See *Finger Prints*.

ANTICHRIST, a word meaning the enemy of the Messiah, and applied in the epistles of St. John to those who opposed the doctrine of the Incarnation. In the Apocalypse the enemy is spoken of as "the beast," which has been taken to represent the Roman Empire as the head of the heathen world. Many of the early reformers saw the rise of Antichrist in the increased power and ambition of the Papacy; and members of the Greek Church hold the same belief with regard to Mohammedanism.

ANTICLIMAX, the opposite of *climax*, which see.

ANTI-CORN LAW LEAGUE, a league formed in 1839 to promote agitation for the repeal of the Corn Laws, i.e., the laws imposing a tax on corn coming into this country. Its head-quarters were in Manchester, where some merchants had begun an association of the kind in 1838, but with the adhesion of Cobden, Bright, and Villiers, the League was formally constituted and so successfully worked that the Corn Laws were repealed in 1846.

ANTICYCLONE. See *Cyclone*.

ANTIG'ONE, (o-ne), was a daughter of a king of Thebes. She was condemned to be buried alive for having covered with earth the exposed body of her brother, contrary to the commands of the usurper Creon, but she committed suicide on hearing the sentence.

ANTI'GUA, the most important of the Leeward Antilles, is a British possession with an area of 108 square miles. The island possesses several good harbours, is very productive, and exports sugar and rum.

ANTILEGOM'ENA (Gr. *spoken against*), certain books of the New Testament not at first generally accepted. They are the Second Epistle of St. Peter, those of St. James and St. Jude, the Epistle to the Hebrews, the Second and Third Epistles of St. John, and the Revelation.

ANTILLES, the West Indian Archipelago, curving round from North America to South America, and enclosing the Caribbean Sea. The northern islands form the Greater Antilles; the eastern, which are divided into the Leeward Islands and the Windward Islands, are known as the Lesser Antilles.

AN'TIMONY is a bright, bluish-white, crystalline, brittle metal, which is found pure in many parts of the world, notably in Borneo. The chief sources of the metal are *stibnite*, or grey antimony ore, antimony bloom, or white antimony, and antimony ochre. The alloys of antimony are much used in the arts. In the act of solidifying from a molten condition the metal expands, and thus possesses the property of taking very fine and sharp castings. This valuable quality it imparts to its alloys, the most important of which are type metal, stereotype metal, and Britannia metal. As an ingredient of tartar-emetic it has figured in many poison trials.

ANTINO'MIANISM, "Against the law," a name first applied to the doctrines propounded by John Agricola, who, in a disputation at Wittenburg in 1537, maintained that, since faith in Jesus Christ is alone necessary to salvation, the observance of the moral law by Christians is unnecessary. He was strongly opposed by Luther and compelled to retract. Passages in the Epistles seem to show that there was a tendency to such a doctrine in the early church. Some of the Anabaptist sects held similar views, and in England, in 1648, severe laws were passed against all who professed such opinions.

AN'TIOCH, the ancient capital of Syria, on the left bank of the Orontes, 20 miles from the sea. Its position on the main road from west to east made it a city of considerable trade. Its splendour and extent led the ancients to name it "the Beautiful" and the "Queen of the East."

It became one of the chief seats of the Christian religion, and it was here the disciples were first called *Christians*. Ten church councils were held at Antioch in the third and fourth centuries.

ANTI'OCHUS EPIPH'ANES, (an-es), i.c., the "Illustrious," a surname adopted by himself, but his subjects, on account of his cruelty and tyranny, named him "Epimanes," the madman. He governed Syria from 175 to 164 B.C. His persecution of the Jews, and the defilement of the Temple at Jerusalem, by setting up therein an image of Jupiter, caused the revolt of the Maccabees. He died in a delirium at Tabæ, in Persia.

ANTIP'ATHY, "a feeling against," the aversion certain individuals have to things harmless in themselves or even agreeable to the majority of people. In some cases antipathies arise from habits, and may be overcome by the practice of contrary habits; but in others, they are due to peculiarities of constitution. Thus, symptoms of poisoning have immediately followed the eating of a perfectly wholesome form of food, when an individual has attempted to overcome an apparently unreasonable loathing to the particular article of diet. Shakespeare, in the Merchant of Venice, Act iv, Scene i., refers to the effect the sight of certain animals produces on some persons. Lord Roberts dislikes and fears cats and camels, and has also an aversion to blue stamps. Lord Rosebery is averse to pink, and the sight of a lady in a pink dress has caused him to lose the thread of his argument in a political speech.

ANTIPHON, "alternate singing," a sacred song sung by two parties, each answering the other. In the Roman Catholic Church it is applied particularly to the verse, first sung as a solo, and then repeated by the whole choir, after the two sides of the latter have sung the Psalm in alternate verses.

ANTIP'ODES (o-des) lit. means those who stand feet to feet, as people do who inhabit any two places on the earth that are diametrically opposite to each other, e.g., London and a small island to the south-west of New Zealand. Such places have a difference of twelve hours in their time, and their seasons are reversed, unless both places are situated on the equator.

ANTI-SEMITIC PARTY, THE. a political party in Russia in parts of Germany who are opposed to the Jews on account of the great influence they have exercised in national affairs. Such a party has recently arisen in France, and in the prosecution of Captain Dreyfus played an active part.

ANTISEPTICS. See *Med. Dict.*

ANTITOXIN. See *Med. Dict.*

ANTITYPE, the person in whom a prophetic type is fulfilled; thus Christ is said to be the antitype of Isaac, of the Brazen Serpent, and of the Paschal Lamb.

ANTLERS are the horns of deer. They are restricted to the male sex, except in the reindeer, and are borne by all species except the musk-deer. An antler is composed of bare dead bone. Each year it is shed, and a new outgrowth from the skull-bone beneath springs up, carrying up the skin with it, which is known as the *velvet*. When fully formed, the blood supply is cut off, the skin and the bone thus die, and the former peeling off in shreds, leaves the bone bare and insensitive. In many species the antlers are branched, each branch being termed a *tyne*. In these cases the antlers usually bear one pair of tynes more each year, so that the age of a stag can be judged from his antlers.

ANTONI'NUS. See *Marcus Aurelius.*

ANTONI'NUS PIUS, *b.* at Lavinium, near Rome, 86, *d.* 161, A.D. He was adopted by Hadrian, and succeeded him as emperor, 138. In private life he was simple in his habits, generous to the needy, and an admirer of virtue and wisdom. His rule was just and moderate; he suppressed the persecution of the Christians; and throughout his reign the empire enjoyed unbroken peace.

ANTONY, MARK, *b.* 83 B.C., *d.* 30 B.C., was a capable soldier and a strong supporter of Julius Cæsar. After the murder of the latter, he so roused the people by his funeral oration that the murderers, including Brutus and Cassius, were compelled to leave the city, and Antony became for a time the foremost man in Rome. He became Triumvir in the year 43 B.C., sharing the government of the empire with Lepidus and Octavius. He defeated Brutus and Cassius at Philippi, but, becoming enamoured of Cleopatra, he followed her to Alexandria. Octavius became sole ruler in Rome and prepared an expedition against Antony, whom he defeated in the naval battle of Actium, 31 B.C. Antony deserted his troops and fled with Cleopatra, and afterwards, on being falsely told that the queen was dead, he committed suicide by falling on his sword. Octavius became emperor as Augustus Cæsar, 27 B.C.

ANTONY AND CLEOPATRA, one of the most wonderful of Shakespeare's historical plays, the materials for which he gathered from a translation of Plutarch's life of Marcus Antonius, (Mark Antony.)

ANTRIM. A mountainous county in the province of Ulster, Ireland, having an area of upwards of 1,100 square miles, and a population exceeding 460,000, still increasing. The Giant's Causeway lies on the north coast, and there is some picturesque scenery in the interior. The staple manufactures are the weaving of linen and cotton goods, to which in Belfast, the largest town, must be added ship-building and tobacco.

ANTWERP, on the Scheldt, is the principal port of Belgium. In 1905 a scheme was adopted for extending the present shipping accommodation fourfold, at a cost of £10,000,000. It is a great place for diamond-cutting. It was the birthplace of Peter Paul Rubens, and the beautiful Gothic Cathedral contains that artist's masterpiece, "*The Descent from the Cross*"; population about 287,000.

AOSTA, a town of Italy, in Piedmont, in the midst of beautiful scenery, was the birthplace of Anselm. It contains several Roman remains, including a triumphal arch, a round tower, and an amphitheatre.

APE, a term used to distinguish the anthropoid or man-like monkeys from other members of the tribe. The apes include the Orangoutang, the Chimpanzee, the Gibbon, and the Gorilla, all of which are distinguished by the absence of a tail and of cheek pouches, and by the great relative length of the fore limbs.

APEL'LES, a celebrated Greek painter who flourished in the fourth century, B.C., and painted many portraits of Alexander the Great. His great work, "*Aphrodite Anadyomene*," represented the goddess (Venus) rising out of the sea.

AP'ENNINES, a spur of the Maritime Alps, which forms the back-bone of Italy, running through the whole of the peninsula, and sending out many minor spurs at right angles to the main chain. Monte Corno, the summit of a mass known as the "Great Rock of Italy," 9,600 feet, is the highest peak.

APHA'SIA. See *Med. Dict.*

APH'IDES, (i-des), or plant-lice, a family of insects which feed on the juices of plants by means of suctorial mouths. They are marvellously prolific, and many species commit extensive depredations on garden and farm crops. The family includes the phylloxera, the pest of the vineyard, the hop-fly, the American blight of the apple orchard, the green fly of the rose tree, and the cochineal and lac insects. A solution of quassia chips is used to destroy them.

APHO'NIA. See *Med. Dict.*

APH'ORISM, a sentence which expresses briefly and forcibly some moral truth or rule of life, as "All the world's a stage." "They also serve who only stand and wait."

APHRODI'TE, the Greek name of Venus, the goddess of love and beauty. A poetical myth represents her as being born from the sea foam. As the queen of beauty, she received from Paris the award of the golden apple.

APIS, the bull worshipped by the ancient Egyptians as the embodiment of Osiris, the god of the Nile. The chosen animal, which was not allowed to live more than twenty-five years, must be black, have a white triangular mark on the forehead, the figure of an eagle on the back, and a knot in the form of a beetle under the tongue, requirements which led to frauds on the part of the priests.

APOC'ALYPSE, the last book of the New Testament; also called "The Revelation of St. John the Divine." The authorship is generally attributed to the apostle St. John.

APOCALYPTIC WRITINGS, THE, a branch of literature which began in the second century, B.C., consisting of visions and symbolical images intended to portray impending events, which would, it was fervently believed, bring about the realisation of "the hope of Israel,"—the coming of the mighty Deliverer, the long wished-for Messiah. The model for this kind of literature was the book of Daniel.

APOC'RYPHA, (literally "hidden"), books whose authorship was obscure, and whose authority was unreliable—for authority mostly depended on authorship. *The Apocrypha* is a collection of fourteen books, enumerated in Article VI. of the Articles of Religion, and there accepted for "example of life and instruction of manners," but not used to "establish any doctrine." These books were composed in Greek by Jews of Alexandria, during the two centuries before our era, and incorporated with the Septuagint (the Alexandrine translation of the Hebrew O.T. into Greek), as a kind of appendix to it: still the Jews did not receive the Apocrypha as canonical. But the early Christian Fathers, as they mostly used the Septuagint, came not to distinguish its Apocryphal from its Canonical books, both kinds of books being admitted into the Vulgate or Latin translation. St. Augustine's undiscriminating acceptance of them became stereotyped in the church, and the Council of Trent, in 1546, pronounced the Apocrypha part of the Canon, while most of the Reformers repudiated it, and the Church of England, as usual, steered a middle course in accordance with primitive authority.

APOLLINA'RIANS, a sect who accepted the teaching of Apollinarius, bishop of Laodicea, 362 to 382, who denied the humanity of Christ, and held that the *Logos*—word of God—in him took the place of the human soul, and that his body was not composed of ordinary flesh and blood. The teaching was condemned as heretical by various councils, including the ecumenical council at Constantinople, 381.

APOLLINARIS, when genuine, water from a spring near Nauenahr, 25 miles from Coblentz.

APOLLO, called also *Phœbus*, was the god of the fine arts, and is reputed to have originated music, poetry, and oratory. When a few days old he destroyed with an arrow the serpent Python. Sculptors represented him as a young and handsome man holding a bow from which an arrow has just been discharged.

APOLLO BELVEDERE, an ancient statue of Apollo, discovered in the ruins of Antium in 1503, and now in the Belvedere Gallery of the Vatican. The statue, which exceeds seven feet in height, is considered one of the finest pieces of sculpture extant.

APOLLYON, the Greek name of the Hebrew *Abaddon*, the angel of the bottomless pit. In the "Pilgrim's Progress," Christian has a terrible combat with him.

APOLOGETICS is that branch of theology which seeks to prove the doctrines of Christianity, and defends them against the attacks of scepticism, infidelity, and opposing systems of philosophy.

AP'OLOGUE, "a novel story contrived to teach some moral truth." (Johnson.) The term is synonymous with fable.

AP'OPHTHEGM, a kind of *aphorism* (which see), being a short, pithy saying so framed as to arrest the attention; e.g., "It is as natural to die as to be born." Bacon's Essays abound in apophthegms.

APOS'TATE, a term applied to a person who, for any reason, renounces his opinions and practices and adopts others of an opposite character. It was originally applied to those who changed their religion, either by conviction or from unworthy motives. The Emperor Julian is surnamed *the Apostate*, because, though educated as a Christian, he preferred Paganism. The term is now sometimes employed for a person who changes his political views.

"A POSTERIO'RI" REASONING consists in reasoning *back* from effects to cause, or from a number of observed facts to the natural law on which they depend. Thus from the facts observed in regard to the tides, it is inferred that they are due to the combined action of sun and moon, in which action the latter is the chief factor.

APOSTLE OF FREE TRADE. See *Cobden, Richard.*

APOSTLE OF TEMPERANCE. See *Matthew, Theobald.*

APOSTLES' CREED. See *Creed.*

APOSTOL'IC COUNCIL, THE, was held at Jerusalem in 52 A.D., under the presidency of James, to determine how far Christian Gentiles were under the obligation of observing the Mosaic Law. See *Acts* xv.

APOSTOL'IC FATHERS, THE, were those teachers in the early Christian church who received their instruction in the faith from the Apostles. Portions of the writings of six of these are extant, viz., Barnabas, Clement of Rome, Ignatius of Antioch, Polycarp of Smyrna, Papias of Hierapolis, and Hermas.

APOSTOL'IC SUCCESSION, the doctrine of the transmission of ministerial powers from Christ to the Apostles, and, through them, from bishop to bishop in unbroken succession.

APOS'TROPHE, (o-phe), "a turning away from." (1) An invocation by name, during the course of a speech or narrative, e.g., "God of Battles: was ever a battle like this in the world before!" (2) A comma used to mark the elision of part of a word, as in e'er for ever, or the possessive case, as in man's disobedience.

APOTHEO'SIS, Gr. "a deification," the raising of a mortal to the ranks of the gods. Greek mythology gives many instances of this, and, among the Romans, Romulus was deified, and Cæsar Augustus and many of his successors were worshipped as gods after their death.

APPALACHIAN MOUNTAINS, a system of mountain ranges in the east of the United States, extending from Alabama in a north-easterly direction to the St. Lawrence. Coal and iron abound in parts of the system. The chief ranges are the Alleghanies, highest peak, Mount Mitchell, 6,088 feet, and the Blue mountains.

APPARITIONS are appearances in bodily form contrary to the known laws of nature. Some forms of apparitions are the creation of the "heat-oppressed brain." Of this type are the visions seen by mad people and by those suffering from delirium. In these cases, and also in the case of persons of a highly strung, nervous, or hysterical temperament, the heated imagination reproduces past feelings and impressions so vividly as to shut out, wholly or partly, the impressions of surrounding objects, and to create illusions which take their place. Many reputable persons have made statements that they have received visits from dead relatives or friends. In such cases, the time at which the apparition is seen frequently coincides with the time of the death of the individual. A belief in such apparitions has gained ground in recent years, and in 1882 the Society for Psychical Research was founded to enquire into these and all kindred phenomena.

APPENDICI'TIS, an inflammation of the vermiform appendix. The appendix is a small blind attachment to the large intestine, at the point where the small intestine enters the large, on the right side of the abdomen. A few days before the date fixed for his coronation, it was found that Edward VII. was suffering from appendicitis. The king was operated on by Sir Frederick Treves, and was sufficiently recovered to go through the ceremony of his coronation on August 9th. [See *Med. Dict.*]

AP'PIAN WAY, the oldest and most celebrated Roman road, leads from Rome to Brindisi, a distance of 350 miles. The portion as far as Capua was laid down by Appius Claudius, B.C. 312. From the perfection of its construction, it has been named the "queen of roads."

APPLES are cultivated in most civilised countries of the temperate zones, and now form a valuable article of commerce. The fruit is imported into Great Britain in considerable quantities, from Canada, the United States, the Continent of Europe, and from Australia and Tasmania, and, inasmuch as the seasons are reversed in the northern and southern hemispheres, a supply may be obtained throughout the year.

APRICOT, a fruit of the plum tribe, resembling a peach in appearance and flavour, but slightly smaller in size. It grows wild in abundance in parts of northern Africa, and is cultivated in the warmer countries of the temperate zones. In England the crops are precarious, owing to frosts in the early spring, when the trees are in blossom.

APRIL (*L. aperire* "to open"), so called probably because it is the month when the buds open. The observance of 1st April as "All-fools' day" seems to be widely spread.

"A PRIO'RI" REASONING consists in arguing from some accepted truth that certain consequences will follow. Thus as soon as it was proved that tides were due to the combined attraction of sun and moon, it might have been inferred—*before* it was actually verified—that the highest tides would occur when sun and moon pulled in the same direction, namely, at the time of new moon.

APSE, a semi-circular recess which terminates the choir or chancel of many cathedrals and churches. It corresponds to a similar recess, in which sat the presiding magistrate in a Roman Basilica. The apse is more common in the churches of Italy, France, and Germany than in England, but examples are to be seen in the cathedrals of Canterbury, Rochester, Peterborough, and Norwich, and in Westminster Abbey.

APSLEY HOUSE, the town residence of the Duke of Wellington at Hyde Park Corner. It was presented, in 1820, to the Great Duke as part of the national reward for his services.

AP'TERYX, "wingless," a running bird of the same class as the ostrich, nocturnal in its habits, peculiar to New Zealand. Its wings are rudimentary, its feathers hair-like, loose, and pendent, and it is destitute of a tail. It lays an egg of extraordinary size compared with its own size. Four species are known, two in North Island and two in South Island.

AQUA FORTIS. See *Nitric Acid.*

AQUÆ SOLIS, (*L.* "Waters of the sun,") the Roman name of Bath, Somersetshire. Extensive remains of the Roman baths have been discovered in recent times, and great modern baths, supplied from warm natural springs, erected near the site.

AQUARIUM, any vessel in which either marine or fresh water animals and plants are kept alive. At first it was simply a domestic toy. In 1872 a large building was opened at Brighton, where the public were able to watch various kinds of fish kept alive in large tanks fitted with glass fronts. This building was acquired by the Municipal Council late in 1901, and is now well stocked with fish. The Westminster Aquarium, now demolished, was of the same type. In their latest development, aquaria have become places for the scientific study of water species, and for the observation of the habits of fish used for food, with a view to the improvement of sea fisheries. The oldest aquarium of this kind is at Naples. The station of the Marine Biological Society at Plymouth is conducted on similar lines.

AQUEDUCT, an artificial channel for conveying water for the supply of towns, or for purposes of irrigation. Aqueducts supplying Rome were carried across valleys on rows of arcades supporting the waterway, and through hills and rocks by means of tunnels. Remains of such structures are also seen in many places that formed part of the Roman Empire. In Great Britain, aqueducts are usually constructed of concrete and brickwork, or of iron pipes. Among the best known are those supplying Manchester from Thirlmere, Liverpool from the river Vyrnwy in North Wales, and Glasgow from Loch Katrine. Aqueducts constructed of wood are met with in America and are called *Flumes.*

AQUEOUS ROCKS are rocks, such as chalk and the various limestones, sandstones, and slates, which owe their origin to the action of water or ice. They are usually stratified, and many kinds abound in fossil remains.

AQUI'NAS, THOMAS, surnamed the "Angelic Doctor," *b.* near Aquino, in Italy, 1225, *d.* 1274; a celebrated writer and lecturer on theology. His greatest work, "Summa Theologiæ," is still a standard authority in the Roman Catholic Church.

AQUITAINE, an ancient province in the south of France, comprising the modern departments of Dordogne, Lot, Aveyron, and part of Tarn-et-Garonne. From the reign of Henry II. to 1453 it was a possession of the English kings.

ARABESQUE, a Moorish ornamental frieze or border, consisting of plant forms, figures, foliage, flowers, and tendrils, but no human shapes, interlacing often in a most fantastic manner. Fine specimens are seen in the Alhambra and other Moorish palaces of Spain, and in some of the Spanish cathedrals.

ARABI PASHA, *b.* in Lower Egypt, 1839, was the leader of an insurrectionary movement in Egypt, in 1881. He armed the forts at Alexandria. These were bombarded by the British fleet, and Arabi was defeated by Sir Garnet Wolseley at Tel-el-Kebir. He pleaded guilty of rebellion, and was banished for life to Ceylon, but was permitted to return to Egypt in 1901.

ARABIA, a compact peninsula in the south-west of Asia, washed by the Red Sea and the Persian Gulf. Much of the country is rainless; there are extensive deserts, stony in the north, sandy in the south; rivers and lakes are altogether wanting, the climate being hot and dry. The country produces frankincense, myrrh and gum-arabic. Many of the people are nomadic Bedouins, living in tents, and moving from one camping ground to another. The principal towns are:—*Mecca*, the birth-place of Mohammed; *Medina*, containing the prophet's tomb; *Muscat*, a busy seaport, and *Mocha*, once famous for its coffee.

ARABIAN NIGHTS' ENTERTAINMENT, or the "Thousand and one Nights," a collection of Eastern tales, first made known in Europe in 1704, and since translated into most of the languages of the continent. The tales are said to have been told in portions, to her lord, by the Sultana Sheherazade. They give a vivid picture of Arab and Persian life, manners, customs, and character.

ARABIAN SEA, an extensive portion of the Indian Ocean, enclosed on three sides by the coasts of India, Persia and Arabia, and Africa. From Aden in the west to Bombay in the east is 1800 miles.

ARABIC, the language of the Arabs, which has contributed to English the words coffee, tariff, algebra, almanac, alcohol, zero, talisman, etc.

ARACH'NE, a Lydian maiden whom Athena changed into a spider because she had challenged her ability to weave as artistic a piece of work as she was engaged upon.

AR'AGO, FRANCOIS, *b.* 1786, *d.* 1853. An eminent French mathematician, astronomer, and physicist, made important discoveries in electricity, magnetism, and optics. He refused to take the oath of allegiance to Louis Napoleon, but was permitted to retain his office of director of the Paris Observatory.

AR'AGON, a province in the north-east of Spain, having an area of nearly 15,000 miles. Minerals are plentiful, but few mines are worked. The mountains abound in timber, and the forests shelter the bear and the wolf. The industries are unimportant.

ARAL, SEA OF, i.e., "Sea of Islands." A salt water lake, rather larger than the Irish Sea, in Russian Turkestan. It receives the rivers Sir and Amoo, but there is no effluent. Nevertheless the lake is shallow and its waters are drying up.

ARAM, EUGENE. See *Eugene Aram.*

ARAMA'IC, the language of the Aramæans or Syrians which became the language of trade and diplomacy in the neighbouring countries, supplanting Assyrian in Assyria and Hebrew in Palestine, being the common dialect there in the time of our Lord.

ARARAT, MOUNT, an isolated volcanic cone in Armenia, rising to a height of nearly 17,000 feet. The only recorded eruption took place in 1840. According to tradition, the mountain was the resting-place of the ark, and it is still known to the Persians as "Noah's Mountain."

ARAUCARIA, a genus of coniferous trees found in various parts of the Southern Hemisphere. The family includes the Chile pine, or monkey-puzzle, the Brazil pine, and the Moreton Bay pine.

ARBALEST, a crossbow introduced into England probably by the Normans. It consisted of a steel bow set in a shaft of wood, and was provided with a trigger. The arrows used were square-headed, and were known as *quarrels.*

ARBELA, now Arbil, a small town of Asiatic Turkey, about 40 miles east by south of Mosul. Here was fought, B.C. 331, the decisive battle by which Alexander overthrew the Persian power, and won for himself and his successors the Empire of the East. Alexander's army consisted of about 50,000 Greeks, who routed about a million Persians, and took booty amounting, it is said, to thirty million pounds.

ARBITRAGE. See *Commercial Dictionary.*

ARBITRATION, INTERNATIONAL, the settlement of differences between independent countries by referring the matter in dispute to selected persons, who pronounce judgment after hearing the evidence tendered by both sides, it being understood that the award must be in accordance with international law. Many efforts have been made to establish permanent arbitration courts, and, in 1873, a motion was carried in the House of Commons, that the Powers should be urged to agree to such an arrangement. On the suggestion of the Czar a peace conference was held at the Hague, in 1899, to which nineteen states sent delegates, and an international tribunal, known as the "Hague Court," was agreed to. Each State signing the convention had the power of nominating four persons of eminence in international law, who were willing to serve as arbitrators. In October, 1903, the French Ambassador and Lord Lansdowne, the British Foreign Secretary, signed an agreement, that questions of a judicial character, or relating to the interpretation of treaties, arising beween Great Britain and France, should be referred to the Hague Court. That tribunal met on November 13th, 1903, to consider matters in dispute between Venezuela on the one hand and England and other European powers on the other. There is a growing tendency in favour of referring international disputes to arbitration, as is shown by the fact that, during the three years ending 1903, more than fifty cases were so referred.

ARBLAY, MADAME D', *b.* at Lynn Regis, in Norfolk, 1752, *d.* at Bath, 1840. An English novelist, the writer of Evelina, Cecilia, Camilla, the Wanderer, and the Memoirs of her Father, Dr. Burney. Her husband, Count d'Arblay, was a French *émigré.*

ARBOR DAY, a day first set apart in Nebraska, U.S.A., in 1872, for tree-planting by school children to encourage the growth of trees in certain districts. The usage has now spread all over the States and Canada, though the same day is not adhered to by all. In 1886 Arbor Day was established in South Australia, and is now generally observed.

ARBOR VITÆ, (*L.* "Tree of Life") a genus of evergreen conifers allied to the cypress, natives of North America and Eastern Asia. The common arbor vitæ is frequently seen in our ornamental shrubberies.

ARBROATH or **ABERBROTHOCK,** i.e., Mouth of the Brothock, is a thriving manufacturing town and seaport in Forfarshire, Scotland. Twelve miles off the coast is the Bell Lighthouse, built on the Inchcape Rock.

ARBUTHNOT, JOHN, *b.* in Scotland, 1667, *d.* 1735; was one of the noted wits of Queen Anne's reign. Having gained his M.D. degree in his native country, he came to London, and soon gained notice both for his literary and scientific ability, and became physician to Queen Anne. Many of his humorous works were published anonymously, but he is, undoubtedly, the author of "Memoir of Martinus Scriblerus" and the "History of John Bull," as well as of some able scientific treatises.

ARCADIA, a tableland and mountainous district forming the heart of the Peloponnesus, and now called Tripolitza. The Arcadians were celebrated among the Greeks for simplicity of character, and are represented by the poets as leading an ideal, pastoral life, so that *Arcadian simplicity* has passed into a proverb. (2) A pastoral romance by Sir Philip Sidney.

ARC DE TRIOMPHE DE L'ETOILE, a splendid triumphal arch standing in the centre of the Place de l'Etoile, Paris. It is dedicated to the glories of the French army, and is adorned by sculptures representing battle scenes and personages connected with French military history.

ARCHÆOL'OGY, the systematic study of antiquities, and the weaving of the earliest history of nations and peoples from the remains of buildings, burial places, implements, utensils, and ornaments belonging to periods of which we have few or no written records.

ARCHÆOPTERYX is the most primitive bird known. It is found fossilised in the Solenhofen slates. Resembling a bird in the possession of feathers and in its general structure, it resembles a reptile in the possession of teeth and of a long bony tail. It is thought that birds are descended from reptiles, and that this species is a connecting link [Refer to *Birds* and *Ichthyornis*].

ARCHANGEL, the oldest port in Russia, stands on the right bank of the river Dwina, forty miles from its entry into the White Sea, and is the capital of the largest province in European Russia.

ARCHBISHOP, a metropolitan or chief bishop. There are two archbishops of the established church in England. The Archbishop of Canterbury is styled the *Primate of all England.* He is the first peer of the realm, and has the power of conferring all the degrees that may be granted by a British University. The Archbishop of York is styled *Primate of England.*

ARCHDEACON. Refer to *Index.*

ARCHER, FRED, *b.* 1857, *d.* 1886; a celebrated jockey. He won his first Derby in 1877, and held the foremost place on the race-course for ten years. He committed suicide during an attack of fever.

ARCHERY, the art of shooting with bow and arrow. The practice of archery may be traced to remotest times. Ishmael, the son of Abraham by Hagar, became an archer (Gen. xxi. 20.). Homer makes frequent mention of the use of the bow among the ancient Greeks. The Swiss were famous bowmen, and the English victories of Crecy, Poictiers, and Agincourt, and successes against the Scots were credited to the superiority of her archers. Archery continued as a fashionable amusement in England and Scotland, after the bow ceased to be used as a war weapon.

ARCHES, COURT OF. See *Court of Arches.*

ARCHIME'DES, *b.* at Syracuse, 287, *d.* 212, B.C., the greatest mathematician of antiquity. Several of his works are extant. More than forty mechanical inventions have been attributed to him, including the endless screw and the spiral pump. He discovered the principle that a body immersed in a liquid loses in weight as much as the weight of the liquid displaced.

ARCHIPELAGO, GREEK, the islands lying in the Ægean Sea, between the shores of Greece and Asia Minor. There are two groups, the *Cyclades*, the largest of which is Naxos, which yields marble and emery powder; and the Sporades, the most famous of which is Rhodes, though Mitylene is the largest.

ARCHIPELAGO, INDIAN OR MALAY, the largest group of islands in the world, stretching between the south-east of Asia and Australia, includes Borneo, Sumatra, Celebes, Java, New Guinea, and the Philippines. The tropical heat is modified by sea breezes. The islands are, for the most part, very fertile; spices, sugar, coffee, rice, and tobacco are cultivated, and the cocoanut, banana, bamboo, and sago palm are the best known trees. The whole district displays great volcanic activity. The inhabitants are chiefly Malays.

ARCHITECTURE. Refer to *Index.*

ARCHIVES, a place where public documents are kept, or the documents themselves that are kept there. The great repository of public documents in England is the Public Record Office in Fetter Lane, London. Here can be seen Domesday Book; Pipe Rolls, giving the revenue and expenditure of the kingdom from Henry II. onwards; Patent Rolls, an account of all royal grants, whether of office, land, or favour, from John's time; and other valuable historical matter.

ARCOT. (1) A district in the Madras Presidency, India, having an area of 12,000 square miles. (2) The former capital of the Carnatic, 65 miles south-west of Madras, was captured by Clive and brilliantly defended by him, 1751. It was afterwards occupied by the French, and was retaken by the British under Colonel Coote, 1760.

ARCTIC CIRCLE, THE, an imaginary circle drawn round the earth, at a distance of 23½ degrees from the North Pole. When the sun is vertical to the Tropic of Capricorn its rays cannot reach beyond this line, and all that part of the world between it and the pole is in darkness.

ARCTIC EXPLORERS. Refer to *Index.*

ARCTIC OCEAN, THE, lies round the North Pole, between the continents of Europe, Asia, and North America, and has an area of about 5½ million square miles. It is connected with the Atlantic by a broad expanse of water to the east of Greenland, and to the Pacific by Behring's Strait. The ocean contains numerous islands, the largest of which is Greenland. On the western shores of this island many glaciers reach down to the sea, the ends are broken off by the action of the waves, and form icebergs. The whole ocean is covered by ice-fields, a great part of which drifts about in the summer. There is abundance of animal life. Polar bears, Arctic foxes, the ermine, musk-oxen, reindeer, whales, and walruses are found, and flocks of birds make it their summer resort.

ARDEN, one of the largest of the ancient British forests is said to have extended from the Avon to the Trent, and westward to the Severn. The name is still applied to the best-wooded portion of Warwickshire.

ARDENNES, FOREST OF, an extensive tract of hilly and well-wooded land extending over a large portion of the south west of Belgium and the north-east of France, and intersected by numerous valleys and deep narrow gorges.

AREOPAGITICA, one of the finest of Milton's prose works, appeared in 1644, and was aimed against the appointment of a censor of literature. Its scope is indicated in the sub-title, "A speech for the liberty of unlicensed printing."

AREOP'AGUS. (1) The Hill of Ares, the Mars Hill of the New Testament, a rocky eminence at Athens, separated from the Acropolis by a narrow valley. (2) The Upper Council of the Ancient Greeks, which held its meetings on the hill.

A'RES, the Greek god of battle, loved fighting for fighting's sake, identified with Mars by the Romans. He is frequently mentioned in the Iliad, but not often in other Greek poetry.

ARETHUSA, in classical mythology, a nymph of Artemis (Diana), whom her mistress changed into a fountain to enable her to escape the pursuit of the river-god Alpheus. The island of Ortygia, near Syracuse, has a famous fountain which bears her name.

ARGAND, AIME', *b.* at Geneva, 1755, *d.* 1803, a Swiss physician and chemist. His great invention, the Argand lamp, provided for a steady supply of oil to the wick, and for complete combustion, by the use of a circular wick and a chimney glass, thus causing a current of air to ascend through and around the flame.

ARGENTINE REPUBLIC, or **ARGENTINA,** a federal republic in the south of South America, extending from the Andes eastward to the Atlantic, having an area of 1,117,000 square miles, and a population exceeding 4½ millions, including a large number of European immigrants, chiefly Italians. The Pampas cover a large proportion of the country. The chief industry is the rearing of sheep and cattle, but in three provinces colonists have introduced wheat cultivation with great success, and an increasing quantity is finding a market in England. The exports are wool, skins, hides, corn, beef and mutton. The chief towns are *Buenos Ayres*, the capital, population 895,000, on the river Plate; *Cordova*, the second city, and *Rosario*, a rising port on the Parana, in regular communication with Europe.

ARGON, a clear, colourless, transparent gas, announced to the British Association by Lord Rayleigh and Professor Ramsay, in 1894, as a newly discovered constituent of the air. It has since been found in the mineral clevite, and the gas arising from the mineral springs of Wildbad and Carterets. Argon closely resembles nitrogen in its inertness and other properties. Berthelot, a French chemist, has succeeded in making the gas combine with the elements of benzene, and it has been liquefied by Professor Olszewsky, of Cracow.

AR'GONAUTS, ancient heroes who sailed with Jason in the "Argo" to Colchis, to recover the "Golden Fleece," which was guarded by a sleepless dragon. The venture proved successful through the help of Medea, the king's daughter, who became the wife of Jason.

ARGOS, the capital of Argolis, is considered the most ancient city of Greece. The city played an important part in the early history of the country, and still possesses architectural remains of great interest to archæologists.

ARGUS. (1) A fabulous monster surnamed the "All-seeing." He possessed a hundred eyes, of which only fifty slept at a time. He was killed by Hermes, who lulled his eyes to sleep, one by one, by playing on the shepherd's pipe. Hera, who had set him to keep guard over Io, transferred his eyes to the tail of her favourite bird, the peacock. (2) The dog of Ulysses, the only creature who recognised his master on his return from twenty years of wandering.

ARGYLL, (George Douglas Campbell,) **DUKE OF,** *b.* 1823, *d.* 1900, scientist, author, and statesman; had a leading part in the government of the country during the middle of last century. From about 1850 to 1881 he held office in all Liberal administrations, severing himself from his party in the latter year over the Irish Land Bill. His scientific and political writings include "The Reign of Law," "The Unity of Nature," and "The Philosophy of Belief."

ARGYLL, MARQUIS OF. (1) ARCHIBALD CAMPBELL, *b.* 1598, tried to combine loyalty to Charles I. with strong opposition to his treatment of the Scots in religious matters. He openly supported the Covenanters and became their political head. In the Civil War he fought on the side of the king, was defeated by Montrose at Inverlochy, 1645, crowned Charles II. at Scone, 1651, opposed Cromwell in Scotland, and refused submission to him as Protector. In spite of all this, on the restoration, he was tried by the Scottish parliament for treason, and executed at Edinburgh, 1661. (2) ARCHIBALD, son of the above, fought against Cromwell at Dunbar, and continued in arms after the battle of Worcester. His father's titles and estates were restored to him in 1663. He offended the Duke of York by accepting the Test Act with a reservation, was indicted for treason and condemned to death, but escaped in disguise. He co-operated with Monmouth in his rebellion against James II., invaded Scotland, and was captured and beheaded, 1685.

ARGYLL or **ARGYLE,** a Scottish county characterised by its mountains, moors, islands, and deeply penetrating arms of the sea; area upwards of 3,100 square miles, population, 73,642. The chief towns are *Inverary*, the county town, and *Oban*, the terminus of the West Highland Railway, and a great tourist centre. *Glencoe*, the scene of the massacre of the Macdonalds in 1692, is in the north-east of the county.

ARIAD'NE, daughter of Minos, king of Crete. She gave Theseus a clue by means of which he escaped from the labyrinth, and killed the minotaur. She was afterwards deserted by Theseus at Naxos, where, according to one tradition, Bacchus married her, and, on her death, placed her among the gods, and hung her wedding wreath in the sky as a constellation of seven stars.

ARIANS, the followers of Arius, a presbyter of Alexandria, in the fourth century, who denied that our Lord was co-equal or co-eternal with God the Father, but only the first and highest of finite beings. The teaching was condemned as heretical by a Synod which met at Alexandria, 321, and by a general council at Nice, 325.

A'RIES, "the Ram," the sign of the Zodiac which the sun enters at the spring equinox, and the first 30° of the ecliptic measured from the point of entrance. This point varies from year to year owing to the precession of the equinoxes, and moves about 50″ westward annually. For this reason the *Constellation of Aries* is not now within the limits of the sign, and nearly 24,000 years will elapse before the two once more coincide.

ARIOS'TO, LUDOVICO, *b.* at Reggio, Lombardy, 1474, *d.* 1532, one of the greatest of Italian poets, spent most of his life at Ferrara. His great work, "Orlando Furioso," is a romantic epic

which describes the loss of reason by the hero, on account of the marriage of Angelica with another. Ariosto also wrote several comedies and satires, sonnets, and other poems.

ARISTI'DES THE JUST, a famous Athenian statesman and general, who received his surname from the manner in which he discharged the duties of his office as one of the chief magistrates of the city. Owing to the influence of Themistocles he was banished by ostracism, and remained in exile ten years. He was recalled three years after the invasion of Xerxes, and fought at Salamis and again at Platæa. He died in poverty, 468 B.C., and was buried at the public expense, his children becoming a charge on the bounty of the state.

ARISTOC'RACY, "the government by the best" or most worthy. The term was originally applied to a government in which the power was in the hands of a minority consisting only of the highest class in wealth, birth, and culture; in this sense the Italian states of the Middle Ages were aristocracies. In English, the word has lost its political signification, and is applied to the nobility and wealthy, or, in a more restricted sense to the titled alone.

ARISTOPH'ANES, (an-es), *b.* at Athens 444, *d.* 384 B.C., the greatest of the Greek comic dramatists. In his works he ridiculed all reforms. He wrote sixty-four plays, eleven of which are extant. In "The Wasps" he attacked the popular courts of justice; "The Clouds" was aimed at Socrates, "The Acharnians" and "The Frogs" at Euripides, and in "The Knights" he held Cleon the Tanner up to ridicule.

ARISTOTLE, *b.* at Stagira in Thrace, 385, *d.* 322 B.C., the founder of the Peripatetic School of Philosophy at Athens. He was the pupil of Plato, and became the tutor of Alexander the Great. His writings were numerous, and included works on logic, physics, natural history, psychology, and language.

ARIUS. See *Arians.*

ARK OF THE COVENANT, a chest of shittim wood overlaid with pure gold, in which were preserved the tables of stone on which the commandments were inscribed, Aaron's rod, and a pot of manna. On the lid, called the "mercy seat," were two figures of angels, with outstretched wings, between which appeared a bright light called the *Shechinah*, regarded as the symbol of the divine presence. Its ultimate fate is unknown.

ARKWRIGHT, SIR RICHARD, *b.* at Preston, 1732, *d.* 1792, was apprenticed to a barber, but took great interest in the machinery used in the cotton manufacture. He invented the spinning frame, and made other improvements in the processes of carding and spinning. With the help of two wealthy partners he established mills at Nottingham and at Cromford in Derbyshire, and amassed a large fortune. He was knighted by George III. in 1786.

ARMA'DA, THE INVINCIBLE, the fleet fitted out by Philip II. of Spain for the invasion of England, in 1588. It consisted of 130 ships mounting 2,430 guns, and carried 20,000 soldiers. The English fleet under Howard, Drake, Hawkins, and Frobisher permitted the Spaniards to pass up the Channel, maintained a running fight with the hindmost, and cut off all stragglers. When the Armada anchored in Calais Roads, fire ships were sent in amongst them, which threw them into confusion; many ships were wrecked in consequence, and a storm completed the defeat. Other ships were lost in an attempt to retreat round the north of Scotland, and, of the whole fleet, only 53 damaged vessels returned to Spain.

ARMADILLO, a family of *edentata*, ("without teeth";) though not truly toothless, peculiar to S. America. They dig burrows for dwellings, feed on vegetables, insects, worms, small snakes, and carrion, and are nocturnal in their habits. The body is protected by plates of bony armour developed in the skin. Six genera are known to naturalists.

ARMAGEDDON, the name given in the Revelation of St. John to the final battlefield between Christ and Antichrist.

ARMAGH, the county town of Armagh, in Ulster, was the capital of Ireland from the fifth to the ninth century, and is still the ecclesiastical capital. Its cathedral is said to have been founded by St. Patrick, 445.

ARMENIA, an extensive district south of the Caucasus, and the Black Sea, now divided among Persia, Russia, and Turkey, the territories of the three empires meeting at Mount Ararat. The Armenians, many of whom have emigrated, are chiefly engaged in banking and commercial pursuits. Turkish Armenia has in recent years, 1893–96, been the scene of terrible massacres, the victims being Christian Armenians, who suffered at the hands of Turkish Mohammedans. The Turkish troops, sent avowedly to restore order, also massacred the poor Christians unmercifully, acting under secret orders from "The Great Assassin," Abdul Hamid II., Sultan of Turkey. More than 20,000 are said to have perished in these massacres.

ARMINIANS, an anti-Calvinistic sect, the followers of Jacobus Arminius, professor of divinity in the University of Leyden, 1603–9.

ARMITAGE, EDWARD, *b.* 1817, *d.* 1896; historical painter; was educated chiefly abroad, and commenced his career as a painter in Paris. He had great success in the competitions for cartoons and frescoes for the New Houses of Parliament in 1843, and subsequent years. He was also very successful with military pictures and Scriptural subjects. "Samson," "Hagar," and various Crimean scenes show his powers best.

ARMORIAL BEARINGS. In ancient days, when knights in battle were completely encased in armour, it was necessary to have some distinctive mark by which each should be known. This was usually painted on the shield and surcoat of the possessor, and at first belonged to him only individually, but became hereditary in course of time. So, too, the custom grew up of having some such distinguishing mark for the flag or banner of a country, province, borough, etc. These latter are *public* armorial bearings, or coats of arms, as distinguished from those of a family, the *private* coat of arms.

ARMOUR, a name given to any form of dress worn to protect the wearer against the attacks of an enemy. Among uncivilised tribes the materials used were chiefly leather and skins, but highly civilised nations adopted brass, iron, or steel for the purpose. The Britons seem to have used only the shield, while the full Roman armour consisted of helmet, shield, coat-of-mail, and greaves. The armour of the Anglo-Saxons and the Danes was of a light nature. The Normans made use of ring and tegulated armour, the latter consisting of small overlapping plates. Great improvements were introduced by the later Plantagenets, and in the reign of Edward II. mixed armour of plates and rings was common. Chain armour fell into disuse in the fifteenth century, being superseded by plate armour, which reached the highest state of perfection in England in the reign of Richard III. The use of armour began to decline soon after the accession of James I., and at the time of the death of Cromwell only a helmet and cuirass were worn. The Tower of London contains a fine collection of arms and armour illustrating progress from a very early date.

The modern battle ship is covered with plates of solid armour. At first these were made of iron, but improvements in guns rendered iron plates useless, and plates of steel, or of iron faced with steel, were introduced.

ARMOURER. (1) An armour smith, or a maker and repairer of armour. (2) In the army, a man attached to each regiment whose duty it is to repair the arms. (3) In the navy the ship's armourer is a petty officer who, under the gunner, has charge of the small arms, and is responsible for their being kept ready for use.

ARMSTRONG, (William George), **BARON,** *b.* at Newcastle-on-Tyne, 1810, *d.* 1900, practised as a solicitor, and devoted his leisure to mechanical subjects. He invented the hydraulic accumulator, the hydraulic crane, and the hydro-electrical machine. He was one of the first in England to achieve success with breech loading guns, and is best known as the inventor of the Armstrong gun. It was composed of bars of wrought-iron, raised to a white heat, twisted spirally round a steel core, and welded together. The barrel was rifled, and the projectile conical in shape. The improvements on the older type consisted in the decreased weight of the gun and charge, and increased range and accuracy of fire. The weapon was adopted by the British government in 1857. The inventor was knighted in 1858 and raised to the peerage in 1887.

ARNE, THOMAS AUGUSTINE, *b.* in London, 1719, *d.* 1778. A composer of songs, sonatas, operas, and two oratorios. The national air, "Rule Britannia," was originally one of the numbers in a popular work composed by him, called the *Masque of Alfred.*

AR'NICA. See *Med. Dict.*

ARNO, an Italian river, rises in the Apennines, and flows westward past Florence and Pisa, through a fertile and well cultivated valley, into the Gulf of Genoa. Its length is 150 miles.

ARNOLD, BENEDICT, *b.* at Norwich, Connecticut, 1740, *d.* in London, 1801, was a general in the army of the Colonists during the American War of Independence. He distinguished himself in several of the earlier engagements, and was placed by Washington in command of the important post of West Point. Piqued by charges that had been brought against him, he entered into negotiations with General Clinton for the surrender of his post with all its military stores. On the capture of Major André, who acted as Clinton's messenger, Arnold fled to the English lines, and afterwards served against the Americans.

ARNOLD, DR. THOMAS, *b.* at Cowes, 1795, *d.* 1842, was a famous headmaster of Rugby school, 1828–42. He introduced many reforms. While retaining the classics as the basis of the education given, he greatly extended the curriculum, and introduced a high moral and religious tone, insisting that the school must be "a school of Christian gentlemen." The year before his death he was appointed professor of modern history at Oxford. His published works include an edition of Thucydides, and five volumes of sermons; his great work, a "*History of Rome*," was unfinished at his death.

ARNOLD, MATTHEW, *b.* at Laleham, near Staines, 1822, *d.* suddenly at Liverpool, 1888, the eldest son of Dr. Thomas Arnold, was an eminent poet, essayist, and

critic, who has been called the "Apostle of sweetness and light." In addition to his poems, his published works include: "*Essays on Criticism*," "*Culture and Anarchy*," "*St. Paul and Protestantism*," "*Friendship's Garland*," and "*Literature and Dogma*."

ARNOLD OF WINKELRIED. See *Winkelried*.

ARNOLD, SIR EDWIN, *b.* at Gravesend, 1832, *d.* 1904. Poet, oriental scholar, and journalist; for forty years on the editorial staff of the *Daily Telegraph*. His principal poem is the "Light of Asia."

ARNOTT, NEIL, *b.* at Arbroath, 1788, *d.* 1874; was educated at Aberdeen Grammar School and Marischal College. Having chosen medicine as a profession and science as a study, he came to London and soon gained fame as a doctor and scientist. His works on Natural Science were widely read, and his practical inventions numerous. The water-bed, the Arnott stove, and the Arnott ventilator were all distinct advances on existing contrivances. Many honours were awarded him: the medal of the Royal Society, a gold medal at the Paris Exhibition, and the cross of the Legion of Honour.

AROMAT'ICS are products of the vegetable kingdom which have a spicy smell, due to a volatile oil, and usually a warm pungent taste. They assist digestion by increasing the flow of the digestive juices, and by quickening the muscular action of the intestines. They also improve the circulation, and act as nerve stimulants. Their use is more necessary in warm climates than in cold; hence the free use made of curry and similar preparations by Europeans residing in the Tropics. The principal aromatics are calamus, ginger, cinnamon, nutmegs, pepper, pimento, cloves, and vanilla.

AR'QUEBUS or **HARQUEBUS,** the first form of hand gun that possessed a contrivance for conveying the match to the touch hole. In the earlier forms of hand guns the match was applied by hand, The arquebus was fired from the chest, so that it was difficult to bring the eye low enough to take proper aim. It was a common weapon in the English army in the time of Richard III.

ARRACK, RACK, or **RAKI,** names common in the East for a strong spirit distilled from rice, the unexpanded flowers of the cocoa-nut and other palms, or from molasses. Great quantities are produced in Ceylon and Java, and it is largely consumed in India and throughout the East generally. In Ceylon, the flowers of the cocoa-nut palm are bruised by blows from a small mallet twice every day for a week, are then cut, and the sweet juice which exudes, and which is known as "toddy," is collected and allowed to ferment, after which the toddy is distilled in copper or earthenware vessels.

ARRAN, "lofty isle," is the largest island in the Firth of Clyde, and forms with Bute a Scotch county. Its area is 165 square miles; its chief height, Goat Fell, 3,000 feet. There are many Druidical and Danish remains, and the island, which is a popular summer resort, possesses interesting features for the geologist and the botanist.

ARROWROOT, a kind of starch extracted from the root-stocks of a plant native to South America, but now cultivated both in the West and East Indies, and in Queensland. It forms a valuable article of diet, particularly for children and invalids, but its nutritive properties are not high. The substance is said to have been so named because it was used by the Indians of South America as an antidote to the poison of poisoned arrows.

ARSENAL, an establishment for the manufacture and storage of munitions of war. The factories of Armstrong and Whitworth in England, and of Krupp in Rhenish Prussia, have a world-wide reputation. Guns and explosives are stored at all the British Royal Dockyards. The government small arm factory is at Enfield; explosives are manufactured at Waltham Abbey; but the great arsenal is at Woolwich. This establishment covers more than 330 acres, and includes gun factories, a laboratory for the manufacture of shells, fuses, cartridges, rockets, torpedoes, etc., and a carriage department.

ARSENIC, is a brittle, steel-grey substance closely resembling the metals in many of its characteristics, and capable of forming alloys with them. It is found in the free state in nature, but is usually combined with sulphur, or with the metals, or with both. The chief ores are arsenical iron, tin white cobalt, arsenical pyrites, and white mundic. It is present in small quantities in most samples of iron-pyrites, and occurs in the smoke from coal fires, being derived from the pyrites in the coal. During the prevalence of fogs in large towns, there is an appreciable quantity of arsenic present in the atmosphere. The addition of a small quantity of arsenic to lead renders the melted metal more fluid, and, on solidifying, the alloy is considerably harder than pure lead. On account of these properties the alloy is used in the manufacture of shot. For arsenic in beer, see "Beer" in *Med. Dict.*

ARSON, the act of wilfully and maliciously setting fire to any building. The punishment is imprisonment not exceeding two years, or penal servitude for from three years to a life sentence.

AR'TEMIS, the goddess of the moon, was, according to Greek mythology, the twin sister of Apollo. The Greek artists represented her as a huntress armed with bow and quiver. The Romans identified her with Diana.

ARTEMUS WARD, the pseudonym of Charles Farrar Browne (which see).

ARTESIAN WELLS, so named from Artois, a French province where they were first extensively used, are borings made by means of boring rods, through the various strata of the earth, until a supply of water is reached, the source of which is at a higher level than that of the mouth of the boring. Their action is due to the principle that water seeks to find its own level. The fountains in Trafalgar Square are supplied by a boring which penetrates the chalk of the London Basin at a depth of 400 feet. The water supply of some of the London breweries is derived from a similar source. The French have made use of the system to obtain a supply of water for the arid districts of their colony of Algeria, and the same principle has been applied in the districts of Queensland, lying to the west of the Great Dividing Range.

ARTHUR, a chief of the British tribe, Silures, flourished in the sixth century, and fought many battles against the Saxons. He was mortally wounded at the battle of Camlan, in Cornwall, 542, in repressing a revolt raised by his nephew Modred. He is the hero of many romantic legends, the most famous of which were woven by Tennyson into the "Idylls of the King."

ARTHUR, DUKE OF CONNAUGHT, third son of Queen Victoria, was born in 1850. He passed through the Woolwich Military Academy, and joined the Rifle Brigade in 1869. He received an allowance of £15,000 a year from Parliament on attaining his majority in 1871, and £10,000 a year more on marrying in 1879 Princess Louise Margaret of Prussia. In 1882 he commanded the Guards in the Egyptian Expedition, and was present at the Battle of Tel-el-kebir. Since then he has done good work in India as commander of the Bombay army, and at home as Commander-in-Chief at Aldershot, and in Ireland.

ARTHUR'S SEAT, a hill rising to a height of 822 feet, close to Edinburgh. The view from the summit is extensive, varied, and beautiful.

ARTICLES, THE THIRTY-NINE, Contain what the Church of England considers the leading Christian doctrines as taught in Holy Scripture, together with a condemnation of what she considers the principal errors of the Roman Catholic Church, and of certain Protestant sects. All candidates for ordination in the Church of England are required to subscribe to these Articles.

ARTILLERY, heavy guns of all kinds, together with the machinery and stores connected with them; also that branch of the army whose duty it is to serve the heavy guns. The most powerful British gun at present is the 12-inch naval gun, in the construction of which 122 miles of wire ribbon is used to give it strength and elasticity. It can throw its projectile, weighing 850 pounds, nearly 20 miles, or cause it to penetrate 32 inches of iron at 2,000 yards. The lightest gun in use is the "pom-pom," which throws a one-pound shell.

The garrison artillery is employed to man the various fortresses for coast defence, and to work guns of heavy calibre used in sieges. Horse artillery and field artillery accompany the cavalry and infantry into the field, and prepare the way for their advance or cover their retreat. They are divided into batteries, each armed with 6 twelve or fifteen-pounders. The great desiderata in the construction of these guns have been lightness combined with strength; but the use of the naval 4·7 guns, firing a shell weighing 45 pounds, and having an effective range of 12,000 yards, and the mobility of the Boer heavy pieces, pointed to the need of other qualities, and this branch of the service is being rearmed with improved quick-firing guns, of greater range, and fitted with non-recoiling telescopic sights.

AR'UNDEL, a small town in Sussex, four miles from the mouth of the Arun. The castle is the residence of the Duke of Norfolk.

ARUWI'MI, a tributary of the Congo, joins the main stream below the Stanley Falls.

ARYAN, synonymous with Indo-European, a name used to designate one of the main divisions of the human family, and the languages spoken by the different peoples of which it is composed. The home of the race is thought to have been in Central Asia, east of the Caspian, and north of the Hindu Kush. Branches of the family spread westward into Europe, and southward into Persia and the Ganges valley, and gave rise to the Greek, Latin, Celtic, Teutonic, Slavonic, Persian, and Hindu races. Their origin from a common stock is attested by scholars from a comparative study of their respective languages.

AS, the Roman *libra*, corresponding in weight to an English pound. The name came to be applied to a Roman coin weighing about half an ounce.

ASAFŒTIDA. See *Med. Dict.*

ASBES'TOS, "unconsumable," a mineral substance usually of a fibrous texture. From it the ancients prepared a cloth in which they enshrouded the dead before placing them upon the funeral pyre. It was also used as a wick for their temple lamps. It is now employed in gas fires, as a covering and packing for steam pipes

and boilers, and in the preparation of paints used for rendering wood-work fire-proof. It is largely imported from Italy, Canada, and Australia.

AS'CALON, a coast town of Palestine, 40 miles S.W. of Jerusalem, now in ruins, was the birth-place of Herod the Great. It was a stronghold of the Crusaders, and on the plains a great battle was fought between them and the Saracens.

ASCENSION ISLAND, a mass of volcanic rock rising to a height of nearly 3,000 feet, and having an area of 35 square miles. It lies in the Atlantic, 900 miles off the coast of Africa, and on the steamer route between England and the Cape. It was acquired by the British in 1815, and is used as a coaling and victualling station for the navy.

ASCET'ICISM, a word used by the ancient Greeks to describe the special training by abstinence and exercise undergone by athletes. The word was subsequently applied to the practice of self-denial, abstinence from sensual enjoyments, and the habit of severe virtue that characterised the Pythagorean and Stoic philosophers. The practice passed to the early Christians, and in the second century the belief was common, that special happiness hereafter was to be obtained by celibacy, penance, fasting, and continual prayer. This idea gave rise to the various forms of Monasticism. That Asceticism still has a deep hold on those who endeavour to attain to a lofty ideal of religion, is seen in the rigorous simplicity of life practised by the Puritans, Quakers, and early Methodists.

ASCHAM, ROGER, *b.* near Northallerton, 1515, *d.* 1568, a great classical scholar, who became the tutor, and afterwards the Latin secretary of Queen Elizabeth. His reputation rests chiefly on a treatise on Education, "The Schoolmaster," which, according to Dr. Johnson, "contains, perhaps, the best advice that was ever given for the study of language."

ASCOT, a celebrated race-course, in Berkshire, 6 miles S.W. of Windsor.

ASEPSIS. See *Med. Dict.*

ASH, a deciduous tree belonging to the same natural order as the lilac, is common in England, and is highly valued on account of the rapidity of its growth and the usefulness of its timber. The wood is white, tough, and hard, and is much used by the wheel-wright, coach builder, joiner, and cabinet maker. Cultivation has produced many varieties of the tree, including the *weeping ash*, in which the branches grow downward and produce a natural arbour. The *mountain ash* is not a true ash, but is a member of the rose family.

ASHAN'TI, an extensive district in West Africa lying to the north of the Gold Coast. The country is well watered and extremely fertile, the greater part being covered with forests and dense bush. The climate is unhealthy to Europeans. Palm oil and rubber are exported, and gold is worked in many parts. The Ashantis are cruel, warlike, and ferocious, and human sacrifices were frequent when the country existed as a negro monarchy. Sir Garnet Wolseley led an expedition against the Ashantis in 1874, and captured and burnt Kumasi, the capital. A second expedition was necessary in 1895, after which a British governor was appointed, and the territory was attached to the Gold Coast Colony. The Ashantis besieged the governor in Kumasi in April, 1900. He succeeded in leaving the city in June, and the small British garrison was finally relieved in July.

ASHBURTON TREATY, THE, named after the special ambassador who concluded it, August, 1842. The treaty settled the boundary between the state of Maine and Canada; the United States acquired a strip of territory, and the English secured a better military frontier. Provisions were also made for putting an end to the African slave trade, and for the mutual extradition of suspected criminals.

ASHBY-DE-LA-ZOUCH, a market town in Leicestershire, contains medicinal springs, the waters of which are recommended in cases of scrofula and rheumatism. The ruins of Ashby Castle, where Mary Queen of Scots was a prisoner, lie to the south of the town. Coal and iron are found in the immediate neighbourhood.

ASHDOWN, a place in Berkshire, where Alfred and his brother King Ethelred defeated the Danes, 871.

ASHE'RA, a wooden image or symbol of the goddess *Ashtoreth* (which see).

ASHLAR, a term in masonry applied to squared stones used in building, both to those roughly squared before leaving the quarry, and to those prepared by expert workmen for facing walls.

ASHLEY COOPER. See *Shaftesbury.*

ASHMOLE, ELIAS, *b.* at Lichfield, 1617, *d.* 1692. A celebrated antiquary, authority on heraldry, and writer of works on astrology. In 1679 he presented to the University of Oxford a collection of curiosities that had been bequeathed to him, on condition that a building should be erected to receive them. The collection formed the nucleus of the treasures of the Ashmolean Museum, the building of which was completed in 1683.

ASH'TORETH or **ASTAR'TE**, the goddess of the Phœnicians, symbolised by the moon. The rites connected with her worship were performed in shady groves devoted to the purpose.

ASH WEDNESDAY, the first day of Lent, so named from the custom in the early Christian Church of placing ashes on the head as an expression of humility and repentance, a custom derived from the Jews. The custom still holds in the Roman Catholic Church. In the Church of England, the Commination Service is appointed to be read as a solemn warning against impenitent sinners.

ASIA, the largest of the continents, has an area of 17¼ million square miles, or nearly one-third of the land surface of the globe. It is joined to Europe and Africa, and approaches within 36 miles of America. It is the home of the oldest civilisations and the cradle of the great religions of the world. It has the largest population, estimated at 850 millions, and the greatest variety of races and languages of all the continents. Asia is a continent of contrasts. It contains the highest plateaux and mountains in the world, and the deepest depressions. Stretching beyond the Arctic Circle in the north, it almost touches the Equator in the south, and hence possesses every variety of climate and productions. Near Verkhoyansk, in north-eastern Siberia, is the pole of greatest cold, the average temperature for the year being 30° below freezing point. Parts of the continent are rainless, whilst a district north of the Bay of Bengal has an average rainfall exceeding 600 inches.

ASIA MINOR. See *Anatolia.*

ASIATIC RUSSIA embraces Caucasia, which includes a portion of Armenia; the Transcaspian Provinces, between the Caspian Sea and Persia and Afghanistan, area 214,000 square miles; Turkestan, stretching into the Pamir Region, and almost touching the sphere of British protection north of Cashmir, area 409,000 square miles, population 3½ millions; the two vassal states of Bokhara and Khiva; Siberia, occupying the whole of the north of Asia, from the Ural mountains to the Pacific Ocean, area 4,826,000 square miles, population 6 millions. The Trans-Siberian railway has now been completed. The length from Moscow to Vladivostock is about 5,500 miles.

ASIATIC TURKEY, the lands lying eastward from the Mediterranean Sea to Persia, and stretching southward from the Black Sea to the Red Sea and Persian Gulf. It includes Asia Minor, Armenia, Syria, Palestine, Kurdistan, Mesopotamia (all of which refer to for details), besides a strip of Arabia bordering on the Red Sea, and another strip, El Hasa, on the western side of the Persian Gulf. The total area of this vast domain is about 700,000 square miles, with a population of 16 or 17 millions. The inhabitants are composed of Turks, Arabs, Greeks, Jews, and Armenians. In Asia Minor the inhabitants are mostly Turks, but in the rest Arabs predominate. The Turks and Arabs are Mohammedans, the Greeks and Armenians are Christians.

ASKEW, ANNE, *b.* in Lincolnshire, 1521, *d.*, by burning, 1546; one of Henry VIII.'s victims; was driven from home by her husband, named Kyme, because of her obstinate adherence to the new faith. Coming to London, she was arrested as a heretic and burned at Smithfield.

ASMODE'US is described in the Talmud as the prince of demons, and is said to have been compelled to assist in the building of the Temple for having driven Solomon from his kingdom. He has been referred to as the evil genius of matrimony, because the book of Tobit represents him as causing Sarah to strangle seven husbands.

ASMONE'ANS. See *Maccabees.*

ASP, a species of viper found in Egypt, in the vicinity of the Nile. It has the power of distending the loose skin of the neck when irritated. When disturbed it raises a considerable portion of its body above the ground. It is found carved in this position on the portals of ancient Egyptian temples, and painted on mummy cases. Its bite causes death quickly and almost painlessly.

ASPASIA, a native of Miletus, in the fifth century, B.C., became famous in Athens for her wit, beauty, culture, and eloquence. She became the wife of Pericles; her house was the resort of the most famous men in Greece, including Socrates; and though the charge of Aristophanes, that she led the Greeks into two wars, may not be true, she undoubtedly exercised a great influence over the whole nation.

ASPHALT, a mineral pitch of a black or brownish colour, consisting chiefly of carbon. It is found in many parts of the world, but the largest natural deposit is the Pitch Lake of Trinidad, which is 99 acres in extent, and of unknown depth. In a liquid state it was formerly taken from the surface of the Dead Sea. Asphalt rock, a species of limestone impregnated with bitumen, is found in various parts of Europe, particularly in the Swiss canton of Neufchatel, and is much used for street paving.

ASPIRATE, THE. Refer to *Index.*

ASQUITH, H. H., *b.* 1852, educated at City of London School and Balliol College, Oxford; entered Parliament in 1886; Home Secretary in 1892; Chancellor of the Exchequer 1905-8, and succeeded Campbell-Bannerman as Premier in 1908. His merit and ability as scholar, lawyer, and statesman are universally admitted. His speeches are remarkable for lucidity and directness.

ASS. This very useful animal is especially adapted for work in dry and comparatively barren countries. During the recent, long and disastrous drought in

Australia, donkeys throve in districts from which horses, sheep, and cattle had to be removed, and hundreds are now employed in drawing supplies from the coast to the Western Australian gold fields. The finest domestic asses are those of Arabia, the best found in Europe are those of Spain and Malta. In England, the animal is smaller than these, and seems to have deteriorated with long-continued ill-usage. The mule is a hybrid between the male ass and the mare, and the hybrid produced by the horse and the female ass is known as a hinny. There is far more of the ass in a mule than a hinny, the latter having the ears, tail and hoof of the horse, showing as far as horse and ass are concerned the predominant influence of the male parent. In some countries mules are more highly prized than horses on account of their greater hardiness, but the hinny is an inferior animal, and is seldom seen.

ASSAM, a district in the north-east of British India, watered by the Brahmaputra and its tributaries, having an area of 49,000 square miles and a population exceeding 5½ millions. It contains the principal tea growing districts of India, and also produces large quantities of rice. The mineral resources are not fully developed, but they include coal, iron, and petroleum.

ASSASSINS, THE, a military and religious order formed in Persia in the eleventh century. They devoted themselves to the assassination of all who opposed the Moslem faith. A branch existed in Syria, and many of the Crusaders met their deaths at the hands of its members. The Persian assassins were exterminated by a Tartar force in 1256, and the Syrian band, by the Sultan of Egypt, fourteen years later.

ASSAYE, a small town in the Deccan, S. India, near which Sir Arthur Wellesley gained a great victory over the Mahrattas, commanded by the French general Péron, in 1803.

ASSAYING or **ESSAYING,** the chemical analysis of the ore of a metal for the purpose of discovering the exact quantity of any particular substance it contains, without reference to the other constituents. The term is often restricted to the estimation of gold or silver.

ASSEGAI, the favourite weapon of the Zulus and other South African tribes. They are made of hard wood, and tipped with iron. Some are for hurling, and some for stabbing; the former are often barbed.

ASSEMBLY, THE GENERAL, the supreme court of the Established Church of Scotland, is a representative body consisting of both clergymen and laymen, and attended by a representative of the king. It holds its sittings in Edinburgh in May, disposes of the general business of the Church, and exercises judicial and legislative functions, reviewing the findings of the lower ecclesiastical courts, determining appeals, and amending the existing laws, or framing new ones, for the government of the Church and its members.

ASSEMBLY, NATIONAL, the Commons' section of the States-General of France, which met May 5th, 1789. The nobles and clergy refused to deliberate with the members of the third estate in a common chamber, and the latter formed themselves into the National Assembly, which sat until September, 1791. They gave a new constitution to the country, divided it into provinces, introduced many reforms in the laws, in the incidence of taxation, and in the finances of the country generally, and completely changed the existing ecclesiastical system.

ASSER, JOHN, a monk of Saint David's, Wales, who became the tutor, companion, and biographer of Alfred the Great. He assisted the king in translating various works into English, and was promoted by him to the episcopal see of Sherborne; *d.* 910.

ASSESSORS, persons who "sit by" a judge, or other person charged with judicial functions, to aid him with their technical knowledge. A bishop is usually aided in his court by the chancellor of the diocese. In Admiralty and Patent cases it is usual to call in the aid of a specialist on the points at issue. Also the Inland Revenue Officer who assesses income, etc., for purposes of taxation, is called an assessor.

ASSIEN'TO, i.e., assent or agreement. The word is especially applied to agreements made by Spain with the Flemings, the Genoese, 1580, the Portuguese, 1696, and the French Guiana Company, 1702, by which these people were granted the monopoly of importing slaves into the Spanish American colonies for a fixed period. By the Treaty of Utrecht, 1713, the monopoly was acquired by the English government, and was transferred to the South Sea Company, who relinquished their rights in 1750, receiving compensation from Spain to the extent of £100,000, and certain commercial concessions.

ASSIGNMENT. See *Commercial Dictionary.*

ASSINIBOIA, a territory, rectangular in shape, lying to the west of Manitoba, with an area of 90,340 square miles, cut out of the North-West Territory of Canada in 1882. The land is mostly prairie; Eastern Assiniboia forms part of the great Canadian wheat belt, and the southern portion is suitable for cattle ranching. The winters are comparatively mild, the summers hot and dry. Settlers are attracted in increasing numbers by the free grants of farms of 160 acres made by the government. The principal rivers are the south fork of the Saskatchewan, and the Assiniboine, a tributary of the Red River. The capital, *Regina,* is situated on the Pacific Railway, which runs through the centre of the territory.

ASSOCIATION OF IDEAS. See *Ideas, Association of.*

AS'SOUAN or **ASWAN,** situated near the First Cataract of the Nile, about 600 miles above Cairo, is famous for the gigantic dam constructed here to form a great reservoir for irrigation in the times of "low Nile." The dam measures 1¼ miles in length, is nearly 100 feet thick at its base, with a maximum height from its foundation of about 130 feet; the greatest difference of level of water above and below the dam is about 67 feet. It is built of local granite, set in Portland cement; the total weight of masonry is over one million tons. The dam has 180 sluice openings, through which could pass 15,000 tons of water per second. These sluices are left open when the river is in flood, but when the discharge has fallen to 2,000 tons per second, the sluice-gates begin to be closed, and the reservoir—that is, the river above the dam—begins to fill up. When full, the reservoir contains 1,000 million tons of water, affecting the depth of the river for 140 miles above the dam. The dam was opened in 1902. Navigation is provided for by a ladder of five locks, each 260 feet long and 32 feet wide.

ASSYRIA, one of the earliest of the great nations of antiquity. The country at first consisted of a track of territory on the left bank of the Tigris. The boundaries were extended by conquest until the Assyrians governed that portion of Asia extending from the Mountains of Armenia to the Arabian Desert, and from the Kurdistan Mountains to the Mediterranean Sea. Their policy, in all their conquests, was to transplant the mass of the inhabitants of the conquered territory to the central provinces of the empire, and to replace them by Assyrian colonists. This policy was carried out by Shalmaneser when he conquered Samaria. The flower of the tribes of Israel were carried into captivity. The Assyrians were polytheists; their supreme god being Asshur, the deified patriarch of the race. Such civilisation as they possessed was acquired from Babylon. The country was at the height of its power under Esar-haddon and his son Asurbanipal. The latter reigned from 667 to 625 B.C., and did much to encourage learning and the arts. After his death, Assyria began to decline rapidly, and was finally conquered by the allied forces of the Medes and Babylonians, who captured and burned the capital, Nineveh, about 620 B.C. Much of our knowledge of Assyria and its people is due to the work of archæologists in excavating the ruined cities, and in deciphering the cuneiform inscriptions on tombs, monuments, etc.

ASTAR'TE. (1) See *Ashtoreth.* (2) A genus of bivalve molluscs, now found chiefly in the Arctic and North Atlantic Ocean. Twenty living species are known, but fossil species are more numerous, and are particularly interesting because, from the positions in which they have been found on Welsh and Scotch mountains, they indicate that Great Britain was at one time submerged to a considerable depth below the ocean.

ASTEROIDS, or minor planets, are a large number of small bodies which revolve round the sun, in orbits lying between those of Mars and Jupiter. Vesta, Juno, Ceres, and Pallas are the principal ones. Even the largest are invisible to the naked eye, their diameters being not more than 300 miles. Upwards of 400 have been discovered, the more recent by the use of photographic plates.

ASTIGMATISM, a defect in vision due to a want of symmetry in the curvature of the cornea, in consequence of which the rays of light are focussed on the retina as a diffused spot. It is often the cause of headache, and may be remedied by the use of suitable spectacles. See *Med. Dict.*

ASTLEY, PHILIP, *b.* 1742, *d.* 1814, a famous circus performer and manager. He assisted Franconi in establishing the *Cirque Olympique* in Paris.

ASTOR FAMILY. JOHN JACOB ASTOR, the founder of the greatness of this family, was born near Heidelberg, in Germany, in 1763. In 1783 he went to America and began trading in furs. Having prospered, he formed the Pacific Fur Company, with head-quarters at Astoria, in Oregon, and connections all over the world. At his death, in 1843, he left about one million pounds to his son William, and £70,000 to found a public library in New York. WILLIAM ASTOR devoted himself to improving his property in New York, so that when he died his fortune was about three times as great as he had received. WILLIAM WALDORF ASTOR, a great grandson of John Jacob, has become a naturalised Englishman, and now owns the beautiful estate of Cliveden, on the Thames.

ASTRAKHAN. (1) A government in the south-east of European Russia, north of the Caspian Sea, covers an area of 85,000 square miles on both sides of the Volga. The land consists chiefly of Steppes, and there are extensive salt marshes. (2) The capital of the former, on an island in the Volga, about 30 miles from its mouth. The fisheries are extensive, and large quantities of fish, caviare, and

isinglass are exported. (3) The fleece of the lambs of a variety of black sheep found in the above province, in Persia, and on the Asiatic Steppes. The wool of the lamb is curled, and closely resembles fur.

ASTRAL SPIRITS, according to eastern myths, existed as the souls of all the heavenly bodies, for which reason the sun, moon, and stars were worshipped. In the Middle Ages, when witchcraft and a belief in demons were rife, the astral spirits were conceived as hovering through space, and influencing men for good or evil.

ASTROLABE, a name given by the Greeks to any circular instrument for observing the stars. An instrument of this kind was employed by astrologers, and formed the badge of their office. Later the name was given to a circular plate of metal having the circumference divided into degrees, and with sights attached; it was used in navigation until superseded by the sextant.

ASTROLOGY is the pseudo-science that pretended to foretell events, especially the destiny of men, by means of the position of the stars. The heavenly bodies were regarded as the agents whereby the Creator regulated the course of events in the world. The more ignorant considered the stars themselves as the moving causes. By means of great circles, astrologers mapped out space into twelve equal portions called "houses." The principal circles were the horizon and the meridian. The other four were drawn equally distant from these, and passed through their points of intersection. The circles were considered immovable, so that all the heavenly bodies passed through the twelve houses every twenty-four hours. Certain powers and influences were ascribed to the sun, moon, and planets, but these were modified by the particular house occupied by the body at the moment. In "casting a person's nativity" the astrologer found the position of the various heavenly bodies at the moment of birth, and then, assuming that he knew the power inherent in each, and the influence derived from its position, he foretold the course of that person's life and its termination. Astrology is generally believed to have originated among the Chaldeans, and to have spread from them to the other nations of antiquity. In the Middle Ages its teachings were universally accepted, and many families retained an astrologer to "read the horoscope" of each child almost as soon as it was born.

ASTRONOMY is the study of the heavenly bodies, their magnitude, distance, composition, movements, the forces regulating those movements, etc. This science, of which astrology may be looked upon as the infant stage, is known to have been cultivated among the Chinese, Hindus, Chaldeans, Egyptians and Greeks previous to the Christian era, but the Greeks were the only people who did not connect it with politics, religion or soothsaying. The theory of the universe laid down by Ptolemy (130–150 A.D.), that the heavens circle round the earth as a fixed centre once in twenty-four hours, was universally accepted until Copernicus, in the 16th century, propounded the system known by his name. In his "De Orbium Revolutionibus," published in 1543, he attempted to prove what is the first principle of modern astronomy—that the sun is the centre of the solar system, and that the earth and the other planets circle round it. That system was afterwards developed and established by the labours of Tycho Brahé, Kepler and Galileo. Galileo was the first to employ the telescope for astronomical observations. His first study of the heavens with its aid was made January 7th, 1616, and resulted very soon in the discovery of Jupiter's moons, and in the resolution of the "Milky Way" into a host of fixed stars. Newton's discovery of the laws of gravitation, published in 1687, gave a clear insight into the forces that regulate the motions of the planets. The mathematician and the observer have co-operated in adding to our knowledge. Modern astronomers, in addition to determining distances and magnitudes with certainty, have devoted themselves to verifying or correcting, by means of greatly improved instruments, the observations of the earlier workers. Spectrum analysis has made known the composition of the various bodies, while the photographic plate has revealed the presence of stars that were invisible to the eye in the field of the most perfect telescope.

ASURBANIPAL. See *Assyria.*

ASYLUMS BOARD, METROPOLITAN. Constituted under the Metropolitan Poor Act of 1867, it provides and manages asylums for the reception and treatment of imbeciles, and of persons suffering from fever and small-pox. The ambulances, with "M.A.B." on them, are familiar in the streets of London, and there is also a service of river ambulances at convenient points.

ATAHUAL'PA, the last of the Incas of Peru. He fell into the hands of the Spaniards through treachery, was tried on the charge of giving secret commands to his subjects to arm against the invaders, and strangled by the orders of Pizarro, 1533.

AT'AVISM or **REVERSION,** the tendency in improved breeds of domestic animals to "hark back," or revert to the characteristics of the parent stock. The subject is treated of in Darwin's "Variation of Animals and Plants under Domestication." Among other experiments, he paired a black Spanish cock and a white silky hen, and found that, in many cases, the offspring showed the peculiar orange-red markings natural to the Himalayan progenitors of our domestic fowls.

ATALANTA, in classical mythology, daughter of the Arcadian Iasus. Her father, disappointed in not getting a son, exposed her on the hills, but she was suckled by a she-bear. When grown up, and sought by many suitors, she promised to wed the man who should outstrip her in the foot race, she being the fleetest of mortals. She was at length overcome by Milanion, aided by three golden apples given him by Venus, which he dropped one by one during the race, and so gained time while Atalanta was picking them up.

ATBA'RA, or "Black River," rises in the mountains of Abyssinia, and joins the Nile at El Damer, bringing with it large quantities of black mud. The bridge carrying the Cairo-Khartoum Railway crosses the river near the confluence. This was the scene of General Kitchener's defeat and capture of the Emir Mahmud, one of the Khalifa's principal generals, April 8th, 1898.

ATHABASCA, a territory in North-West Canada, to the north of Alberta, has an area of 251,300 square miles, and is watered by the Peace and Athabasca rivers, the valleys of which include an enormous wheat growing area. Vast petroleum fields are said to exist, but as yet these are undeveloped. The greater part of Lake Athabasca lies outside the area.

ATHANASIAN CREED, THE, sets forth the Catholic Faith with respect to the nature of God, the Incarnation of Christ, and man's future state. It was for a long time supposed to be the work of Athanasius, but it is now generally admitted to belong to the fifth century. The title "Athanasian" was probably given to it because it expresses the teaching of Athanasius as opposed to the Arian heresy. The Creed was in use in the Church of England before the close of the eighth century, and became general throughout the Church of Rome in the middle of the tenth. At the Reformation it was retained in the Prayer Book, and ordered to be read at certain festivals.

ATHANASIUS, SAINT, *b.* at Alexandria, 296, *d.* 373, early came under the influence of Saint Anthony, and for a time adopted asceticism. In the council held at Nice he strongly opposed the teaching of Arius, and so drew upon himself the hatred of the Arians. He was appointed to succeed Alexander, as bishop of Alexandria, but the persecutions and accusations of the Arians drove him from his bishopric several times, and he spent 20 out of his 46 years of office in exile. His writings consist of treatises bearing on the Arian controversy, and valuable contributions to the history of the early church.

ATHELSTAN, *b.* 895, *d.* 941; crowned at Kingston on Thames, 925; was the first to adopt the title of King of England. By his victory at Brunanburgh in Northumbria, he secured the submission of Northumbria, and afterwards that of Wales and Cornwall. He extended his political influence to the Continent, and at home laboured to improve the conditions of the people on the lines of his grandfather, Alfred. He improved the laws, favoured the building of monasteries and the translation of the Scriptures. He also encouraged commerce by conferring the rank of a thane upon every merchant who made three sea voyages on his own account.

ATHENÆ'UM, the temple erected at Athens to the goddess Athene. This became the resort of poets, philosophers, and orators, who there gave readings of their works. The name was also given to the school established by Hadrian at Rome, and held in high repute until the fifth century. The name is now commonly applied to institutes for the study of literature and science.

ATHENÆUM CLUB, London, an association of persons interested in arts, literature, or science in any way. The artist, the literary man, and the scientist look to admission to the Athenæum Club as a kind of hall-mark of their genius. Also noblemen and gentlemen who have shown devotion to these pursuits are eligible. It was founded in 1824, John Wilson Croker being one of its founders.

ATHE'NE, the Greek goddess of wisdom, war, and all the liberal arts, was said to have sprung fully armed from the head of Jupiter. She is usually represented wearing a plumed helmet, and carrying a spear in one hand and a shield, with the head of Medusa on it, in the other. By the Romans she was known as Minerva.

ATHENS was the capital of Attica, the seat of ancient Greek culture, and the resort of poets, philosophers, artists, and orators. The city was built on and around several low hills, rising from the plain of Attica, the chief eminences being the Acropolis, the Areopagus, and the Hill of the Museum. On the *Acropolis* were erected the Parthenon, dedicated to Athene, the Erechtheum, dedicated to Poseidon, and other temples and statues. The western end of the hill was covered by the Propylæa, a white marble building approached by a stair-way 70 feet wide. The largest temple in Athens was that dedicated to Zeus Olympius, the outside of which was adorned with 120 fluted columns, 60 feet in height. All the temples contained statues, and the

walls were ornamented with reliefs. The *Areopagus* was the meeting place of the supreme court of Athens. The seats occupied by the judges, and the places reserved for the accused and his accuser, are still to be seen. Not far off, the Pnyx, where the freemen of the city met for their deliberations, exists almost in its original state. Near the city were the Academy where Plato taught, and the Lyceum, where Aristotle founded the Peripatetic School. Athens is the capital of modern Greece, the seat of a university, and the residence of the king of Greece.

ATHOS, MOUNT, or Monte Santo, is the highest peak, 6,780 feet in height, in the chain of mountains running through the peninsula of Salonica, Turkey. The sides of the mountains are covered with monasteries connected with the Greek church. The monks, who number about 6,000, and form a kind of republic, under the protection of the Sultan, are occupied in gardening, fishing, and the manufacture of amulets and crucifixes. They collect alms from the many pilgrims who visit them, with which to pay the heavy taxes imposed on them by the Porte. Many literary treasures, particularly manuscripts, are preserved in the libraries of the monasteries.

ATLANTIC CABLE. The first was laid in 1858 between Valentia, Ireland, and Trinity Bay, Newfoundland, but it failed to work. A second cable, much heavier, was lost in mid-ocean in 1865; a third was successfully laid in 1866 and answered its purpose. The lost cable was also recovered. Since then more than a dozen cables have been stretched across the Atlantic, and now the world is girdled with telegraph cables, one of which is "all-British."

ATLANTIC OCEAN, the most important of the oceans, lies between the Old World and the New, and is 9,000 miles long, with an average breadth of 2,700 miles, and an average depth of 15,000 feet. It is characterised by the length of its coast-line, the size and number of the inland seas, gulfs, and bays connected with it, and the number of large rivers it receives. These circumstances, combined with the great fertility of the countries on its shores, make it the greatest commercial highway of the world. The principal currents are the Equatorial Current, which crosses from the coast of Africa to the shores of South America; the Gulf Stream, which at first flows parallel to the coast of North America, but turns eastward first at C. Hatteras, and next at the Banks of Newfoundland, and laves the shores of the British Islands and Scandinavia; and the cold Labrador Current which meets the Gulf Stream off Newfoundland, and then flows between it and the coast of North America. The circular motion of the waters of the North Atlantic leads to an accumulation of drift-wood, sea-weed, and other floating matter, and favours the growth of the "gulf-weed." The central portion is known as the Sargasso Sea. Here the weed is so densely packed as to impede the passage of ships. A similar Sargasso Sea exists in the South Atlantic.

ATLAS. (1) The leader of the Titans, who attempted to storm the heavens and to dethrone Zeus. For this he was condemned to bear the heavens on his head and shoulders. (2) The first vertebra which supports the skull.

ATLAS MOUNTAINS, two parallel ranges in Morocco and Algeria, North Africa. The Little Atlas is close to the coast: the Great Atlas is farther south, and in Mount Miltsin reaches an elevation of 11,400 feet.

ATMOSPHERE. See *Air.*

ATOLL, a coral island consisting of a ring enclosing a central lagoon. The slope into the sea on the inner side is very gradual, while that on the outside plunges rapidly into deep water. Atolls are numerous in the Pacific Ocean, and form several archipelagoes.

ATOM, the smallest portion of matter that can exist and still retain the properties of the substance of which it is composed. Recent experiments prove that the atom is not the ultimate division of matter, but that each is composed of a number of smaller particles, possibly thousands, which scientists have named "electrons," or corpuscles.

A'TRIUM, the principal court of a Roman dwelling house. It was near the entrance, and lighted from the roof, which sloped towards an opening in the centre, from which the rain flowed into a cistern in the floor. The atrium served as an audience chamber, and contained the *focus* or family fire, the *lares* or household gods, the family pictures, and the spinning wheel of the mistress of the house.

ATROPOS. See *Lachesis.*

ATTAINDER, BILL OF, a means of reaching offenders whom the ordinary process of law, or an impeachment, would probably fail to touch, for want of legal proof, or some other technicality. A bill is brought in, and has to pass through both Houses of Parliament, declaring that the accused has been guilty of treason in certain acts, and the accused is allowed to defend himself before both Houses. If it passes, and then receives the Sovereign's assent, the ordinary consequences of a conviction for treason follow.

ATTAR OF ROSES. See *Otto.*

ATTERBURY, FRANCIS, *b.* in Buckinghamshire, 1662; *d.* in Paris, 1732; gained a great reputation as a preacher; he was a keen churchman and ardent Jacobite. In 1715 he refused to sign the bishops' declaration of allegiance to George I., and became involved in several minor plots for the restoration of the Stuarts. In 1722 he was charged with treason. A bill of pains and penalties passed through both houses of parliament, and Atterbury was deprived of all his offices and condemned to perpetual banishment.

AT'TICA, the most famous of the states of ancient Greece, had Athens for its capital. The district was triangular in shape, less than 900 square miles in area, with a surface diversified by hills and narrow plains. It was made a Roman province by Vespasian, and conquered by Alaric, the Goth, 396. Attica, with Bœotia, forms a department of modern Greece.

AT'TILA, king of the Huns, surnamed the "scourge of God." He and his army of 700,000 men inspired terror throughout the civilised world. He overran the eastern portion of the Roman Empire, and extorted a heavy tribute from the Emperor Theodosius. He then advanced into Gaul and was defeated by the combined Roman and Frankish armies near Chalons-sur-Marne, 451. Contemporary historians say the number of killed exceeded 250,000. The following year he laid waste the whole of northern Italy, but Rome itself was spared by the intervention of Pope Leo I. In 453 he prepared for another invasion of Italy, but died suddenly, either of hæmorrhage of the lungs, or by assassination.

ATTOCK, a town and fortress in the Punjab, India, near the junction of the Kabul and Indus. It was captured from the Sikhs in 1840. An important railway bridge crosses the Indus at this point.

ATTORNEY, one appointed or authorised to act on behalf of another. As a legal designation, it is now replaced in England by the word Solicitor (which see). We still use the term in certain expressions as "Power of Attorney," a document authorising one to sell property or do some other act on behalf of another.

ATTORNEY-GENERAL, the highest law-officer of the Crown. He represents the Crown as an ordinary attorney would his principal. He has to advise the Government on legal questions, and generally to appear as counsel in cases where the interests of the Crown, or the peace or welfare of the kingdom, are at stake. Refer to *Attorney-General* in *Index.*

ATTORNEY, POWER OF. See *Commercial Dictionary.*

ATWOOD'S MACHINE, an instrument designed to illustrate the laws of motion. In its simplest form it consists of a graduated vertical column supporting a nearly frictionless pulley. A fine string, to the ends of which equal weights are attached, passes over the pulley. Motion is given to the weights by placing a small piece of metal known as a "rider" on one of them. When motion has continued for one second, the rider is removed mechanically, and the distance through which the weights move during the next second is carefully measured. In this way the relation that exists between the force causing motion, the mass moved, and the resulting rate of motion is experimentally determined.

AUBER, DANIEL FRANCOIS, *b.* at Caen, 1782, *d.* 1871; a prolific writer of the light French opera, so characteristic of the middle of the 19th century. In "Masaniello," indeed, he seemed to strike a deeper vein, but "Fra Diavolo" and its successors show him in the old light. He wrote forty operas, among them "Le Domino Noir," "Les Diamants de la Couronne," and "Haydée."

AUCKLAND, in North Island, is the largest city in New Zealand, and possesses an excellent harbour, an arm of the Gulf of Hauraki. It was formerly the capital of the colony.

AUCTION. See *Commercial Dictionary.*

AUCTION, DUTCH, a very popular form of sale with street vendors. The would-be seller asks a high price for the article in question, and then gradually comes down until some one agrees to give the price he mentions.

AUCTIONEER. Refer to *Index.*

AUCU'BA, the variegated or Japanese laurel, is a hardy evergreen shrub, and is particularly valuable for gardens and shrubberies in large towns, as it thrives in spite of the impure air.

AUDITOR. See *Commercial Dictionary.*

AU'DUBON, JOHN JAMES, *b.* in Louisiana, 1780, *d.* 1851, a celebrated American naturalist. His two great works, the "Birds of America" and the "Quadrupeds of America," were illustrated by drawings made by himself in the natural haunts of the animals.

AUGE'AN STABLE, the stable in which Augeas, the legendary king of Elis, housed 3,000 oxen. For a payment of 300 oxen, Hercules undertook to cleanse the stable of its accumulated filth of 30 years, in a day. He accomplished his task by turning the rivers Alpheus and Peneus through the stable. Payment for the task was refused and a war ensued, in which Augeas was killed by Hercules.

AUGSBURG, a busy commercial town and banking centre on the river Lech, Bavaria. The articles of faith drawn up by Melancthon in conference with Luther, were laid before the Emperor, Charles V., at the diet held here, in 1530. The document is known as the "Confession of Augsburg." Its 28 articles contain the

principal doctrines of Christianity, as accepted by the Lutherans at the time, but the advances made in the study of Theology and Ecclesiastical History have considerably modified the views held by the majority of that community.

AU'GURIES and AU'SPICES, (i-ces), the practice of divination, as exercised among the Romans by priests specially trained in the college of Augurs. The forecasts were made by noting natural phenomena, and by observing the flight, cries, and behaviour of birds, particularly the eagle, vulture, raven, owl, and domestic fowls. Predictions founded on the observation of birds were properly called *auspices*. The practice grew to such importance, that no great undertaking was begun without first consulting the will of the gods through the Augurs. An augur accompanied the army in the field, and a general could not cross a river or begin a battle without first consulting the birds, which were conveyed in coops. The right of so determining the future rested with the commander-in-chief. His subordinates fought under his auspices; the honour of victory or blame for defeat was ascribed to him alone. The augurs possessed great political influence; for having the right to declare the omens, or signs, unfavourable, they were able to interpose in the execution of any important transaction.

AUGUST, SEXTILIS, the sixth month of the Roman year, which began with March, received its present name from the Emperor Augustus, on account of the many fortunate events connected with his life that occurred during this month.

AUGUSTINE, SAINT. (1) Born at Tagasta, in Numidia, 354, *d.* 430, the greatest of the Latin fathers of the Church, was the son of a pagan father and a Christian mother. After a vicious youth he was converted to Christianity, and baptized by Ambrose, Bishop of Milan, 387. He was consecrated Bishop of Hippo, 396. He took an active part in the religious controversies of the age, was a keen opponent of the Manichæans, Donatists, and Pelagians, and exercised a very great influence on Christian thought and teaching throughout the Church. His "Confessions" are of the nature of an autobiography. His "City of God," completed in 426, is usually considered his greatest work. (2) The "Apostle of England," was sent with 40 monks, by Pope Gregory, 596, to preach Christianity to the Anglo-Saxons. They landed in Kent and were well received by Ethelbert, whose wife was a Christian. Augustine was consecrated the first Archbishop of Canterbury and Metropolitan of England; *d.* 605.

AUGUSTUS, CÆSAR (Caius Octavius), *b.* 63 B.C., *d.* 14 A.D.; the grand-nephew of Julius Cæsar, who, by his will, made him his adopted son and heir. After the assassination of his great uncle he shared the government of the Empire with Antony and Lepidus. Lepidus was soon deprived of his province, and the defeat of Antony at Actium, 31 B.C., gave Octavius the supreme power as Emperor of Rome. The title of *Augustus* was conferred upon him by the Senate, 27 B.C. During his reign of 40 years, the empire made great commercial progress, the city was improved, and art and literature received such encouragement, that the "Augustan Age" stands out as the most splendid in the history of Roman letters. After his death Augustus was deified by the Romans, and temples and altars were raised to his memory.

AUK, a marine bird of the same genus as the razor-bills, guillemots, and puffins. The *Great Auk* was at one time a frequent visitor to the Orkneys, the Hebrides, and Iceland, but no living specimen has been seen for more than 60 years, and the bird is believed to be extinct. It was about 3 feet in length; its rudimentary wings served as paddles; its legs were short, and placed so far back in the body, that, when standing, the bird assumed an erect position. The egg was as large as that of a swan, yellowish-white in colour, with black markings. It is now highly prized by collectors, as much as 300 guineas having been paid for a single specimen. The *Little Auk* is a native of the Arctic Ocean.

AULIC COUNCIL, one of the two supreme courts of the Holy Roman Empire, was first formed in 1495. It consisted of a president, vice-president, and 18 councillors, all of whom were elected and paid by the Emperor. Its functions were of a judicial character. It ceased to exist with the Holy Roman Empire, 1806.

AURELIUS, MARCUS. See *Marcus Aurelius.*

AUREOLE, the whole golden setting with which holy figures are surrounded in sacred art to suggest the holy radiance emanating from them. Refer to "Symbolic Light" in *Index.*

AURO'RA, the mother of the winds and of the morning star, the Roman goddess of the dawn, corresponding with the Greek Eos, whose duty it was, with rosy fingers to raise the veil of night. (2) A city in Illinois, U.S.A., which is credited with being the first town to apply electricity to street lighting.

AURO'RA BOREA'LIS, or Northern Lights, are tremulous bands of light that appear towards the north, in the form of an arc, during the long dark winter within the Arctic Circle. The name "merry dancers" is commonly, and not inaptly, applied to the phenomenon. Many theories as to the cause have been suggested, but all agree that it is electrical in its origin, and this is corroborated by the fact that the most brilliant displays are accompanied by magnetic storms, and the upsetting of electric telegraph apparatus. The most recent theory is that put forward by Sir William Ramsay, 1904. He suggests that the light is due to the myriads of electrons continually thrown out by the sun. These act on the krypton and helium in the atmosphere, and excite into intense activity the internal motions of the atoms of those elements, and so produce the bands of variously coloured light. In the southern hemisphere, the phenomenon receives the name of *Aurora Australis.*

AURUNGZEBE, *b.* 1618, *d.* 1707; the last great Mogul Emperor of India. The third son of Shah Jehan, he played off his two elder brothers against each other when the father was seized with an apparently mortal illness, and obtained supreme power. He then imprisoned his father and executed his brothers, and finally caused himself to be proclaimed emperor in 1658. He had great successes at first, but dissensions with his sons ruined his power, and he died a fugitive before the Mahrattas, then just becoming a powerful State.

AUSPICES. See *Auguries.*

AUSTEN, JANE, *b.* at Steventon, Hampshire, 1775, *d.* 1817; a celebrated English novelist. Her first novels, "Sense and Sensibility," "Pride and Prejudice," and "Mansfield Park" were published anonymously. "Northanger Abbey" and "Persuasion" appeared after her death, and with her name on the title page.

AUSTERLITZ, a small town near Brünn, in Moravia, made famous by the victory gained by Napoleon over the allied forces of Austria and Russia, December 2nd, 1805.

AUSTIN ALFRED, *b.* 1835, the present Poet Laureate, may be said to have touched every branch of literature. His first essay in poetry, "The Season," was published in 1861. "The Golden Age," "The Human Tragedy," "Alfred the Great," and "Flodden Field," are among the more important of his poems. As a prose writer he has gained success, "Veronica's Garden," and "The Garden that I love," being much admired.

AUSTRALASIA comprises Australia, Tasmania, New Zealand, New Guinea, Fiji and the neighbouring islands.

AUSTRALIA. Refer to *Index.*

AUSTRIA-HUNGARY, an empire lying almost in the middle of Europe, includes altogether more than 50 states, and contains many races of people—Germans, Italians, Magyars, Roumanians, Czechs, and other Slavs, speaking twenty different languages. Area exceeds 250,000 square miles, and population is upwards of 47 millions, more than half of whom belong to the Slav race. Next to Switzerland, it is the most mountainous country in Europe. The coast line is short, but this is partly compensated for by the Danube, and the proximity of great commercial nations. The internal trade s very great. The principal exports are grain, flour, horses, and other live stock, wine and wool. Austria and Hungary have each a separate parliament, but are united under one monarch, and the army, navy, diplomatic, telegraphic, and postal services are common to both. In 1908 the provinces of Bosnia and Herzegovina, in the Balkan peninsula, were formally annexed.

AUSTRO-PRUSSIAN WAR, known as the "Seven Weeks' War," arose out of a dispute about the division of the provinces Schleswig-Holstein, ceded by Denmark to the German Confederation in 1864. The Prussians, in alliance with Italy, were everywhere successful, and the victory of Sadowa, July 3rd, 1866, opened the road to Vienna, and the Austrians sued for peace. By the Treaty of Prague, Italy acquired Venetia; Hanover, Hesse, and other provinces were added to Prussia; and the German Confederation was dissolved.

AUTO-DA-FE', a Portuguese term meaning, literally, "Act of Faith," a ceremony which preceded the execution of those condemned as heretics by the Spanish Inquisition. The condemned, clothed in a hideous robe known as the "San Benito," and followed by black coffins, containing the bones of those who had been executed, walked in a procession of priests and monks to a church, where a sermon was preached on the true faith. The execution took place later in the day. Those who recanted were strangled and then burnt, while those who held out were burnt alive. The first Auto-da-fé took place in 1481, the last in 1826.

AUTOGRAVURE, a process of photographic engraving invented by J. R. Sawyer, an eminent London photographer, in 1884.

AUTOL'YCUS, a Greek astronomer who flourished in the fourth century B.C. (2) In mythology, the maternal grandfather of Ulysses, a famous thief who possessed the power of making himself and the things he stole invisible. (3) A delightful rogue, in Shakespeare's "Winter's Tale," a "picker-up of unconsidered trifles," who sells gewgaws at the sheep-shearer's feast.

AUTOMATON, a name generally reserved for machines acting in certain respects as human beings or animals, and so constructed as to go through certain natural motions without the operating

agency being revealed. Of late years Mr. Maskelyne's automata have been unsurpassed, as "Psycho," the whist player, and "Zoe," the artist.

AUTOMOBILE, a mechanically propelled carriage which carries its own motive power. The chief methods of propulsion in use are steam, the explosion of a mixture of air and petrol vapour, and electricity. (See *Electric Motor Cars.*) Steam is particularly suitable for heavy lorries, trucks, etc. The machinery consists of the boiler, fire, the engine, and some form of gearing for transmitting the motion to the axles of the road wheels. The boiler is usually a modification of the water-tube boiler, known as a "*flash*" boiler. This consists of a number of flattened steel tubes passing through the fire-box. A small quantity of water is injected into the tubes by the stroke of a pump, and this is almost instantly converted into steam. The supply of steam to the engine is controlled by the amount of water with which the tubes are fed. The advantage of such a boiler is its lightness, and the small space it occupies in proportion to the amount of heating surface. A large majority of automobiles, including *motor cycles*, make use of petrol. The essential parts are the tank, carburettor, cylinder, a heavy fly-wheel, sparking apparatus, and belts or cogs for transmitting the motion to the wheels. By means of a pipe of small bore, a regulated supply of petrol is conveyed from the tank to the carburettor. It there meets with a current of air, is volatilised, and the mixture of atmospheric air and petrol vapour rises into the cylinder, and is exploded by an electric spark. The explosive force drives the piston forward. The inertia of the fly-wheel, which has previously been set in motion by physical force, returns the piston to its former position, and the spent gases are driven out of the cylinder. The continued swing of the fly-wheel sends the piston forward again, and a fresh supply of the explosive mixture is drawn into the cylinder. This is compressed into the head of the piston by the return of the piston, and exploded as before. This cycle of movements is continued as long as the engine is kept running.

AUTONOMY, "self-rule." Every place, whether parish, city, or province, enjoys a certain amount of autonomy, and the extent to which this is carried is, in a measure, a criterion of the degree of liberty a country has attained. But the term is generally used now-a-days to express the privilege that a Sovereign State, as Turkey, confers on a subordinate province, as Crete, of managing entirely its own internal affairs.

AUTOPLASTY. See *Med. Dict.*

AUTOTYPE, a reproduction of a photograph or picture in printer's ink, or other permanent pigment. The method of production depends on the fact that, while gelatine combined with bichromate of potash is ordinarily soluble in water, exposure to sunlight renders it insoluble. A film of the compound is spread over a rigid plate for support. A negative on glass is placed above it, and the whole is exposed to sunlight, which penetrates the lights of the negative, and renders the underlying gelatine insoluble; the gelatine covered by the darks of the negative remains soluble. After treatment with water it is found that the insoluble gelatine will freely receive and impart printers' ink. The film is hardened by the admixture of gums, and so a plate is obtained that may be used in the printing press.

AVALANCHES are masses of snow and ice that become detached from the sides of mountains, and slide or roll into the valleys below. They are frequent in the Alps. During winter, the dry snow is often set in motion by the wind. At other times pieces of partly melted snow begin to roll, and the mass gathering in volume and velocity as it proceeds, creates great devastation, the accompanying wind being strong enough to uproot trees and to overturn houses. In spring, after a long thaw, the whole mass of snow on the side of a mountain becomes detached from its base by the percolating water, and, carried along by its own weight, slides into the valley. Ice avalanches consist of masses detached from glaciers. They are frequently seen and heard in Switzerland, in July and August.

AV'ALON, in Celtic mythology, an island situated in the region of the setting sun, and looked upon as the heaven of all heroic souls.

AVATAR', the incarnation of a Hindu deity. Hindu poetry contains a large number of instances of their gods assuming earthly shapes for purposes of retribution, or to right the wrong. The best known is the eighth avatar of Vishnu, in the form of Khrishna, which forms the subject of the Sanscrit epic poem, the Mahabharata.

AVEBURY, a small village in Wiltshire, about 6 miles from Marlborough. Near it are the remains of what was formerly, it is believed, a large Druidical temple.

AVEBURY (John Lubbock), **LORD,** *b.* 1834, F.R.S., scientist, writer, banker, and formerly Member of Parliament for the University of London. His work on ants suggests that they possess reason as well as instinct, whilst his researches on Stonehenge show that it dates from the bronze age, and not merely from the time of the Druids as formerly thought. We are indebted to him for our Bank holidays, as owing to his efforts, an Act of Parliament was passed, authorising the closing of banks on certain days. Of his many writings, the most popular are "The Pleasures of Life," and "Ants, Bees, and Wasps."

A'VE MARI'A, "Hail Mary," the first two words of the Latin translation of the salutation addressed by the angel to the Virgin, (Luke i. 28), and in the Roman Catholic Church, the name of a prayer in which the Virgin is invoked. (2) Each of the smaller beads of a rosary is called an *Ave Maria.*

AVER'NO, a lake about 1½ miles in circumference, occupying the crater of an extinct volcano near Naples, Italy. The noxious vapours that arose from its surface were said to prove fatal to birds flying over it. This story, combined with its gloomy appearance, led the ancients to regard it as the entrance to the infernal regions.

AVESTA, the sacred writings of the Parsees. Refer to *Index.*

AVIGNON, a French town on the left bank of the river Rhone, near its junction with the Durance, manufactures silk, and has a considerable trade in wine, oil, and fruits. It contains a very ancient cathedral and the palace which formed the home of the Popes from 1309 to 1376. Many Roman antiquities are found in the neighbourhood.

AVO'CA, VALE OF, a beautiful river valley in County Wicklow, Ireland, made famous by Moore's poem, the "Meeting of the Waters."

AVON, the name of several small rivers in Great Britain. (1) The Upper Avon flows past Stratford, and joins the Severn at Tewkesbury. (2) The Lower Avon separates Somersetshire and Gloucestershire, passes Bath and Bristol, and flows into the Bristol Channel. (3) The East Avon, after a course through Wiltshire and Hampshire, passing Salisbury on the way, enters the English Channel at Christchurch.

AXENSTRASSE, (stras-se), a picturesque mountain road, hewn out of the solid rock, along the shore of the Lake of Lucerne, between Tell's Chapel and Flüelen.

AYE'SHA, *b.* 610, *d.* 677, the favourite wife of Mohammed, styled by Mohammedans the "Mother of the Faithful." On the death of the prophet, she resisted the accession of Ali by force of arms, but was defeated and captured. Ali restored her to liberty, with permission to live in any town in Arabia, provided she took no further part in state affairs.

AYTOUN, WILLIAM EDMONSTONE, *b.*, at Edinburgh, 1813, *d.* 1865; poet, critic, and professor of literature. His "Lays of the Scottish Cavaliers" has seen many editions, and he wrote many of the "Bon Gaultier" ballads. He was a frequent contributor to "Blackwood."

AZA'ZEL, either the Hebrew name of the scape-goat, that was led out to the wilderness, laden with the sins of the people, or a term for Satan, to whom the sin-laden goat was abandoned.

AZ'IMUTH, THE, of a star, is the angle measured along the arc of the horizon, between the meridian of the observer and the plane of a vertical circle passing through the star.

AZORES or **WESTERN ISLANDS,** a group of nine volcanic islands belonging to Portugal, situated in the North Atlantic, 800 miles west of Lisbon. St. Miguel and Fayal are the best known. The islands are covered with orange groves; oranges, lemons, and other fruits, together with wine and brandy, are exported.

AZOV, SEA OF, in the south of Russia, is the shallowest sea in the world, and is gradually silting up with the mud brought down by the river Don. The fisheries are very valuable, and large quantities of caviare and isinglass are produced. In August, 1903, the Russian government signified its approval of a plan for connecting the Caucasus with the Crimea, by a bridge spanning the Strait of Yenikale, which joins the Sea of Azov to the Black Sea.

AZTECS, the ruling race in Mexico at the time of the Spanish invasion and conquest under Cortez, 1519.

BAAL, the sun-god of the Phœnicians and the Canaanitish nations. His worship was introduced into Israel by Jezebel, wife of Ahab (1 Kings xviii.).

BAALBEC, the Heliopolis of the Greeks, an ancient Syrian city, situated 35 miles north-west of Damascus. Its name means the "City of the Sun." The city was one of the largest and most splendid in Syria, but is now in ruins. The temple of the sun-god, now in ruins, is justly regarded as one of the wonders of the world.

BABBAGE, CHARLES, *b.* at Teignmouth, Devon, 1792, *d.* 1871, a celebrated mathematician and inventor. He devoted much time to the invention of a calculating machine, and received grants from government to defray part of the cost, but the machine was never completed. His principal work was the "Economy of Manufactures and Machinery." He also published "Tables of Logarithms," and an autobiography entitled "Passages from the Life of a Philosopher."

BAB-EL-MANDEB, "Gate of Tears," the strait, 15 miles in width, uniting the Red Sea to the Indian Ocean, was so called on account of the dangers of its navigation. A lighthouse has been erected by the British government on the island of Perim in the middle of the strait.

BABER, *b.* 1483, *d.* 1530, the founder of the Mogul Empire in Hindustan, was

a descendant of the great Tartar chieftain, Timur or Tamerlane. On his third invasion of India he defeated the Sultan Ibrahim, near Delhi, 1526, and captured Agra a month later. In addition to being a skilful general, he proved himself an able statesman and administrator, displayed a taste for science and art, and wrote in the Tartar language a history of his life and conquests. The dynasty of which he was the founder, governed northern India for three centuries.

BABINGTON, ANTHONY, a Roman Catholic gentleman of Derbyshire, who entered into a conspiracy to assassinate Queen Elizabeth, and to set Mary Queen of Scots on the throne. The scheme was known to Walsingham, the conspirators were arrested, Babington confessed his participation in the plot, and was executed at Tyburn, 1586.

BABOO or **BABU,** an Indian term equivalent to Mr., used by Anglo-Indians to denote a Bengali, who parades his knowledge of English and English literature, all unconscious that his style of speaking is devoid of good taste, even when free from grotesque blunders.

BABOON, a species of monkey found in most parts of Africa. The head is large and dog-like, with powerful jaws and projecting teeth. The animals inhabit rocky and mountainous districts in preference to forests. They congregate in troops, and display great skill and daring in their attacks on gardens and grain fields. They possess a remarkable instinct for finding water, and in South Africa have been employed for this purpose.

BABUL TREE, an Indian acacia yielding a hard timber used for railway sleepers. A medicinal and edible gum is obtained from it.

BABYLON. (1) The Shinar and Chaldæa of the Bible, first existed as a small state to the north of the Persian Gulf. Thence the nation spread along the rivers Tigris and Euphrates, the seat of government moving in the same direction, until it was finally fixed at Babylon, in the eighteenth century, B.C. For a time, the country was tributary to Assyria, but Nabopolassar asserted his independence, 625 B.C., and in the reign of his son, Nebuchadnezzar, Babylon reached the zenith of its power. In the year 538 B.C., it was conquered by Cyrus, and from that time its history was merged in that of Persia. (2) The capital of the former was built on both banks of the Euphrates. It is said to have covered an area of 200 square miles. and to have been surrounded by walls 300 feet in height, and more than 80 feet in thickness, strengthened with 250 towers, and pierced by 100 gates of brass. Its walls and hanging gardens were accounted among the seven wonders of the world. (3) The name was frequently applied to Rome by the early Christians, and is now sometimes used for any large centre of population.

BABYLONIAN CAPTIVITY. When Nebuchadnezzar took Jerusalem in 586 B.C., he deported the inhabitants to Babylon, where they remained in tolerable comfort for more than fifty years. After the taking of Babylon by Cyrus, permission was given the Jews to return, a privilege which was accepted by about 50,000 of them. During the period of captivity, they were generally free to exercise their religion, and many rose to positions of political dignity and wealth.

BACCHANTES, devotees of the god Bacchus, in whose revels and processions they are depicted as taking a riotous part.

BAC'CHUS, the son of Jupiter and Semele, was the god of wine, and is generally represented crowned with vine leaves, and sitting in a car drawn by tigers.

BACH, JOHANN SEBASTIAN, *b.* in Eisenach, 1685, *d.* 1750; the most distinguished of a remarkable family of musicians. He gained a great reputation throughout Germany as a performer on the harpsichord and organ, and was particularly skilful in extemporising. His compositions are mostly of a religious nature, and include cantatas, motets, and numerous pieces for the organ. His fugues are well known to all lovers of that instrument.

BACILLUS is a microbe shaped like a rod. [See "Bacteria" in *Med. Dict.*]

BACKWELL, EDWARD, a goldsmith of the 17th century, who had banking transactions with Cromwell and Charles II., and was probably the founder of banking in England, although, according to Lord Avebury, the system was practised on the Continent as early as 1400.

BACON, FRANCIS, Lord Verulam, *b.* in London, 1561, *d.* 1626; one of the founders of inductive philosophy, which makes well-ascertained facts the basis of truth. In the reign of James I. he became, in succession, Attorney-General, Privy Councillor, Lord Keeper, and Lord Chancellor. He was most extravagant in his mode of life, and this led to his accepting bribes from suitors. A parliamentary enquiry led to his conviction, on his own written confession, of twenty-three acts of corruption, and he was deprived of his office. He devoted the remainder of his life to literature and science. His greatest works are the "Advancement of Learning" and his "Novum Organum." His Essays, remarkable for their terseness, display a keen observation of human nature.

BACON, ROGER, *b.* at Ilchester, 1214, *d.* 1294, a Franciscan friar, who, on account of his extensive knowledge, received the name of "Doctor Mirabilis." Natural philosophy was his principal study, and he is credited with being the inventor of the telescope, the camera obscura, and gun-powder. His knowledge of astronomy led him to discover certain errors in the calendar; he prepared a corrected calendar, a copy of which is preserved in the Bodleian Library. His discoveries were regarded as the result of witchcraft, and the jealousy of the other monks led to his being denounced before the court of Rome, and to his undergoing two terms of imprisonment.

BACTERIA, microscopic fungi. See *Med. Dict.*

BADAJOZ, on the Guadiana, Spain, surrendered to Soult in 1811, and was retaken by Wellington, 1812.

BADEN-POWELL, LIEUTENANT GENERAL SIR ROBERT STEPHENSON, K.C.B., K.C.V.O., *b.* 1857, made a great reputation as a leader of scouts in India and Africa. He successfully held Mafeking, which was invested by the Boers a few days after the outbreak of war, until its relief, 18th May, 1900. He then took part in the general advance on Pretoria. Later, as commander of the South African Police, he did much for the pacification of the country. On his return to England he was appointed Inspector-General of Cavalry. In 1908 he founded the "Boy Scouts" organization, and gave up his commission in the Army in May, 1910, in order to devote more time to the "Boy Scouts" movement.

BADGE, originally the mark by which the followers of one knight were distinguished from those of another; it afterwards became a sign of authority. Badges have similar applications now in the British army; the men of certain regiments are distinguished from those of another by a badge worn on the collar or shoulder straps, and the rank of officers is indicated in a similar manner, by a badge consisting of one or two stars, a crown, or a star and a crown. Members of colleges and large schools also adopt a distinguishing badge. The rose, thistle, harp, or shamrock are the national badges of England, Scotland, and Ireland respectively.

BADGER, an animal belonging to the same family as the otter and the skunk, and closely allied to the bear, is common throughout northern Europe and Asia. It is about two feet in length, of powerful build, and walks with the whole of the foot on the ground. Its burrow, constructed within the cover of plantations and woods consists of a long passage leading to several chambers, the last of which is lined with dried grass, etc. Here the badger passes the day, leaving it at night to seek for food, which consists of vegetables, insects, and small birds. Badger-baiting was formerly a popular sport in England.

BADMINTON, a game played by means of a battledore and shuttlecock. The players stand on opposite sides of a net, as in lawn tennis. The shuttlecock is "served" by one player to an opponent on the other side of the net, and a point is scored against that player who fails to return it.

BAEDEKER, KARL, *b.* 1801, *d.* 1859, a printer of Coblenz, who published a series of excellent guide books to almost every European country.

BAFFIN, WILLIAM, *b.* 1584, *d.* 1622, an English Arctic explorer who discovered and explored Baffin's Bay, Smith Sound, and Lancaster Sound, 1616.

BAGDAD, on the river Tigris, in Asiatic Turkey, is one of the most prosperous and ancient cities in the Turkish Empire. The first meeting of the board of the Bagdad Railway Company was held in Constantinople, 1903. The completion of the line, designed to connect the Bosphorus with a port on the Persian Gulf, will make Bagdad a city of first-rate importance.

BAGPIPE, a wind instrument still in use among the peasantry of several parts of Europe, and very popular in the Highlands of Scotland, and at gatherings of Scotsmen. Pipers are attached to the Highland regiments, and are also retained by some Scottish noblemen. The instrument consists of a leathern bag, inflated by means of a mouthpiece, with three or four pipes attached; the one with finger-holes, called the *chanter*, produces the tune, whilst the *drones* emit a single low note each.

BAHA'MAS, a group of twenty inhabited islands, and several thousand rocks, of coral formation, lying between the isthmus of Florida and the island of Cuba, form part of the British possessions in the West Indies. There is a considerable trade in sponges and turtles; pineapples and other fruits are exported. *Nassau*, population 12,000, on New Providence, is the capital, and is a great resort for invalids.

BAHI'A, on the Bay of All Saints, was, until 1771, the capital of Brazil, and is still one of the chief ports, carrying on a considerable trade in sugar, cotton, coffee, hides, etc.

BAIKAL, LAKE, in the south of Siberia, is about half the size of Scotland. Its waters, which in places reach a depth of 4,500 feet, are frozen for six months of the year to the thickness of five feet.

BAILIE, a Scottish term denoting a magistrate of a municipality or royal borough, the provost and bailies of a municipal corporation in Scotland corresponding to the mayor and aldermen of an English borough.

BAILIFF. See *Commercial Dictionary.*

BAILMENT. See *Commercial Dictionary.*

BAIRAM, the name of the two festivals annually celebrated by Mohammedans. The first, which ends the period of fasting rigorously observed by the faithful, lasts three days. The second, which occurs 70 days after the first, commemorates the offering of Isaac by Abraham.

BAIRD, SIR DAVID, *b.* at Newbyth, Aberdeenshire, 1757, *d.* 1829, joined the army at 15, and saw considerable service in India and Egypt. He commanded the force which seized Cape Colony in 1806, and served under Moore as second in command at Corunna, where he lost an arm. He four times received the thanks of Parliament for his services, was knighted in 1804, and created a baronet in 1809.

BAJAZET', *b.* 1347, *d.* 1403, Sultan of the Turks, received the name of *Ilderim,* that is "lightning," from the rapidity with which he pursued his conquests. He conquered nearly the whole of the Balkan Peninsula, and subdued Asia Minor. He was finally defeated by Timur, 1401, and remained in captivity until his death.

BAKER, SIR BENJAMIN, *b.* 1840, a celebrated civil engineer. He was joint engineer with Sir John Fowler for the Forth Bridge; also engineer for the Central London Railway ("the twopenny tube"). He is consulting engineer to the Egyptian Government, and the dam at Assouan and the barrage at Assiout were carried out under his directions.

BAKER, SIR SAMUEL, *b.* in London, 1821, *d.* 1893, travelled extensively in India, Cyprus, and Africa, and discovered the Albert Nyanza. His book "Ismailia" contains a description of an expedition he commanded in the Soudan. An account of his travels was published in five volumes.

BAKSHISH, a Persian word meaning a present. Its commonest use is to denote a "tip" given to an Arab.

BAKU, the Caspian port of Trans-Caucasia, is in the centre of a district rich in petroleum. More than 700 oil-wells have been sunk, and connected by pipes with the refineries in the town. The district was formerly a resort of Persian fire worshippers.

BALAAM, a Midianitish prophet, to whom Balak, king of Moab, sent an embassy, offering him large bribes to curse the Israelites. He consented, at last, to go with the ambassadors to Balak, but was constrained to pronounce a blessing instead of a curse (Num. xxii.–xxiv.).

BALAKLA'VA, a small port with a land-locked harbour, in the south-west of the Crimea, about six miles from Sevastopol. It formed the British base of operations during the Crimean War, and a valley near the town was the scene of the charges of the "Heavy Brigade," and of the "Six Hundred," 25th October, 1854.

BALANCE OF TRADE. See *Commercial Dictionary.*

BAL'DACHIN, a canopy, supported on pillars, suspended from the roof, or projecting from the wall, as a cover to an altar. The most celebrated is the Baldachin of bronze, 95 feet in height, in St. Peter's, Rome.

BÂLE. See *Basel.*

BÂLE, COUNCIL OF, a council of the Roman Church that met at intervals during 1431–43, with the object of promoting such reforms in the Church as would reconcile the Hussite reformers. It caused a schism, however, by deposing Pope Eugenius IV., and electing a rival, Felix V. The latter resigned on the death of Eugenius IV., and acknowledged as his successor Nicholas V.

BALEAR'IC ISLANDS, the "Fortunate Isles" of the ancients, a group of five islands forming a Spanish province in the Mediterranean. The largest are Majorca, Minorca, and Iviza; the chief towns Palma, population 32,000, and Port Mahon.

BALEEN consists of from 300 to 400 horny plates which grow from the palate of certain species of whales and hang down into the mouth.

BALFE, MICHAEL WILLIAM, *b.* at Dublin, 1808, *d.* 1870; an operatic singer, and the composer of several tuneful operas, the best known of which is the "Bohemian Girl."

BALFOUR, ARTHUR JAMES, *b.* 1848, son of a Scotsman and nephew of the Marquis of Salisbury, who employed him as his Private Secretary at the Berlin Congress, 1878. Mr. Balfour was Chief Secretary for Ireland, 1887–91, became Leader of the House of Commons in 1891, and held the office of Prime Minister, 1902–5. As Irish Secretary he showed unexpected strength. His energetic and judicious management of the Congested District Board, the construction of Light Railways, and the Zetland Fund for evicted tenants won general approval. The chief measures of his premiership were the Education Act of 1902, and the Licensing Bill of 1904. Losing his seat at East Manchester in the General Election of 1906, he was provided with one in the City of London by the retirement of the Hon. Alban Gibbs. His chief literary works are "A Defence of Philosophic Doubt," and "The Foundations of Belief."

BALIOL, SIR JOHN DE, of Barnard Castle, Durham, fought against Simon de Montfort under Henry III., and died in exile, 1269. In order to escape a scourging at the doors of Durham Cathedral he founded Balliol College, Oxford.

BALIOL, JOHN, son of the former, *b.* 1259, *d.* 1314; became a claimant for the throne of Scotland on the death of Princess Margaret, 1290. Edward I., king of England, who had been called in as arbitrator, decided in his favour, and Baliol did homage to him as the feudal overlord of Scotland, 1292. He found his position full of indignities, and attempted to recover the independence of Scotland. The Scotch were defeated at Dunbar, 1296, Baliol was captured, and, together with his son, was imprisoned in the Tower of London for three years, after which he was permitted to withdraw to his estates in Normandy, where he died.

BALKANS, THE, a mountain range extending from the borders of Servia to the Black Sea, and now forming the southern frontier of Bulgaria. In the Russo-Turkish War, 1877–8, a Russian army forced a passage across the range, and a Turkish force of 32,000 men surrendered to them in the Shipka Pass.

BALKAN PENINSULA, THE, the most easterly of three great peninsulas in the south of Europe, situated south of the Danube, and terminating towards the south in the secondary peninsula of Greece. The Balkan States comprise Roumania, Servia, Montenegro, Bulgaria with East Roumelia, and Turkey. The population of these States includes amongst others Turks, Albanians, Greeks, Bulgarians, Armenians and Jews. This mixture of races with its accompanying hostility of creeds leads to incessant unrest, and is the prime cause of the political problem known as the "Eastern Question."

BALL, JOHN, an excommunicated priest, who became associated with Wat Tyler in the popular insurrection against the government of Richard II., 1381. Ball roused the people by preaching to them on the text "When Adam delved and Eve span, who was then the gentleman?" He was captured and executed.

BALL, SIR ROBERT, *b.* 1840, astronomer and mathematician, was educated at Trinity College, Dublin. He became Astronomer Royal of Ireland, 1874, and director of the Cambridge University Observatory, 1892, and has held the office of President of the Royal Astronomical Society. He has done more than any one, both by writing and lecturing, to popularise the study of Astronomy, as witness his popular books, "The Story of the Heavens," "Time and Tide," and his "Atlas of Astronomy." He is an authority on applied mathematics, and has written a "Treatise on the Theory of Screws."

BALLAD, originally a song that accompanied a dance, now denotes a narrative poem in a simple rhymed metre. The mediæval ballads of England were the work of minstrels rather than scholars, and were made for the people. Bishop Percy in 1765, published his "Reliques of Ancient English Poetry," and this collection of native ballads restored to favour that forgotten form of art.

BALLARAT, the second city in the province of Victoria, Australia, was a famous gold mining town. At first the gold was procured by washing the soil; this source is now exhausted, and the metal is obtained by crushing the quartz derived from deep mines. The value of the output in 1902 was £3,062,000.

BALLAST. (1) The material placed in light cargo vessels to ensure stability, by sinking the hull to a sufficient depth in the water. Iron, stone, gravel, sand, and water are commonly used. Water is sometimes enclosed in water-tight bags, which are laid on the floor of the hold, or it is confined beneath a false bottom in the ship, or contained in reservoirs that are at other times used for the conveyance of cargo. (2) The loose material, consisting of broken slag, stones, etc., placed as a packing between railway sleepers to give them stability, and to assist in the drainage of the line.

BALLISTA, a Roman instrument of war used for hurling heavy stones. It was a kind of heavy bow fixed on a platform on which rested the missiles.

BALLOON. See *Aeronautics.*

BALLOT, a method of secret voting. The voter in an election receives from the presiding officer of the polling station a voting paper, which bears the names of all the candidates. He places a cross against the names of those he supports, folds the paper, and deposits it in a locked box. The principle of public voting by ballot was first adopted in England at the election of school boards in 1870, and was extended to parliamentary and municipal elections by the Ballot Act of 1872. A similar method is made use of in electing members of clubs, scientific societies, etc., but balls of different colours sometimes take the place of voting papers.

BALME, COL DE, a famous pass off the Rhone Valley between Chamonix and Martigny, commanding magnificent views; greatest height above 7,000 feet.

BALMERINO, a village in Fife from which the Elphinstones took their title. The last (sixth) Lord Balmerino was beheaded on Tower Hill, in 1764, for complicity in the '45 Rebellion.

BALMORAL CASTLE, the Highland residence of the king, on the right bank of the river Dee, Aberdeenshire. The estate was purchased by Queen Victoria in 1851, and the present castle was erected from the designs of the Prince Consort, 1853–5.

BALSAM, an exudation from plants of the bean family growing in tropical America. The exudation contains resin, a volatile oil, and either benzoic or cinnamic acid. Balsam of Peru is an

exudation from the stem after the removal of the bark; Balsam of Tolu is obtained by making incisions in the bark. Both are used in medicine in cases of bronchitis, rheumatism, and asthma. The Balm, or Balsam of Gilead, referred to in the Old Testament and by ancient writers, is a liquid, resinous substance obtained from a small tree growing in Arabia, etc. It was highly prized for its fragrance and for its medicinal properties, being considered a cure for many diseases.

BALTHAZAR. See *Belshazzar.*

BALTIC, THE, an inland sea in the north-west of Europe, about twice the size of England and Wales, washing the shores of Sweden, Russia, Germany, and Denmark, and opening into the North Sea. The sea is very shallow, and its waters are fresher than the ocean, owing to the numerous rivers it receives. From December to April the navigation is closed by ice.

BALTIMORE, on Chesapeake Bay, is the most flourishing commercial city and manufacturing centre in the state of Maryland, U.S.A., and is the seat of the Johns Hopkins University. It exports grain, flour, and tobacco. Early in 1904 a fire destroyed a large part of the commercial section of the city, the damage being estimated at £20,000,000; population before the fire, 525,000.

BALUCHISTAN, area 132,000 square miles, population rather more than one million tribesmen, extends from the south of Afghanistan to the Persian Gulf, and from British India to Persia. Independent Baluchistan is ruled by the Khan of Kelat, who receives an annual subsidy of 100,000 rupees from the Indian government, to whom, in 1903, he granted a perpetual lease of certain border lands for an additional annual payment. Quetta and the Bolan Pass District have been held on lease since 1883. The country is chiefly a desert plateau, peopled by two races, the Baluchis, who are robber nomads, and the Brahuis, of Mongolian descent. A railway is being constructed from Quetta for 93 miles along the principal trade route.

BALZAC, HONORÉ DE, *b.* at Tours, 1799, *d.* 1850, a brilliant French novelist who aimed at depicting in his works every phase of human life, but died before completing his scheme. After his death, his works were published in 45 volumes, with the collective title of the "Comedy of Human Life."

BAMBINO (Ital.="babe") a term applied especially to a figure of the infant Christ bedecked with jewels in the Church of the Ara Coeli at Rome. This image is venerated for its supposed healing powers, and annually, on the Epiphany, is shown with great ceremony to the people.

BAMBOO, a species of giant grass, common in most tropical countries. In the East it is put to many economic uses, furnishing materials for house building, furniture, domestic utensils, masts of boats, etc. Paper is made from the sheaths and leaves, and the stems are used as water-pipes.

BAMPTON LECTURES, a course of eight divinity lectures delivered triennially at Oxford, for the endowment of which John Bampton, canon of Salisbury, left property to the University, which yields an income of £200 a year. The course, first delivered in 1780, and until recently given annually, was founded "to confirm and establish the Christian faith and to confute all heretics and schismatics."

BANANA, a plant native to the tropics of the Old World, but now distributed throughout the hot regions of America. The seedless fruit forms a valuable food in hot countries, and large quantities are now exported to England from the West Indian Islands. The fibres of the stem and leaves are used for the manufacture of textile fabrics, and for cordage. The plant, which is closely allied to the plantain, is cultivated from suckers, and the produce of fruit is enormous.

BANBURY, a market town in Oxfordshire, famous for its cheese, cakes, and ale; population about 13,000.

BANCROFT, GEORGE, *b.* 1800. *d.* 1891. American historian and diplomatist. He was educated in Germany where he associated with Goethe and Humboldt. His "History of the United States" was issued in ten volumes during a period of over forty years. Meanwhile he was ambassador to Great Britain and to Germany.

BANDANA, originally an Indian spotted silk handkerchief, but now a kind of printed handkerchief, extensively made in Britain, usually of cotton. The cloth is first dyed red, and then the spots are produced by applying bleaching powder under pressure.

BAND OF HOPE, an organisation for promoting the teaching of temperance among children. It was founded in 1855. It has about 30,000 branches and a membership of over three millions.

BANDY, hockey played on ice, with rules similar to those of hockey on land. It is played extensively in the colder parts of the United States.

BANFF. (1) A port on the Moray Firth, 44 miles north-west of Aberdeen, forming one of the Elgin burghs. Duff House, the seat of the Duke of Fife, is situated near the town. (2) A small town in Alberta, Canada, at the foot of the Rockies, on the Central Pacific Railway. At Banff Station travellers alight for the Canadian National Park, 20 miles by 10 miles, containing scenery unsurpassed for grandeur and beauty.

BANGKOK, the "Venice of the East," on the delta of the river Menam, is the capital of Siam, and the commercial centre of the country, the trade being almost wholly in the hands of foreigners. The chief exports are rice and teak-wood; population about 400,000.

BANGWEOLO, or **BEMBA,** an oval-shaped lake, a little larger than Wales, in Equatorial Africa, forming the head waters of the Congo, at an elevation of 3,690 feet. The lake was discovered by Livingstone.

BANK HOLIDAYS, or general holidays, so called because on those days, chiefly through the efforts of Sir John Lubbock (Lord Avebury), the banks of England and Ireland are authorised by Act of Parliament (1871) to be closed on Easter Monday, Whit Monday, the first Monday in August and Boxing Day, in addition to Good Friday and Christmas Day, as formerly. In Scotland bank holidays occur on New Year's Day, and the first Mondays in May and August, in addition to Good Friday and Christmas Day. The Stock Exchange keeps holiday also on May 1 and November 1.

BANK OF ENGLAND, THE, was established by charter in 1694, and at first enjoyed exclusive privileges, as no other banking company was allowed to do business in the kingdom. The charter was renewed in 1708, but with a more limited monopoly. Yet it was not until the passing of the Banks Bill of 1826 that joint-stock banks began to be established in England; indeed, the first business of the kind in London did not begin operations until 1833. The Bank of England still enjoys a monopoly of certain business, and for this privilege pays to the government £180,000 annually, and the profits arising from the issue of notes beyond a certain sum. In addition to the business it does with private customers, it acts as the Government Banker, manages the National Debt, and pays its dividends. It issues Exchequer bills and government loans, and also manages much of the financial business of the Indian and Colonial Governments. All bankers dealing with the London Clearing House have accounts with the Bank of England, the net profits of which, for the half-year ending August, 1903, amounted to £715,767. Since 1816 the capital of the Bank has stood at £14,553,000, and on December 9th, 1903, there was a reserve of £3,148,604. Since the Gordon Riots of 1780, when the bank premises were considered to be in danger of attack, a military guard has been nightly stationed there. Refer to *Index.*

BANK NOTES are printed promises, made by the issuing bank, to pay to the bearer on demand a certain sum in cash. £1 and £2 notes have been in circulation from time to time, but at present, notes are not issued in England for a smaller sum than £5, though the Bank of Scotland and the Bank of Ireland still issue £1 notes. The holder of a note is protected against loss by the legal requirement that the issuing bank must hold a reserve, either in gold, Bank of England notes, or Government stock, to cover a large proportion of the amount for which it issues notes. By the Bank Charter Act of 1844, the Bank of England was permitted to issue notes to the amount of £14,000,000, since increased to £18,450,000, an amount covered by the £11,015,100, to which extent the Government is indebted to the Bank, and by other 'gilt-edged' securities. Every note issued in excess of £18,450,000 must be covered by gold coins or bullion deposited in the vaults of the Bank. According to the "Banker's Magazine" for December, 1903, the fixed issue of bank notes by the banks of the United Kingdom amounts to £29,370,328. No Bank of England note is issued twice. In the manufacture of bank notes, every care is taken to render forgery difficult, or easy of detection, by the employment of peculiar paper and ink, water-marks, and peculiarities in the design.

BANKS, SIR JOSEPH, *b.* in London, 1743, *d.* 1820, a celebrated naturalist, who was president of the Royal Society for forty-one years. He collected botanical specimens from all parts of the world, and on his death bequeathed his collection, and a valuable library, to the British Museum. He was created a baronet in 1781.

BANNER, a flag bearing a coat of arms, or some other device, and attached to a pole. From a very early period banners have been used for directing the movements of troops. In the Middle Ages, the banner indicated the rank of the bearer. Its use was not confined to warriors. Bishops and abbots had their banners, bearing the effigies of saints, borne before them in religious processions. Every regiment in the British army is provided with banners, called "colours," bearing the regimental badge, and inscribed with the names of battles in which the regiment has taken part.

BANNOCKBURN, a village in Stirlingshire, manufactures carpets and tartans. The village was the scene of the victory of Robert the Bruce over Edward II., 1314, by which the independence of Scotland was secured.

BANSHEE, a fairy who, according to the legends of Ireland, Scotland, and Brittany, was attached to a particular family, and by her wailings foretold the approaching death of a member of the house.

BANTING, WILLIAM, a London merchant who, in 1863, published a pamphlet

on a method of reducing corpulence by dieting. He recommended the use of lean meat, fish, and dry toast, and the avoidance of food rich in starch, sugar, or fat.

BANTU, the language of the natives of the interior of Tropical Africa. It differs from every known family of languages, the inflections being usually placed at the beginning of the words.

BANYAN, the Indian fig. The branches of the tree throw out supports which take root when they reach the ground, and grow into trunks which, in their turn, produce similar branches. One banyan is said to have sheltered 7,000 men.

BA'OBAB, a native of Tropical Africa, is one of the largest trees in the world. Its trunk is often 30 feet in diameter, but the tree is not proportionately tall. It produces an acid pulpy fruit, known as monkey-bread, the juice of which forms a refreshing beverage, and is considered a specific in cases of fever. The bruised leaves are also used medicinally.

BAP'TISTERY, a building or portion of a building in which the rite of baptism is, or was, performed. Among the early Christians the baptistery was detached from the Church to which it belonged, and was polygonal or circular in shape. Remarkable specimens are to be seen at Florence and Pisa.

BAPTISTS, a denomination of Christians who hold that the proper mode of baptism is by immersion, and that the only persons suitable to receive the rite are those old enough to exercise an intelligent faith. Each congregation, with its pastor and deacons, is self-governing; church membership is conferred by baptism, and every member has the right of voting on any question brought before a church-meeting. In 1903 the denomination possessed 6,764 places of worship in the United Kingdom, and 377,747 members. (Refer to "Baptists" in *Index*.)

BARBA'DOS, the oldest and healthiest of the British Colonies in the West Indies, was acquired in 1605, and is, next to Jamaica, the most valuable of our West Indian possessions. The chief exports are sugar and molasses. In 1902 the Imperial Government allotted £80,000 to the island, for the relief of the sugar growers: population nearly 200,000, of whom less than one-tenth are whites.

BARBARA, SAINT, a Christian martyr of the third century, and the patron saint of artillery. She was beheaded by her father, who is said to have been struck dead by lightning immediately after the act.

BARBARY, a general name applied to the north of Africa, from Egypt to the Atlantic, and from the Mediterranean to the Sahara. It includes Morocco, Algeria, Tunis, and Tripoli.

BARBAULD, ANNE LETITIA, *b.* in Leicestershire, 1743, *d.* 1825, English author. She first became known as a writer of hymns and of poems for children, but her most elaborate work was a collection of English novels with biographical and critical notes.

BARBER. (1) Formerly the practice of blood-letting was recognized as a legitimate part of the barber's profession, and their company was incorporated under the name of "Barber-Surgeons." This connection was dissolved in 1745, but the barber's pole may still be seen with its chin basin dangling as symbol of the old function of surgery. (2) A keen winter wind which, laden with particles of ice that cut the face, blows at certain times in the Gulf of St. Lawrence.

BARBETTE. (1) In a fortress a platform from which guns can be fired over the parapet instead of through an embrasure. (2) In war-ships a platform provided with a heavy-armoured breastwork behind which the guns are revolved and over which they are fired. The barbette system has superseded that of the turret since 1893, when armoured hoods were first employed to revolve with the guns. In the earlier barbette ships the whole gun was exposed except when in the loading position.

BARBICAN, a strong flanking tower or outwork guarding the approaches to a castle or fortress, and intended especially to protect the drawbridge. At Alnwick, York and Warwick are still to be seen good examples.

BARCAROLLE, a species of song peculiar to the Venetian gondoliers. The name is applied to musical compositions for the voice or piano, written in imitation of these songs. The swaying rhythm is intended to convey the idea of the plying of the oar and the motion of the gondola.

BARCELO'NA, on the Mediterranean, is the principal port of Spain and its largest manufacturing town. The staple industry is the cotton manufacture; population about 540,000.

BAREBONE'S PARLIAMENT met July 4th, and resigned its power into the hands of Cromwell December 13th, 1653. The members were selected by Cromwell and the Council, from names forwarded by the congregational churches as being those of persons, "faithful, fearing God, and hating covetousness." The parliament was named after one of the members for London, "Praise-God Barebones."

BARENTZ, WILLIAM, a Dutch Arctic explorer who discovered Spitzbergen, and explored the coasts of Nova Zembla; *d.* 1596.

BARHAM, RICHARD, *b.* at Canterbury, 1788, *d.* 1845, a minor canon of St. Paul's, is chiefly remembered as the author of the "Ingoldsby Legends," a series of humorous tales in verse, which first appeared in "Bentley's Miscellany," in 1837, and have been republished many times since.

BARIL'LA, an impure carbonate of soda obtained by burning plants grown in salt marshes or on the sea coast. The preparation formerly employed a number of people in the countries bordering on the Mediterranean, but the industry has declined owing to the discovery of methods of preparing the carbonate from common salt.

BARING-GOULD, SABINE, *b.* 1834, divine, traveller, novelist and music writer. He is one of the most prolific writers of our day, his subjects including religion, folk-lore, topography, history and romance. His most important work is "The Lives of the Saints" (15 vols.). Of his novels "Mehalah," "John Herring," and the "Broom Squire" are popular. Still more so are his hymns "Onward, Christian Soldiers," "Now the day is over," and "Through the night of doubt and sorrow." His versatility may be judged from his most interesting works on Dartmoor, Brittany, the Riviera, Iceland, Mediæval Myths, and Virgin Saints.

BARLEY, a species of grass more hardy than wheat. In Europe and America it is chiefly cultivated for making malt for brewing and distilling. It is also used for feeding cattle. Pearl-barley is barley freed from the husk, in a mill, and is used for thickening soups and broth.

BARMECIDE'S FEAST, an imaginary banquet. The phrase is derived from a story in the Arabian Nights' Entertainment. Schacabac, a hungry beggar, applied to a wealthy Barmecide for charity, and was invited to partake of a sumptuous feast. Several rich dishes were called for in succession by the host, and a pretence was made of serving each, but none actually appeared. The beggar displayed great good humour, expressed his delight with each course, as it appeared in the form of an empty dish, and finally won for himself a real meal and a position in the household.

BARMOUTH, a favourite Welsh watering-place, standing on the estuary of the river Mawddach, Merionethshire.

BARNABAS, SAINT, also known as Joses, a native of Cyprus, is mentioned in the Acts of the Apostles as a companion of St. Paul, and is supposed to have founded the first Christian community at Antioch. According to tradition he was stoned to death at Cyprus, 61, A.D.

BARNACLE, a genus of crustaceans commonly found adhering to logs of wood, and to the bottoms of ships. Barnacles begin life as active larvæ. In the adult stage the creature surrounds itself with a multivalved shell. The six pairs of limbs remain free, and are capable of slight protrusion, while the mouth, with its mandibles, lies at the bottom of the shell cavity. The acorn barnacle covers our piers at the seaside with a white crust of shells.

BARNARDO, THOMAS JOHN, commonly called Dr. Barnardo, *b.* 1845, *d.* 1905, a distinguished philanthropist. While a medical student he founded his home for waifs and strays in Stepney. In 1899 the institution was incorporated under the title "The National Incorporated Association for the Reclamation of Destitute Children." His ruling principle was that no destitute child should ever be refused admission. He established four branch missions, and 140 homes, of which four are in Canada. There are 8,000 children at present (1906) in residence, the daily expenditure being £240. Over 17,000 have been settled as emigrants in Canada, and 60,000 have passed through the institution.

BARNATO, BARNETT ISAACS, *b.* 1852, of Jewish parentage in London, *d.* 1897. He went out to South Africa in 1873, and with his brother, Harry Barnato, settled in Kimberley, where they made a fortune in the diamond industry. His firm, "Barnato Bros.," amalgamated with the De Beers Company under Cecil Rhodes. He built a magnificent mansion in Park Lane, which, however, he never occupied. Returning from South Africa in broken health, he threw himself overboard.

BARNES, WILLIAM, *b.* near Salisbury, 1800, *d.* 1886, a poet and scholar. He lived a quiet life as a Dorsetshire incumbent, and made a reputation as a pastoral poet by his "Poems of Rural Life in the Dorset Dialect" and "Hwomley Rhymes." He gives a true picture of human life, with its quaintness and humour, as well as of nature in all its varied beauty, within the limits of his secluded parish.

BARNET, a town in the south of Hertfordshire, is celebrated for its horse and cattle fair. In the battle fought here in 1471 the Lancastrians were defeated by the Yorkists, and Warwick, the "king maker," was slain. An obelisk now marks the spot where Warwick fell; population about 10,000.

BARNUM, PHINEAS, *b.* in America, 1810, *d.* 1891, began his career as a showman in 1834, by exhibiting George Washington's nurse. "Tom Thumb" proved another success, and by his "Jenny Lind" Concerts, in 1849, Barnum realised a fortune, which he afterwards lost. In 1871 he organised his "Greatest Show on Earth," with which he toured the United States and Europe, and amassed another fortune.

BARODA, a native state under a prince known as the Gaekwar, in the province of Bombay; area 8,570 square miles;

population 1,950,000. The capital, of the same name, is 250 miles north of Bombay in the centre of the State.

BAROM'ETER, an instrument for measuring the pressure of the air. In its simplest form it consists of a vertical glass tube about 33 inches in length, closed at one end. This is filled with mercury, and inverted, with its open end under the surface of more of the same liquid contained in a shallow vessel. The mercury in the tube falls until it reaches a point about 30 inches above the mercury in the cup. The distance from the surface of the liquid in the cup to the top of the mercury in the tube is called the height of the barometer. A height of 30 inches indicates an atmospheric pressure of fifteen pounds to the square inch, and a variation of one inch in the height marks a change of half a pound in the pressure. In the *Syphon Barometer* the open end of the tube is bent into the shape of the letter U, and the cup is dispensed with. Also see *Aneroid.*

BARON, the lowest degree in the peerage of the United Kingdom. In feudal times the barons were the tenants in chief of their feudal overlord, the king, and had a seat and vote in the royal courts and tribunals. From the time of Edward II. the word has had a more restricted meaning, and is now applied only to those peers who take precedence after the dukes, marquises, earls, and viscounts.

BARONET, the lowest hereditary title in the United Kingdom. The order was instituted by James I. in 1611, for the purpose of raising money for the province of Ulster, and all baronets are still entitled to bear on their coats of arms the bloody hand of Ulster.

BAROTSE LAND, lies to the north of Matabele Land, on the Upper Zambesi, and forms the north-west part of Rhodesia, a territory controlled by the British South Africa Company. The inhabitants, like the Matabele, are a Bantu people.

BARRATRY. See *Commercial Dictionary.*

BARRIE, JAMES MATTHEW, *b.* 1860, at Kirriemuir, Forfarshire, a village that he immortalised as "Thrums." The life of his mother and his own early aspirations are recorded with singular beauty in "Margaret Ogilvy." He migrated to the Midlands where he worked as a journalist. Thence he came to London and wrote for several newspapers. He won popularity by his "Auld Licht Idylls" and "A Window in Thrums" and "The Little Minister." It is as a dramatist, however, that he has achieved his chief successes. "Walker, London," "The Professor's Love Story," "The Admirable Crichton." "Little Mary," and "Peter Pan," with all their whimsicality and humour, represent a series of successes that would be hard to parallel in recent English drama.

BARRIER REEF, a reef of coral found some distance from the shore. The Great Barrier Reef of Australia lies off the coast of Queensland, and consists of a series of reefs stretching for a distance of 1,200 miles, and having a width of 100 miles in the south. The channel between it and the shore is from 20 to 70 miles wide. The barrier is broken by several deep channels, which occur opposite the mouths of rivers, where the flow of fresh water prevents the growth of coral.

BARROW, a mound heaped over the burial place of a person of distinction, or of warriors slain in battle. Barrows are found in many parts of the world. In England they are scattered over the open downs, and along the ridges of Wiltshire, Dorset, and parts of Hampshire. The excavations of a large number of British barrows by Dr. Greenwell led to the discovery of many remarkable pieces of ancient ware, which are now to be seen, along with other prehistoric relics, in the "Greenwell" cases at the British Museum.

BARROW IN FURNESS, a seaport in North Lancashire, opposite Walney Island, has the largest steel manufactures in the kingdom. The town owes its rapid growth —less than 60 years ago it was a hamlet inhabited by 100 people—to the discovery of iron in the neighbourhood; population about 60,000.

BARROW, ISAAC, *b.* in London, 1630, *d.* 1677, a celebrated English theologian, mathematician, and astronomer; made Master of Trinity College in 1672.

BARROW, SIR JOHN, *b.* near Ulverstone, Lancashire, 1764, *d.* 1848, occupied the position of Secretary to the Admiralty, 1804–45, and devoted his leisure to literature and geographical science. He published biographies of Drake, Anson, and Howe; Voyages of Discovery and Research within the Arctic Regions; and an Autobiography, written at the age of 83.

BARRY, SIR CHARLES, *b.* at Westminster, 1795, *d.* 1860, was the architect of the Houses of Parliament, and was knighted in 1852.

BARRY, SIR JOHN WOLFE, *b.* 1836, civil engineer, the youngest son of Sir Charles Barry. He designed the Blackfriars, Kew, and Tower Bridges over the Thames. He is consulting engineer to several railway companies, and has acted on many important public commissions. He was knighted in 1894 on the opening of the Tower Bridge.

BAR SINISTER. Refer to *Index.*

BARTH, HEINRICH, *b.* at Hamburg, 1821, *d.* 1865; a distinguished African traveller, explored a considerable portion of the north and centre of the continent, and published an account of his travels, and an important work on the languages of the countries he visited.

BARTHOLOMEW, SAINT, an apostle of Christ, and probably the Nathanael of St. John's Gospel. He is said to have laboured in the south of Arabia and in Armenia, and to have suffered martyrdom by crucifixion, at Albania Pyla, (now Durbend), in Russia.

BARTHOLOMEW FAIR, an annual market formerly held on St. Bartholomew's Day, at Smithfield. The fair was instituted by Henry I., in 1133. In course of time it lost its business character, became an occasion of revelry and debauchery, and was finally abolished in 1855.

BARTHOLOMEW, MASSACRE OF SAINT, the massacre of the Huguenots in France by the orders of Charles IX. and his mother, Catherine de Medici. The massacres began in Paris on St. Bartholomew's Day, 1572, extended to the whole of France, and continued for thirty days in most of the provinces; 30,000 Protestants are said to have been slaughtered.

BAR'TIZAN, a small turret projecting beyond the face of the main building in mediæval fortifications.

BARTOLOMEO, FRA, *b.* 1469, *d.* 1517, a Florentine painter who owed much to the influence of Leonardo da Vinci, and in his turn greatly influenced Raphael. He was a follower of the reformer Savonarola, after whose death he became a monk. His best works are in Florence; the Louvre at Paris, and the National Gallery in London can each boast of only one of his pictures. He is said to have invented the lay-figure.

BARTOLOZZI, FRANCESCO, *b.* at Florence 1727, *d.* 1815, a celebrated engraver. He was induced to settle in England, where he soon established a permanent fame as a master of line-engraving. The diploma still issued by the Royal Academy was engraved by him from a design by Cipriani, and is considered one of his masterpieces. He spent his last years in Lisbon, at the head of the royal school of engravers.

BARTON, ELIZABETH, the "holy Maid of Kent," a servant girl subject to trances, during which she made use of incoherent words and phrases, which were looked upon as Divine inspirations. For uttering pretended revelations against the divorce of Henry VIII. from Catherine of Aragon, and the ecclesiastical changes in the country, she was executed, 1534.

BARTON, SIR EDMUND, *b.* 1849, an Australian statesman and lawyer. He was premier of the first Federal Cabinet in 1901, and was present at the Colonial Conference in London in 1902. The federation of the Australian colonies was largely due to his energetic advocacy.

BASALT is a dark rock produced by the solidification of molten lava. In cooling it frequently has separated into vertical columns as in the Giant's Causeway and Fingal's Cave.

BASE-BALL, an American ball game developed from the English game of "rounders." The game has become highly organised, and is largely played by "professionals." It is as much the national game of the United States as cricket is the national game of England.

BASEL or **BÂLE,** on both banks of the Rhine, on the borders of Switzerland, has extensive manufactures of silk and chemicals, and is one of the great financial centres of the world. An important ecclesiastical council was held here, 1431–43.

BASHI-BAZOUKS, irregular troops in the pay of the Sultan of Turkey, and recruited principally from the Asiatic provinces. They are turbulent and ill-disciplined, and at various times have been guilty of great atrocities.

BASHKIRTSEFF, MARIE, *b.* 1860, *d.* 1884, a Russian painter and diarist. Her "Umbrella" and "The Meeting" in the Luxembourg, Paris, display her genius, and her "Journal" and "Further Memoirs" disclose a nature and temperament at once emotional, vain, and supersensitive.

BASIL, surnamed "the Great," *b.* 329, *d.* 379, the most distinguished of the fathers of the Greek Church. He led a life of asceticism, and his rules for monastic orders are still followed in the Eastern Church. He became bishop of Caesarea, in Cappadocia, 370, and was a powerful advocate of the orthodox faith in the struggle with Arianism.

BASIL'ICA. (1) Originally denoted a king's palace, but the name was applied by the Romans to a hall in which justice was administered or business transacted. The hall usually included a nave, aisles surmounted by galleries, and a semicircular apse at one end. Many Roman Basilicas were afterwards adapted for use as Christian Churches, and the plans for new places of worship followed similar lines. (2) A code of laws compiled by Basil I., Emperor of the East, and his son Leo, first published in sixty books in 887.

BAS'ILISK, a mythical serpent, also called a *cockatrice,* that inhabited the deserts of Africa, and killed plants and animals by its breath, and men by its direct gaze, so that it could be approached only by the aid of a mirror. (2) A genus of harmless lizards inhabiting Guiana and other parts of South America, and also the Indian Archipelago. The creature is adapted for tree climbing and for swimming. The *crested basilisk* is over three feet in length. Its flesh is said to be wholesome, as tender as chicken, and to possess the flavour of venison.

BASQUES, a people inhabiting the districts in Spain and France at the western end of the Pyrenees. Differing in language and characteristics from the peoples of the rest of Europe, they represent, it is thought, a primitive stock that has survived the Aryan invasions. They are of excellent physique and make capital sailors. They are industrious and lively in disposition. Their national game "pelota," is becoming generally known. Many have emigrated to South America, where they number more than 200,000. The home population is 650,000.

BASRA, a river port on the Euphrates, 70 miles from the Persian Gulf. It is situated in marshy and low ground, and is the furthest point navigable for sea-going vessels. It does a large export trade in rice, barley and dates.

BAS-RELIEF, or "low relief," a term in art denoting sculptures slightly projecting above the general surface. The metopes and frieze of the Parthenon (see *Elgin Marbles*) are in *alto relievo* or "high relief," that is, they are almost detached. In *mezzo-relievo* the proportion of detachment is half, and in low-relief or *basso-relievo* proper, the detachment is slight.

BASS ROCK, a circular rock about a mile in circumference, rising to a height of 420 feet, at the entrance to the Firth of Forth, and inaccessible except at the south-east. Many prominent Covenanters were imprisoned in its castle, and the Rock was the last place in Britain to yield to William III.

BASS STRAIT, the channel, 150 miles across, separating Tasmania from Australia, named after the commander of the boat's crew that first sailed through it.

BASSOON', a wind instrument, the speaking part of which is a double reed. The instrument consists of a tube of wood nearly eight feet in length, bent sharply upon itself, so that the bell is brought into position above the metal mouthpiece, which contains the reed. It is very effective in an orchestra, forming the bass of the "wood wind."

BASTILLE, THE, was built, 1370–83, as a fortress for the defence of Paris, and was also used as a state prison. The building was protected by towers, and was surrounded by a moat. On 14th July, 1789, it was attacked by the populace of Paris. Its fall was the signal for a general uprising of the people throughout France, against the Government, and the inauguration of the great French Revolution. A column, to the memory of the patriots of July 1789 and 1830 marks the site.

BASTINADO, a punishment common over the whole East, consisting of blows with a stick, generally upon the soles of the feet.

BASTION, a bulwark projecting in front of the general line of fortifications, and so designed, that its guns command the country in front, and may also be trained along the line of ramparts, so as to protect the latter from assault.

BASUTOLAND. Refer to *Index*.

BATAVIA, on the north coast of Java, is the capital of the island, and of the Dutch East Indies; population 150,000.

BATH, on the Lower Avon, is the largest town in Somersetshire, and is built almost entirely of Bath stone, a species of sand-stone quarried in the neighbourhood. The town derives its name from the hot baths and mineral springs that have helped to make it a fashionable watering place from the time of the Romans to the present day. The abbey church was begun in the reign of Henry VII. and completed in 1609; population about 50,000.

BATH, ORDER OF THE. Refer to *Index*.

BATHOS, a sudden descent from the sublime to the ridiculous. Usually this fault is committed unwittingly by writers aspiring to be impressive, but Byron has a fine satirical example:—

"With eagle pinions soaring to the skies
Behold the ballad-monger Southey rise."

BATHS. See *Med. Dict.*

BATH-STONE, a yellow limestone quarried extensively in Wiltshire and Somersetshire, and taking its name from Bath, where it has been extensively used. It works easily, hardens on exposure, but in London perishes quickly.

BATHURST. (1) The centre of a pastoral, agricultural, and gold-mining district in New South Wales; it stands in the middle of the chief wheat-growing district of the colony. The first discovery of gold in Australia took place in 1851, about twenty miles from the town; population about 10,000. (2) The capital of British Gambia, West Africa, stands at the mouth of the river Gambia; population about 9,000.

BATOUM, a seaport in Trans-Caucasia, has the safest harbour on the eastern shores of the Black Sea. The town was ceded to Russia by Turkey in 1878.

BATTALION, a unit of command in infantry for tactical purposes. In the British army every territorial regiment is intended to consist of two battalions of regular troops, each consisting of from 800 to 1,000 men, and commanded by a licutenant-colonel, two militia battalions, and the affiliated volunteers. The battalion is divided into ten service companies, which are again subdivided into sections.

BATTENBERG, a small town in Prussia, about 40 miles west of Cassel. It is from this place that the late husband of our Princess Beatrice, (youngest daughter of Queen Victoria), drew his title.

BATTENBERG, PRINCESS HENRY OF See *Beatrice, Princess*.

BATTENS, a term now applied by importers to all pieces of sawn timber having a cross section of from 6 to 27 square inches. Any piece of wood nailed across jointed boards to prevent warping is also called a batten.

BATTERING-RAM, a heavy beam used in sieges in ancient and mediæval times. It was shod at one end with a "ram's head" of heavy metal, which by continued impacts broke in the wall. The beam was either swung or rolled, and the operators were protected by a roof.

BATTERY. (1) In artillery, a number of guns, and the complement of men, horses, gun-carriages, ammunition-waggons, etc., required to work them. In the British, French, and German armies a battery consists of six guns; in the Russian army, of twelve. (2) All the lines of a fortress behind the parapets of which guns are placed. (3) Any raised platform, which may be either floating or fixed, on which cannon are mounted. (4) In law, an assault by beating or wounding.

BATTLE, a market town in Sussex, seven miles north of Hastings, so called from the battle of Senlac, in which William the Conqueror defeated Harold, 1066. To commemorate his victory, he founded and richly endowed the abbey, the ruins of which still show the gate-house, hall, almonry, the refectory, a portion of the cloisters, and remains of the church; population about 3,000.

BATTLEMENTS are parapets surmounting the walls of a town, castle, or tower, with regularly intervening spaces originally intended for the discharge of weapons. The interstices are called *embrasures* or *crenelles*, and the uprights, *cops* or *merlons*. Crenellations or battlements came to be used extensively as an ornament by church builders of the 14th and 15th centuries.

BATTUE, a method of killing game by beaters driving them to a place occupied in advance by the sportsmen, each of whom is usually provided with two guns, which are re-loaded by an attendant as soon as discharged. In fact, a battue is designed to give as little labour as possible to the sportsman.

BAUCIS AND PHILEMON. According to Greek mythology, they were two poor people of Phrygia, who entertained Jupiter and Mercury, after those gods, who were travelling in disguise, had been refused hospitality by their neighbours. They and their cottage were saved from the deluge which destroyed the other inhabitants of the country. The cottage was transformed into a temple, in which Philemon and Baucis officiated as priest and priestess.

BAUR, FERDINAND, *b.* near Stuttgart, 1792, *d.* 1860; a celebrated German theologian, and founder of the "New Tübingen School of Theology." He published works on various Christian dogmas, including the Atonement, the Holy Trinity, and the Incarnation, criticisms on the Gospels and certain of St. Paul's Epistles, and a history of Christian doctrine to the end of the 18th century. His views have had a great influence on modern theology.

BAVARIA, the second in size and population of the German states, is situated in the south of the empire, and consists chiefly of a high tableland crossed by ranges of mountains and hills. The area is 29,286 square miles, and the population about 6½ millions. 50 per cent. of whom are engaged in agriculture, and about 25 per cent. in mining and manufactures. The capital is Munich.

BAXTER, RICHARD, *b.* at Rowton, in Shropshire, 1615, *d.* 1691, was the most eminent English divine of the 17th century. He ministered as parish priest of Kidderminster for 19 years, though his sympathies were always with the Puritans. In the Civil War he sided with the Parliamentarians, and became chaplain to one of the regiments; nevertheless he openly expressed his disapproval of the execution of Charles, and of the position taken by Cromwell. On the Restoration he became a chaplain to the king, and was offered the see of Hereford. The Act of Uniformity at length drove him from the English Church, and, in 1682, he was tried for sedition, because certain passages in his commentary were deemed hostile to episcopacy. Jeffreys condemned him to be imprisoned until a fine of 500 marks was paid, but he was released after nearly 18 months, and spent the remainder of his life in peace. His writings were numerous. The most popular were:—"The Saints' Everlasting Rest," "Dying Thoughts," and the "Call to the Unconverted." The last was translated into nearly every European language.

BAYARD, CHEVALIER DE, *b.* in the Château Bayard, near Grenoble, France, 1475, *d.* 1524; "the Good Knight, without fear and without reproach," the descendant of many generations of warriors. He won renown in the wars of Charles VIII., Louis XII., and Francis I., the last of whom, at his own request, received the honour of knighthood at his hands, after the battle of Marignano, 1515. Bayard, who was distinguished for his courage, justice, generosity, modesty, and loyalty, was mortally wounded while defending a pass near the river Sesia, in Italy, when he ordered himself to be placed facing the enemy, with his back to a tree.

BAYEUX, a Norman town in the province of Calvados, France, manufac-

tures lace and hosiery, and possesses an ancient Gothic cathedral. In the public library is preserved the Bayeux Tapestry, which represents scenes connected with the Norman conquest of England, commencing with Harold's visit to the court of William, and ending with his death at the battle of Senlac. It is supposed to have been worked by Matilda, the wife of the Conqueror, and her attendants.

BAYONNE, a strongly fortified town in the south-west of France, about four miles from the Bay of Biscay, was held by the English from 1152 to 1451. Its cathedral church dates from the 12th century. The "bayonet" is said to have received its name from being invented at Bayonne, about the year 1640.

BAYREUTH, the home of Wagner, is in Bavaria. The town, well situated on the Red Maine, has a handsome palace of the Duke of Würtemburg, and a beautiful national theatre built in 1875 for the performance of Wagner's operas. Bayreuth was the home also of Jean Paul Richter, whose house, as well as that of Wagner, is a centre of attraction.

BAZAAR, an Eastern word signifying a market-place, or an "exchange." The bazaars of India are permanent, and here one has to go for all the necessaries of life. The same term is applied to the institutions which answer to our "Exchange." The bazaars of Constantinople and Cairo are renowned.

BAZAINE, FRANCOIS, *b.* at Versailles, 1811, *d.* 1888, distinguished himself as a soldier in Algiers, the Crimea, and Mexico, and became a marshal of France. He commanded the army of the Rhine at the beginning of the Franco-German War, 1870–1; but, after the fall of Sedan, was surrounded in Metz, and compelled to surrender with the whole of his forces. After the conclusion of the war he was tried by court-martial and condemned to death. The sentence was commuted to imprisonment for life. He escaped to Madrid, and wrote a book justifying his action at Metz, but its sale was prohibited in France.

BEACHY HEAD, about two miles south-west of Eastbourne, is the highest headland on the south coast of England, rising to a height of 570 feet. Off this cape a combined English and Dutch fleet suffered defeat at the hands of the French, 1690.

BEACONSFIELD, EARL OF. See *Disraeli.*

BEADS are small balls of glass, wood, metal, etc., pierced for stringing, and used as articles of adornment, or, in the form of a rosary, for counting the number of prayers recited. Their use as an ornament is of very ancient date. Specimens have been found in the ruins of Assyrian temples, on Egyptian mummies, and in the graves of ancient Greeks, Romans, and Britons. The manufacture of glass beads is an important industry in Venice, where more than 6,000 persons are employed in the business. Large quantities are also produced in Birmingham.

BEAGLE, a small species of hound, stoutly and strongly built, with drooping ears and possessing a very keen scent, formerly used for hunting hares. The smaller breeds were highly valued, and at one time a whole pack could be covered with a sheet. Their place has now been taken by harriers.

BEAN FEAST, an annual outing taken together, generally at the employer's expense, by the employees of large firms. The origin of the word is uncertain.

BEAR-BAITING was formerly a popular and fashionable sport in most European countries, and it is recorded that Queen Elisabeth was a frequent attendant at the bear gardens. The animal was chained to a post and worried by specially trained mastiffs. The practice was finally abolished in England by an Act passed in 1835.

BEARD. The fashion in beards has varied at various times and among different nations. By the Levitical law, the Jews were forbidden to "mar the corners" of the beard. (Lev. xix. 27.) Its growth was generally cultivated among Eastern peoples. The figures on the Babylonian cylinders are bearded, the Persian kings are said to have interwoven their beards with gold thread, and down to the present time the Turks have considered the beard as a mark of great dignity, and its removal as a degradation. The Greeks wore beards until the time of Alexander the Great, and the Romans followed the same practice until the year 296 B.C., after which, the first day of shaving was considered as the entrance upon the state of manhood, and was kept with great festivities. The ancient Britons wore moustaches only; the Anglo-Saxons permitted the growth of the whole beard and whiskers; while the Normans not only shaved the whole of the face themselves, but imposed the same rule upon the conquered. In England, in the time of Elizabeth, the beard received great attention. It was cut and trimmed in a most fantastic manner, the members of the various professions adopting a distinctive pattern. Its growth became less common after the restoration of Charles II., and gradually the practice of clean-shaving spread over the whole of Europe. During the Napoleonic wars, the soldiers permitted their beards to grow, and continued to do so when they returned to civil life, with the result, that the practice again became general, and to-day, every individual follows his own inclination. Physicians recommend that men who are liable to inflammatory diseases of the throat and lungs should permit the beard to grow, as a protection to those organs.

BEATON, DAVID, CARDINAL, *b.* 1494, *d.* 1546, the man who did most to hinder the spread of Reformation doctrines in Scotland, and to prevent the proposed alliance of England and Scotland by the marriage of Mary to Edward VI. He was chiefly instrumental in getting the great preacher, George Wishart, burnt, and was soon after assassinated.

BEATRICE, PRINCESS, *b.* 1857, youngest daughter of Queen Victoria, married Prince Henry of Battenberg, and was left a widow in 1896. She succeeded her late husband as governor of the Isle of Wight. Her daughter Victoria Eugénie, married Alphonso XIII., of Spain in 1906.

BEAUFORT, HENRY, *b.* 1370, *d.* 1447, was a natural son of John of Gaunt, and half-brother of Henry IV. He was made bishop of Lincoln, and afterwards succeeded William of Wykeham in the see of Winchester. In 1426 he received a cardinal's hat, and was appointed papal legate in England and Ireland. He four times filled the office of Lord Chancellor, and played a prominent part in all the political movements of his time. His great opponent, Humphrey, duke of Gloucester, accused him of amassing his great wealth by dishonest means. He left many charitable bequests, and endowed the hospital of St. Cross at Winchester.

BEAUHARNAIS, EUGENE HORTENSE DE, *b.* in Paris, 1780, *d.* 1824, the son of Josephine by her first husband, was adopted by Napoleon, and accompanied him on his campaigns in Italy and Egypt. When Bonaparte became Emperor, Eugene was created a prince of the new empire, and appointed viceroy of Italy. He took an active part in the wars of the empire, and, in the retreat from Moscow, succeeded in maintaining some show of order and discipline in his own corps. On the fall of Napoleon he retired to the court of his father-in-law, at Munich.

BEAUHARNAIS, JOSEPHINE. See *Josephine.*

BEAUMONT AND FLETCHER, two dramatists, contemporaries of Shakespeare and Ben Jonson, whose works were more popular during their lifetime than those of the two great writers named. In all they wrote 52 plays. Beaumont excelled in tragedy and Fletcher in comedy. The "Maid's Tragedy" and the "Knight of the Burning Pestle" are considered the finest of their works in their respective classes. Beaumont died in 1616, Fletcher in 1625.

BEAVER, a rodent of aquatic and gregarious habits found both in the Old and New Worlds, and valued for its fur, and for a peculiar substance called *castoreum*, used in perfumery. The fur varies in colour from a glossy brown to almost black. During the eighteenth and part of the nineteenth century as many as 200,000 skins were annually exported from America. The fur was largely used in the manufacture of hats; an Act of 1638 prohibited the use of any other material for the purpose in England.

BEBEL, F. AUGUST, *b.* 1840, leader of the German Socialists in the Reichstag. Out of struggling groups of despised, poverty-stricken workmen, he has created a compact party commanding 3,000,000 votes.

BÊCHE DE MER, or TREPANG, a sea-slug, often called sea-cucumber, found on coral reefs in Eastern seas. They somewhat resemble in appearance a very prickly cucumber, and vary from 8 to 24 inches in length. China is the only market for them.

BECHUANALAND. Refer to *Index.*

BECKET. See *A Becket, Thomas.*

BEDE, THE VENERABLE, *b.* about 673, *d.* 735, an English monk who received the title of "The Venerable," on account of his great talents and virtues. He was educated at a monastery at Wearmouth, and there, and at Jarrow, he spent the whole of his life from the age of seven, devoting himself to study, and to writing and teaching. His most valuable work is the "Ecclesiastical History of the English Nation," which incidentally contains almost all we know of the earlier Saxon rulers.

BEDFORD, the county town of Bedfordshire is a well-built town on the Great Ouse, 50 miles N.N.W. of London. It dates back to early times, but its present importance is due to its educational institutions, which owe their origin to a gift made by Sir W. Harpur in 1561; population over 36,000. The county is noted for its market-gardens.

BEDFORD LEVEL, a low-lying tract of land in the east of England, exceeding 500,000 acres in extent, extending inland from the Wash, and occupying portions of the counties of Norfolk, Suffolk, Cambridge, Huntingdon, Northampton, and Lincoln. It includes nearly the whole of the Fen District. It received its name from Francis, Earl of Bedford, who, in 1634, obtained a charter to drain the morass which then occupied the district, on condition of receiving 95,000 acres of the reclaimed land. Modern improvements in the art of drainage have been more effective than the plans adopted by the earl, and a great part of the level is now under cultivation. The marshy tracts are frequented by aquatic birds, and during the winter yield a rich harvest for the London markets.

BEDLAM is a hospital for the treatment of the insane, now situated in the Lambeth Road, London. It has been devoted to its present use since the year 1547, when the monastery of St. Mary of Bethlehem—of which word "Bedlam" is a popular corruption—was granted to the citizens of London for the purpose.

BEDOUINS are nomadic tribes dwelling in the deserts of Arabia, Egypt, and North Africa. They live in tents, huts, caverns, and ruins, remote from towns and villages, and are organised in families under sheiks, or under emirs, in tribes that are continually moving from district to district in quest of fresh water and pasture. Some are given to open robbery, and even murder, but all hold the claims of hospitality sacred, and the traveller, who has once received shelter from them, may rely upon their protection and assistance.

BEECH, one of the handsomest of our forest trees, forms whole forests in many parts of Europe. The wood is hard and brittle, but soon decays when exposed to the air. It resists the action of water, and for this reason is much used in the construction of weirs and sluices, and for making the *sabots* of the French peasantry. Cabinet makers find it particularly useful. The fruit, known as *beech mast*, yields a sweet oil, which is considered equal to the best olive oil, and is extensively manufactured in many parts of France.

BEECHER, HENRY WARD, *b.* in Connecticut, 1813, *d.* 1887, was a celebrated American preacher, and the minister of the Plymouth Congregational Church, Brooklyn, from 1847 till his death, although his denial of the doctrine of eternal punishment had led to his secession from the Congregational body. He was also engaged in religious journalism, and was closely identified with the anti-slavery and temperance movements.

BEECHER-STOWE, HARRIET. See *Stowe, Beecher.*

BEEFEATERS. (1) A name applied to the yeomen of the guard, whose duty it is to attend on the sovereign at royal banquets, and on other state occasions. Their costume has undergone but slight alteration since their institution in the reign of Henry VII. (2) The warders of the Tower of London, who are a separate body, and of more recent origin than the yeomen of the guard. (3) A genus of African birds that feed on the larvæ of gadflies which they find in the hides of oxen, camels, and other large animals.

BEEHIVE, THE, usually contains three kinds of occupants, a single perfect female or "queen" bee, the drones or males, and the workers or imperfect females. The working bees, in addition to visiting flowers in search of honey and pollen, attend on the queen, make and prepare the cells for the reception of the eggs, and feed the larvæ and young bees. The cells are built of wax, which is elaborated in the wax-pockets situated in the abdomens of the working bees, and are combined to form combs. Each comb consists of two layers of cells, one on each side. The cells take the form of a regular hexagonal prism, terminating internally in a triangular pyramid, a form calculated to combine the greatest strength and space with economy of material. The majority of the cells in a comb are fitted for breeding workers, but there are always some larger drone cells, and sometimes a special cell for the hatching and rearing of a queen bee. The latter is generally placed at the edge of the comb, is much larger than the others, and is oval in shape. The combs form vertical layers, with sufficient space between each pair for the bees to move freely. The wax is elaborated in the form of small scales, which the bees take into their mouths and draw out into a minute thread, which is passed backward and forward through the mouth until a special secretion has rendered it fit for its work, when it is deposited in the place where it is needed. The cells and combs are strengthened by a substance known as *propolis*, which the bees obtain from the viscid buds of trees.

BEELZEBUB, "god of flies," a deity worshipped by the Philistines at Ekron. In the Gospels we find the name signifies the chief of evil spirits.

BEER, a name which embraces a number of intoxicating drinks produced by the fermentation of an aqueous solution of a vegetable substance containing sugar. In this country the materials employed consist of malt prepared from barley, water containing certain inorganic matter in solution, a ferment to convert the sugar into alcohol, and hops, which supply the necessary flavour, and act as a preservative. The amount of alcohol varies from one to ten per cent., according to the length of time fermentation is permitted to go on. In South America maize-malt is employed; rye is used for the same purpose in Russia, and millet seed in Arabia and many parts of Africa.

BEERSHEBA was the most southerly village in Canaan, and is mentioned in the Old Testament as early as the time of Abraham. The phrase "from Dan even unto Beersheba," meant the whole of Palestine. Its site is marked by ruins, and by two circular wells of pure water.

BEESWAX is a secretion of the bee, used in the construction of the cells or honey-comb in which the honey is stored and the young reared. By melting the honey-comb, yellow wax is obtained, and by bleaching this white wax is produced. Wax is acted on by very few chemicals and is impervious to water; it thus forms a useful protective coating for many objects in daily use.

BEESWING, a gauzy film which forms on good port wine after bottling.

BEET, a genus of plants, natives of the temperate regions of the Old World, which produce a large succulent root. The *red beet*, when boiled and cut in slices, forms an excellent addition to salads, and is also used as a pickle. The *white beet* is extensively cultivated in France, Germany, Austria, the Netherlands, and Russia, for the production of sugar, and its leaves form a substitute for spinach. A coarse variety of beet, the *mangold wurzel*, is a valuable food for cattle.

BEE, THE HIVE. This kind of bee comprises queens (perfect females), drones (males), and workers (imperfect females). Drones are thought to arise from eggs that have not been fertilised. Queens or workers are produced at pleasure, all depending on the sort of food supplied, and the size of the cell in which the grub is confined. The queen has no sting, the mechanism for depositing eggs taking its place. See *Beehive, The.*

BEETHOVEN, LUDWIG VAN, a German by birth but of Dutch descent, *b.* at Bonn, 1770, *d.* 1827, one of the greatest musical composers. He published his first composition in 1795, and from that year to his death produced a series of symphonies, sonatas, operas, and overtures of surpassing beauty. In his later years he was afflicted with deafness, so that some of his greatest works he only heard mentally.

BEHISTUN, or **BISUTUN,** a precipitous mountain in Persian Kurdistan, remarkable for the inscriptions and sculpture cut upon one of its rocks. These were deciphered by Sir H. Rawlinson in 1846, and found to refer to the genealogy, dominions, and victories of Darius Hystaspes, and to date from 516 B.C.

BEHRING SEA ARBITRATION. The seal fishery in Behring Sea has been a source of contention between the United States and England ever since the former took over Alaska from Russia in 1867. In 1893 the rival claims came to arbitration at Paris, when the English gained the day, and the sea was declared open outside the usual territorial limits. Regulations were made to prevent the extermination of the seals, by establishing a close season and by prohibiting their capture within a zone of 60 miles around the Pribylov Islands.

BEHRING STRAIT, about 50 miles wide, connects the Pacific and the Arctic Oceans, and separates America from Asia. The strait was discovered by Vitus Behring, a Danish navigator, in 1728, and was explored by Cook in 1788.

BEIRUT, or **BEYRUT,** the port of Damascus, is the greatest commercial city in Syria. It is the centre of the silk trade, and exports fruit, wool, and olive-oil, as well as the goods brought to it by caravan.

BEIT, ALFRED, *b.* at Hamburg, 1853, *d.* 1906, went out to Kimberley soon after its foundation, and has been connected with the diamond mines and most other important undertakings in South Africa. He aided and approved the movement known as the Jameson Raid, and warmly supported Cecil Rhodes in all his schemes for British predominance in South Africa. He amassed an enormous fortune, amounting to many millions.

BELFAST, in County Antrim, at the head of Belfast Lough, is the centre of the Irish linen and cotton manufactures. Its ship-building yards employ a large number of men, and are capable of building iron ships of the largest class. There are also important tobacco factories. It is supplied with coal from the Cumberland coal-field. Belfast carries on an extensive cross-channel trade, and its foreign trade exceeds that of Dublin; population about 360,000.

BELFORT, a strongly fortified town which defends the entrance into France, through the opening between the Vosges and the Jura Mountains. After a siege of three months the town capitulated to the Germans in 1871, when its defenders were allowed to march out with full military honours.

BELGIUM, a small kingdom cut out of Holland in 1830, is the most thickly populated and most industrial country of Europe. Its mines produce coal in abundance, besides iron, zinc, and lead; marble also is plentiful. The manufactures are important, and no country in the world is more carefully cultivated. In spite of its small size, 11,373 square miles, and comparatively large population, 6,800,000 in 1902, the country exports corn and other food products. The land is a network of railways, and is well equipped with canals, which play an important part in the commercial life of the country. There are two distinct races: the Flemings, belonging to the Teutonic family, who inhabit the north and west, and the Walloons, of Celtic origin, who are found chiefly in the east and south-east, and speak a French dialect. The official language is French. Brussels is the capital. Other important towns are Antwerp, Ghent, and Liège.

BELGRADE, the capital of Servia, is a strongly fortified town crowning a rocky eminence at the junction of the Save with the Danube. The palace was the scene of the murder of King Alexander and Queen Draga, 1903; population about 70,000.

BELGRAVIA, a fashionable residential district in the west end of London, in the neighbourhood of Buckingham Palace.

BELISA'RIUS, *b.* in Illyria, 505, *d.* 565, A.D., a celebrated general under the Emperor Justinian. He defeated the Persians, conquered the Vandals, and captured their leader Gelimer, with all his treasure, and subdued the Goths. He is said to have suffered defeat on one occasion only, in a battle against a superior force of Persians. He was accused of conspiracy but acquitted. The story that he was deprived of his sight and condemned to beg in the streets of Constantinople is discredited.

BELL, ANDREW, *b.* at St. Andrews, 1753, *d.* 1832, an educationist, one of the founders of the monitorial system of instruction. The system received the name of the "Madras System," because it was adopted by Bell when he was superintendent of an orphanage in Madras. Being without qualified assistants, he employed the more advanced pupils to impart under his supervision, the mechanical instruction to their fellows. His system was widely adopted in this and other countries.

BELL, ALEXANDER GRAHAM, *b.* at Edinburgh, 1847, became an American professor in 1872. Four years later he exhibited his telephone. He also invented the photophone. [See *Telephone* and *Photophone*].

BELLADONNA, or the deadly nightshade, is an extremely poisonous wild plant, not to be confounded with the woody nightshade of our hedges. It is a very rare herbaceous plant 2 or 3 feet high. It has only one large, violet-black fruit, and large leaves, nearly a foot long. Preparations from the plant are very valuable in medicine, and are applied both externally and internally. Belladonna is in constant use by oculists for dilating the pupils of the eye previous to an examination of that organ, and for rendering the retina less sensitive to light. See "Poisonous Plants" in *Med. Dict.*

BELLARMINE, ROBT. FRANCIS, *b.* 1542, *d.* 1621, a learned Cardinal and theologian of the Roman Catholic Church. His writings did much to maintain the Catholic cause in the 16th century, and he is regarded as the champion of the Ultramontane party, who uphold the Pope's authority in all things.

BELLE-ALLIANCE, LA, a farm-house about 13 miles south of Brussels, the head-quarters of Napoleon, and the centre of the position occupied by the French army at the battle of Waterloo, June 18th, 1815.

BELLER'OPHON, a mythical hero of the Greeks, who, having accidentally killed his brother, fled to his kinsman, Prœtus. The latter became jealous of his guest, and dispatched him to Iobates with a sealed message requesting that he should be put to death. Iobates imposed upon him the apparently impossible task of slaying the Chimæra. Bellerophon ascended into the air, mounted on the winged steed, Pegasus, slew the monster with his arrows, and on his return received the daughter of Iobates to wife.

BELLO'NA, the Roman goddess of war, is described by the poets as being related to Mars, as sister, wife, or daughter. She was represented as armed with a bloody scourge in one hand, and a torch in the other, whilst inspiring her votaries with an enthusiastic war-spirit.

BELL ROCK. See *Inchcape Rock.*

BELLS are formed of an alloy of copper and tin in slightly varying proportions, but usually consisting of four parts of copper to one of tin. Each bell consists of the body or barrel, the ear or canon, and the clapper, which may strike the bell either from within or from without, the former producing by far the finer effect. Bells have been in use from the earliest times of which we have any record. They were worn by the Jewish high-priests (Ex. xxviii., xxix.). The Egyptians inaugurated the festivals in honour of Osiris by the ringing of bells. The Greek priests employed them, and they were used in the camps and garrisons of the Greek troops. The Romans announced the hour of bathing by the ringing of a bell. The custom of summoning worshippers to church by the ringing of bells originated in Italy, at the beginning of the 5th century, and was introduced into this country by the abbot of Wearmouth about 680. They were probably hand-bells, as the practice of hanging bells in towers was not known before the ninth century. The *Curfew* bell, which William the Conqueror is said to have ordered to be rung in England at eight o'clock every evening, as a signal to extinguish all fires, is probably of much earlier date, and was intended not only to prevent meetings of conspirators, but also to reduce the number of conflagrations. In the Roman Catholic Church, the *Sanctus* is still rung during the mass, and the *Angelus*, morning, noon, and night, when the faithful are required to repeat an "Ave Maria." On board ship, bells are rung every half hour to mark the progress of each watch.

The largest bells in the world are found in Russia. The Czar Kolokol, "king of bells," at Moscow, weighed nearly 200 tons. In 1737 a fire caused its fall, and it remained on the ground, cracked and useless, until 1837, when it was made to serve as the dome of a church which was excavated beneath it. The "New Bell," which was cast in 1817, hangs in a tower near the former, and is nearly as heavy. "Great Paul," the heaviest bell in England, was cast and hung in Saint Paul's Cathedral in 1882. It weighs 16½ tons, and is rung only on special occasions. "Big Ben," the hour-bell at Westminster, originally weighed 14 tons, and was cast in 1856. A crack and a flaw in the metal necessitated recasting, and 2½ tons less material was used in the process; the clapper weighs 6 cwt. After a time the second bell developed a crack, which has been cut out. The quarters are rung by bells weighing 4½ tons, 2 tons, 1½ tons, and 1 ton respectively. "Great Tom," at Oxford, weighs 7 tons 12 cwt., and the principal bell in Exeter Cathedral is 4 cwt. heavier.

BELL, SIR CHARLES, *b.* 1774, *d.* 1842, an anatomist and surgeon. Educated in Edinburgh, he came to London and became surgeon to the Middlesex Hospital. His researches on the nervous system form a valuable contribution to our knowledge. Of his many writings—"The Hand," in the Bridgewater Treatise, is probably the best known to the public.

BELOOCHISTAN'. See *Baluchistan.*

BELSHAZZAR, the grandson of Nebuchadnezzar, and the last of the Chaldean kings of Babylon, was slain at the capture of the city by Cyrus, who commanded the armies of Darius the Median, about 538, B.C. (Dan. v.).

BELT, THE GREAT, about 12 miles wide and 70 miles long, lies between the islands of Funen and Zealand, and is the only strait leading into the Baltic that is deep enough for war vessels. The navigation is difficult, owing to the presence of numerous shoals and small islands.

BELT, THE LITTLE, between Funen and Jutland, is another gateway into the Baltic, and is about 80 miles in length, with a width varying from one to eight miles. Similar causes render its navigation even more dangerous than that of the Great Belt.

BENAR'ES, on the Ganges, is a Holy City of the Hindus, and the centre of Hindu learning. The city is a labyrinth of narrow winding streets, and is crowded with palaces, temples, and mosques. Altars and shrines are set up at almost every corner. The "Ghats," or flights of steps leading down to the river, are constantly crowded with pilgrims who have journeyed from all parts of India to bathe in the sacred stream.

BENBOW, JOHN, *b.* at Shrewsbury, 1653, *d.* 1702, served at first in the merchant service, but afterwards joined the navy, and finally became an admiral. In 1702 he commanded the English fleet in the West Indies, and lost a leg in an action with the French. When the wound had been dressed he caused himself to be carried on deck, and continued the fight. The desertion of some of his ships enabled the French fleet to escape. The wound received in the action, combined with his mental suffering at his failure to capture the enemy, caused the admiral's death.

BENDIGO. See *Sandhurst.*

BENEDI'CITE (-te), the canticle used at certain seasons in the English Church service instead of the "Te Deum." It takes its name from the first word *Benedicite* in the Latin version, which means "bless ye." It is said to be the song of praise sung by the three Jewish youths in the fiery furnace, and is given as such in the Septuagint version of the Old Testament.

BENEDICT, SAINT, *b.* near Spoleto, Italy, 480, *d.* 543, was the founder of monachism in the West. The rule for his monks, first introduced into the monastery on Monte Cassino, near Naples, was adopted by all the western orders. In addition to their ordinary religious duties, the brethren were called upon to give instruction in many subjects, and in the mechanical arts. The aged and infirm were employed in copying manuscripts, and, in this way, assisted in preserving many literary treasures.

BENEDICTUS, or Song of Zacharias, a canticle used in the Morning Service of the Church of England. It is so called from the first word *Benedictus* in the Latin version, which means "blessed."

BENEFICE, the revenues of the rector, vicar, or perpetual curate of a parish, usually derived from tithes, lands, or other endowments, and popularly known as the church living.

BENEFIT OF CLERGY, in England, formerly exempted clergymen guilty of felony from punishment by a secular court, leaving them to be dealt with in the bishop's court. At first the privilege was allowed only to those who were *bona fide* clergymen, but the claim was afterwards allowed to all who could prove, to the satisfaction of the court, their ability to read; and this practice continued till the reign of Queen Anne. A layman could claim the privilege once only. He was discharged after being branded with a hot iron on the "brawn of the left thumb." The privilege was so much abused, that an Act of Queen Elizabeth empowered a judge to order the detention in prison, for a period not exceeding a year, of any person discharged by the court on claiming his "clergy," and the privilege was finally abolished by an Act passed in 1827.

BENEFIT SOCIETIES. See *Friendly Societies.*

BENEVOLENCES, a convenient name for loans extorted by the king or his agents from wealthy subjects in the Middle Ages. The *name* owes its origin to Edward IV., but the practice goes much further back. The practice was expressly forbidden by Act of Parliament in 1484, but it persisted until the reign of James I.

BENGAL. Refer to *Index.*

BENI-HASSAN, a village in Middle Egypt, near the left bank of the Nile,

is remarkable for its rock-cut catacombs, about 30 in number, which are supposed to have been the cemeteries of the principal families of Hermopolis, a town facing them on the opposite bank of the river. The walls and columns of the catacombs are adorned with paintings representing the pursuits, sports, and pastimes of the ancient inhabitants.

BENNETT, JAMES GORDON, *b.* at Keith, Scotland, 1795, *d.* 1872, a distinguished journalist and newspaper proprietor. At the age of 19 he emigrated to America, and found employment as a proof-reader in Boston. In 1835 he founded the "*New York Herald*" and acted as its editor, and succeeded in making the paper the leading American daily. His son, bearing the same name, is the donor of the cup annually competed for by the most skilful and daring motorists of the world.

BENNETT, SIR WM. STERNDALE, *b.* at Sheffield. 1816, *d.* 1875; English pianist, composer and teacher. After being a chorister in King's College Chapel, he entered the Royal Academy, where he studied hard and successfully. He went to Germany in 1836 on the invitation of Mendelssohn, who did much to cause his genius to be recognised. After his return to England his success was undoubted. He became Principal of the Royal Academy in 1868, and was knighted in 1871. His cantata "The May Queen" is greatly admired, and his pianoforte pieces are models of grace and finish.

BEN NEVIS, in the Grampians, near the southern entrance of the Caledonian Canal, is the highest mountain, 4,406 feet, in the British Isles.

BENSON, EDWARD WHITE, *b.* near Birmingham. 1829. *d.* 1896. Archbishop of Canterbury. Educated at King Edward's School, Birmingham, and Trinity College, Cambridge, he was from 1858 to 1872 Head Master of Wellington College. He was first bishop of the restored diocese of Truro, which he left in 1882 to succeed Dr. Tait as Primate.

BENTHAM, JEREMY, *b.* in London, 1747, *d.* 1832, a distinguished writer on politics and jurisprudence, who advocated wholesale changes in criminal and civil legislation, taking as the cardinal principle of his philosophy, "the greatest happiness of the greatest number." His literary works were arranged and translated into French by his friend M. Dumont, and, at the time, found a better reception in France than in England.

BENZENE, a colourless, highly inflammable liquid, a compound of carbon and hydrogen, having a peculiar smell. It is obtained from coal-tar, and is extensively used in the production of aniline. It is also invaluable on account of its solvent action on organic substances, such as fats, indiarubber, etc., and on this account is employed by manufacturers of indiarubber and guttapercha.

BEOWULF, the hero of a long Anglo-Saxon poem of about 6,000 lines, which commemorates the hero's various great deeds, especially against the *Grendel*, a monster inhabiting the damp fen country.

BERANGER, PIERRE JEAN DE, *b.* in Paris. 1780. *d.* 1857; a great national song-writer of France. His political songs had a hold over the French populace that has never been rivalled. The gaiety and grace of his other lyrics gained him unbounded popularity, and his songs are still widely sung in France.

BERBER, a town on the Nile, just below the confluence of the Atbara, is the starting point of the principal caravan route from the Middle Nile to the Red Sea. A railway will soon connect Berber with Suakim, a port on the Red Sea.

BERBERS, the name given by the Arabs to the original inhabitants of the Atlas Mountain region in North Africa. The race is of great antiquity, and has maintained its ancient language and habits to the present time. The people have light complexions and fair hair, are robust, proud, and revengeful, and live in a state of almost perfect independence of the rulers of the various states in which they dwell, being governed by their own hereditary chiefs. In religion they are Mohammedans.

BERESFORD, ADMIRAL LORD CHARLES, K.C.B., G.C.V.O., *b.* 1846, second son of the Marquis of Waterford, entered the Royal Navy in 1859. He commanded the "Condor" at the bombardment of Alexandria in 1882, and contributed greatly to the successful result. He served in the Nile Expedition of 1884 with great distinction. He was Commander-in-Chief of the Mediterranean Fleet, 1905–1907, and of the Channel Fleet, 1907–1909. As an M.P. he has done much to promote the efficiency and increase the strength of the Navy.

BERGAMOT is one of the essential oils extracted from the rind of the fruit of a species of Citrus. The tree is cultivated in Calabria, Italy, whence almost the entire supply of the oil is obtained.

BERGEN, once the most important seaport of Norway, is now surpassed by Christiania. From the oldest times it has been the chief place in Northern Europe for the fishing trade; population about 70,000.

BERG WIND, a dry, hot wind that frequently blows from the north along the coast lands of Cape Colony. It derives its name from the *berge*, or mountains, which lie in the centre of the Colony, and its dryness and heat from the arid Karroo over which it passes.

BERI-BERI. See *Med. Dict.*

BERKELEY CASTLE, about 16 miles south-west of Gloucester, is chiefly memorable as the scene of the confinement and brutal murder of Edward II., 1327.

BERKELEY, GEORGE, *b.* at Kilkoin, Ireland, 1685, *d.* 1753, was bishop of Cloyne, in Ireland, and became famous through his works on philosophy and mathematics, and his self-sacrificing philanthropic schemes. In his "Treatise on the Philosophy of Human Knowledge," he maintained that the universe, as man sees it, is not the creation of matter, but merely impressions made on the mind by the direct act of God.

BERLIN, on the river Spree, is the capital of Prussia and of the German Empire. It is famous for its glass, jewellery, and metal works; is one of the cleanest, brightest, and healthiest cities in Europe, and possesses a magnificent system of street cars and railways. Near the centre of the city are the imperial palace, the university buildings, the national gallery and museums, and the arsenal. The most attractive promenade is the street called "Unter den Linden," a broad thoroughfare nearly a mile in length, with two double rows of lime trees running from end to end. Berlin is growing more rapidly than any other European city. At the beginning of the 19th century its inhabitants numbered 182,000, while in April, 1904, the population was estimated at two millions.

BERLIN, CONGRESS OF, the diplomatic conference of the European Powers, which met at Berlin, in 1878, at the conclusion of the Russo-Turkish War, and concluded the Treaty of Berlin. The treaty made important modifications in the Treaty of San Stefano, which had already been agreed to by the belligerents.

BERLIN DECREES, THE, were issued by Napoleon from Berlin in 1806. Their object was the destruction of British commerce. The British Islands were declared to be in a state of blockade, and all commerce and correspondence between Great Britain and the countries under his government were prohibited.

BERMUDAS. Refer to *Index.*

BERN, or **BERNE,** on the river Aar, has been the federal capital of Switzerland since 1849. The city commands magnificent views of the Bernese Oberland and of the Jura Mountains; population 64,864.

BERNADOTTE, JEAN BAPTISTE JULES, *b.* 1764, *d.* 1844, who became eventually King of Sweden, was the son of a French lawyer, and had received a good education. He fought his way up from a private in the Republican armies to be Marshal of France and Minister of War. His chivalrous conduct in the field had gained him much admiration, and in 1810 he was invited to become Crown Prince of Sweden and heir to the aged and childless Charles XIII, whom he succeeded in 1818. His duty to Sweden made him oppose Napoleon in the great campaign which ended at Leipzig in 1813.

BERNARD PASS, GREAT ST., a celebrated pass leading from Martigny in Switzerland over the Pennine Alps to Aosta in Piedmont, at a height of 8,200 feet above the sea. Here is the celebrated hospice of St. Bernard, inhabited by a dozen young and strong monks who take turns in going out every morning with dogs to seek for travellers.

BERNARD, SAINT, *b.* at Fontaines, in Burgundy, 1091, *d.* 1153; became abbot of the monastery of Clairvaux, and drew around him many who afterwards occupied positions of eminence in the church. He attacked several heresies, including some of the teachings of Abelard, whom he defeated in a public controversy. His persuasive eloquence roused the king and nobility of France to undertake the Second Crusade. Luther said of him—"If there ever lived on the earth a God-fearing and holy monk, it was St. Bernard of Clairvaux." He was canonized by Pope Alexander III., 1174.

BERNESE OBERLAND, the southern part of the canton of Bern in Switzerland, containing some of the best of the beautiful Alpine scenery. Majestic mountains, as the Jung-Frau, Finsteraarhorn, Schreckhorn, Wetterhorn, Mönch and Eiger; lovely valleys, as Grindelwald and Lauterbrünnen; beautiful waterfalls, as Handegg and Giessbach make it unsurpassable for picturesque scenery. Tourists visit it in increasing numbers every year.

BERNHARDT, SARAH, *b.* in Paris, 1846; a famous French actress, considered by many the greatest tragedienne of the age.

BERSERKS, or **BERSERKERS,** a name applied to men of ungovernable temper. It originated with Berserker, a hero in Scandinavian mythology, who raged like a madman in battle and when excited. He had eight sons as uncontrollable as himself.

BERTILLON SYSTEM. See *Anthropometry.*

BERWICK-ON-TWEED, a walled town on the Scottish side of the mouth of the river Tweed. During the Border Wars it frequently changed hands. In 1482 it was finally taken by the English. For many years it was treated as an independent county, separate from England and Scotland, but since 1835 it has been included in Northumberland; population 13,437.

BERYL, a mineral usually found crystallised in hexagonal prisms. It varies in colour—green, bluish-green, yellow, and white. The bright green variety produces the gem known as the *emerald*, the blue-

green that known as the *aquamarine*. The *cairngorm* is another variety of beryl. The regions most productive of the mineral are Brazil, Siberia, and Saxony. Specimens are found in the mountains of Aberdeenshire, and in the Mourne Mountains of Ireland.

BESANCON, a frontier town of France on the river Doubs, a tributary of the Rhone, is considered one of the strongest military positions in Europe. Watchmaking employs some 15,000 of its inhabitants, and there are also manufactures of porcelain and carpets. It was an important Roman military station; many of the streets still bear their old Roman names, and the Roman antiquities include a triumphal arch, an aqueduct, and an amphitheatre.

BESANT, SIR WALTER, *b.* at Portsmouth, 1838, *d.* 1901; a novelist and antiquary, who was greatly interested in the people and history of London. His book, "All Sorts and Conditions of Men," is generally thought to have been the prime cause of the erection of the "People's Palace." His earlier novels were written in collaboration with James Rice. Sir Walter was the founder of the Authors' Society, for the protection and maintenance of authors' rights.

BESSEMER, SIR HENRY, *b.* at Charlton, Hertfordshire, 1813, *d.* 1898, was an eminent engineer and inventor. His process for converting pig-iron into steel has revolutionised the iron trade. The process consists in passing a blast of atmospheric air through the molten cast iron, until the carbon and silicon contained in it are completely burnt up. The exact quantity of molten cast iron necessary to supply the carbon required to convert the whole charge into steel is then added, the blast is again turned on for a few moments in order to thoroughly mix the materials, and the contents are cast into ingots. By this process, several tons of cast iron can be converted into steel in less than half-an-hour, an operation that would occupy several days if the older process were employed.

BETEL is the leaf of a climbing plant of the pepper family grown in the East Indies. It closely resembles the ivy leaf, but is full of a narcotic juice. The natives, almost without exception, chew it, either alone or, after treatment with lime, wrapped round slices of areca nut. Men and women carry it about with them in white boxes, and offer it to each other much in the same way as a past generation of Europeans presented their snuff boxes. The habitual use of betel reddens the gums and lips and blackens and destroys the teeth.

BETHANY, a village on the eastern slope of the Mount of Olives, about two miles from Jerusalem. Among the ruins, visitors are shown what is said to be the house of Martha and Mary and the grave of Lazarus. (St. John xi.)

BETHEL, a place now in ruins, situated about eleven miles north of Jerusalem, where Jeroboam set up the Golden Calf as an object of worship.

BETHLEHEM, a village about five miles south of Jerusalem, was the birthplace of King David and of our Saviour. The present inhabitants are mostly Christians, and are employed in the manufacture of rosaries and crucifixes for sale to the numerous pilgrims. The Church of the Nativity is said to have been built by the Empress Helena, 327 A.D., over the place where Christ was born. Separate portions of it are now allotted to the Greek, Latin, and Armenian branches of the Christian church, each of which has a monastery close to the building. In the crypt under the choir a marble trough is shown as the manger in which Jesus was laid after his birth.

BETTING, particularly on horse racing, is indulged in by all classes of society, and thousands of pounds change hands over every important race. Acts have been passed for the regulation of public betting, and persons indulging in the practice in any public place are declared to be rogues and vagabonds, and may be punished accordingly. Bets are usually made with a professional betting man, known as a *bookmaker*, who is prepared to bet against any particular horse winning the race. The odds he offers against the horse are determined by the number of people, known as *backers*, who wish to back it, and the amount of money they are prepared to risk. In proportion as the horse is favoured by backers, so are the odds offered by the bookmaker shortened. In this way, and by encouraging bets on horses that have found few backers, by the offer of long odds against them, he so arranges his *book* that, whichever horse wins, he stands to lose nothing; in other words, the money paid to the winners is provided by the backers of the losing horses. Should he find he has laid too much against a horse, he sometimes covers himself by backing the same horse with another bookmaker. This is known as *hedging*. A backer who, some time before the race is to be run, obtained long odds against a horse that has improved in favour, may also "hedge" part of his bet by laying against the same horse at the shorter odds. On the day of the race, numerous bets are made with bookmakers who stand in an enclosed place on the course, known as the "Ring." Others stand outside and do their business with those visitors to the races who have not paid for admission to the betting ring. Dishonest members of this latter fraternity, who find their "book" in an unsatisfactory condition, occasionally decamp with their clients' money while the race is being run. These are termed *welshers*. If their attempt at swindling is noticed they receive but short shrift from the crowd.

BETTWS-Y-COED, in Carnarvonshire, is one of the most popular resorts in Wales for artists, anglers, and tourists. Among the natural attractions of the neighbourhood are the Swallow Falls, the Fairy Glen, and the Conway Falls. Bettws-y-Coed is one of the best starting points for the exploration of the Snowdon range.

BETTY, WILLIAM HENRY, *b.* 1791, *d.* 1874, a phenomenally successful actor of the early 19th century. At the age of eleven he made a successful appearance at Belfast Theatre. This was succeeded by other engagements in Ireland, Scotland, and England, where he frequently commanded fifty guineas a night. Pitt once adjourned the House that the Commons might see him act. He retired in 1824, and for fifty years enjoyed the fortune he had so rapidly earned.

BEUST, COUNT FREDERICK VON, *b.* in Dresden, 1809, *d.* 1886; a German statesman who, as foreign minister of the kingdom of Saxony, showed great friendship for Austria, and eventually became Chancellor of the Austro-Hungarian Empire, from which position he retired in 1871.

BEVERLEY, a town in the East Riding of Yorkshire, stands on the edge of the Yorkshire Wolds, and is the centre of an important agricultural district. The Minster Church is superior to many cathedrals in size and architectural beauty, and the west front has been described as the finest in the perpendicular style in England; population about 13,000.

BEWICK, THOMAS, *b.* at Cherryburn, near Newcastle, 1753, *d.* 1828, was a distinguished wood engraver. The illustrations to his "History of Quadrupeds" and "British Birds" were considered superior to any wood engraving that had been previously produced. With the assistance of his brother, he also illustrated Goldsmith's "Traveller" and "Deserted Village," Somerville's "Chase," and other works.

BEYRUT. See *Beirut*.

BEZANTS, or **BYZANTINES,** coins of the Byzantine Empire, so called from Byzantium or Constantinople. They passed current in most countries in the Middle Ages. The value of the gold bezant was from 10s. to 20s., and that of the silver one from 1s. to 2s. We find them frequently mentioned in Middle English, and in books dealing with that period.

BEZA, THEODORE, *b.* in Burgundy, 1519, *d.* 1605, the most influential of the Geneva reformers, after the death of Calvin. His influence led the king of Navarre to assist the persecuted French Protestants, and he presided over synods of the French Reformers at Rochelle and Nimes. His best known works are a translation of the New Testament into Latin, and a "History of the French Protestants" from 1521 to 1563.

BHANG, the Indian name for the common variety of hemp. In hot countries the plant develops narcotic and intoxicating properties, on which account its leaves and seeds are often chewed. An intoxicating drug, often called *hashish*, is obtained from a resin that exudes from the plant.

BHUTAN is a small independent state on the southern slopes of the Himalayas, having an area of about 18,000 square miles, and a population of 25,000, chiefly Bhuddists. The leading chiefs are subsidised by the Indian Government to the extent of 50,000 rupees annually.

BIARRITZ, a fashionable watering-place on the Bay of Biscay, about five miles south-west of Bayonne. It was the favourite summer resort of Napoleon III. and the Empress Eugénie. Till patronized by them it was an obscure fishing-village.

BIBLE SOCIETY, THE (British and Foreign), was founded in 1804, with the object of encouraging a wider diffusion of the Scriptures. Up to the year 1903 the society had issued upwards of 180,000,000 Bibles and portions of Bibles, in 370 languages and dialects; and to celebrate its centenary, a fund of 250,000 guineas was raised to extend its work in all departments. The society works through the various missionary societies, and has, in addition, some thirty agents in foreign countries, under whom a staff of nearly 900 colporteurs is engaged in distributing the society's publications.

BIBLIOMANCY, divination by means of the Bible. One way was to name a certain page and line, and to seek for guidance or information from the sentence there found. The stern Puritans are said to have been much addicted to Bibliomancy. The ancients used to draw inspiration from the works of Virgil in the same way.

BIBLIOTHÈQUE NATIONALE, the most important library in Paris, is situated in the Rue Richelieu, and contains one of the largest and finest collections in existence, including printed books, manuscripts, engravings, cartoons, coins, and medals.

BICYCLE. See *Cycling*.

BIDDER, GEORGE PARKER, *b.* 1806, *d.* 1878, a great engineer who had a hand in most of the engineering works carried out between 1835 and 1870. As a boy he was remarkable for his calculating powers, and his father made much money by causing him to exhibit them. He became associated with Robt. Stephenson early in

life. The Victoria Docks, London, were constructed under his direction.

BIDDING PRAYER, a formula of public prayer found in ancient liturgies and in our own service books, in which the preacher tells the people what and for whom to pray, always ending with the Lord's Prayer.

BIDDLE, JOHN, *b.* in Gloucestershire, 1615, *d.* 1662; was the founder of English Unitarianism. The publication of his views on the personality of the Holy Ghost, in 1647, led to his imprisonment, and an Act was passed imposing the death penalty on all who denied the doctrine of the Trinity. The hostility of the army to the Act rendered it inoperative. Biddle was released by Cromwell, began preaching in London, and soon gathered a congregation around him, the members of which took the name of "Unitarians." He suffered further terms of imprisonment and banishment, on account of his views, and eventually died in jail.

BIG BEN. The name given to the big bell in the clock-tower of the Houses of Parliament. It was cast in 1858.

BIGLOW PAPERS, THE, a poetical satire on the invasion of Mexico, and the slavery question in the United States, written in the Yankee dialect, by J. R. Lowell.

BILBA'O is the principal town in the Basque province of Biscay, in Spain, and an important port for the export of iron-ore.

BILLETING is a method of providing food and lodgings for troops on the march, in towns where there is no barrack accommodation. Formerly private householders were liable to be called upon to make such provision, but the Army Regulation Act of 1879 limits the liability to the holders of licensed premises. A list of houses, liable under the Act, is kept in every town, and, on the application of the commanding officer made to him some time in advance, the chief of the police allots a certain number of men to each. On their arrival the soldiers are provided with a written order termed a billet, addressed to the person who has to provide for them. In return for a day's food, which includes one hot meal, and a bed, the owner of the house receives the sum of 1s. 4d. for each man accommodated. All payments are made by the regimental paymaster, and the officers visit the various houses at dinner-time, to see that the food is of a satisfactory nature.

BILLINGSGATE, the most extensive fishmarket in the world, is situated on the Thames, just below London Bridge. The fish arrives at the market both by way of the river and by land, and is consigned to salesmen, who supply the retail dealers. The busiest time is from 5 to 9 a.m.

BILL OF EXCHANGE, HEALTH, LADING, ETC. See *Commercial Dictionary.*

BILL OF RIGHTS. Before the throne was offered to William and Mary in 1688, a document was presented to them, generally known as the "Declaration of Rights," setting forth the chief "rights" of the people as against the king, such as freedom from all taxes not imposed by Parliament. After their accession, it was passed through Parliament and assented to by their Majesties, and thus became the law of the land.

BILNEY, THOMAS, one of the earliest martyrs of Henry VIII.'s reign. Ordained in 1524, he was arraigned in 1527 for speaking against the reverence paid to saints and relics, but recanted. Being set free, he again preached the new doctrines, was apprehended and burned. He was instrumental in converting Latimer to Protestantism.

BIMETALLISM is the employment of two metals, gold and silver, in the currency of a country as legal tender to any amount. To render its universal adoption possible, it is first necessary that a fixed relative value between the two metals should be arrived at by international agreement. The Americans suggest that the ratio between the two should be fixed at 16 to 1. Bimetallists, who include in their ranks many eminent statesmen and economists, contend that the growth of commerce and population demands that the comparatively limited supply of gold should be supplemented by a greater use of silver, as a medium of exchange. Several international congresses have considered the question, but no settlement has yet been arrived at.

BINGEN, a town on the Rhine, 16 miles west of Mainz. In the neighbourhood are the ruins of the castle where the Emperor, Henry IV., was imprisoned by his brother, in 1105; and in the middle of the river, opposite the town, stands the "Mouse Tower," in which, according to an old legend, Bishop Hatto, a cruel oppressor of the poor, was devoured by rats, 969.

BINNACLE, a box or case on board ship in which the compass is kept. It is placed just in front of the wheel, or steering-apparatus, that the steersman may see it without moving.

BIOGRAPH, THE, known also as the *Bioscope* and *Cinematograph*, is an apparatus for exhibiting in rapid succession a series of photographs of moving objects. The effect depends on the fact that the impressions which light makes on the eye continue for a short time after the cause of the impression has ceased to act. In the case of these "animated photographs," each separate picture remains impressed on the retina until the following one appears. The camera used for taking the photographs is fitted with two dark chambers. A long strip of sensitive film, wound on a drum, is placed in the upper of these chambers. One end is passed through the camera so that the light is focused on it, and is attached to an empty drum in the second dark chamber. When the mechanism of the instrument is set in motion, it unwinds from the upper drum exactly the amount of film needed for one picture. It retains this in position behind the lens while the shutter is opened and closed again; it then draws down another portion, and continues to repeat this series of operations several times in a second; the film loosened from the upper drum is wound round the lower one. When the film is developed it contains the negatives of a sequence of pictures of the same object, taken at intervals of a small fraction of a second. A positive film for exhibition is printed from this negative. To exhibit the pictures, the same, or a similar piece of apparatus, is fixed in front of the condenser of a powerful magic-lantern, and worked in the same way as before. To produce the best effect, the pictures should be thrown on the screen at the same rate of speed as they were taken.

BIOLOGY is the study of life. The nature of life being at present unknown, this subject resolves itself into a study of living things and thus embraces Botany, Zoology, and Physiology.

BIRCH, an exceedingly hardy tree, is indigenous to all parts of the north temperate zone, and is found nearer to the North Pole than almost any other tree, though in a dwarfed condition. Its timber, which is light in colour and of a tough texture, is applied to a variety of purposes, e.g., coach builders use it for the bodies of carriages. The bark is used for tanning and for preserving fishing-nets. It is to the birch bark used in tanning that Russia leather owes its peculiar scent. It is also made into canoes by the American Indians, and in the north of Europe, roofs of huts and houses are constructed of it. Birch wine is produced from the sap, and the twigs are made into besoms.

BIRD OF PARADISE, a family of birds inhabiting New Guinea and the neighbouring islands, and distinguished in the case of the male-birds for the extraordinary beauty and lustre of their plumage.

BIRDLIME, a sticky substance with which twigs, etc., are besmeared for the purpose of ensnaring birds when they settle thereon, which they are attracted to do by the song of a decoy, or tame bird placed near. The birdlime is prepared from holly-bark or the stem of the mistletoe, by boiling.

BIRDS' NESTS vary considerably in form, in the materials of which they are composed, and the situation chosen for building. All birds of the same species adopt the same plan of construction, and choose similar situations. Some always prefer the topmost branches of lofty trees, others select bushes, others the tall grass in meadows, and others again the dry trunks of old trees. The nests of the larger birds are for the most part roughly constructed. Those of the eagle, the crane, and the stork are mere platforms of twigs and other materials, while the nests of wood-pigeons and rooks resemble loosely-made baskets. Many of the smaller birds display great ingenuity of workmanship. The thrush plasters the inside of its nest with clay or cow-dung, and many species carefully line them with down, feathers, and wool. The house martin constructs a hollow ball of clay and sand beneath the sheltering eaves of houses, and lines it with hay and feathers. The sand martin burrows a hole in a sandbank, and constructs its nest at the end of the passage, which sometimes exceeds three feet in length. The tailor-bird forms its home by sewing leaves together. The nests of a species of swift, found in the Malay Archipelago, are constructed of a mucilaginous substance having the appearance of isinglass, and which seems to be secreted by the birds in special glands. They resemble the nest of the common swallow in shape, and are built in caves in sea cliffs. These are the edible birds' nests so much prized by the Chinese. Many birds, e.g. gulls, make no nest.

BIRDS, DESCENT OF. According to those who hold the theory of evolution, birds owe their origin to certain reptile forms. The evidence on which the claim is based consists in the close resemblance existing in the anatomical structure of both classes; the reptilian characteristics of the earliest known bird, the "archæopteryx;" the existence of a series of fossil forms which connect the winged lizards with the toothed birds; and the fact that the reptiles form the next lowest class of vertebrates. The whole of this evidence is corroborated by the careful study of the development of the embryo; for in passing through its embryonic state, each individual is said to pass through the life history of the race.

BIRDS, DEVELOPMENT OF. All birds are developed from eggs which are hatched after they have passed from the body of the mother, who in most cases supplies the necessary warmth by sitting on them. The embryo is produced from a single microscopic cell, the fertilised *ovum*, and the whole of the structures and organs result from its repeated divisions. The food for the growing embryo is obtained from the yolk-sac, which gradually shrinks, and is eventually absorbed into the body cavity, the walls of which gradually grow

together. At the broad end of the egg is an air-space, which enlarges as development proceeds, and on the fourteenth day of incubation, in the case of fowls, though the period varies in different species, the chick moves so as to lie with its beak pressing against the inner wall of the air space. On the twentieth day the beak penetrates the wall, and the chick, which until then has obtained the necessary oxygen by means of an embryonic respiratory organ, begins to breathe the contained air through its lungs. Finally, the chick breaks the egg-shell with its beak, and is hatched.

BIRDS, MIGRATION OF. With the exception of tropical varieties, most birds change their homes with the seasons. Even those species that are with us throughout the year, such as the sparrow, are now known to migrate from district to district at certain fixed periods, so that the species is represented by different individuals at different parts of the year. The migratory habit is more easily observed in those birds that spend one portion of the year in one country, and the remainder in another having different climatic conditions. The cuckoo, the nightingale, the swallows, and swifts arrive in England in spring, spend the summer here, and leave again in the autumn, for warmer latitudes. Our winter visitors include woodcocks, field-fares, and many aquatic birds. These arrive from more northerly regions, to which they again return on the approach of warmer weather. In all cases the young birds are reared in those countries where the summer is spent. Some species, as the swallows, migrate in large flocks; others in straggling groups; and, in the northward flight, the male birds frequently travel first. The departure and arrival of the flocks take place with such regularity that the dates may be fixed beforehand. As the day for departure approaches, the birds assemble in certain localities from all parts of the country. In their flight they take certain well-defined lines always following the same route. In crossing the North Sea, it has been observed that the route is not the shortest possible, but is over a series of shallows. The flight is usually made against the wind, and some species are known to delay their departure for a few days, if the direction of the wind is unfavourable. The majority go north to breed.

BIRETTA, a four-cornered cap worn by the clergy of the Roman Catholic Church, and by some in the English Church. The biretta worn by priests is black, by bishops purple, and by cardinals red.

BIRKBECK, GEORGE, *b.* at Settle, in Yorkshire, 1776, *d.* 1841, a member of the Society of Friends who took an active part in the foundation of mechanics' institutes in various parts of the country. The idea for this class of institution arose out of a series of free lectures delivered by Birkbeck to mechanics in Glasgow, where the first institute was established in 1823. The London Mechanics' Institute was founded in December of the same year, and Dr. Birkbeck, who had acquired a large practice in London, was elected president for life. The institute is now known as Birkbeck College.

BIRKENHEAD, a seaport in Cheshire, on the estuary of the Mersey, opposite Liverpool, with which it is connected by the Mersey tunnel, about 4½ miles in length. Numerous ferry steamers also ply across the river. The town owes its rapid rise to its extensive docks, ship-building yards, and engineering works. The shipping returns of Birkenhead are included in those of Liverpool; population 236 (1821), 110,926 (1901). (To compare population, etc., see p. 902.)

BIRKENHEAD, THE, a British ship that struck on a rock off the Cape of Good Hope, 1852. The soldiers on board, under the command of Colonel Seton, drew up on deck, while the two boats were filled with the women and children. About 400 brave men went down with the ship.

BIRMINGHAM, in Warwickshire, is the fourth largest city in England, and the greatest hardware manufacturing town in the world. It owes its prosperity to its proximity to extensive beds of coal and iron, combined with a splendid system of railway and canal traffic. In hardware, it manufactures everything from a pin to the heaviest engine or ship's anchor. The manufacture of jewellery, and of gold and silver plate, employs a large number of hands. Glass making and staining are important industries, and there are extensive chemical works. The Birmingham University was incorporated by royal charter in 1900, and includes faculties in science, arts, medicine, and commerce; and in 1905 was founded the bishopric of Birmingham. (For population, etc., see p. 902.

BISCAY, BAY OF, between the west coast of France and the north coast of Spain, is one of the stormiest seas in the world, owing to the fact that it is exposed to the prevailing south-west winds, and that the currents within it run in opposition to the tides.

BISHOP, ISABELLA (née Bird), *b.* 1832, *d.* 1904, a celebrated lady traveller and philanthropist. Beginning at the age of twenty-two, she travelled almost continuously to the end of her life, and has done much to promote the establishment of medical missions. She was the first lady fellow of the Royal Geographical Society. "The Englishwoman in America," "Six months in the Sandwich Islands," and "Unbeaten Tracks in Japan" are among her works.

BISLEY, a village in Surrey, near Woking. Not far distant is Bisley Camp, the scene of the National Rifle Association competitions in July. Compelled by the increasing range of rifles to find a spot for shooting, more remote than Wimbledon, the Association opened here in 1890. The chief competition is that for the "King's Prize." The winner receives £250 and a gold medal.

BISMARCK, PRINCE VON, *b.* at Schönhausen, in Pomerania, 1815, *d.* 1898, was the greatest statesman of modern times. His political career began in 1846, when he was elected a member of the Prussian Diet. From the first he expressed strongly Conservative views, supported the absolutism of the monarch, defended the privileges of the landed aristocracy, and opposed every democratic principle. From 1859 to the spring of 1862 he was Prussian ambassador at the court of St. Petersburg, but he still exercised considerable influence over Prussian politics, to which he returned as foreign minister in the autumn of 1862. His plans for the reorganisation of the army were severely criticised by the Liberal party; but when, after the annexation of Schleswig Holstein, he explained to the Diet his plans for expelling Austria from the German Confederation, and for promoting the unity of the North German States under the leadership of Prussia, he won the confidence and support of his former opponents. The successful termination of the Seven Weeks' War with Austria, 1866, further strengthened his position. Prussia and the smaller states of Germany, under his guidance, formed an offensive and defensive alliance. And when, in the course of the Franco-German War, the king of Prussia was crowned German Emperor in the palace of Versailles, 1871, Bismarck was appointed Imperial Chancellor, and raised to the rank of a prince. On the conclusion of peace with France he set himself the task of effecting a reconciliation with Austria, and eventually concluded a triple alliance between that country, Italy, and Germany. He presided over the Berlin Congress in 1878, and did much to promote peace. In his foreign policy he received the almost universal support of his countrymen, though his plans for internal reforms were frequently thwarted. Backed as he was by the king, his will became law in the end, and he succeeded in reforming the coinage, strengthening the army, establishing protection, and, at any rate temporarily, repressing the rising wave of socialism. His steadfastness of purpose gained for him the title of the "Iron Chancellor." Soon after the accession of William II., in 1888, he ceased to be chancellor, and retired into private life, an event which "Punch" commemorated by its well-known cartoon, "Dropping the Pilot."

BISON, an animal of the same genus as the ox, differs from it in the possession of a large hump behind the neck. The name is more correctly used to denote the American bison or buffalo, which at one time roamed the American prairies in immense herds. From its flesh and fat was produced the *pemmican* which formed the chief food of the fur hunters. See *Buffalo*.

BITON AND CLEOBIS were the sons of Cydippe, the chief priestess of Hera (Juno) at Argos. We are indebted to Herodotus for the story of filial affection which prompted these two youths to draw their mother's chariot in a procession to the temple of the goddess, the customary white oxen not having arrived. As a reward Cydippe prayed the goddess to confer on them the best gift that could be given to mortals. While they were still in the temple a gentle sleep fell upon them, from which they never awoke.

BITUMEN, a name applied to various mineral substances with apparently very different qualities, but all composed principally of carbon and hydrogen. Naphtha, petroleum, mineral caoutchouc, and asphalt are the principal varieties and they vary in solidity with the proportion of oxygen they contain, asphalt containing the most. Bitumen is of vegetable origin.

BLACK BESS, the mare on which Dick Turpin is said to have ridden from London to York in sixteen hours.

BLACK, WILLIAM, *b.* at Glasgow, 1841, *d.* 1898, began life as a journalist, but is chiefly celebrated as a writer of novels descriptive of life and scenes in the Western Highlands and islands of Scotland. Among the most popular are a "Daughter of Heth," "Madcap Violet," "Macleod of Dare," and "A Princess of Thule."

BLACKBURN, one of the oldest cotton manufacturing towns of Lancashire, about 9 miles east of Preston. Hargreaves, the inventor of the spinning jenny, was born there. The town has also important iron manufactures, and is rapidly growing. (For population, etc., see p. 902.)

BLACKCOCK, a species of grouse common on the moors of the north of England and of Scotland, and very abundant in parts of Scandinavia, Russia and Siberia. The female is known as the "Gray Hen."

BLACK COUNTRY, THE, a tract of country in South Staffordshire, rich in iron and coal, extending from Wolverhampton to the outskirts of Birmingham in one direction, and from Walsall to Dudley in another. Here every stage of the iron manufacture may be seen in constant operation, from the production of crude pig-iron, by smelting, to the most highly finished articles of iron and steel, for the sale of which Birmingham is the centre.

In this district are situated many large and important towns, including Wolverhampton, population 100,000; Walsall, 92,000; West Bromwich, 68,000; Dudley, 50,000; Wednesbury, 30,000; and Bilston, 25,000.

BLACK DEATH, a name given to a series of epidemics that devastated Europe, Asia, and Africa in the 14th century. It took its name from the black spots which covered the skin at one stage of the disease. The sufferers usually died within two or three days of being attacked. In the epidemic of 1348 England lost one-third of its inhabitants, and it is estimated that upwards of 20,000,000 perished in Europe.

BLACK FOREST, THE, a forest-clad range of mountains in the German provinces of Würtemberg and Baden, running almost parallel to the eastern bank of the Rhine. The district is famous for its picturesque scenery, is rich in minerals, and contains several well-known mineral springs.

BLACK FRIARS. (1) The Dominican order of mendicant and preaching friars founded by St. Dominic. They were so named from their black dress. (2) A district in London which formerly contained a Dominican monastery.

BLACKHEATH, a rapidly growing suburb of London with a large common, adjoining Greenwich Park. The heath was the scene of the insurrections of Wat Tyler in 1381, and of Jack Cade in 1450, and was for many years infested by highwaymen.

BLACK HOLE OF CALCUTTA, a room about twenty feet square, and ventilated by two small windows only, in which Surajah Dowlah confined 146 English prisoners on the night of June 18th, 1756. When the doors were opened in the morning only twenty-three were found alive.

BLACKING, a mixture of finely powdered boneblack, oil, raw sugar, or molasses, vinegar, and sulphuric acid, used for producing a black polish on leather.

BLACKLEAD is the common name of *graphite* or *plumbago*, one of the natural forms in which carbon appears. The mines in Borrowdale, in Cumberland, are now practically exhausted. It is abundant in Siberia, Ceylon, and various parts of India and California. In addition to its use for the manufacture of ordinary lead pencils, it is employed as a lubricant for machinery where oil is inadmissible, in the processes of electro-typing, and as a coating for ironwork to prevent rusting.

BLACKLETTER, the Gothic, or Old English alphabet. As printing was invented in Germany, naturally the first books were printed in that character, and this is why book-collectors are so enthusiastic about books in "blackletter" characters. But as the art of printing was diffused, the simpler characters now in use, called Roman type, became general.

BLACKMAIL, a rent or tribute formerly paid by farmers and others living in the neighbourhood of the Scottish Highlands, in the Border counties, and in other districts subject to the incursions of bands of cattle thieves. It was sometimes paid to a neighbouring chief for protection against the depredators, and at other times to the robbers themselves to buy off their molestation.

BLACK MARIA, the popular name for the police van in which prisoners are conveyed from the police courts to prison.

BLACKMORE, RICHARD DODDRIDGE, *b.* at Longworth, Berkshire, 1825, *d.* 1900; a novelist who gained a great reputation by his romance of Exmoor, "Lorna Doone." "Christowell" a Dartmoor story, is almost equally famous.

BLACKPOOL, a favourite Lancashire watering-place, a few miles north-west of the Ribble Estuary. The excellence of the sands, together with the splendid piers and promenade, attracts thousands of visitors. The air is bracing, and the amusements of the town well organised; population about 50,000.

BLACK PRINCE, THE, *b.* 1330, *d* 1376; eldest son of Edward III., was described by old writers as the "mirror of knighthood, the first and greatest of heroes;" but the merciless slaughter of the people of Limoges, for admitting a French garrison into the town, has left a great blot on his name. The prince won his spurs at the battle of Crecy, 1346, where he was the nominal leader of the first division of the English army; and ten years later he defeated a French force five times as numerous as his own, at Poictiers. He was the first Prince of Wales to adopt as his crest three ostrich feathers, with the motto *Ich dien*, I serve. His tomb is in Canterbury Cathedral.

BLACK ROD. Refer to *Index*.

BLACK SEA, a land-locked sea lying to the south of Russia, between Europe and Asia, and having an area twice as great as that of Great Britain. It communicates with the Mediterranean by the Bosphorus and Dardanelles. It receives the drainage of nearly one-third of all Europe. The sea has no noticeable tides, is remarkably free of islands, reefs, and shoals, possesses excellent fishing grounds, but is subject to dense fogs and sudden storms.

BLACKSTONE, SIR WILLIAM, *b.* in London, 1723, *d.* 1780; an eminent lawyer and judge, lectured on Law at Oxford, and became the first Vinerian professor at the University. His "Commentaries on the Laws of England" appeared in 1765, and contained a clear exposition of English Law free from technical phraseology.

BLACK WATCH, the popular name of the "Royal Highlanders," the 42nd and the 73rd regiments. They were organised in 1739 out of the six companies that had previously been entrusted with the "watching" of the Highlands, and the maintenance of law and order among the Highlanders.

BLACKWOOD (FREDK.), MARQUIS OF DUFFERIN, *b.* 1826, *d.* 1902; an eminent statesman and diplomatist, who devoted nearly fifty years to the service of his country. He held office as British ambassador at St. Petersburg, Constantinople, Rome, and Paris, and became Governor-General of Canada, and afterwards of India.

BLAKE, ROBERT, *b.* at Bridgewater, 1598, *d.* 1657; an English admiral who did much to give England the command of the sea. During the Civil War he served in the army, and first took to the sea in pursuit of Prince Rupert, whose ships he finally destroyed. To Blake fell the task of organising the navy of the Commonwealth, and he set himself to man the fleet with the same type of men that had made Cromwell's Ironsides so successful. In the war with the Dutch he defeated Van Tromp off Dover, and De Ruyter in the Downs, in 1652, Van Tromp off Portland, and again off the North Foreland, and the combined fleets of Van Tromp and De Ruyter off the Texel, in 1653. His greatest success was the destruction of the Spanish treasure ships in the harbour of Santa Cruz, 1657.

BLAKE, WILLIAM, *b.* in London, 1757 *d.* 1828; a poet, painter and engraver, who held very peculiar views, and imagined that he was able to converse with the spirits of Moses, Homer, Virgil, Dante, Milton, and others. His principal works were the "Songs of Innocence" and the "Songs of Experience," poems illustrated by original etchings and borderings tinted by the artist. He illustrated Young's "Night Thoughts," the "Book of Job," and his own "prophetic books."

BLANC, JEAN LOUIS, *b.* at Madrid, 1811, *d.* 1882, a French journalist and writer on Socialism. He founded the "Revue de Progrès," in which his articles on the "Organisation of Labour" first appeared. For a time he lived in exile in England, where he completed his great work, the "History of the French Revolution." Returning to Paris after the fall of Napoleon III. he was elected a member of the Chamber of Deputies, a position he continued to occupy until his death.

BLANKETEERS, a term applied to a number of mill operatives, who met in St. Peter's Fields, Manchester, in 1819. They intended to join a similar contingent from Derby, and march on London, with the object of pressing the demands for parliamentary reform. The name arose from the circumstances that each man had provided himself with a blanket for camping. The meeting was dispersed by the yeomanry, and several of those who took part in it were imprisoned.

BLANKETS are composed either entirely of wool or of a cotton warp and wool weft. The latter are known as "Union" blankets. The heavy pile on both sides, produced by the aid of teazles, conceals the cotton warp. The kind known as "Scotch Blankets" is composed entirely of wool, but there is so little pile that the twilled pattern beneath shows through. Dewsbury is the principal seat of the blanket manufacture in England.

BLANK VERSE, unrhymed verse, depending on metre alone. This was the principle on which all the ancient Greek and Latin poems were written. The earliest example of blank verse in English is a translation of a part of the Æneid, which appeared in 1547. The dramas of Shakespeare are in this form, and since his time, dramatic writers in verse, with the notable exception of Dryden, have adopted this form.

BLARNEY, a village and castle dating from the 15th century, about five miles north-west of Cork. The "Blarney Stone" is set in the parapet wall on the western side of the tower, and, according to tradition, possesses the power of conferring the gift of eloquence on all who kiss it.

BLASPHEMY. Refer to *Index*.

BLASTING, the most efficient mode of removing, or breaking up large masses of rock in the operations of mining, quarrying, or engineering. The old method was to bore a hole in the rock by means of suitable instruments, insert a charge of gunpowder in the end of this, tightly pack the remainder of the hole with chips of stone, clay, etc. and then fire the charge by means of a train of powder. The first great improvement on this early method was the employment of loose sand instead of tight packing, and safety fuses for firing; and the risk of accidents has now been reduced to a minimum by the use of electric currents for that purpose. More powerful explosives in the form of gun-cotton, dynamite, and blasting-gelatine are now used.

BLATCHFORD ROBERT, *b.* 1851, founder of the "Clarion" the leading socialist newspaper in England. In his "Merrie England." he sketches England as it is and might be. He is a warm advocate for Imperial defence.

BLAVATSKY, HELENA PETROVNA, *b.* 1831, *d.* 1891, Russian adventuress and Theosophist, who in 1875 founded the Theosophical Society.

BLAZON. Refer to "Heraldry," in *Index*.

BLEACHING is the art of removing colouring matter from cotton, linen, woollen, and other fabrics. This was done formerly by boiling the material with soap or an alkali, and then exposing it to sunlight—a process that occupied many weeks or even months. The modern method of bleaching cotton or linen goods is to soak the materials in a solution of bleaching powder, and then to pass them through dilute hydrochloric or sulphuric acid. In this way the colouring matters are oxydised into colourless compounds. Wool, silk, and straw are hung in closed rooms, on the floor of which sulphur is burnt. Hydrogen-peroxide is also now used as a bleaching agent.

BLENHEIM, a village in Bavaria, near which Marlborough and Prince Eugene gained a decisive victory over the French and Bavarians, 1704.

BLENHEIM PALACE, the seat of the Marlborough family, is near Woodstock, in Oxfordshire. The grateful Parliament voted half-a-million after the victory of Blenheim to erect a mansion for the victor. The majestic building, designed by Sir John Vanbrugh, has a front of 348 feet, and the interior is in keeping with its outward magnificence. In front stands a column 130 feet high crowned with a statue of the hero, and bearing inscriptions around the base. The area of the park is 2,700 acres.

BLERIOT, LOUIS, *b.* 1871, the French aviator who, on July 25th, 1909, flew across the Channel, from Calais to Dover, in his monoplane. Though the Channel was crossed by balloon as far back as 1785, M. Bleriot was the first to cross it by areoplane, and his success marks a notable step forward in the evolution of the flying machine.

BLESSINGTON, MARGUERITE, COUNTESS OF, *b.* in Tipperary, 1789. *d.* 1849, the daughter of an impoverished Irish squire, for many years swayed the literary and intellectual portion of London Society. After the death of her husband, she lived at Gore House, Kensington, for many years receiving at her reunions all the famous men of the time, and adding to her considerable income by writing fashionable novels and sketches.

BLIND FISH. It is well known to biologists that organs tend to become atrophied from want of use. Specimens obtained by the "Challenger Expedition" showed that those fish whose natural habitat is now at a greater depth than that to which light can penetrate possessed only rudimentary organs of sight.

BLIND-WORM or **SLOW-WORM,** a small reptile, usually about a foot in length, closely resembling a snake in appearance, but the existence of rudimentary pelvic and shoulder girdles connect it with the lizards. It is found all over Europe, except in Ireland, and also in Western Asia and Northern Africa. It feeds on insects, earth-worms, slugs, etc., and is perfectly harmless, in spite of Shakespeare's description, "the eyeless, venom'd worm." The smallness of its eyes gave rise to the fallacy of its blindness.

BLIZZARD, a cold and bitter wind accompanied by driving snow, which makes it almost impossible to sustain life long outdoors. The true home of the blizzard is Montana and Dakota in the north-west of the United States, where the thermometer has been known to go down 100° in twenty-four hours, and the wind driving ice-needles before it to blow for 100 hours incessantly at the rate of 40 miles an hour.

BLOCKADE, the closing in of a town by surrounding it with troops or ships in such a manner as to prevent those inside from leaving it, and outsiders from entering. The declaration by a Power that a place is blockaded, makes it unlawful for a neutral to attempt to trade with it, and places him in the position of an enemy if he attempts to do so. In the event of capture, the goods he is attempting to take in, or to bring away, are liable to be seized by the investing force.

BLOCKHOUSE, a small temporary fort composed of logs of wood or other easily acquired material, roofed in, and loopholed for rifle fire. It is sometimes surrounded by a trench, and entirely covered with earth to render it bomb and fire-proof. In the guerilla stage of the Boer War, large areas were enclosed by lines of blockhouses, constructed of corrugated iron, connected together by barbed-wire fencing, and surrounded by barbed-wire entanglements. The whole zone within the line of blockhouses was then crossed by a line of troops, the object being to drive any of the enemy within the area, on to the line of blockhouses, and so ensure their capture.

BLOCK SYSTEM, a method of preventing collisions on railways. According to this system, two trains on the same line of rails cannot approach each other nearer than the distance between two signal boxes; for the signalman at one box keeps the signal against the one until he has been informed by telegraph that the preceding train has passed the next box, and so entered the succeeding "block."

BLOEMFONTEIN, "Flowery Fountain," is the capital of the Orange River Colony. The town was occupied by Lord Roberts, 13th March, 1900, population 6,500.

BLONDEL, a minstrel and confidential servant of Richard Cœur de Lion. He is said to have discovered the place of his master's confinement in Austria, by singing outside the tower the first stanza of a love ballad that the two had composed together. Richard replied from within, and Blondel at once took steps to restore the king to liberty.

BLONDIN, CHARLES, *b.* at St. Omer, France, 1824, *d.* 1897; a celebrated acrobat and rope dancer, whose most daring feat was the crossing of Niagara Falls on a tight rope, stretched from side to side.

BLOOD-RAIN, a red rain often seen to descend on the seas to the north and west of the Sahara. After a prolonged drought, the minute particles of red sand are caught up by whirlwinds and carried away sometimes hundreds of miles by horizontal currents of air. Then the rain falling through these dust-clouds is impregnated with it, thus becoming red.

BLOOD, THOMAS, *b.* about 1628, *d.* 1680; served with Cromwell's army in Ireland. Soon after the Restoration he headed a daring plot for seizing Dublin Castle and killing the Lord-Lieutenant. Later he attempted to steal the crown and regalia from the Tower of London, but was captured and confessed his guilt. Charles II visited him in prison, and was persuaded to pardon him. The king also granted him a pension of £500 a year.

BLOODHOUND, a variety of hound, taller, stronger, and more compactly built than the foxhound, remarkable for its keen sense of smell. Owing to this circumstance, bloodhounds were employed to track the cattle raiders of the border counties, and for the pursuit of criminals. They were also used in the United States for tracing fugitive slaves.

BLOODY ASSIZE, the special sessions held in the western counties, by a commission consisting of Chief Justice Jeffreys and four other judges, for the trial of those who assisted in the Monmouth Rebellion of 1685. More than 300 persons were condemned to death, and nearly 1,000 were sold as slaves in the West Indies.

BLOOMFIELD, ROBERT, *b.* at Honington, near Bury St. Edmunds, 1766, *d.* 1823; a poor shoemaker with the gift of poetry. His earliest poems, the "Milkmaid" and the "Sailor's Return," appeared in the London Magazine. The "Farmer's Boy" was written in a London garret, and published by the aid of friends, who afterwards secured for him a subordinate post in a government office, which he was compelled to relinquish on account of ill health.

BLOUET, PAUL. See *Max O'Rell*.

BLOW-FLY is a common fly in Great Britain; infesting sheepfolds it lays its eggs in the wool of the sheep; the maggots, which hatch from these eggs, burrow into the skin of the sheep; ulcers are thus produced which may cause the death of the sheep, if they are not treated promptly.

BLOWPIPE. (1) A metal tube with a smaller tube fitted with a fine orifice, projecting at right-angles from its lower extremity. The instrument is used in many of the arts, and in chemical analysis, for directing a jet of flame on any object to be heated. The current for directing the flame is provided by the breath of the operator, or by some form of bellows. A portable lamp, provided with a blowpipe, is used by plumbers for soldering and by painters for burning off old paint. The blow-pipe used by the glass-blower consists of a long, straight, metal tube. (2) A blow-pipe, from 8 to 12 feet in length, and consisting of a double tube, made from two stems of a species of palm fitted one within the other, is a most effective weapon in the hands of certain tribes of South American Indians, either in warfare or for hunting. A small arrow, having its pointed end notched and poisoned, and made to fit the tube exactly, by being wound at the other end with a little soft down from the silk-cotton tree, is expelled by the breath of the hunter, and proves fatal to birds and other game, the flesh being in no way injured by the poison of the arrow. A similar weapon is in use among the Dyaks of Borneo and other native tribes of the Indian Archipelago.

BLÜCHER, MARSHAL VON, *b.* at Rostock, Prussia, 1742, *d.* 1819; served first in the Swedish army, but afterwards joined that of Prussia, and eventually became a field-marshal. In 1813 he commanded a combined force of 60,000 Russians and Prussians operating against the French, which, after gaining several victories, formed the left wing of the army of the allies in the pursuit of Napoleon, who was then retreating on France. In 1815 he commanded the Prussian army in Belgium. On June 16th he was defeated at Ligny, but reformed his men. His opportune appearance on the field of Waterloo completed Wellington's victory. His courage, impetuosity, and resolution after defeat gained for him the title of "Marshal Forwards."

BLUEBIRD, so called from the rich blue colour of its upper plumage, is common over the whole of North America, except the extreme north, and is the harbinger of spring to the Americans. It makes its appearance in the United States in February or March, leaves again in November, and probably winters in Brazil and Guiana. It is a sweet songster.

BLUE-BOOK, any volume of reports and other official documents published by parliament, and so named from the circumstance that they have blue covers. Some fifty or sixty volumes are issued during a single session.

BLUE COAT SCHOOL. See *Christ's Hospital*.

BLUE GOWNS, the popular name of a class of privileged beggars formerly existing in Scotland. Their correct designation was the *king's bedesmen.* On the king's birthday each of them received a gown of blue cloth, a loaf, and a purse containing a penny for every year of the king's life. Their appointment has been discontinued since 1833, and the last allowance was paid in 1863.

BLUE MOUNTAINS. (1) A range from 5,000 to 7,000 feet in height traversing the island of Jamaica from east to west, and containing some picturesque scenery. (2) A range forming part of the Appalachian system in the east of the United States. (3) A range running parallel to the coast of New South Wales, reaching a height of 4,100 feet, and producing copper, tin, lead, and coal.

BLUE-PETER, a flag with a blue ground and a white square in the middle. It is hoisted when a ship is about to sail, for the double purpose of recalling absent sailors, and warning all who have accounts to settle with any one on board, to do so at once.

BLUE RIBBON. From the fact that the emblem of the highest order of knighthood in England is a dark blue ribbon, has arisen the custom of applying the term to the most valued prize to be obtained in any profession or form of sport. Thus, the Lord Chancellorship is spoken of as the Blue Ribbon of the Law; a Field Marshal's baton, as the Blue Ribbon of the Army; winning the Derby, as the Blue Ribbon of the Turf; and the America Cup, as the Blue Ribbon of Yacht Racing, etc.

BLUNDERBUSS, a short gun, having a bore wide enough to throw three or four bullets at once. It was introduced into England in the reign of Charles II., probably from Holland.

BOA, a family of serpents destitute of poison fangs, but of immense size and strength. It is peculiar to the warmer regions of South America. The largest species is the Anaconda. The *Boa Constrictor* is much smaller, rarely exceeding 12 feet in length. It is a native of Brazil and the West Indian Islands, and is frequently seen hanging by the tail from a branch of a tree, waiting for its prey, which consists of the smaller mammals of the country. It never enters the water, but lies concealed in burrows, and is hunted by the Brazilians for its skin and fat.

BOADICE'A, the queen of the Iceni, a British tribe who inhabited Norfolk and Suffolk. Roused by the indignities offered to her and her people by the Romans, she raised an army, attacked several Roman settlements, and reduced London to ashes. She was eventually defeated by the Roman governor Suetonius, and committed suicide by poison A.D. 61.

BOANER'GES, "Sons of Thunder," a title given by Christ to James and John, the sons of Zebedee, on account of their fervent zeal.

BOAR, THE WILD, is found in many parts of Europe and Asia, and differs from the domestic variety, of which he has been the progenitor, in possessing greater intelligence. He has also a longer snout, shorter ears, and well developed tusks. Boar hunting, a favourite amusement in many countries, is known in India as pig-sticking. The droves of wild hogs that roam the forests of South America are descendants of the domestic variety introduced from Europe.

BOATSWAIN, a naval warrant officer, who has charge of certain stores belonging to the ship to which he has been appointed. He superintends the men, summons the crew to their duties by the sound of a whistle known as the boatswain's pipe, relieves the watch, and, in rough weather, pays special attention to the boats and anchors.

BOCCAC'CIO, GIOVAN'NI, *b.* at Paris, 1313, *d.* 1375; was designed by his father, a Florentine merchant, for a mercantile career, but devoted himself to story-telling in prose and verse, and contributed largely to the revival of classic literature in Italy. His "Decamerone" is the earliest prose work written in pure Italian, and furnished the material for Chaucer's tale of "Griselda." The "Falcon," a pathetic love story, was dramatised by Tennyson.

BODENSEE, the German name of Lake Constance, which see.

BODLEIAN LIBRARY, the public library of Oxford University, was founded by Sir Thomas Bodley, and opened in 1608. It contains many rare oriental, Greek, Latin, and Hebrew books and manuscripts, and under the Copyright Act possesses the privilege of receiving a copy of every book printed in Great Britain or Ireland. All graduates of the University, and literary persons who have been duly recommended, are permitted to read and make extracts from the works in the collection.

BOEHM, SIR JOSEPH EDGAR, *b.* at Vienna, 1843, *d.* 1890, sculptor, came to London in 1862 after studying in Vienna, Paris and Italy. He had great success at the Exhibition of that year, and this made him resolve to settle in England. He executed a statue of Queen Victoria for Windsor Castle, of Carlyle for the Thames embankment, and the equestrian statue of Wellington at Hyde Park Corner. His masterpiece was the effigy of Dean Stanley for the Abbey.

BOERHAAVE, HERMANN, *b.* near Leyden, 1668, *d.* 1738; a celebrated physician and the author of several medical works, who became Professor of Medicine, Botany, and Chemistry in the University of his native town. He gained a European reputation, and included among his patients Pope Benedict VIII. and Peter the Great.

BOER WAR, THE, arose out of the unfair treatment meted out to British residents in the Transvaal, and the determination of the Boers that the Dutch should be the predominant race in South Africa. The war began with the Boer invasion of Natal, 11th October, 1899. In a short time the Boer forces laid siege to Ladysmith, Kimberley, and Mafeking. The earlier operations of the British army were directed to the relief of these three places. General Buller directed the operations in Natal, and Lord Methuen in Cape Colony. In one black week in December our troops suffered three serious reverses, at Stormberg and Magersfontein in Cape Colony, and at Colenso in Natal. The whole empire was now thoroughly stirred. Troops were sent from the Colonies, Volunteer and Yeomanry regiments were dispatched, in addition to the regular forces. Lord Roberts, with Lord Kitchener as his chief-of-staff, took the chief command, and after making due preparations, took the field, and swept the enemy before him. On the 15th February, 1900, General French relieved Kimberley; on the 27th, Cronjé was compelled to surrender with 4,000 men at Paardeburg; on the same day General Buller opened the way to Ladysmith by the capture of Pieter's Hill; Bloemfontein was entered by Lord Roberts on March 13th; and on May 17th Mafeking was relieved by a flying column under Colonel Mahon.

The Transvaal was now invaded by our victorious troops, who entered Johannesburg on 31st May and Pretoria on 5th June. One immediate result was the liberation of 3,200 British prisoners of war. Roberts and Buller were now able to join forces and to make a combined attack upon the main Boer army under General Botha. It was only after a long series of engagements, lasting until the end of September, that the Boer army was completely broken up, their excellent artillery captured or destroyed, and their President (Kruger), an exile in Europe.

A guerilla war ensued, and for 18 months longer the stubborn struggle went on. Meanwhile Lord Roberts returned to England, leaving Lord Kitchener "to fight to a finish." The end came on 31st May, 1902, when peace was signed at Pretoria. As a result, the two Boer States—the Transvaal and the Orange Free State—now form part of the British Empire.

BOG, land covered with peat, a substance produced by superimposed layers of a species of moss. Each layer, as it died, has been succeeded by another layer of living plants, until a mass, many feet in thickness, and of a very spongy texture, has been produced. Peat is capable of holding a large quantity of water, and for this reason most bogs partake of the nature of quagmires; indeed some parts of the centre of Dartmoor are almost impassable. The largest bog in the British Islands is the Bog of Allen, in Ireland. The peat is valuable for fuel, and also as a principal ingredient in manures for certain purposes. At the base of the peat the remains of oak trees are sometimes found. The wood is of a deep ebony black colour, and in parts of Ireland is used for the manufacture of small ornaments.

BOGIE, a low truck placed in front of a locomotive-engine or railway carriage to facilitate the movement around curves, and to lessen the danger of the train running off the rails.

BOG-OAK is the oak which is found buried in peat. As the bog enlarges it spreads over the surrounding land and in the course of ages buries the trees growing thereon. Oak, which has thus lain immersed in bog for countless centuries, is stained black. It is much prized by the cabinet-maker.

BOGOTA', the capital of the South American Republic of Colombia, is within 5° of the equator, but owing to its elevation, 8,600 feet above sea-level, enjoys a climate of perpetual spring; population 120,000.

BOHEMIA, a state in the north-west of the Austrian Empire, consists of a lozenge-shaped plateau surrounded by ranges of mountains, and has an area of about 20,000 square miles. Minerals are abundant and the manufactures of importance. Czechs, a race of Slavonic origin, form nearly two-thirds of the inhabitants. The capital is Prague, with a population of over 180,000.

BOILERS for the production of steam for driving machinery were at first heated by means of a cylindrical fire-box passing through the boiler from end to end. The earliest improvements consisted in providing a greater heating surface by employing two inner fire-tubes, and afterwards a number of flues were added. These flues are small tubes, which not only convey the furnace gases to the chimney, but also transmit the heat of the gases to the water of the boiler. In *Water-tube Boilers* the water is heated in a number of tubes which pass through the furnace, and communicate at their ends with larger vessels which act as reservoirs of water and steam. The *Belleville Boiler*, which has been fitted to many of our warships, is of the water-tube variety. It

consists of a number of "elements." Each element is composed of a vertical, zigzag, steel tube, which communicates above with the vessel in which the steam collects, and at its lower end with the adjoining element. The heat is sometimes further economised by the use of an "Economiser." This consists of elements similar to those composing the boiler, fixed in the space above the boiler, through which the furnace gases escape. The "feed" water passes through the economiser, and is thus raised in temperature by the heated gases before reaching the boiler proper. Another variation of the water-tube boiler, known as the *Flash Boiler*, is used for the propulsion of motor cars. [See *Automobiles*].

BOILING POINT is the temperature at which the tension of the vapour of a liquid is equal to the pressure it supports. When such a temperature is reached, the vapour escapes in bubbles at the surface of the liquid. Under the ordinary atmospheric pressure of 15 lbs. to the square inch, alcohol boils at 173° F., water at 212° F., and mercury at 662° F.

BOLAN PASS, a deep, narrow mountain gorge lying between Quetta, in Baluchistan, and Kandahar, in Afghanistan.

BOLEYN, ANNE See *Anne Boleyn.*

BOLINGBROKE, (Henry St. John) **VISCOUNT.** See *St. John, Henry.*

BOL'IVAR, SIMON, *b.* at Caracas, 1783, *d.* 1830, has been called the "Liberator" and the "Washington of South America," owing to the part he played, as soldier and statesman, in gaining the independence of Venezuela, New Granada, and Bolivia. In 1819 he became the first president of Colombia, and in 1824 was appointed dictator of the newly formed republic of Northern Peru, which was afterwards known as Bolivia, after his name. Unable to control the fiercely contending factions, and broken in health, he retired into private life.

BOLIVIA, a republic consisting of an immense tableland, extending from the eastern slopes of the Andes to Brazil. The area is about 567,000 square miles, and the population 2 millions, about half of whom are Indians. The country is possessed of great mineral wealth, particularly copper, tin, and silver; and exports, in addition to these, wool, rubber, and coffee. This state has no access to the Pacific, having lost its sea coast in the war with Chile, 1875–80; the exports are mostly shipped at Buenos Ayres. Its largest town is La Paz; population 63,000.

BOLOGNA, the chief city of the Italian province of the same name, is a walled town, situated in a fertile plain north of the Apennines. Its university is the oldest in Italy.

BOLTON, a town on the Lancashire coal-fields, about eleven miles north-west of Manchester, has extensive cotton factories. (For population, etc., see p. 902.)

BOLTON ABBEY, now in ruins, is beautifully situated on the Wharfe, in Yorkshire, about 21 miles north-west of Leeds. It was founded in the 12th century for Augustine Canons. There are remains dating from the Early English to the Perpendicular Period. It has been celebrated by Wordsworth in "The White Doe of Rylstone."

BOMB, a hollow ball or shell filled with explosive material, and fired by means of a time-fuse or clock-work mechanism. Bombs were formerly used in warfare for setting fire to buildings, magazines, etc., and were thrown from mortars or howitzers. The conical shell has now replaced the ordinary bomb-shell. Bombs have been employed for the destruction of life and property by the nihilists, anarchists, and Fenians.

BOMBA, KING, a nickname given to Ferdinand II., king of the "Two Sicilies," i.e., Naples and Sicily, who succeeded to the throne in 1830, and, during the civil war that broke out in 1848, cruelly bombarded his own cities.

BOMBARDIER. A bombardier was an artilleryman who, in battles or sieges, had to attend to shells and fuses and serve mortars and howitzers; now the lowest rank of the artillery non-commissioned officers.

BOMBASTES FURIOSO, an opera by Thomas Rhodes, written in the inflated style of the popular dramas of his day.

BOMBAY. (1) The western presidency of India, extends from Baluchistan to Mysore, and has an area exceeding 120,000 square miles, and a population of upwards of 18½ millions. (2) The capital of the presidency stands on a small island, connected with the mainland by an artificial causeway, and possesses the finest harbour in India. Two neighbouring islands, Salsette and Elephanta, contain the remains of marvellous temples hollowed out in the native rock. Bombay formed part of the dowry of Catharine, wife of Charles II. During the American Civil War it became the principal cotton mart of the world, and the opening of the Suez Canal gave a great impetus to its trade, so that it promised to rival Calcutta. In recent years the very serious outbreak of bubonic plague has dislocated its trade and industry, and the census of March, 1901, showed that the population had decreased from 822,000 to 776,000. Since then the evil has increased, the outbreak of 1903 having lasted longer, and caused a heavier mortality, than any previous visitation.

BOMBAZINE, a cloth woven of silk and worsted. The manufacture was introduced into England by a colony of Flemings who settled in Norfolk and set up their principal factories in Norwich. It is now produced principally at Halifax and Kidderminster, and is largely exported to Spain and South America.

BONAPARTE FAMILY, THE, a family of Italian origin, settled in Corsica, that has given the following crowned heads to European countries:—Napoleon I., emperor of the French, 1804–14; Joseph, king of Spain, 1808–13; Louis, king of Holland, 1806–10; Jerome, king of Westphalia, 1807–13; Charles Louis (nephew of Napoleon I.), emperor of the French, 1852 to 1870. François Joseph, son of Napoleon I., *b.* 1811, was proclaimed king of Rome, while still an infant, but his father's fall after his defeat at Waterloo put an end to his career as a prince.

BONAPARTE, NAPOLEON EUGÈNE, the "Prince Imperial," *b.* 1856, was the son of Napoleon III. He was present with his father at one of the earlier battles of the Franco-German war, but withdrew to Paris, and after the capitulation of Macmahon's army at Sedan, and the capture of his father, he and his mother secretly repaired to England and took up their residence at Chiselhurst, where they were joined by the emperor in 1871. The Prince Imperial volunteered for service with the British army in South Africa, and was killed in the war with the Zulus, 1879.

BONAVENTURA, ST., *b.* 1221, *d.* 1274, called the *Seraphic Doctor*, was a Franciscan monk, and one of the most eminent of the schoolmen. His learning was immense and his influence in ecclesiastical matters very great. See *Schoolmen.*

BONDED WAREHOUSES. See *Commercial Dictionary.*

BONHEUR, ROSA, *b.* at Bordeaux, 1822, *d.* 1899, was a celebrated animal painter. She first studied under her father, and her first picture was exhibited when she was 19. "Ploughing with Oxen" is considered her finest work, though the "Horse Fair" is equally well known.

BONIFACE, SAINT, *b.* at Crediton, Devon, 680, *d.* 755, the "Apostle of Germany," spent 30 years in civilising and Christianising the people of that country, being assisted in his work by fellow-countrymen from Britain. He established numerous monasteries, founded four cathedrals, and became archbishop of Maintz. In 755 he attempted to convert the people of Friesland, but he and his companions were attacked by a party of heathens and massacred.

BONNER, EDMUND, *b.* at Hanley, Worcestershire, 1495, *d.* 1569; became bishop of London, and at first assisted in the reformation of the church. On the accession of Edward VI. he opposed Cranmer on points of dogma, was deprived of his bishopric, and committed to prison. He was restored by Queen Mary, and much odium has clung to his name, owing to the number of people put to death in his diocese, on account of their religious convictions. He refused to take the oath of supremacy to Elizabeth, was again deprived of his bishopric, and confined in the Marshalsea, where he died.

BOOKMAKER. See *Betting.*

BOOK OF COMMON PRAYER. It combines in one volume all the offices of the Church of England. It is based on the Second Prayer Book of Edward VI., published in 1552, but certain modifications and additions were made in the reign of Elizabeth, 1599, after the Hampton Court Conference, 1604, and after the Savoy Conference, 1661. Its contents were compiled from existing service-books, and translated into the "vulgar tongue." More than a half is taken direct from the Scriptures, and most of the prayers and collects are translations of those that had been repeated in Latin from very early times.

BOOK OF THE DEAD, an ancient Egyptian work consisting of a collection of prayers composed at various periods. Copies were placed in mummy cases in order to free the departed from the influence of evil spirits, and to give him safe conduct through the lower world.

BOOK OF MARTYRS was written by John Foxe, a prebendary of Salisbury Cathedral, in the reign of Queen Elizabeth. The book, which treats of the persecutions suffered by Protestants, was first published on the Continent, and in Latin. The English translation appeared in 1563.

BOOK OF SNOBS, a series of papers, marked by keen irony and playful humour, which Thackeray contributed to the early numbers of "Punch."

BOOM. (1) In a ship, is a spar jutting out from a support such as the mast, and forming an attachment for the lower edge of a sail. Booms are named after the sail that is attached to them; thus the main-boom serves as an attachment for the main-sail. (2) In the defence of a harbour, a boom is a strong chain stretched across the fair-way, firmly moored at each end, and floated by means of logs of wood. (3) In commerce, and on the Stock Exchange, the term is applied to a sudden strong rise in prices. The opposite condition is known as a "slump." Both terms are Americanisms.

BOOMERANG, a missile used in hunting and fighting by the aborigines of Australia. It consists of a piece of hard wood, parabolic in shape, with rounded ends, and having one side flat and the other convex. When thrown by an expert, it ascends into the air with a spiral motion, stops, and returns to the thrower.

BOOT AND SHOE TRADE. The invention of the sewing machine gave a

great impetus to the manufacture of boots and shoes, both in England and in the United States. Large factories were erected, and have been fitted with a machinery plant capable of performing every operation in the making of a boot or a shoe. The leather is cut by one machine, the uppers are stitched by others, and then sewn, pegged, riveted, or screwed to the soles by others; in fact, the machines are able to turn out a welted boot that resembles the hand-sewn article in appearance. Northampton is the centre of the British boot trade, and the factories of Leicester, Stafford, and Norwich also employ many hands.

BOOTH, CHARLES, *b.* 1840, an eminent writer and student of sociological questions. His chief work is "Life and Labour of the People of London;" others, "The Aged Poor," "Pauperism," and "Old Age Pensions."

BOOTH, WILLIAM, *b.* at Nottingham, 1829, resigned his ministry in the Methodist New Connexion in 1861, in order that he might work as an evangelist among those who attended no place of worship. In 1865 he established a Christian mission in the East End of London, and out of this has grown the organisation known as the "Salvation Army." An International Congress of the "Army," held in the Strand in June, 1904, was presided over by "General" Booth, and was attended by delegates from China, Japan, India, Australia, America, and most of the European countries. His book, "In Darkest England and the Way Out," published 1890, has been widely read, and Mr. Booth has vigorously prosecuted his scheme for the amelioration of the social condition of the "submerged tenth," with great success.

BOOTLE. See *Liverpool.*

BORAX, a compound of sodium and boracic acid, is a white crystalline substance easily soluble in water. It occurs naturally as *tincal*, and is largely exported from Tibet, Persia, Tuscany, and parts of North America. It is used as a preservative, in the manufacture of enamels, glass, and artificial gems, for glazing pottery, and in soldering. It is sometimes used to adulterate milk, with poisonous results.

BORCHGREVINK, CURSTEN, *b.* 1864, at Christiania, emigrated to Australia. He was one of the first to land on the Antarctic Continent in 1895, and in 1898 he commanded the Southern Cross Expedition to the same regions.

BORDEAUX, the chief wine shipping port of France, stands on the left bank of the Garonne. Wine, brandy, and fruits are the principal exports. The Gothic cathedral dates from the 13th century. The Black Prince, as governor of Aquitaine, held his court at Bordeaux, and the town was the birth-place of his son, who became Richard II. of England.

BORDEREAU (F.), a detailed memorandum. In the Dreyfus case, Captain Dreyfus was condemned for sending (as was alleged) a bordereau revealing military secrets to the German government. See *Dreyfus.*

BORDERS, THE, the territory on both sides of the boundary between England and Scotland. There were frequent wars between the two countries for the possession of the Border lands, and, up to 1237, the boundary was not fixed. The Borders were consequently the scene of more battles and sieges than any other part of Britain. They were rich in abbeys, the most famous being Jedburgh, Melrose, Kelso, Dryburgh and Lindisfarne. Other places famous in history were Roxburgh, Berwick-on-Tweed, and Alnwick.

BORE. (1) A phenomenon observed at the season of spring tides in certain rivers that possess a gradually widening estuary. The tidal wave enters the estuary, rises higher and advances more rapidly as the volume of water becomes restricted in width by the narrowing banks, until, when it reaches the mouth of the river it presents the appearance of a wall of water, which pursues its course in opposition to the current of fresh water. The height of the bore varies from two or three feet in the case of the Severn, Trent, Solway, and Dee of our country, to more than 12 feet in the Brahmaputra of India. (2) The hollow inside the barrel of any form of gun. This was formerly smooth, but in modern weapons is grooved or rifled. The term is also applied to the diameter of the barrel; thus, 12" bore expresses the fact that the barrel (inside measure) has a diameter of 12 inches.

BORGIA, CESARE, the son of Pope Alexander VI., has become notorious for his cunning, viciousness, and cruelty. He is suspected of having murdered his own brother, that he might succeed to the dukedom of Beneventum. With the aid of Louis XII. of France he made himself the independent sovereign of Romagna, the Marches, and Umbria, murdering every noble who fell into his hands, and sometimes even those who had assisted his designs. He was driven from Rome by Pope Julius II., and imprisoned in Spain. He made his escape, joined the army of Navarre, and was killed in the war against Castile, 1507.

BORGIA, LUCREZIA, the sister of Cesare Borgia, has been accused of almost as many crimes as her brother, though contemporary Italian poets praised her many virtues, and modern historians have endeavoured, with some success, to clear her reputation. She is the subject of a drama by Victor Hugo, and of an opera by Donizetti, in both of which her character is painted in the blackest colours.

BORING is the art of penetrating rocks, etc., in the formation of artesian wells, oil wells, and tunnels. In *well-boring*, soil-pipes are driven into the ground until the hard rock is reached, and then drilling tools are employed. The cutting tool, known as a bit, is attached to a combination of jointed rods by screw connections, and at various points contrivances known as "jars" are introduced for the purpose of lessening the jar on the rod at each downward stroke. The whole is attached by a rope to a beam at the surface, which is raised and depressed by engine power. In *boring modern tunnels*, the harder kinds of rock have been penetrated by means of a shield furnished with diamonds as cutting instruments. The shield is pressed against the face of the rock and made to revolve. The rock is worn away but, owing to their extreme hardness, the diamonds are not even scratched. In *tunnelling under rivers*, to prevent the works being flooded, the device has been adopted of working the shield in a compressed air chamber. In the event of water being tapped, the pressure of the air is sufficient to keep it back until the tubes have been placed in position, and the space between them and the rock has been filled in with concrete.

BORNEO, the second largest island in the world, is situated in the East Indian Archipelago. Its area is estimated at 300,000 square miles, and the population at nearly two millions. Little is known of the interior, but the parts near the coast possess a fertile soil, and are rich in valuable timber trees, fruits, and spices; diamond, gold, coal, iron, and antimony mines are worked. The Dutch claim the west, south, and east of the island. Great Britain has established protectorates over Sarawak, Brunei, and British North Borneo, where a large area has been placed under tobacco cultivation.

BORODINO, a village lying about 70 miles to the west of Moscow, was made famous by the sanguinary battle in which Napoleon defeated the Russians, 1812.

BOROROS, THE, a race of men of gigantic stature, averaging over 6 feet 4 inches in height, and inhabiting large territories in the south-west of Brazil. They are the tallest people in the world, and probably racially connected with the Patagonians.

BOROUGH ENGLISH, a custom existing in certain ancient English boroughs, by which property within the borough descends to the youngest son in preference to his elder brothers.

BORROME'O, CARLO, SAINT, *b.* 1538, *d.* 1584, was a nephew of Pope Pius IV, by whom he was made a cardinal, and archbishop of Milan. His labours for the improvement of ecclesiastical discipline, and for the reformation of morals in his archbishopric, roused the monastic orders to open hostility. In the famine of 1570, and during the plague of 1576 he devoted all his energies to the alleviation of distress, and in giving spiritual consolation. He spent large sums in beautifying the cathedral and in founding schools, libraries, and hospitals. His canonisation took place in 1610, after miracles were supposed to be worked at his tomb.

BORROW, GEORGE, *b.* in Norfolk, 1803, *d.* 1881. As agent for the British and Foreign Bible Society he travelled through nearly the whole of Europe, and over many parts of Africa. His book, the "Bible in Spain," rendered him famous. He made a close study of the gipsies in various parts of Europe, and published an account of those in Spain. "Lavengro," i.e., the "word-master," a title applied to him by the gipsies on account of his wonderful knowledge of languages, is generally regarded as an auto-biography. The "Romany Rye" was a sequel to it.

BORSTAL SYSTEM provides special treatment for young offenders under legal detention to prevent them from becoming habitual criminals. Under it they are taught some useful trade, are given suitable educational instruction, are developed physically by means of regular drill, and encouraged by the grant of special privileges for good conduct and industry.

BOSCAWEN, ADMIRAL, *b.* in Cornwall, 1711, *d.* 1761, distinguished himself in naval engagements at Puerto Bello, Carthagena, and Cape Finisterre. In 1748 he commanded the fleet that took possession of Madras; and in 1758 he co-operated with Generals Wolfe and Amherst in the capture of Louisburg, Cape Breton island. His courage won for him the title of "Old Dreadnought."

BOSPHORUS or **BOSPORUS,** is the strait leading from the Sea of Marmora to the Black Sea. The name means "ox-ferry." A gulf on the northern shore, known as the Golden Horn, forms the harbour of Constantinople.

BOSSUET, JACQUES BENIGNE, *b.* at Dijon, 1627, *d.* 1704, made himself famous as an eloquent preacher and religious controversialist. The care he bestowed on the education of the dauphin was rewarded with the bishopric of Meux. He wrote a "Discourse on Universal History," the "Story of the Diversities (i.e., in dogma), in the Protestant Churches," and "Politics founded on Holy Scripture." He was greater as an orator than as a writer, and his funeral orations at the tombs of the Duchess of Orleans and Condé have always been considered masterpieces.

BOSTON. (1) A small port near the mouth of the river Witham, Lincoln-

shire. The name is a contraction of St. Botolph's Town, and was derived from the name of the monastery founded by St. Botolph, 654, and destroyed by the Danes, 870; population 16,000 (2) Boston, on Massachusetts Bay, is the capital of the state of Massachusetts, and the chief commercial centre of the New England States. Education has always occupied a foremost place in the policy of the town, so that it is pre-eminent throughout America in literature and science, and possesses excellent literary, scientific, historical, and artistic societies. It has been named the "Athens of America."

BOSWELL, JAMES, *b.* at Edinburgh, 1740, *d.* 1795; was described by Macaulay as the "first of biographers." His fame rests on his "Life of Johnson," a work remarkable for its minuteness and accuracy, and its wealth of literary anecdotes.

BOSWORTH, a market town in Leicestershire. The battle of Bosworth Field, fought about three miles from the town brought the Wars of the Roses to an end, 1485. Richard III. was killed, and after the battle his opponent, the Earl of Richmond, was crowned as Henry VII., on a part of the field still known as Crown Hill.

BOTANY BAY is situated on the coast of New South Wales, and received its name from the number of new species of plants discovered here by the first explorers, 1770. It was selected as a site for a penal settlement, but the convict colony was really established at Port Jackson, about ten miles to the northward, on the site of Sydney.

BOTHA, LOUIS, *b.* 1862, in the Orange Free State, came into note in the Boer War of 1899–1902. He at first fought under Meyer, but afterwards had a separate command against General Buller on the Tugela. He succeeded Joubert as commandant general, and this office he retained till the end of the war. He became first Prime Minister of United South Africa 1910.

BOTHWELL BRIDGE, about a mile from the village of Bothwell, Lanarkshire, was the scene of the decisive defeat of the Scottish Covenanters by the royal forces commanded by the Duke of Monmouth, 1679.

BOTTICEL'LI, SANDRO, *b.* at Florence, 1447, *d.* 1515; changed his own name of Alessandro Filipepi for that of the master with whom he studied gold and metal work. He became one of the leading artists of the day, and was summoned to Rome by Pope Sextus IV. to work on the frescoes on the walls of the Sistine Chapel. He was greatly influenced by the teaching of Savonarola, abandoned painting, and is believed to have died in poverty.

BOTTLES were formerly made of leather or skins, and most of the bottles mentioned in the Bible were of this kind. The Arabs employ the skins of goats and kids for the purpose, and in Spain, wine-skins are still in use.

BOTTOMRY. See *Commercial Dictionary.*

BOULANGER, ERNEST GEORGE, *b.* 1837, a French soldier and political adventurer. In the Franco-German War he became a lieutenant-colonel under the Government of National Defence. In 1884 he was chief in command of the French army in Tunis. He became Minister of War in 1886 and introduced democratic reforms in the army. He took the lead in the policy of revenge against Germany, demanded a revision of the constitution and aimed at being dictator. In 1889 he left Paris for Brussels, and in his absence was prosecuted for treachery and fraud and condemned to expatriation. In 1891 he shot himself in a cemetery in Brussels.

BOULDERS, ERRATIC, are large blocks of water-worn stone that have been removed some distance from the parent rock, usually by the ice-drifts of the glacial period. They often weigh many tons.

BOULOGNE, a favourite French watering place, and a fortified sea-port on the English Channel, is connected with Folkestone by a daily service of steamers. In 1803 Napoleon collected here a large flotilla for the invasion of England. A new dock is in course of construction, one of the quays of which will be able to accommodate ocean-going ships at all states of the tide.

BOULTON, MATTHEW, *b.* at Birmingham, 1728, *d.* 1809, an eminent engineer and mechanician. He invented an improved process for inlaying steel and an apparatus for coining. He and his partner, James Watt, established the famous steam-engine factory at Soho, near Birmingham, in 1769.

BOUNDS, BEATING THE. On Ascension Day the clergyman of the parish, with the parish officials, school-boys, and others perambulated the boundaries of the parish, which the boys struck with peeled willow wands, they themselves being also beaten at important points to make them remember. This custom, now obsolete, was called "Beating the Bounds."

BOUNTY, THE, a vessel despatched by the British Government in 1787 for the purpose of conveying plants of the bread-fruit type from Tahiti to Jamaica. On the voyage from Tahiti, 25 of the crew mutinied, set Captain Bligh and 18 members of the crew adrift in a boat, and returned with the ship to the island. Nine of the mutineers fled to Pitcairn Island, where one of their number, John Adams, and the descendants of the others, were discovered by an American ship in 1808. Of the 16 who remained at Tahiti, ten were captured and brought to England. Here they were tried, and three were executed.

BOUNTIES. See *Commercial Dictionary.*

BOURBON, HOUSE OF, a family of French origin that, since 1589, has always had one or more of its members reigning in some part of Europe. Bourbon kings governed France from 1589 to the Revolution, and again, from the Restoration to 1830, when Charles X. was banished, and the Orleans branch of the family came into power, and occupied the throne until 1848. Spain has been ruled by Bourbon kings, with the exception of the period from 1808 to 1813, from 1700 to the present day. Other members of the family were kings of Naples and Sicily from 1734 to 1860, when the government of Francis II. fell before Garibaldi.

BOURNEMOUTH. Few towns can boast of so rapid a rise as Bournemouth, a favourite health resort on the coast of Hampshire, close to Dorsetshire. From being a fishing village in 1850, it has grown into a handsome town of over 65,000 inhabitants. (See p. 902.) This rise it owes to its mild climate, its sands, and its pine-clad slopes, which attract visitors from all parts in search of health and recreation.

BOURSE. See *Commercial Dictionary.*

BOWDLER, THOMAS, *b.* 1754, *d.* 1825; an English physician, who by editing editions of Shakespeare and Gibbon from which all passages that he considered inconsistent with morality were carefully expurgated, gave rise to the expression "Bowdlerism."

BOWDLERISM. See *Bowdler, Thomas.*

BOWER BIRD, the name given to a group of Australian birds of the starling family. Under the shelter of the overhanging branches of trees the birds construct bower-like galleries, which they adorn with highly coloured feathers, rags, shells, bones, etc. The bowers are not used for nests, but seem to be places of amusement, and are much resorted to in the breeding season.

BOXERS, a party in China strongly opposed to foreign influence. They were organised in the year 1896 by the prefect of Shantung, who, on account of local disaffection, enrolled a kind of militia. The occupation of certain strategic positions by European powers, the granting of mining and railway concessions to foreigners, a severe drought and famine, combined with troubles in the court, roused them to great excesses. Finding the murder of a missionary went almost unpunished, they aimed at the destruction of all foreigners in the country. Railways were destroyed, and early in 1900 the Boxers marched through the country pillaging and murdering native Christians and missionaries. The movement was openly supported by a number of the princes, and encouraged by the empress, whilst the Imperial troops did nothing to stop the outbreak. The Boxers advanced to Pekin, murdered the chancellor of the Japanese Legation and the German Minister, and besieged the Legations. The Powers sent a combined force of 50,000 men to defend their subjects. Tien-tsin, which had been invested, was retaken, and the Legations were relieved on August 14th, 1900. A peace protocol was signed on September 7th, by which the emperor agreed to pay a large indemnity to the powers concerned, and also to grant certain further concessions

BOXING. See *Prize-fighting.*

BOXWOOD, the wood of an evergreen shrub or tree, is pale yellow, hard and smooth, and is used in cabinet making, wood engraving, and in making mathematical and musical instruments. It is imported from Spain, Portugal and Turkey.

BOY BISHOP. In the Middle Ages, cathedral choristers were allowed to elect on St. Nicholas' Day (December 6), a mimic bishop from their number, and his jurisdiction lasted till Innocents' Day, December 28.

BOYCOTTING, a system adopted under the "Land League" in Ireland to prevent any person from taking or working a farm or building from which a tenant had been evicted for the non-payment of rent. Labourers were forbidden to work for the "land-grabber," shop-keepers and tradesmen refused to deal with him, and in many cases cattle were maimed, crops destroyed, and personal assaults committed. The first victim of the system was Captain Boycott, a landlord's agent, with whom the inhabitants of the Connemara district refused to have any dealings on account of disagreements between him and the tenants.

BOYLE ROBERT, *b.* at Lismore, 1626, *d.* 1691; an eminent scientist and writer on theological subjects. He was one of the founders of the Royal Society, and became its president in 1680. He left an estate to provide payment for the delivery of a series of eight sermons in defence of Christianity. The first "Boyle Lectures" were delivered by Richard Bentley, in 1692.

BOYNE, a river in the east of Ireland, rising in the Bog of Allen, and flowing into the Irish Sea. On its banks, about three miles west from Drogheda, William III. defeated James II., 1690. An obelisk marks the spot where General Schomberg, the commander of William's troops, fell.

BOYS BRIGADE, THE, an organization commenced by Mr. W. A. Smith, of Glasgow, and intended to promote in boys habits of obedience, discipline, reverence and self-respect, so making them manly Christians.

BOY SCOUTS. An organization founded by Lieutenant General Sir Robert Baden Powell in 1908, to promote good citizenship in the rising generation. The movement has already shown abundant proofs of success in the spirit of good comradeship, discipline and courage displayed by the youthful scouts.

BRADDOCK, EDWARD, *b.* in Perthshire, 1695, *d.* 1755, commanded the forces operating against the French on the Ohio, 1755. He was taken in an ambuscade in an attempt to capture Fort Duquesne. Nearly half his troops fell, and he himself received a mortal wound.

BRADDON, MARY ELIZABETH (Mrs. John Maxwell), *b.* in London, 1837, at a very early age began literary work, chiefly in the form of verses, political squibs and parodies. Her first novel was "The Trail of the Serpent," but she became at once famous when "Lady Audley's Secret" appeared. Her other novels are very numerous, the most popular being "Aurora Floyd" and "Henry Dunbar."

BRADFORD. (1) One of the largest towns in the West Riding of Yorkshire, stands on the river Aire. It is the chief seat of worsted spinning and weaving in England, and also manufactures alpaca, silk, velvet, and mixed cotton and silk goods; population compared p. 902. (2) A small town in Wiltshire, on the river Avon, manufactures "West of England Cloth." Its chapel of St. Lawrence has been pronounced "the one perfect Saxon church in the country."

BRADLAUGH, CHARLES, *b.* in London, 1833, *d.* 1891; served as a private soldier. He afterwards became a lecturer and writer on secularist and social subjects. He was three times elected M.P. for Northampton, but at first was not permitted to take his seat because he refused to take the oath. Afterwards he was not allowed to take the oath because he considered it would not be binding on his conscience. On the third occasion, he took the oath and proved a useful member.

BRADSHAW, GEORGE, *b.* 1801, *d.* 1853, was a Manchester engraver who, in 1839, published "Bradshaw's Railway Time-tables," the first book of the kind. In 1340 it was enlarged and called "Bradshaw's Railway Companion." This appeared at irregular intervals and it was not till 1841 that "Bradshaw's Monthly Railway Guide" was published, now known all over the world as "Bradshaw."

BRADSHAW, JOHN, *b.* at Stockport, 1586, *d.* 1659, was president of the High Court of Justice that tried and condemned Charles I. He became obnoxious to Cromwell and was deprived of the chief-justiceship of Chester. On the death of the Protector he became president of the council that undertook the government of the country. At the Restoration, his body was exhumed and hung on a gibbet.

BRAHE, TYCHO, *b.* 1546, *d.* 1601; an eminent Danish astronomer, who for 20 years made most careful observations of the stars at the observatory built at the expense of King Frederick II., on the island of Huen. After the death of the king, the persecutions of the nobles, who resented one of their order being a mere scientist and the husband of a peasant, caused him to leave Denmark. He continued his observations in the Castle of Banach, near Prague, where he had Kepler as his pupil and assistant. His work was marked by its extreme accuracy and the patience with which he accumulated innumerable facts.

BRAHMA is the first person in the Hindu Trinity, and the "creator of all the worlds." The other persons are Vishnu the Preserver and Siva the Destroyer. Brahma is represented as having four heads and four arms, and his image is frequently placed in temples devoted to other deities. He is looked upon as the author of the Vedas, and as the great lawgiver and teacher of India.

BRAHMANISM. Refer to *Index.*

BRAHMAPUTRA, THE, one of the great rivers of India, rises in Tibet, near Lake Manasowar. It runs under the name of Sanpo, about 1,000 miles eastward, then turns south-east through the Himalayas, and enters the valley of the Ganges. It sends a part of its waters to the Ganges, and forms with that river a vast delta at the head of the Bay of Bengal. Its total length is 1,800 miles, and for about 800 miles it is navigable for steamers.

BRAHMA SOMAJ, a religious society founded in India in 1830. Their principal tenets are that there is but one God, and that all knowledge of him must be derived from nature or by intuition; they have no sacred writings. The members acknowledge no distinction of class, but look upon all men as equally the children of God. They have many branches throughout India, and spread their teaching by means of their schools and journals.

BRAHMINS or **BRAHMANS.** Refer to *Index.*

BRAHMS, JOHANNES, *b.* at Hamburg, 1833, *d.* 1897, was equally distinguished as a musical composer of the severely classical school and as a pianist. His works appeal more to the trained musician than to the ordinary listener.

BRAILLE, LOUIS, *b.* at Paris, 1809, became blind at the age of three. In 1826 he became professor at the Paris School for the Blind. Dissatisfied with the alphabets for the blind then in use, he set to work and invented one in which letters were represented by variations in the arrangement of six raised dots, and which could be read or written more easily than the existing alphabets.

BRAKES are contrivances for overcoming the momentum of moving machinery and bringing it to a standstill. Pneumatic brakes are in use on most passenger trains. The majority of the British railway companies employ some form of "automatic vacuum" brake. Brake-blocks are fitted to the wheels of every coach on the train, and these are applied by means of levers connected with a piston working in a cylinder under the coach. A continuous pipe connects the cylinders with the engine, and the pipe and a vacuum chamber under each carriage are kept exhausted of air. The vacuum in the pipe is destroyed by the intentional opening of a valve or by any accident to the tube itself. The atmospheric pressure at once presses the pistons forward in their cylinders, and the brake-blocks are applied by means of the connecting levers. In the Westinghouse brake the pistons are brought into action by means of compressed air, supplied by a force-pump on the engine, and from compressed air reservoirs placed under each vehicle. The advantages claimed for this type are rapidity of action, and a greater force than can be obtained from the ordinary atmospheric pressure. In 1878 the Board of Trade reported that this form of brake was the only one that fulfilled all the official requirements for an effective brake, and the latest type of the Westinghouse quick-acting brake is now being gradually adopted by the North-Eastern and other railway companies which make use of compression brakes.

BRAMAH, JOSEPH, *b.* in Stainborough, in Yorkshire, 1749, *d.* 1814, is distinguished for the value of his many mechanical inventions, which included the hydrostatic press, safety locks, the apparatus used in public houses for raising liquids from the cellar to the counter, the printing machine used for numbering Bank of England notes, and improvements in pumps, fire-engines, steam-engines, and the manufacture of paper.

BRANDING, a mode of punishment formerly inflicted on criminals entitled to "benefit of clergy," thieves, and others. It was performed by pressing against the skin of the cheek or hand a red-hot iron, with a letter or mark at the end. In respect to criminals this mode of punishment was abolished in the reign of George IV., but was applied to deserters from the army till a much later date.

BRANDON, CHARLES, son of Henry VII.'s standard bearer at the battle of Bosworth, was created Duke of Suffolk, 1514. He secretly married Mary, youngest daughter of Henry VII. and widow of Louis XII. The unfortunate Lady Jane Grey was their granddaughter.

BRANDY, a spirit produced by the distillation of wine. The name is also applied to liquors prepared from the juice of cherries, peaches, etc. The finest brandies are manufactured in France, the best brand being known as Cognac, the inferior varieties as eau-de-vie. Much of the so called brandy prepared for export really consists of whisky, rum, or potato-spirit, coloured and flavoured to resemble the genuine article. Brandy is also adulterated by the addition of water and burnt sugar.

BRANK, or **BRANKS,** an instrument at one time used to punish scolds. It was a kind of bridle with a plate attached so as to press on the tongue and form a gag. The woman was marched through the streets by the bellman or constable, and sometimes chained to the market cross, forming an object of insult and ridicule.

BRASS is an alloy of copper and zinc, in the proportions of two parts of the former to one of the latter. Its hardness, toughness, fusibility, and great ductility render it most useful in various ways. It is used in the construction of electrical apparatus, of scientific instruments, and, in machinery, for the bearings of moving parts, and to give a finished appearance to the whole machine.

BRASSES, MONUMENTAL, in England date from the beginning of the 13th century, though the earliest now extant is the one in the church of Stoke d'Abernon, Surrey, which is dated 1277. They consist of plates of brass inlaid in slabs of polished stone, and usually contain a representation of the person they were intended to commemorate, either in the form of the plate itself, or incised in the plate, together with the coat of arms and an inscription. Others bear merely a representation of an ornamental cross. They vary in size from a few inches in length to several feet. They are valuable from the light they throw on the history of the period and on the dress of the people. The finest specimens of the art are found amongst those engraved before the 15th century, and were imported into this country from Holland and Germany. The art has recently been successfully revived.

BRASSEY, THOMAS, *b.* 1805, *d.* 1870, was a Cheshire farmer's son. At the time when the earliest railways were being made in England, he practised as a railway engineer and contractor. In 1847 he began the construction of the Great Northern Railway, and afterwards his contracts extended to France and other European countries. He constructed the Grand Trunk Railway in Canada, and undertook contracts in Australia and India. He left an enormous fortune.

BRASSEY, THOMAS, BARON, *b.* 1836, at Stafford; was the eldest son of the above

T. Brassey. He became M.P. for Devonport in 1865, and represented Hastings from 1868 to 1886. He chiefly interested himself in labour questions, and the improvement of the navy and naval reserves. He travelled much, and "The Voyage of the Sunbeam," written by Lady Brassey, records an interesting voyage round the world. He was raised to the peerage in 1886. He is author of "Work and Wages," "British Seamen," and many kindred works.

BRAWLING. Refer to *Index.*

BRAY, VICAR OF. The famous vicar was Simon Aleyn, who held the living of Bray, near Windsor, during the reigns of Henry VIII., Edward VI., Mary and Elizabeth, not in those of Charles II. to George I., as the famous song states.

BRAZIL, a federal republic in the north-east of South America, is composed of 21 self-governed states, federated for purposes of defence, the maintenance of order, and other matters of common interest. The country, which has an area of nearly 3¼ million square miles, embraces nearly the whole of the basin of the Amazon, the basin of the San Francisco, and a large portion of the basins of the Paraguay, Parana, and Uruguay. The forests produce valuable timber; considerable crops of coffee, cotton, indiarubber, and tobacco are raised; and diamonds and other precious stones, gold, quicksilver, and copper are found in large quantities. The population exceeds 18½ millions, and consists of negroes, Indians, and whites, chiefly of Portuguese descent. The chief towns are Rio Janeiro, Bahia, and Pernambuco. The present constitution dates from 1891, the revolution of 1889 having replaced the government of the emperor Pedro II., a member of the House of Braganza, by that of a President, a Senate, and a Chamber of Deputies.

BRAZIL NUTS are the seeds of a large tree of the myrtle order growing in Tropical America, particularly in Brazil, and on the banks of the Orinoco. The seed-vessel is round, as large as a man's head, and woody, and contains from fifteen to fifty of the irregularly triangular, oily nuts. Large quantities are exported from Para.

BREAD is most commonly prepared from wheaten flour, the sponginess and lightness being produced either by the fermentation of yeast or by impregnating the dough with carbonic-acid gas (see *Aerated Bread*). In fermented bread the yeast partly converts the starch of the flour into more soluble sugars, and alcohol and carbonic acid gas are produced. If kept at a proper temperature, the pressure of the latter causes the dough to swell or rise. In the process of baking, the carbonic-acid gas and a part of the alcohol are expelled, but a small percentage of alcohol is always present in newly fermented bread. The most usual adulterants are rice flour, barley flour, potatoes, and alum. Brown, or whole meal bread, is prepared from undressed flour and contains the bran as well as the flour. In the northern countries of Europe rye bread is a common article of diet.

BREAD-FRUIT TREE, a tree of the mulberry family, is a native of the South Sea Islands, and is now cultivated in many parts of Tropical America. The fruit is globular in shape, and about the size of a large melon. The natives of the South Sea Islands prepare it for use by baking it in hot embers. The inside then resembles the crumb of wheaten bread in appearance, but is insipid to the taste.

BREAKSPEAR, NICHOLAS. See *Adrian, Pope.*

BREAKWATER, a barrier erected in front of harbours and anchorages, and intended to break the force of the waves without, and produce a calm within. Some of the most famous are those of Cherbourg, Plymouth, Portland, and Holyhead.

BREDA, the capital of the Dutch province of North Brabant, was the home of Charles II. during a part of his exile, and it was from here that he dated his declaration in 1660. The treaty of Breda put an end to the second Dutch War in 1667.

BREECH-LOADING FIREARMS. The breech of a gun is the portion immediately behind the bore, and is movable to facilitate the action of loading. The principle of breech-loading is not a new one. Many of the earliest forms of cannon were of this type. The success of the needle gun, adopted by the Prussians in 1861, showed the superiority of this style of rifle over the muzzle-loading variety, in rapidity and accuracy of fire, and other European Powers began arming their troops with breech-loading guns. The French adopted the Chassepôt, and the British Government followed with the Snider, which was replaced by the Martini-Henry in 1871. The modern military rifle differs from these in being supplied with a magazine, so that more than one cartridge is inserted each time the breech is opened. Armstrong and Krupp were pioneers in the application of the breech-loading principle to artillery. The breech mechanism of the new quick-firing field gun, with which our troops are now armed, is of such a nature that a single movement of a lever rotates and unlocks the breech-plug, swings it out of the breech, and at the same time ejects the empty case.

BREMEN, a free city and state of the German empire, is situated on the river Weser, about 50 miles from its mouth. The state has an area of 90 square miles and a population of a quarter of a million. The city is the second port of the empire, and one of the chief ports on the continent for emigrants.

BREMERHAVEN, at the mouth of the Weser, is the sister port of Bremen, vessels of deep draught loading and unloading at its docks.

BRENNAN, LOUIS, *b.* 1852, inventor of the celebrated torpedo bearing his name; for which Government gave £110.000; and of a gyro-scope railway for transit operations in war.

BRENNER PASS, THE, crosses the central portion of the Tyrolese Alps. The road from Germany to Italy crosses the pass at an elevation of 4,658 feet, and a railway over it was opened in 1867.

BRENTFORD, the county town of Middlesex, stands at the junction of the Brent with the Thames. Here Edmund Ironside gained a victory over the Danes in 1061, and Prince Rupert defeated a part of the Parliamentary forces, 1642; population over 15,000.

BRESLAU, chief town of Silesia, Germany; population 445,000. Situated on the Oder, in a district rich in coal, iron, and zinc, it has extensive hardware manufactures, and is the great market of East Germany for timber and cereals.

BREST, a great naval and military port of France; population 85,000. Finely situated on a good harbour, with strong natural defences, its extensive fortifications render it almost impregnable. Its roadstead is deep and commodious. The repairing and refitting of ships, and trade in naval supplies are the leading industries. The arsenal employs over 8,000 men.

BRETIGNY, a village in France, where, in 1360, a peace was signed between Edward III. and the French, by which Edward gave up his claims to the French crown in return for the full sovereignty of Calais and Guienne.

BREVET, a commission granting honorary promotion to a military officer. A brevet-major receives the pay of a captain and attains full rank when a vacancy occurs.

BREVIARY, a Roman Catholic service book which all in Holy Orders are enjoined to use daily.

BREVIER. See *Type.*

BREWSTER, SIR DAVID, *b.* 1781, *d.* 1868; a famous scientist, whose research work attracted much notice. He was editor of the Edinburgh Encyclopædia in 1808, one of the founders of the British Association in 1831, and was knighted in 1832 for his services to science. He made important observations on the polarization of light, invented the kaleidoscope, and contributed valuable articles to most of the scientific journals of his time. From 1859 to his death he was principal of Edinburgh University.

BRIAR, the root used in making pipes for smoking, is not the root of a briar but of a tree heath found near the Mediterranean, the name being a corruption of *bruyère* (F. for heath).

BRIAREUS. In Greek mythology, a son of Uranus (heaven), and Ge (earth). He is described as a monster with 100 hands and 50 heads, who with his brothers overcame the Titans when they made war against Zeus (Jupiter).

BRIDEWELL, originally the workhouse and house of correction into which Edward VI. converted the palace of St. Bride, in Blackfriars, London; now applied to any house of correction for vagrants. The original "Bridewell" was pulled down in 1864.

BRIDGES are structures of wood, stone, iron, &c., crossing a gorge or deep hollow, or joining two banks separated by a body of water. (1) *Arched Bridges*, as a rule, are built of stone, and consist of a series of semi-elliptical arches supporting the roadway. Waterloo Bridge, over the Thames, is a stone bridge, with nine such arches. Arched bridges of cast or wrought iron frequently occur. (2) In *Suspension Bridges* the roadway is suspended upon chains, steel cables, or bars which pass over high piers built on each side of the river or hollow to be crossed. This type of bridge leaves a wide, clear waterway between the piers. Brooklyn Suspension Bridge has a central span 1,600 feet long. (3) *Cantilever Bridges* of the simplest type consist of two beams projecting obliquely upwards from opposite banks or piers, and meeting at an angle above the roadway —the latter lying horizontally between the ends fixed in the banks or piers. The Forth Bridge consists of a series of such arrangements. Railway bridges on this principle are frequent in the mountainous districts of the United States. (4) *Girder Bridges*, the most common form of iron bridge, consist usually of girders placed horizontally upon perpendicular supports. The Crumlin Viaduct in South Wales belongs to this class. The Britannia Tubular Bridge over the Menai Strait consists of two long rectangular tubes—box girders—placed side by side, through which the railway runs. There are four spans supported by perpendicular stone towers, with a total length of 1510 feet. The tubular bridge over the St. Lawrence at Montreal is nearly two miles long. (5) *Movable Bridges* are exceedingly varied and are so constructed that the roadway can be removed to allow vessels to pass. The Tower Bridge, in which the roadway can be raised in two sections, belongs to the "bascule" type, an arrangement in which the projecting

portion is balanced by an inner portion, the latter descending into a kind of well when the former is raised. The Barton Aqueduct over the Manchester Ship Canal can be turned on a pivot so that the bridge lies in midstream parallel to the banks. (6) *Pontoon Bridges* consist of a line of boats, barrels, etc., over which planks are laid. In the British Army the bodies of waggons, specially constructed for this purpose, are employed in making temporary bridges.

BRIDGE OF SIGHS, a bridge in Venice connecting the Doge's Palace with the State prisons. In the Middle Ages, prisoners sentenced to death in the Judgment Hall of the palace were conducted over this bridge to execution.

BRIDGET, ST., *b.* 1302, *d.* 1373, was a Swede by birth, who built the first monastery of the Augustines in Sweden. She visited Rome in 1350 and spent the rest of her life there. There is also a much revered Irish saint named St. Bridget, or St. Bride, who lived in the 5th century.

BRIDGEWATER, FRANCIS EGERTON, Duke of, *b.* 1736, *d.* 1803; the patron of James Brindley, and an enthusiast in canal navigation. He built the Bridgewater Canal, connecting his coal mines at Worsley with Manchester, and by the success of this undertaking laid the foundations of the canal system of England.

BRIDGEWATER TREATISES, THE, a series of eight theological works, written by eight authors chosen by the Royal Society. They were the result of a bequest of the Earl of Bridgewater, a clergyman of the Church of England, who at his death, in 1829, left £8,000 to be devoted to a work on the Attributes of the Deity.

BRIDGMAN, LAURA, *b.* 1829, *d.* 1889, a celebrated American deaf mute, who was also blind. Carefully taught in the blind asylum of Boston, her mind developed in spite of her affliction. Her own impressions and the observations made by her instructors, have proved of great service to the teachers of deaf-mutes and the blind.

BRIEF. (1) A brief (in law) is an epitome or abridged statement of a client's case for the instruction of counsel, with a reference to the points of law supposed to be applicable to the case. (2) Papal Briefs were letters sent by the Pope to individuals or religious communities on matters of discipline, appointments to benefices, indulgences, &c. (3) Church Briefs were letters in the king's name sent in England, after the Reformation, to archbishops, bishops, clergy, magistrates, churchwardens and overseers, licensing them to collect money for the building of churches or other charitable objects. Being much abused they were regulated by a statute of Queen Anne and again by a statute of George IV. Since 1853 such briefs have been in abeyance.

BRIGADE, a division of troops composed of a varying number of regiments or squadrons, commanded by a brigadier-general, and so supplied and equipped as to be able to operate independently. An infantry brigade numbers usually over 4,000, a cavalry brigade, over 2,000.

BRIGHT, JOHN, *b.* near Rochdale, 1811, *d.* 1889; a cotton manufacturer of Rochdale, and an eminent politician. Entering Parliament in 1843, he contributed largely to the Repeal of the Corn Laws. After representing Manchester for ten years he was, in 1857, rejected for his vigorous denunciation of the Crimean and China Wars. From 1857 to his death he represented Birmingham. He supported the Reform Bill of 1867, was president of the Board of Trade in 1868, and disagreed with the Liberal policy on the Egyptian question in 1882, when he resigned his seat in the Cabinet. In 1886 he attacked Gladstone's Home Rule Bill, and from that time identified himself with the Unionist party. An ardent reformer, a lover of justice, a brilliant orator, and ever an advocate of peace, he was one of the most striking figures in the political life of the 19th century.

BRIGHTON, a popular watering-place in Sussex. Until the middle of the 18th century it was merely a fishing village. From Shoreham, near Brighton, Charles II., in 1651, escaped in a fishing boat. The Royal Pavilion, with its gardens, now in the hands of the municipal authorities, was built as a residence for George IV., with whom Brighton was a favourite resort. A fine promenade extends for three miles along the sea front. (For population, etc., see p. 902.)

BRIN'DISI, a busy port of south-east Italy, formerly the terminus of the European portion of the overland route to India. In ancient times the Romans used it as a naval station. Figs, wine, and olive oil are exported in large quantities. Since 1898, when the P. & O. Company began to make Marseilles a mail station and port of call, the annual tonnage of the port has fallen considerably.

BRINDLEY, JAMES, *b.* at Thornsett Derbyshire, 1716, *d.* 1772, was a great engineer. Inventions he had made for pumping water from mines attracted the notice of the Duke of Bridgewater, who employed him to superintend the construction of the Bridgewater Canal. Before his death he had accomplished the cutting of 360 miles of canal in England.

BRIQUETTE, a mixture of coal dust and pitch compressed into the form of a brick and used as fuel.

BRISBANE, capital of Queensland, on the Brisbane River, 25 miles inland; population 125,000. It is in railway communication with Sydney, and exports large quantities of wool from the Darling Downs. The harbour accommodates large steamers, but requires constant dredging. The town receives its name from Sir Thomas Brisbane, Governor of New South Wales, 1821–5.

BRISTOL, a city and port, on the Avon, on the borders of Somerset and Gloucestershire. Its trade with Ireland, Canada, West Indies, and South America is considerable and increasing. The new dock at Avonmouth, now (1906) building, at a cost of nearly 1½ millions, will offer great facilities to shipping. The city has an ancient cathedral, which is, however, surpassed in beauty by the church of St. Mary Redcliffe; (For population, etc., see p. 902.)

BRITANNIA METAL, a white alloy of zinc, antimony, copper, and bismuth, used largely for teapots, forks, and spoons.

BRITANNIA TUBULAR BRIDGE. See *Bridges*.

BRITISH BORNEO. See *Borneo*.

BRITISH COLUMBIA, with the adjacent island of Vancouver, is a province of Western Canada, on the Pacific sea-board; area, 403,000 square miles; population 180,000. The Rocky Mountains and the Coast Range traverse it from north to south. Along the coast strip the rainfall is abundant, and extensive forests of pine and fir are found. Coal of a good quality exists in great quantities in Vancouver and the adjacent islands. Gold is worked in the Yukon Valley, silver in the Kootenay District. The mineral wealth still unworked is believed to be very great. The soil and climate are adapted to fruit and dairy farming. The salmon fisheries of the Fraser river are very valuable, tin being imported in vast quantities from Singapore for canning purposes. The Canadian Pacific Railway passes through the south of the province, and has its terminus at Vancouver, a rising port, in steamship communication with China and Japan. Victoria, the capital situated on Vancouver Island, has a splendid harbour.

BRITISH EMPIRE, THE, comprises eleven million square miles of territory under British rule. It occupies one-fifth of the earth's surface, and contains a population nearly equal to one-fourth of the human race. Nearly one-half of the empire lies within the temperate zones, a fact which gives Britain an advantage possessed by no other European nation. Besides the British Isles, the Empire comprises:—(1) Territories suited to the permanent settlement of a white population:—Canada, Australia, New Zealand, Cape Colony, Natal, the Transvaal, and the Orange River Colony. (2) Territories unsuited to such settlement:—India, Ceylon, and many islands in the Indian Ocean, British East Africa, West African possessions, British Honduras, British Guiana, Jamaica, and numerous West India Islands. These, generally speaking, have a tropical climate, and possess a dense native population. They are mostly under the control of officials appointed by the English Government, and serve as a field for the exploitation of British capital and for the exercise of civilising influences. (3) Strategical positions and points on the great trade routes:—Gibraltar, Malta, Aden, Singapore, Labuan, Hong-Kong, St. Helena, Ascension. There are, besides, vast territories in Africa under British influence and protection. Refer to "British Empire" in *Index*.

BRITISH GUIANA. See *Guiana*.

BRITISH HONDU'RAS, a Crown Colony in Central America, acquired from Spain by treaty in 1670. Area, 7,500 square miles; population 38,000. The climate is moist and hot, and unsuited to Europeans, except in the uplands of the interior. Extensive forests yield mahogany, log-wood, cedar, and india-rubber. Sugar is grown and coffee planting is increasing. Belize, the capital, on a good harbour, does a large export trade.

BRITISH MUSEUM, THE, the great national storehouse of antiquities, books, manuscripts, and art treasures is situated in Great Russell Street, London. In 1754 Montague House was purchased by the authority of Parliament as a home for the Cotton MSS., the Harley MSS., and the library and museum of Sir Hans Sloane, all of which had been acquired by the nation; thus originated the British Museum In 1845 Montague House was pulled down, and the present building erected in its place, the great domed Reading Room, capable of seating 300 readers, each at a separate desk, being added in 1857. By 1883 the collection had so grown that the Natural History exhibits were removed to a separate building at South Kensington. The library consists of about two million books, besides manuscripts, prints and pamphlets. Innumerable relics of bygone civilisations—Assyrian, Babylonian, Egyptian, Greek and Roman—interesting prehistoric remains, specimens of ancient and mediæval pottery, fine old manuscripts, all arranged with great skill and care, render this a collection of priceless value.

BRITTANY, the peninsular province of France, between the English Channel and the Bay of Biscay; area, 13,000 square miles; population 3,200,000. The principal occupation in the interior is agriculture, though this is in a backward condition. Fishing employs large numbers of the coast population. The people are allied to the Welsh both in descent and disposition. Around the coast are numerous pretty watering places, many of them

delightfully situated. Druidical and Roman remains are common. Brittany is steadily increasing in favour with English tourists. Chief towns:—Brest, St. Malo, Nantes, and L'Orient.

BROAD ARROW, THE, is a mark in the form of an arrow-head used to mark government property. It was originally the badge of Sydney of Penshurst, but how it acquired its present use is unknown. It is a felony to obliterate the mark.

BROADBENT, SIR WILLIAM, *b.* 1835, is one of the leaders of the Medical profession. He is Consulting Physician to St. Mary's Hospital and to the London Fever Hospital, and is Physician to the King. Of his many contributions to Medical Science, his works on the pulse and on the nervous system are the most famous.

BROAD CHURCH, a school of thought in the Church of England that attaches more importance to the performance of every-day duties than to religious observances. It values right action more than strict orthodoxy of creed, and exercises the right of making a free use of the intellect in dealing with religious questions, instead of passively accepting what has been put forth by authority. Arnold of Rugby, Frederick Denison Maurice, and Charles Kingsley are typical examples of this school.

BROADS, THE, are shallow lakes in Norfolk and Suffolk. They are expansions of the Yare, Bure, and Waveney—three rivers which enter the North Sea at Yarmouth. They are admirably adapted for yachting, vessels of light draught being specially constructed to navigate these waters. They are much frequented in summer as a holiday resort. Wroxham and Oulton are the principal yachting centres.

BROBDINGNAG, in Dean Swift's "Gulliver's Travels," an imaginary country of giants. Everything in it was on a gigantic scale.

BROCADE, a fabric into which are worked patterns that stand out in relief from the rest of the material. The name was once applied to cloth, woven from gold and silver threads, sometimes mixed with silk.

BROCKEN, THE, a peak of the Harz Mountains, Germany, much visited by tourists; height, 3,745 feet. The "Spectre of the Brocken," seen from the top of the mountain under certain atmospheric conditions, is merely the observer's own shadow cast by the sun upon the clouds.

BROCK, THOMAS, *b.* at Worcester, 1847, after a distinguished course in the Royal Academy Schools became pupil and assistant to Foley, sculptor, R.A. In 1891 he was elected an academician, and his reputation rapidly increased. Specimens of his powerful work may be seen in many British cities, and in India. One of the greatest, "A Moment of Peril," is a noble equestrian group, purchased under the Chantery bequest. He is now, (1905–6) engaged on the sculpture of the Memorial to Queen Victoria in front of Buckingham Palace, London.

BROKE, SIR PHILIP, a gallant British seaman, who, when commander of H.M. frigate *Shannon*, while sailing off Boston, sent a challenge to the Captain of the American frigate, *Chesapeake*. The duel ended in the capture of the *Chesapeake*, June 1st, 1813. Said to be "one of the most brilliant actions of the British Navy."

BROMHEAD. See *Rorke's Drift.*

BRONTE, CHARLOTTE, (afterwards Mrs. Nicholls), *b.* 1816, *d.* 1855; a celebrated English novelist. Her childhood was spent in the village of Haworth, near Keighley, Yorkshire, where her father was rector. The death of her mother in 1820, the severe restrictions in the matter of amusements and companions placed upon his children by an eccentric father, and the care of her two younger sisters, Emily and Anne, made her early life a hard one, and to this must be attributed the morbid tone in her works. All three sisters had considerable literary talent. Emily, in 1846, produced "Wuthering Heights," and Anne, "Agnes Grey," but these novels are much inferior to the work of the eldest sister. Under the name of Currer Bell, Charlotte, in 1847, achieved fame with "Jane Eyre," a novel still largely read. Her other works are:—"Shirley," "Villette," and "The Professor." Within a year after her marriage she died of consumption, a disease which had already carried off her sisters.

BRONZE AGE, a period in the history of many races when bronze was used in the making of weapons, ornaments, and various utensils. The Bronze Age varied in point of time with different parts of the globe. Refer to *Index*.

BROOKE, SIR JAMES, *b.* 1803, *d.* 1868; an adventurous Englishman, who became Rajah of Sarawak, north-west Borneo. He served for some years in the army of the East India Company, but gave up his commission and fitted out a vessel at his own expense with the view of suppressing piracy in the East Indies. Having assisted the uncle of the Sultan of Borneo to put down a rebellion, he was made Rajah of Sarawak, 1841. This position he held for over 20 years, and by the firmness of his rule he suppressed head-hunting and piracy, established law and order, and exercised a strong civilising influence in his district. His nephew succeeded him as Rajah.

BROOKLYN, an important town and seaport on Long Island, U.S.A.; population 1,160,000. The suspension bridge connecting it with New York is nearly a mile long, and has five distinct passage ways, two for ordinary vehicles, two for electric and steam trams and one for foot passengers. Its shipping trade rivals that of New York, and its manufactures are considerable.

BROUGHAM, HENRY, LORD, *b.* at Edinburgh, 1779, *d.* 1868; a famous lawyer and politician. He was called to the bar in 1808. Entering parliament in 1810, he boldly attacked the slave trade. His brilliant and clever defence of Queen Caroline, in 1820, brought him much public favour and the King's displeasure. Raised to the peerage in 1830, he warmly supported the Reform Bill of 1832. He was successful in introducing many much-needed reforms in the law, and to this end he devoted the greater part of his life.

BROWN BESS, the old flint-lock musket in use in the British army up to 1842, when it was superseded by a musket fired by a percussion cap. Bess is a corruption of the Dutch "bus," a gun barrel. The barrels were browned to prevent rust.

BROWNE, CHARLES FARRER (Artemus Ward), *b.* 1834, *d.* 1867; a most original American humourist. He visited England in 1866, his lectures attracting large audiences. He died at Southampton, the strain of his English tour having proved too much for a constitution already wasted by consumption. "Artemus Ward His Book" and "Artemus Ward among the Mormons," contain some rich specimens of his humour.

BROWNE, ROBERT, *b.* 1550, *d.* 1630; the founder of a sect of extreme Puritans—the Brownists—in the reign of Elizabeth. He began preaching in 1581, and by his aggressive methods often came into conflict with the authorities. His followers suffered much persecution, and afterwards identified themselves with the Independents. Browne died in prison.

BROWNE, SIR THOMAS, *b.* London, 1605, *d.* 1682; physician, antiquary, philosopher, and one of the most learned men of his day. His "Religio Medici" (the religion of a doctor) is a work of great penetration, dealing with morals and religion.

BROWNIE, the name given by superstitious Scots to a spirit who, at night, performs various little friendly offices for the household to which he is partial. He is supposed to sweep floors, churn milk, &c., and seems to be the Scotch variation of our "Robin Goodfellow."

BROWNING, MRS. (née Elizabeth Barrett), *b.* 1809, *d.* 1861; a celebrated English poetess. She had but feeble health, and was a woman of very high-strung temperament. In 1846 she married Robert Browning, the poet, and from that time lived principally in Florence. Her best known poems are "Aurora Leigh" and "Lady Geraldine's Courtship." Her sonnets are full of feeling and beauty.

BROWNING, ROBERT, *b.* in London, 1812, *d.* 1889; one of the greatest of English poets. His first poem, Pauline, was published in 1833, and from that date he wrote almost without a break till his death. His poetry is marked by depth of thought, a fearless search after truth, a healthy optimism, and a rich diction, marred by ruggedness of expression. "The Ring and the Book" is the best known of his longer poems. His most popular poems are "The Pied Piper of Hamelin" and "How they brought the good news from Ghent to Aix." He died at Florence, but was buried in the Poets' Corner of Westminster Abbey.

BRUCE, JAMES, *b.* 1730, *d.* 1794; a famous Scotch traveller, who added greatly to geographical knowledge. He explored the Barbary States, visited Baalbec and Palmyra, and from 1768–72 led a most adventurous life in Abyssinia, where he traced the Blue Nile to its source. On the publication of the record of his travels many of his statements, since proved to have been in the main correct, were openly derided.

BRUCE, ROBERT, king of Scotland, 1306–1329, was crowned at Scone while Scotland was still nominally under English rule. Twice defeated by the English troops of Edward I. he fled to the Hebrides, whence he emerged in 1307, and called the Scots to arms. The death of Edward I. prevented any immediate measures being taken for the reconquest of Scotland. In 1314 he defeated Edward II. at Bannockburn, thereby making his position as king secure. In 1328 Edward III. acknowledged the independence of Scotland.

BRUGES, a town in Belgium; population 55,000. It is an important canal centre and has considerable lace manufactures. In the 13th century it was a most flourishing town, and it still retains its mediæval appearance. A ship canal in course of construction, connecting it with the North Sea, will enable vessels of 3,000 tons burthen to reach it.

BRUMMEL, BEAU, *b.* 1778, *d.* 1840; the most distinguished of a set of fashionable fops, who gained notoriety in the reign of George IV. by their dress and actions. For many years his opinion was held sacred on questions of dress and etiquette. He spent a large fortune, and losing the king's friendship fled to France to avoid his creditors. He died insane in an asylum at Caen.

BRUNEL', SIR MARC ISAMBARD, *b.* in Normandy, 1769, *d.* 1849; a famous engineer. Driven from France in 1792 by the French Revolution, he took refuge in the United States, where he became an engineer, supervised the fortifying of

New York, and established an arsenal and cannon foundry. He came to England in 1799, and while in the employ of the British Government invented a machine for making pulley blocks, which is still used. His chief work was the construction of the Thames Tunnel, which is now a railway tunnel. He is the originator of many labour-saving inventions.

BRUNEL, ISAMBARD KINGDOM, son of the above, *b.* 1806, *d.* 1859. He was the designer of the *Clifton Suspension Bridge* and of the *S.S. Great Western*, the first steamship to cross the Atlantic. He was appointed engineer to the Great Western Railway and built their main line. He directed the construction of the *Great Eastern*, and superintended the making of docks at Cardiff and Milford Haven.

BRÜNIG, a pass in the centre of Switzerland, 3,340 feet above sea-level. It is often used by tourists passing from Lake Brienz to Lake Lucerne.

BRÜNN, a manufacturing town of Moravia, Austria; population 98,000. Coal is found in the vicinity, and it is the leading woollen manufacturing centre of Austria. The strong ramparts and moats, which once defended it, have now been replaced by avenues. Napoleon I. used Brunn as his headquarters after his victory at Austerlitz.

BRUNSWICK, a duchy of Germany, area 1,424 square miles; population 435,000. The industries are chiefly agricultural, though coal, iron, and asphalt are worked in considerable quantities. Beet is grown on a large scale, nearly 100,000 tons of sugar being annually made from it. Hops, wheat, flax, and fruits are largely cultivated. Ninety-seven per cent. of the people are Lutherans in religion. Brunswick, the capital, is the leading manufacturing centre of the duchy; population 128,000.

BRUSH, CHARLES FRANCIS, *b.* 1849; a distinguished American inventor, who has devoted much attention to electric lighting. Since 1875 he has taken out over fifty patents, most of which are in common use. The Brush Electrical Engineering Co., London, was formed mainly with the idea of applying his inventions.

BRUSSELS, capital and centre of the canal and railway system of Belgium; population 587,000. Its buildings, boulevards, shops, and general air of gaiety make of it a miniature Paris. Its lace manufactures are considerable, but few carpets are now made there. The work of widening and deepening the canal, connecting it with the Scheldt, will, when completed, enable sea-going vessels of 2,000 tons to reach the city.

BRUTUS, MARCUS JUNIUS, *b.* 85 B.C., a Roman who followed the stoical tenets of Cato, whose daughter, Portia, he married. At the instigation of Cassius he headed the conspiracy against Cæsar and was present at his assassination. He was defeated in battle at Philippi (42 B.C.) by Octavius and Mark Antony, and died by his own sword.

BRYANT, WILLIAM CULLEN, *b.* 1794, *d.* 1878, an American poet and journalist. He resembles Wordsworth to some extent in his choice of subjects. His first volume of poems, "The Ages," published in 1821, established his reputation as a poet. The "Flood of Years," "Thanatopsis," and his poems of nature are very fine. From 1826 to his death he was editor of the New York Evening Post.

BRYCE, JAMES, *b.* at Belfast, 1838, historian and politician, entered Parliament in 1867, was a staunch supporter of Mr. Gladstone in his Home-Rule policy, and in 1892 joined his cabinet. In 1905 he was appointed Chief Secretary for Ireland, and since then British Ambassador at Washington. He has travelled far and wide, and written much, his most notable works being "The American Commonwealth," "The Holy Roman Empire," and "Two Centuries of Irish History." He has received the O.M.

BUBONIC PLAGUE is the Black Death of the Middle Ages and is still rampant in Asia. Amongst other symptoms the lymphatic glands of the armpits and groins swell forming masses termed *buboes*. [See "Plague" in *Med. Dict.*]

BUCCANEERS, THE, a formidable body of pirates of all nationalities, who ravaged the West Indies in the 17th century. They were characterized by extreme ferocity and brutality. Their efforts were principally directed against Spanish shipping, although they had no hesitation in attacking ships of other nations. Henry Morgan, the best known Englishman among them, rose to be admiral of the buccaneer fleet, and acquired such power that he was knighted and made governor of Jamaica. Peace between England and Spain, disunion among the leaders, and determined efforts on the part of European nations to crush them, broke up the organisation. The best thing that can be said of them is that, by weakening Spanish rule in America, they assisted in opening up the West Indies to European trade.

BUCENTAUR, the state barge used by the Doge of Venice in the annual ceremony of wedding Venice to the Adriatic. In this ceremony, which took place on Ascension Day, the Doge dropped a ring into the sea. The custom symbolized the supremacy of Venice in the Adriatic. The last bucentaur was destroyed in 1797, when Venice ceased to exist as a republic.

BUCEPH'ALUS, the famous Thessalian charger of Alexander the Great. After carrying his master through many campaigns in Asia, he was killed in battle in North-west India, where Alexander built a town to his memory.

BUCER, MARTIN, *b.* 1491, *d.* 1551; a learned German monk, and follower of Martin Luther. He gained great fame in Germany by his preaching and his learning. Invited to England by Edward VI., he was appointed Professor of Theology at Cambridge, where he died. The extent of his knowledge roused the admiration even of his religious opponents.

BUCHANAN, GEORGE, *b.* near Loch Lomond, 1506, *d.* 1582, a famous scholar and historian, was sent by his uncle, George Heriot, to Paris University. Returning to Scotland for the second time, in 1566, he became classical tutor to the young Queen Mary, and soon afterwards Moderator of the General Assembly of the Church of Scotland. He was also appointed tutor, in 1570, to Prince James, afterwards James I. of England. Buchanan was a man of talent and profound classical learning. His most famous works (in Latin) were his "History of Scotland," and a "Paraphrase of the Psalms."

BUCHANAN, ROBERT WILLIAM, *b.* of Scottish parents, in England, 1841, *d.* 1901, poet and novelist. He came into note as a poet in 1866, when he published "London Poems." Other poems followed, but he is best known as a novelist, his best works being "The Shadow of the Sword," "Rachel Dene," and "God and the Man."

BUCHAREST, capital of Roumania; population exceeds 270,000. Situated in the middle of the fertile Wallachian plain, and connected by railway with Austro-Hungary, Russia, and the Black Sea, it has become a great collecting station for wheat, maize, and other cereals, and is a centre of trade between Austria and the Balkan States. Petroleum wells are found north-west of the town.

BUCKINGHAM (George Villiers), **DUKE OF,** *b.* 1592, *d.* 1628. He stood high in the favour of James I., and became chief minister of Charles I. on his accession. He incurred popular hatred by lending a fleet to France, in 1626, to be used against the Huguenots in Rochelle. Over Charles he had complete ascendancy, and most of the troubles between that king and his early parliaments were due to him. In 1627 he led an expedition to aid the Huguenots, which ended in disaster. While fitting out a fresh expedition at Portsmouth, he was stabbed to death by an officer named Felton, who was actuated chiefly by a desire to revenge a personal grievance.

BUCKINGHAM PALACE, one of the royal palaces in London, was built for George IV. in 1825, and stands on the site of Buckingham House, the residence of Sheffield, Duke of Buckingham, in the reign of Queen Anne. The principal façade, overlooking St. James's Park, was added later, and being made of soft, easily worked stone, is painted to prevent weathering. The King occupies it when in London, and the royal drawing-rooms are held there. Visitors will find it difficult to obtain admission to view the palace; even Royalty like a place they may call home.

BUCKLE, HENRY THOMAS, *b.* 1822, *d.* 1862; historian and philosopher. His life was given over almost entirely to study. He projected writing "The History of Civilisation in Europe," the introductory volumes of which, published in 1858, created intense interest by the bold theories put forth and the extensive learning displayed. His early death prevented the completion of the work.

BUDA-PEST, the leading city of Hungary, on the Danube; population about 810,000. It really consists of two cities, Buda, a city dating from Roman times, on the right bank; Pest, a more recent city, on the left bank; but the two are under one corporation. A fine suspension bridge connects the two towns. Buda contains many mineral springs, notably that of Hunyadi-Janos. Pest is busier and more important, industrially, than Buda, and contains the newly-built Houses of Parliament for the Hungarian deputies. Buda-Pest stands on the main line from Vienna to Constantinople, is a great collecting centre for the products of the great Hungarian plain—grain, wine, wool, cattle—and does a large river trade. The flour mills of the town are highly important, Hungarian flour being much superior to that ground in other countries from Hungarian wheat.

BUDDHA. Refer to *Index*.

BUDDHISM. Refer to *Index*.

BUDGET, THE, the statement of the government's financial affairs laid annually before Parliament by the Chancellor of the Exchequer. It gives details of the expenditure during the past year, and estimates the expenses of the ensuing year, with a list of the sources from which the money is to be raised.

BUENOS AY'RES, capital of the Argentine Republic; population 960,000. Situated on the shallow estuary of the La Plata, constant dredging is necessary to allow ocean-going vessels to use the extensive docks and wharves of the town. It is a railway centre, and exports wool, hides, tallow, meat, and wheat, the latter in rapidly increasing quantities. It is a go-ahead city, lit by electricity, and with a good service of electric trams. The climate is dry and healthy.

BUFFALO, a town in the United States; population 352,000. Situated on the

Niagara River, near its junction with Lake Erie, it is admirably adapted for trade. It is a great railway centre, many miles of rails lying within the limits of the city alone. Its commerce by lake and rail has increased enormously during the past twenty years. It is a great collecting station for grain, timber, and metals, much of which is sent by way of the Welland Canal to the Atlantic. Here, in 1901, President Mc Kinley was shot. The Niagara Falls provide the power for its electric lighting, traction, etc.

BUFFALO, an animal resembling the ox in general appearance, but larger, heavier, more muscular, and more active. There are two distinct species, the straight-necked Asiatic, and the hump-necked American buffalo. Great numbers of the former are still found wild in the valley of the Zambesi, in South Africa. In India and the adjacent countries it has been domesticated, and performs all the duties of the ox. Pemmican, the dried flesh of the bison or American buffalo, and once the principal food of the early pioneers of the central and western parts of the United States, is now a thing of the past. See *Bison.*

BUFFON, *b.* in Burgundy, 1707, *d.* 1788; a great French naturalist. In 1738 he was put in charge of the Jardin du Roi, the Zoological Gardens of Louis XIV. In this capacity he produced his Natural History, a work in 36 volumes, which occupied him nearly forty years.

BUGLE. a musical wind instrument, with a cup mouth-piece. made of copper, brass or silver. Its piercing, far-reaching sound makes it peculiarly suitable for giving signals to soldiers, for which purpose it is chiefly used. The bugle-calls or signals are all formed from the notes of the common chord in the key of C. The Kent bugle was formerly used in brass bands, but its place is now taken by the cornet.

BUHL WORK is the ornamentation of furniture and other articles by inlaying with brass, mother o' pearl, tortoiseshell, ivory, fancy woods, &c.

BULAWAYO, a town in Matabeleland, Southern Rhodesia, 1,360 miles by rail from Cape Town. It lies in a fertile district rich in minerals, gold especially; and it seems destined to become the centre of a large white population. Near it are the Matoppo Hills, where Cecil Rhodes was buried.

BULGARIA, an important kingdom in the Balkan Peninsula; area 37,200 square miles; population 3,744,000. Eastern Roumelia now forms part of Bulgaria, and has been recognised as such by the chief European powers since 1886. Both countries were cut out from the Turkish Empire, and granted autonomy by the Berlin Treaty of 1878. The territory consists roughly of two slopes of the Balkans, one to the north the other to the south, and is well fitted to perform the part of a "Buffer State" between Russia and Turkey. About one-half of the country is under pasture; and sheep, goats, cattle, and pigs are reared in large numbers. Wine, tobacco, silk, and attar of roses from the neighbourhood of Philippopolis are the leading products. Varna, a port on the Black Sea, exports wheat. Sofia, the capital, is in a strong position, commanding the railway from Vienna to Constantinople, and has growing manufactures of woollen goods and leather. Minerals, theoretically the property of the state, are plentiful, and the output of coal and iron is increasing.

BULKHEADS in a vessel are partitions, generally of wood or iron, separating compartments on the same deck. Watertight compartments of a vessel are also separated by bulkheads. In mines, bulkheads are constructed to prevent flooding in the working portions.

BULL. (1) Papal Bull: an edict of the Pope with the bulla, a small leaden seal, attached. (2) A humorous blunder consisting of a statement containing contradictory terms. The gentleman who proposed that all local societies, with a membership of from one to a hundred, should send three delegates to conference, committed a bull.

BULL-BAITING, a favourite English sport up to the reign of George IV. Dogs, specially bred for this sport, were set upon the bull, which was usually tied to a stake in an enclosure. Occasionally the bull was allowed to run free. The dogs, which have developed into the modern bull-dog, possessed powerful protruding lower jaws, and were very tenacious in their hold. They were trained to aim at the muzzle of the bull. This sport succumbed to the verdict of popular opinion.

BULLER, SIR REDVERS, *b.* 1839; a well-known English general, with wide military experience. He took part in the China War, 1860; Red River Expedition, 1870; Ashanti War, 1874; Kaffir War, 1878; Zulu War of 1878–9 (when he won the V.C.), first Boer War, 1882; and the Soudan War, 1884. During the South African War, 1899–1900, he conducted the operations in Natal for the relief of Ladysmith. Before attaining this end he suffered three reverses in succession on the Tugela. On returning to England his conduct of the war was subjected to severe criticism, and in attempting to justify his actions in a speech made at a luncheon in London, 1902, he was deemed by the War Office authorities to have committed a grave indiscretion, removed from his command at Aldershot, and placed upon half-pay; *d.* 1908.

BULLET, a small projectile used for revolvers, rifles, and machine-guns. In warfare, since the introduction of breech-loaders, the round bullet has been almost entirely superseded by an elongated conical bullet, which forms a part of the cartridge. The bullet used largely in the British army consists of a compressed lead centre, coated with cupro-nickel. The removal of the latter from the point exposes the lead, and converts the bullet into a "Dum-dum," which inflicts a nasty wound, as the lead expands on striking a bone. The use of Dum-dum or expanding bullets of this type is prohibited in civilized warfare.

BULL-FIGHTING, the national sport of Spain and the Spanish-speaking peoples of South America. Many of the larger towns in Spain have splendid enclosures in which the exhibition takes place. These enclosures are capable of seating thousands of spectators, who sit in tiers overlooking the ring. The sport begins by driving the bull into the arena, where he is roused to a state of fury by two horsemen, the *picadores*, who probe him with blunted lances, and by several men on foot, the *banderilleros*, who hurl small barbs at him. When the bull has been rendered almost mad with rage, the turn of the principal performer, the *matador*, comes. Armed with a short pointed sword, and with the "muleta," a small red cloak, on his left arm, he stands awaiting the bull's charge. This work requires great nerve, a steady hand, and a keen eye. He may avoid several charges before the opportunity comes for the one straight thrust which ends the contest. The matador aims at a point between the shoulders, and it is considered a disgrace not to kill with one stroke. The bulls are usually small, but strong and agile. The Portuguese are also fond of this cruel sport.

BULLION. See *Commercial Dictionary.*

BULLS AND BEARS. See *Commercial Dictionary.*

BULWER-CLAYTON TREATY, a treaty between Great Britain and the United States concluded, 1850, by which both parties undertook to respect the neutrality of a proposed ship-canal across the Isthmus of Panama. It was abrogated, 1901, by a new treaty, which acknowledges the right of the United States to construct and protect such canal.

BULWER-LYTTON, EDWARD, first Baron Lytton, *b.* 1803, *d.* 1873; novelist, dramatist, diplomatist, and politician. He was a most prolific writer, gifted with unusual powers of imagination. His works display great dramatic power, profound learning, keen analysis of character, and are generally interesting, but they lack the touch of genius necessary to put him in the first rank of writers. His historical novels, "Harold," "The Last Days of Pompeii," the "Last of the Barons," and "Rienzi" are widely read. Among his other novels, "Ernest Maltravers," "The Caxtons," and "Eugene Aram" are well-known. His best plays were "The Lady of Lyons" and "Richelieu." His political life was uneventful, most of his time being devoted to writing. He was Colonial Secretary in Lord Derby's government in 1858–9.

BUMBOAT, a rowing boat of heavy build used in seaports to carry provisions to vessels moored at some distance from the shore. These boats are generally the property of the watermen of the port.

BUNDESRATH, THE, is the Federal Council of the German Empire, and is composed of fifty-eight members appointed by the different States. Its chief business is to revise and confirm or reject measures passed by the Reichstag.

BUNKER HILL, a hill in Boston, Massachusetts, near which a battle was fought in 1775, between the American Colonists and the British, during the War of American Independence. Boston was held by the British army under General Gage, and the Colonists determined to fortify Bunker Hill to prevent the British advancing into the interior. Eventually the Colonists chose Breed's Hill, as being nearer to the town, and occupying a more commanding position, and fortified it during the night. The British attacked the position next morning, and twice were repulsed with great slaughter. At the third attack, however, they were successful.

BUNSEN BURNER, a gas burner used largely in laboratory work, the invention of the German chemist Bunsen. It consists of an upright metal tube fixed to a stand, the whole attached by a rubber tube to the tap of a gas pipe. Holes at the base of the vertical tube admit air. The mixture of air and gas, when ignited, burns with intense heat. The burners used with incandescent mantles are made on the same principle.

BUNSEN, ROBERT WILHELM, *b.* at Göttingen, 1811, *d.* 1899, one of the most eminent German chemists and physicists. His investigations in waste gases produced valuable results. Among his many inventions were the magnesium light and the burner which bears his name. He is best known by his researches in spectrum analysis. In 1898 the English Society of Arts awarded him their Albert Medal "in recognition of his numerous and most valuable applications of chemistry and physics to arts and manufactures." His German scientific works are numerous.

BUNYAN, JOHN, *b.* 1628, *d.* 1688; the great Puritan writer of Charles II.'s reign.

He was a tinker by trade, and in the Civil War fought on the Parliamentary side. During the war he became deeply convinced of the importance of religion, and began a life differing greatly from that of his youth. His ardour and persistence as a preacher led to his imprisonment under the Conventicle Act of 1664. He was confined for twelve years in Bedford Jail, during which time he produced the "Pilgrim's Progress," a religious allegory beautifully written, which has enlisted the serious interest of millions of people.

BUOY, a floating mark to point out the position of shallow water or objects under water, so as to indicate to ships their proper course. *Bell buoys* have bells attached, which may be heard when the buoys themselves are invisible through fog, &c.

BURDETT COUTTS, BARONESS, *b.* 1814, d. of Sir Francis Burdett, *d.* 1906, buried in Westminster Abbey. She inherited the immense wealth of Thomas Coutts the banker, her maternal grandfather, and gained a great name for philanthropy. During the Russo-Turkish War of 1877 she raised a fund for the relief of the peasantry in the Balkan Peninsula. Many churches in London, and the colonial bishoprics of Adelaide, Cape Town, and British Columbia have been materially aided by her wealth. She has been of great assistance to the poor in times of distress. In 1881 she married W. L. Ashmead-Bartlett.

BUREAUCRACY, the name given to a system of government in which the various departments are controlled by trained officials, independent of popular election. In Russia, the ministers controlling the various departments are appointed by the Czar, and nominally retain their position during his pleasure.

BURGH, HUBERT DE, a great warrior-statesman of mediæval England, and one of the 24 barons chosen to see that John adhered to the terms of Magna Charta. As Regent during Henry III.'s minority, Hubert ruled vigorously and wisely, and forced the more turbulent barons to respect his authority. In 1227, Henry himself took up the reins of government, and made Hûbert his justiciar, or chief minister, in which office he strove hard to check the growing power of the Pope in England. He was, in 1232, ousted from his position by the intrigues of his rival, Peter des Roches, Bishop of Winchester.

BURGOYNE, JOHN, *b.* 1722, *d.* 1792; an English general best known for his share in the war of American Independence. In 1777 he marched with an army from Canada to join a British force advancing along the banks of the Hudson, from New York, with the object of isolating the northern states. Failing to effect this junction, he was compelled by famine to surrender at Saratoga, with his army of 6,000 men.

BURGUNDY was one of the old provinces of France. It adjoined Switzerland and Savoy in the east, and included parts of the basins of the Loire, Rhone and Seine. It is one of the most fertile districts in France, and is rich in agricultural produce. Its chief production is wine, known by the general name of Burgundy. Its chief towns are Dijon, Châlons-sur-Saône, Auxerre and Mâcon. From the 9th to the 15th century, Burgundy was an independent kingdom, but on the death of Charles the Bold, 1477, it became a duchy under the kings of France.

BURIAL CUSTOMS. They fall into three classes according as they have originated in a desire (1) to keep the ghost of the departed from returning, (2) to facilitate his passage to another world, (3) to provide for his necessities when there. As typical examples of these three classes of customs we give the following: (1) The Australian aboriginals take off the nails of the corpse and tie its hands to prevent it from digging its way out again. (2) The Norse warrior had his horse and armour laid in the grave with him that he might ride to Valhalla in full panoply. The Laplander placed beside the corpse flint, steel, and tinder to provide light for the dark journey. (3) In America the Indian hunter was buried with all the implements of the chase and other articles in daily use. In Egypt we often find the tombs filled with the relics of the deceased. This notion that the dead may require things they were wont to use when alive, led in some cases to an attempt to provide them with the services of their former dependants by causing favourite horses and slaves to be slain at their death. In India, the widow was, for the same reason, burned with the corpse of her husband. The ancient Greeks and Romans believed that the spirit of the dead flitted about disconsolate, unable to cross the Styx, whilst his body was unburied. It was, therefore, among them an act of piety for a person coming across an unburied corpse to cover it with earth. Of their many customs relating to the dead we may mention that of placing a coin in the mouth of the deceased to pay Charon, the ferryman, and by his side a honey-cake for Cerberus.

BURIAL, MODES OF. The mode of disposing of the dead has differed greatly in different ages and countries. Among certain uncivilised tribes the dead are exposed to the ravages of birds and beasts, and even the cultured Parsee leaves the corpse of his friend on the top of a tower to be devoured by vultures. But the most common practice has been to deposit the corpse, with or without a coffin, in the ground or in some cave or tomb. Among the ancient Greeks and Romans cremation was also commonly practised, especially in the case of the richer citizens, the ashes and burnt bones being collected and placed in an urn. It is still one of the usual methods of disposing of the dead in India. The Egyptians never burned the dead, but among them embalming always preceded burial, the mode of embalming varying considerably. As Christianity spread the custom of cremation gradually fell into disuse, and that of interment became universal among Christians, until towards the end of the 19th century, when cremation began to be tolerated on sanitary grounds (See *Cremation*).

BURKE, EDMUND, *b.* at Dublin, 1730, *d.* 1797. He came to London in 1750, and entered Parliament, where he soon made a great name for brilliant oratory, nobility of sentiment, and the whole-hearted enthusiasm he put into his political work. He strongly opposed the taxation of the American Colonies, boldly attacked the system by which George III. granted sinecures to obtain votes, and took a leading part in the impeachment of Warren Hastings. His hatred of the French Revolution caused a rupture between him and his friend Charles James Fox. His works include "An Essay on the Sublime and Beautiful" and "Reflections on the French Revolution." His speeches are models of rhetorical style.

BURKE, ROBERT O'HARA, *b.* 1820, *d.* 1861, of Irish birth, led a party of explorers across Australia. Starting from Melbourne (1860), Burke and Wills reached Flinders River, the rest having turned back. They were the first Europeans to cross the island from south to north, but they both died of starvation on the way back. Their bodies were discovered and brought to Melbourne, where statues have been erected in their honour.

BURLEIGH, LORD. See *Cecil.*

BURLESQUE, a humorous rendering of a play, poem, opera, or even of a person's characteristics, which tends to provoke laughter. Burlesque may be produced in various ways: serious passages may be given with mock gravity, gestures may be exaggerated, or actors may be chosen utterly unfitted, in manner and appearance, to suit the characters.

BURMA, a province of India, which has been acquired by three successive wars, in 1826, 1852, and 1885; area 236,000 square miles; population over 10 millions. The lower portion of the Irawadi basin is very flat, and produces immense quantities of rice, most of which is exported from Rangoon. Teak is obtainable from the extensive forests of Upper Burma. Rubies, jade, tin, iron, petroleum and coal are fairly plentiful. The bulk of the people are Buddhists. From Rangoon two railway lines run into the interior, one direct north, to Mandalay, the capital of Upper Burma, and the other to Prome, a rice collecting centre on the Irawadi.

BURNE-JONES, SIR EDWARD, *b.* at Birmingham, 1833, *d.* 1898; a celebrated artist. He did not become famous until comparatively late in life. He was elected an Associate of the Royal Academy in 1886, and received a baronetcy eight years later. One of his greatest works, "King Cophetua and the Beggar Maid," is included in the collection at the National Gallery.

BURNET, GILBERT, *b.* at Edinburgh, 1643, *d.* 1715; a distinguished churchman and historian. In the reign of James II. he twice refused a bishopric, but after the Revolution, in which he took a prominent part, he was appointed to the see of Salisbury. He was largely responsible for the establishment of the fund known as Queen Anne's Bounty. He wrote a History of the Reformation and a History of his own Times.

BURNETT, FRANCES HODGSON (née Hodgson), *b.* 1849, was brought up in Manchester, but went with her parents to the United States in 1865. She soon began to contribute stories to the magazines, and her reputation as a novelist was at once established, when "That Lass o' Lowrie's" appeared. "Little Lord Fauntleroy" (1886) became exceedingly popular and was dramatized. Later novels are "A Lady of Quality" (also dramatized), "His Grace of Ormonde," "The Making of a Marchioness," and "The Little Princess."

BURNEY, FRANCES. See *D'Arblay.*

BURNHAM BEECHES. The picturesque remains of an old beech forest, near Slough, purchased in 1900 by the Corporation of London, in order to preserve them as a public recreation ground.

BURNLEY, a thriving Lancashire town, 21 miles east of Preston. It has an important manufacture of machinery as well as cotton. Numerous Roman remains have been found here. (For population, etc., see p. 902.)

BURNS, JOHN, *b.* at Vauxhall, 1858, the first labour leader to become a Cabinet Minister. As a boy he worked in a candle factory and early became imbued with extreme socialistic ideas. In the eighties he gained notoriety by the prominent part he took in all labour disputes, and in 1887 underwent a short term of imprisonment for the part he took in the Trafalgar Square meeting in defiance of the public authorities. In 1889 he became a member of the London County Council, and in 1892 was elected M.P. for Battersea, and in 1905 joined the Cabinet

of Campbell-Bannerman as President of the Local Government Board. He piloted the Housing and Town Planning Bill through the Commons in 1909.

BURNS, ROBERT, *b.* at Alloway (Ayr), 1759, *d.* 1796; by far the greatest of the Scottish poets. He was originally a farmer, and is in consequence sometimes called "The Ayrshire Ploughman." He led a riotous life, squandered what little money he possessed, and was compelled to give up his farm and become an exciseman. His poems are remarkable for their wit, pathos, and melody; but owing to the fact that many are written in dialect, they are not rightly appreciated by Englishmen. "Tam o' Shanter," and "The Cotter's Saturday Night" are the best of his longer poems, and of the shorter, "Auld Lang Syne," "For a' that," "John Anderson," and "The Banks and Braes of Bonny Doon," are well known.

BURRITT, ELIHU, *b.* in Connecticut, 1810, *d.* 1879; was originally a blacksmith. Becoming known as a linguist, he received a post in the consular service of the United States. He was the pioneer of the movement to secure the abolition of war, and formed a society known as "The League of Universal Brotherhood." He lived for many years at Birmingham as U.S. Consul, and is frequently spoken of as "The Learned Blacksmith."

BURSLEM, one of the oldest pottery manufacturing towns in England, in the north of Staffordshire. Here Josiah Wedgwood was born in 1730. Population 40,000.

BURTON, SIR RICHARD FRANCIS, *b.* in Hertfordshire, 1821, *d.* 1890; a famous explorer and brilliant oriental scholar. He went disguised as a pilgrim to Mecca, explored Somaliland, and in 1856 discovered Lake Tanganyika. His writings are numerous, and include, besides accounts of his travels, translations of the "Arabian Nights" and of the "Lusiad" of Camoens, the Portuguese epic poet.

BURTON-ON-TRENT, a town situated in Staffordshire, and, as its name implies, on the river Trent. It is famous for its breweries, of which it contains no less than twenty, the largest being those of Bass and of Allsopp; population 62,000.

BURYING BEETLE, an insect which, when about to deposit its eggs, seeks out by its sense of smell the body of a rat or mole, recently dead. When one is found, several of the insects proceed to bury it, by burrowing under it with their heads, until a hole about six inches deep is formed. Upon the body, which is to form the food of the young insects, they deposit their eggs, and then carefully cover it up.

BURY ST. EDMUNDS, literally, "Borough of St. Edmund," a market town situated in Suffolk. It obtains its name from Edmund king of East Anglia, who was martyred for his faith by the Danes, 870, and is buried here. The town contains the ruins of a once famous Benedictine monastery and abbey, founded by Canute; population 16,000.

BUSHMEN, a race of people found in South-western Africa. They rank among the lowest types of mankind; they are usually of small stature, with yellow skins and woolly hair. They live in caves, and are usually found in isolated families. The dog is their only domestic animal, and their food consists largely of locusts.

BUSHRANGERS, the name given to bands of robbers who formerly infested parts of Australia and Tasmania. They first appeared in the latter colony about 1815, but were most troublesome in New South Wales and Victoria some twenty years later. The earliest bushrangers were convicts, who had escaped from the various penal settlements established in these colonies by the British Government. They frequently terrorised whole districts, robbing and murdering gold diggers, and stealing cattle; and in several cases martial law had to be proclaimed to rid the infested districts of them. The last to give any trouble was the Kelly gang in 1879.

BUTE, KYLES OF, a narrow strait, separating the island of Bute from the neighbouring county of Argyll. It is noted for its beautiful scenery, and is much visited by tourists.

BUTLER, LADY, *b.* at Lausanne, 1843, one of the most popular artists of the present day, the painter of some famous war pictures. Among the best known are "The Roll Call," "Balaklava," "Inkermann," and "The Eve of Waterloo." Lady Butler is the wife of General Sir William Butler.

BUTLER, JOSEPH, *b.* at Wantage, 1692, *d.* 1752; a distinguished theologian and philosopher. He occupied successively the sees of Bristol and Durham, and is the author of the still famous book, "The Analogy of Religion, natural and revealed, to the constitution and course of nature."

BUTLER, SAMUEL, *b.* in Worcestershire, 1612, *d.* 1680; a poet of whose life little definite is known. He is the author of a humorous poem entitled "Hudibras," in which the Puritans are caricatured. He died in extreme poverty.

BUTTER-TREE, a name given to several different trees found in tropical countries from whose flowers or fruit a substance resembling butter is obtained. Two such trees are found in India, in Nepaul and the Central Provinces respectively, and a third in West Africa.

BUXTON, a picturesquely situated town of Derbyshire, near the source of the Wye, a tributary of the Derwent. It is visited by thousands annually for the sake of its calcareous and chalybeate springs. The caves and cliffs of the neighbourhood are interesting; population 11,000.

BUXTON, SIR THOMAS FOWELL, *b.* 1786, *d.* 1845, was a great philanthropist. He took part with Wilberforce in the movement for the abolition of the slave trade, and he worked to the end of his life in many other philanthropic movements, especially slave emancipation and the reform of the criminal law and prison discipline. He was a partner in the brewing firm of Truman, Hanbury and Buxton. He married a sister of Mrs. Fry.

BYE PLOT. The object of this plot (1603) was to seize James I. and compel him to grant toleration to the Roman Catholics and the Puritans.

BYNG, ADMIRAL JOHN, *b.* 1704, *d.* 1757. In 1757 he was sent in command of a poorly equipped expedition to relieve Port St. Philip, Minorca, which was blockaded by the French. He made a half-hearted attempt and failed. The failure caused an outbreak of popular indignation, and on his return to England Byng was tried by court martial, on a charge of cowardice, and sentenced to be shot on the deck of his own ship.

BY-PRODUCTS. In the process of the manufacture of certain substances other secondary substances are produced. These secondary substances are known as by-products, and in modern times have given rise to new and extensive industries. Thus from coal-tar, a by-product of the gas-works, the various aniline dyes, saccharin, essences for perfumes, and useful drugs, such as phenacetin, and antipyrin, are produced. The extremely hard layer of gas-carbon which is found lining the roof and sides of the gas-retorts is utilised for the manufacture of carbon rods for arc lights; and all the ammonia salts are now manufactured on the large scale from the "ammoniacal liquor" of the gas-works. Alkali works supply large quantities of hydrochloric acid as a by-product; glycerin is a by-product of the soap-boiler; while the "grains" from the brewery and the crushed seeds from which oil has been extracted are utilised in the preparation of cattle foods.

BYRON, LORD, *b.* in London, 1788, *d.* 1824; a celebrated English poet. He was of a morbid and passionate disposition, and after leaving Cambridge plunged into a life of dissipation. Owing to some unexplained disagreement with his wife he left England in 1816, and never returned. After spending some years in Italy, he proceeded to Greece, where he assisted the insurgents in their efforts to set themselves free from Turkish rule. He died of fever, in the course of the war, at Missolonghi. Among his best works are "Childe Harold," "The Prisoner of Chillon," and "Don Juan."

BYZANTINE EMPIRE, founded in 395 A.D., when the Emperor Theodosius divided the Roman Empire into two parts, which he bestowed upon his two sons. The Byzantine, or Eastern Empire, at first included Syria, Asia Minor, the Balkan Peninsula, and Egypt; but its extent varied greatly in the course of its history. It was finally destroyed by the Turks in 1453, about a thousand years after the fall of the Western Roman Empire. The capital was Byzantium, or Constantinople, as it began to be called in 330.

BYZANTIUM, situated on the Bosphorus, was founded in 667 B.C. by the Greeks, and was occupied at different times by the Persians, Athenians, and Spartans. It fell into Roman hands, 169 B.C., and in 395 A.D. became the capital of the Eastern Roman Empire. It had already changed its name to Constantinople, in honour of Constantine the Great, who founded a new city there, 330 A.D. It was a famous centre of learning before its capture by the Turks in 1453.

CAABA or **KAABA,** a small oblong building, situated in the centre of the Great Mosque at Mecca, containing the sacred stone towards which all Moslems turn in worship. According to Mohammedan tradition, the stone was originally pure white, its present black colour being due, as they believe, to the tears shed for sin by the vast crowds of pilgrims that visit it annually. The Kaaba is regarded with extreme reverence by Mohammedans, being usually covered by a black curtain, and opened for worship on three occasions only during the year.

CABAL', a secret cabinet or committee, whose aims and measures are unpopular with the nation. The word is of French origin, but its popular use in England is probably due to the existence of such a cabinet during the reign of Charles II. It was composed of five members, Clifford, Ashley, Buckingham, Arlington, and Lauderdale, and by a coincidence, the initial letters of their names form the word Cabal.

CABINET. Refer to *Index.*

CABLE, a term applied to a large rope or chain used for holding a vessel to her anchor or other fixed body. Chain cables are stronger and less liable to damage from friction against rocks, and have almost entirely supplanted those made from hemp. To enable a vessel to slip her anchor readily, in case of emergency, chain cables are made in fifteen fathom sections, jointed together by shackles and bolts. These may be easily detached by striking out the bolt. Usually the cable

consists of eight such sections, so that a cable's length indicates 120 fathoms. See *Atlantic Cable.*

CABOT, JOHN, a navigator, who discovered Newfoundland, 1497, and was probably the first to sight the mainland of America.

CABOT, SEBASTIAN, *b.* 1467, *d.* 1557; son of John Cabot; he accompanied his father to Newfoundland. Subsequently he made unsuccessful attempts to discover the north-west and north-east passages to the Pacific. He also visited South America, and published a map of the world. He is credited with the discovery of the variation of the compass.

CABUL, the capital of Afghanistan, situated on the Cabul river. It commands the western entrance to the Khyber Pass, and is of great strategic importance. In 1839 the Amir of Afghanistan was suspected of plotting against the British, and Cabul was occupied by a force sent from India. In the following year some British officers were murdered, and it was decided to evacuate the town. The retreating column, 26,000 strong, was treacherously attacked by the Afghans. Only Dr. Brydon succeeded in reaching India. It was again occupied, in the course of the second Afghan War, by a force led by General Roberts, 1879–80. [See *Afghanistan.*]

CACHALOT. See *Sperm-Whale.*

CACHE, an American term, introduced by French settlers, and applied to a hole formed in the ground or under the snow, in which food or heavy baggage is temporarily stored by travellers.

CACTUS is the popular name of a large group of desert plants, especially common in tropical America. In order to reduce the loss of water by evaporation to a minimum, they all have thick stems and spines or bristles instead of leaves. The stems being green, are able to perform those functions which are carried out by the green leaves of other plants. The flowers are usually red. The Cochineal insect lives on one species of cactus.

CADDIS-FLIES, or caddis-worms, are a family of insects allied to the dragon-flies. The grub or larva is aquatic, feeding on water plants and living enclosed in a sheath of sticks and gravel held together by silk. This protection is necessary, as the body is long and soft, and much sought after by fish. The adult is a four winged air-breathing insect, not unlike a dull coloured dragon-fly on the small scale, with a sucking proboscis instead of jaws. It feeds on the juices of plants.

CADE, JACK, the leader of an insurrection of the men of Kent, 1450. He marched on London with a following of 20,000 men, and, after defeating a force sent against him by Henry VI., entered London. His triumph was short-lived. Driven out of London by the citizens, his followers dispersed and left him to his fate. He was soon captured and killed, 1450.

CADIZ, a seaport of Spain, situated on a small peninsula near the mouth of the river Guadalquivir. It exports wine (sherry), fruits, and cork. Cadiz was founded by the Phœnicians about 1100 B.C. During the reign of Elizabeth, a number of the ships intended for the Armada were burnt in the harbour by Drake, 1587; and during the war with Spain the town was taken by Essex, 1596; population is now about 68,000.

CADMUS, a Phœnician, who according to tradition founded the city of Thebes, in Bœotia, about 1550 B.C. He is also credited with the introduction into Greece of an alphabet of sixteen letters, from Phœnicia or Egypt. In classical mythology Cadmus was sent to seek his sister Europa, who had been carried off by Zeus (Jupiter). In the course of his wanderings he destroyed a dragon, whose teeth, by command of Athena (Minerva), he sowed in the ground. Armed men immediately sprang up, and with their aid he founded the city of Thebes.

CADRE, a French term meaning a framework, and in naval and military language applied to the list of the officers of a ship or a regiment. In this sense the word is used in the British army.

CÆDMON, *d.* 680; a Saxon monk of the monastery of Whitby who, at the bidding of a vision in a dream, sang the "Origin of Creatures." He wrote in verse a paraphrase of the Biblical narrative, including both the Old and New Testaments.

CAERLE'ON, a small town situated in Monmouthshire, on the Usk. It contains many Roman remains, notably a large amphitheatre known as 'King Arthur's Round Table." The town has been connected wth the exploits of King Arthur by Lord Tennyson.

CÆSAR, the surname of a noble Roman family who claimed descent from Æneas. As members of the family by descent or adoption, the emperors from Augustus to Nero bore the name. It was adopted by the later emperors, and on the division of the empire, the title was also applied to the heirs-apparent of the Eastern and Western portions. See *Augustus Cæsar* and *Julius Cæsar.*

CAFFEINE is the alkaloid to which the stimulating effects of both tea and coffee are mainly due. See *Med. Dict.*

CAINE, HALL, *b.* at Runcorn, 1853; a celebrated novelist and dramatist. He adopted architecture as a profession, and became a contributor to the "Builder" and the "Building News." He afterwards joined the staff of the "Liverpool Mercury," and later wrote for the "Academy" and the "Athenæum." Among his best known novels are "A Son of Hagar," "The Bondman." "The Deemster." "The Manxman," "The Christian," "The Eternal City," and "The Prodigal Son," the last six of which have been dramatized, the Deemster under the title of *Ben-my-chree.*

CAIRN, a mound of stones, conical in form, originally designed as sepulchres, or monuments to "the mighty dead." They are common in Scotland and Wales; the largest reach the height of 70 feet. In modern times cairns are erected chiefly as landmarks on hill-tops and mountain-peaks.

CAIRNGORM, a brown or yellowish crystal, much used as an ornament. In shape it is hexagonal, with the upper part in the form of a pyramid. It derives its name from a peak in the Grampian Mountains, near which it is found. It is also obtained from Cornwall, India, and Brazil. [See *Beryl.*]

CAIRO, the capital of Egypt, founded in 969 A.D., is situated on the right bank of the Nile, at the head of the Delta. It is the great Mohammedan centre of learning, and possesses considerable trade. There are over 200 Mosques in the city, and also a considerable number of quite modern buildings. Near Cairo are situated the famous pyramids. The city was occupied by the British in 1882, after the defeat of the Egyptian troops under Arabi Pasha, and British troops are still stationed there: population over 600,000.

CAISSON. (1) In engineering, the name given to a large wooden or iron structure used in the construction of piers of bridges. It is a sort of box, open at the bottom, and is connected with the surface of the water by a cylindrical shaft. In it the work of excavation is carried on, and, to prevent the water leaking in, compressed air is used. As the work proceeds, the caisson is caused to descend, and the pier is built on its upper platform. In some cases the caisson actually contains the pier, the work of construction being carried on inside, and the caisson removed when the pier is finished. (2) A military term applied to an ammunition chest, or a mine formed by burying powder in a case or an ammunition waggon. (3) A boat-shaped gate, used to close the entrance to a dry dock. The caisson is placed in position and then filled with water, which causes it to fit tightly in its place. (4) In architecture, a sunken panel in a ceiling.

CALABAR, OLD, a British possession, situated on the Guinea Coast of West Africa, which obtains its name from a river flowing through it. It is now the head-quarters of the administration of the British Protectorate of Southern Nigeria; population 15,000. The district, which is practically a part of the Niger delta, is exceedingly unhealthy. It produces ivory, palm-oil, and rubber.

CALABASH, the thin, hard, close-grained shell of the fruit of the calabash tree, which grows in West Africa, the West Indies, and Tropical America. The shell is employed for various kinds of domestic utensils.

CALAIS, a seaport and packet station, situated on the coast of France, about twenty miles from Dover. Steamers run daily between the two towns. Calais exports an enormous number of eggs to England. It was a British possession from 1347 until 1558, and was the last of our possessions on the mainland of France.

CALCAREOUS ROCKS are those in which calcium carbonate is the chief ingredient. Chalk, limestone, and marble are the chief varieties. Chalk has been deposited in the ocean depths, and is composed of the shells of foraminifera; limestone has been formed from coral, in shallow seas, usually near land; marble has been produced from chalk or limestone by the heat due to volcanic action, which has given the rock a crystalline structure. Calcareous rocks are easily recognised by the application of hydrochloric acid, when carbon dioxide is at once given off in the form of bubbles.

CALCAREOUS SOILS are produced by the disintegration of calcareous rocks. Unless mixed with clay, they support but little plant life. Hence our chalk downs are bare open spaces which the agriculturist has not invaded.

CALCULATING MACHINES are contrivances for obtaining the results of arithmetical operations by mechanical means. The earliest machines were capable of working only the four simple rules of arithmetic, but others have been invented by which much more complicated operations, e.g., the extraction of the roots of numbers, may be performed. Such machines are of great value in constructing mathematical, astronomical, and actuarial tables, and in other cases where absolute accuracy is of supreme importance, and their aid has been sought by many business houses. The engineer's slide rule is an example of a simple calculating machine, while the more complicated include those of Babbage, Scheutz, and Burroughs.

CALCUTTA, the capital and largest seaport of India, is situated on the Hooghly, a branch of the Ganges. The harbour is one of the most expensive in the world to maintain, owing to the swift current, the amount of mud brought down, and a tidal bore, which occurs at spring tides. The exports include opium, rice, jute, tea, and indigo. Calcutta was founded by the East India Company, 1690, under the

name of Fort William; population, including suburbs, exceeds 1,000,000.

CALEDONIA, the name given by the Romans to that part of Scotland which is situated to the north of the Firths of Forth and Clyde.

CALEDONIAN CANAL, extends from Moray Firth, on the east coast of Scotland, to Loch Eil on the west. It connects Lochs Ness, Oich, and Lochy; the total length of the canal proper is 23 miles. It was opened in 1822, and can be used by boats up to 600 tons burden, but its commercial importance is not great.

CALENDAR. (1) An almanac or tabulated list of the days of the year. (2) The name given to the division of time into years, months, etc. Practically all civilised nations use the year, that is the time taken by the earth to make one complete revolution around the sun, as the standard of measurement. This cannot be expressed by an exact number of days, and in order to maintain the relative positions of the months and seasons, additional days are inserted or "intercalated." In the Julian Calendar, introduced by Julius Cæsar, the length of the year was taken to be 365¼ days. To avoid fractions, an ordinary year was reckoned as consisting of 365 days, with an additional day every fourth year ("Leap year"). The length of the year is slightly less than this estimate, and, in consequence, by 1582, a mistake of ten days had arisen. To correct this error, Pope Gregory ordered ten days to be dropped from the month of October in that year, and to prevent the mistake arising again, directed that the last year of each century should be regarded as a leap year, only when the number of the century was exactly divisible by four. This calendar has been adopted, at various times, by all European nations excepting Russia, which still uses the Julian, and is in consequence thirteen days in arrear. Our own country did not adopt the new calendar until 1752, when 11 days were left out in September. The Julian Calendar is known as the *Old Style* and the Gregorian as the *New Style.* The Jewish year consists of 12 lunar months, an additional month being intercalated at intervals. The Mohammedan year also consists of 12 lunar months, but as they do not intercalate, there is no correspondence between their months and seasons. [See *Era.*]

CALIF or **CALIPH,** the title given to the successors of Mohammed. It is equivalent to the term "Pope." The original caliphs were the princes who ruled over the Mohammedan dominions in Asia, their capital being situated at first at Medina, and later at Damascus and Bagdad. The title is now claimed by the Sultan of Turkey, though the Persians choose to regard the Shah of Persia as the real caliph.

CALIFORNIA, one of the United States of America, situated on the Pacific coast. It has an area of 158,000 square miles, and a population of about 1½ millions. The productions include wheat, wine, fruit, wool, and metals, especially gold, silver, and quicksilver. California was discovered by the Spaniards, and for a long time formed part of Mexico. It was ceded to the States in 1848, and in the following year occurred the famous gold rush of California. The chief towns are San Francisco and Sacramento.

CALIG'ULA, Emperor of Rome, 37–41 A.D. He is suspected of having caused the death of his predecessor Tiberius, and was remarkable for his brutality, licentiousness, and cowardice. He was probably insane; for he built a temple in his own honour, had himself worshipped as a god, and caused his horse to be appointed Consul. He was assassinated at the age of 29.

CALLIPERS, an instrument used to determine the diameter of circular and cylindrical objects, in shape something like a pair of compasses with curved legs.

CALMUCKS, the name given by the Russians and Turks to a branch of the Mongolian race inhabiting certain parts of Western and Central Asia. In the 17th century a number settled on the steppes of southern Russia, and there are still about 160,000 to be found there. The Calmucks are a nomadic race, Buddhists in religion, and they number, it is thought, about a million.

CALOMEL. See *Med. Dict.*

CALORIM'ETER, a piece of apparatus, usually a copper vessel, used to determine the specific heat of a substance; that is to determine the number of units of heat required to raise a unit mass of that substance through one degree of temperature.

CALPURNIA, daughter of a Roman Consul, who became the wife of Julius Cæsar. Her pleading with her husband not to attend the meeting of the Senate on the day appointed by the conspirators for his assassination forms a powerful scene in the second act of Shakespeare's Julius Cæsar.

CALTROP, a small iron ball fitted with sharp spikes. Caltrops were formerly used to check cavalry charges, numbers of them being strewn upon the ground in front of an army. They obtain their name from a thistle which grows in southern Europe.

CALUMET, the pipe of peace, used by the North American Indians. It possessed a marble bowl and a long reed stem, and was passed round amongst the warriors who were assembled to arrange terms of peace. It was also used in discussions before war; to refuse it on such an occasion was equivalent to voting for war.

CALVARY, a small eminence situated outside the walls of Jerusalem, the scene of the crucifixion of Christ. The word literally means, "place of a skull"; whether from the shape of the hill or not is uncertain.

CALVERT, FREDERICK GRACE, *b.* in London, 1819, *d.* 1873; was the first to manufacture pure carbolic acid, for which purpose he opened large works in Manchester. He also introduced many scientific improvements into the calico printing, iron puddling, and tanning industries.

CALVERT, GEORGE *b.* at Kipling, Yorkshire, 1582, *d.* 1632; a secretary of state in the reign of James I. He was created Baron Baltimore, and subsequently founded a settlement in what is now the State of Maryland. The principal town, Baltimore, derives its name from his title.

CALVIN, JOHN, *b.* in Picardy, 1509, *d.* 1564; a celebrated theologian and reformer, who continued the work of Martin Luther. He spent the greater part of his life at Basle and Geneva. His followers are called Calvinists, and at the present time include the Presbyterians, Independents, some sections of the Baptists, and nearly all the French Protestants.

CALYPSO, in classical mythology, a nymph living in an island called Ogygia. Ulysses was ship-wrecked on this island, and there remained seven years in her company. Calypso promised him perpetual youth if he would remain with her, but the hero preferred to return to his beloved Ithaca, where his wife Penelope awaited him.

CAM, a mechanical contrivance employed in machinery for converting circular motion into motion in a straight line or in some other direction. In a gas engine, e.g., the exhaust valve is opened by means of a rod, which is made to rise by means of a cam consisting of a metal disc working on an eccentric.

CAMARILLA, the name applied to a body of unofficial advisers or favourites of a sovereign. The word is of Spanish origin, and was originally applied to a clique which influenced Ferdinand of Spain during the years 1814–1820.

CAMBODIA, a part of the Indo-Chinese peninsula, occupying the southern portion of the basin of the Mekong. It has an area of 37,000 square miles, and an estimated population of 1½ millions. It has been a French protectorate since 1863.

CAMBRIA, the name applied by the Romans to Wales. It survives in the name, Cambrian mountains.

CAMBRIDGE. (1) The county town of Cambridgeshire, situated on the Cam, and famous for its university. The principal objects of interest are the various colleges and their chapels; population about 48,000. (2) A town in Massachusetts, the seat of Harvard University. It was called at first Newtown, but after the founding of the university its name was changed to Cambridge; population 90,000.

CAMBRIDGE UNIVERSITY. Refer to *Index.*

CAMDEN, WILLIAM, *b.* in London, 1551, *d.* 1623; was a famous antiquary and historian. His most famous work, *Britannia,* contains a descriptive and historical account of the British Isles. He also wrote *Annals of Elizabeth's Reign.* In 1623 he presented Oxford University with the Manor of Bexley, in Kent, for the endowment of a chair of history.

CAMEL, a beast of burden, found in North Africa, Arabia, and Central Asia. There are two varieties, the two-humped camel, found in the northern parts of Central Asia, and the so-called dromedary, with one hump, found in the warmer parts of Asia and in Africa. It is capable of going long periods without water—sometimes for weeks—and is consequently of great use in desert districts. Its load varies from 300 to 700 pounds, and those bred for speed can travel from 70 to 90 miles a day, though the ordinary camel travels at a very leisurely pace. The flesh and milk of the camel are important articles of food.

CAMELOT, the town at which King Arthur held his court. Its position is a matter of dispute; it was probably situated in Cornwall, and was either Tintagel or Camelford.

CAMEO, a precious stone, usually onyx, upon which figures are engraved in relief. The Italians are skilful in the making of cameos, in which shells take the place of onyx.

CAMERA OBSCURA, an instrument by means of which an image of external objects is cast on a screen in a darkened chamber. In the ordinary form the rays of light proceeding from the objects are reflected by means of a plane mirror set at an angle on to a convex lens, which brings them to a focus on the screen, usually a table with its surface hollowed out to give greater definition. A photographic camera is a form of camera obscura.

CAMERONIANS, a fanatical section of Scottish Presbyterians who, in the 17th century, headed by Richard Cameron, contended for the principles adopted by the Reformers between 1638 and 1650. The persecutions to which they were subjected served only to increase their

numbers, and to add to their fiery zeal. They afterwards broke up into a number of small societies. (2) A name given to the regiment of Scottish Rifles which was originally recruited (1689) from among the Cameronians. The Cameron Highlanders (79th Foot) are a distinct regiment.

CAMERON, VERNEY LOVETT. *b.* at Weymouth, 1844, *d.* 1894: a famous African explorer. He was sent, in 1872, to discover Livingstone, and in the following year met the natives conveying the dead body to the coast. Proceeding on his journey, he explored Lake Tanganyika, and proved that the Nile did not rise in it, as had been supposed. He then continued his journey westward, and succeeded in reaching the Atlantic. He was the first explorer to cross Africa from east to west.

CAMEROONS, a district on the Guinea Coast, West Africa, which derives its name from a river flowing through it. It has an area of 191,000 square miles, and a population of about 4½ millions, of which about 600 are Europeans. With the exception of a small British station, Victoria, the whole of the district is under German protection. It produces palm-oil and ivory.

CAMISARDS, the name given to the French Protestants of the Cevennes, who, in 1702, took up arms in defence of their religious liberties.

CAMOENS, LUIS DE, *b.* at Lisbon, 1524, *d.* 1579; the national poet of Portugal. He wrote his great work, "The Lusiads," whilst living in exile at Macao, a Portuguese settlement on an island in the Bay of Canton. His work, an epic treating of the doings of Da Gama and the Portuguese merchant adventurers, was not appreciated during his lifetime, and he died in extreme poverty.

CAMORRA, a secret society which had branches in all parts of the old kingdom of Naples. Its members were recruited chiefly from the criminal classes, but also included members of the aristocracy and of the army. They practised smuggling and brigandage, and acquired considerable political power. Many attempts have been made to suppress the organisation, and even as late as 1901 the Italian Government took active measures against it.

CAMPAGNA, a desolate, malaria-stricken tract of country, extending north and south of Rome for a distance of 100 miles, and with a width of from 30 to 40 miles. Ruins of temples, amphitheatres, monuments, and aqueducts are found there. The soil is generally fertile, but the land is sparsely populated.

CAMPANILE, a lofty bell tower, standing apart from other buildings. Campaniles are common in Italy, and are frequently of great architectural beauty. Among the most famous, are the "Leaning Tower" of Pisa, and the Campanile of St. Mark, Venice. The latter, which collapsed in 1902, and will probably be rebuilt exactly as it stood before, was a square tower, standing 325 feet in height.

CAMPBELL, COLIN, *b.* at Glasgow, 1792, *d.* 1863; a famous British General, one of the most brilliant soldiers of the 19th century. He served in the Peninsular War, and commanded the Highland Brigade during the Crimean War. The defeat of the Russians, both at the Alma and at Balaklava, was largely due to him; in the latter battle he was in command of "the thin red line" that defended the little port of Balaklava. On the outbreak of the Indian Mutiny, in 1857, he was appointed commander of the British forces. He relieved Lucknow, and successfully fought in turn against every city in revolt. Before the end of the year 1858, the embers of the rebellion were finally stamped out. For his services he was granted a pension of £2,000 a year, and created Baron Clyde. He is buried in Westminster Abbey.

CAMPBELL, THOMAS, *b.* at Glasgow, 1777, *d.* 1844; wrote both prose and verse, but is remembered chiefly for his lyric poetry. Among his best known poems are: the "Pleasures of Hope," "Hohenlinden," "Ye Mariners of England," and "Gertrude of Wyoming."

CAMPERDOWN, a tract of sandy hills, or downs, about thirty miles north of Amsterdam. Off the coast here, a British fleet under Admiral Duncan gained a great victory over the Dutch, 1797.

CAMPHOR is distilled from the wood of a tree, *Cinnamomum camphora*, a native of Eastern Asia. It is used chiefly to preserve clothing from the attacks of moths, though naphthalene is now being used largely for this purpose. It has also certain medicinal uses [Refer to *Med. Dict.*].

CAMPION, EDMUND, *b.* in London, 1540, *d.* 1581, an English Jesuit and martyr. Ordained deacon in the Church of England, he afterwards joined the Church of Rome, and was sent, 1580, by the Society of Jesus on a mission to England. His preaching had a great effect. His career was violently cut short. He was tried as a conspirator, thrice tortured, and hanged at Tyburn.

CANADA was originally settled by the French, who founded Quebec, 1609, and acquired the country bordering on the St. Lawrence as far west as Montreal. New Brunswick and Quebec were ceded to Great Britain in 1713, and the remainder of Canada fell into British hands during the course of the Seven Years' War, 1756–1763, after the capture of Quebec by General Wolfe, 1759. The North-West Territory was administered by the Hudson Bay Fur Company until 1870, when it was taken over by the Canadian government. In 1837 the various provinces became self-governing, and in 1867 all, with the exception of Newfoundland, formed a confederation with the name of "The Dominion of Canada." For its geography refer to "Canada" in *Index*.

CANADA BALSAM, a resinous substance obtained from the balsam fir. When fresh it is a liquid, but after being kept for some time becomes a solid. It is used in the manufacture of varnish and in the preparation of slides for the microscope.

CANARY, a songbird originally found in the Canary Islands. In its wild state its usual colour is olive green, but the captive bird, as the result of careful attention to breeding, is more generally yellow. The canary belongs to the finch tribe, and its powers of song are greatly improved by careful training.

CANARY ISLANDS, a group of volcanic islands, belonging to Spain, situated about sixty miles from the north-west coast of Africa. The group has an area of 2,800 miles, and a population of 335,000. The principal productions are wine, silk, and fruits, especially bananas and tomatoes. The largest islands are Teneriffe and Grand Canary. Santa Cruz and Las Palmas are the principal towns. The people are of Spanish origin, the original inhabitants having been exterminated after the conquest of the islands.

CANARY WINE, a white wine produced in the Canary Islands, which enjoyed great popularity from the 16th to the middle of the 19th century.

CANDAHAR, a town of Afghanistan, commanding the western entrance of the Bolan Pass. It was occupied by the British in 1839 and again in 1879.

CANDLE FISH, a small fish resembling the smelt, found on the Pacific coast of North America, remarkable for the oily nature of its flesh. It is used as a food, and obtains its name from the fact that the Indians use the dried bodies as candles.

CANDLEMAS, a festival held 2nd February, in commemoration of the Presentation of Christ in the Temple and the Purification of the Blessed Virgin. It is so called because of the important part which lighted candles play in the Roman Catholic Church in the celebration of the festival, and because the candles to be used for ecclesiastical purposes during the year are then consecrated.

CANNES, a small town situated on the Mediterranean coast of France. It possesses a delightful climate, and is much resorted to by invalids. Cannes was several times visited by Queen Victoria, and contains a memorial to the Duke of Albany, who died there in 1884; population about 34,000.

CANNIBALISM, the eating of human flesh. The practice was at one time exceedingly common, but is now confined to certain parts of Africa, New Guinea, and Polynesia. The rules which seem to have governed the practice varied considerably in different districts; some tribes ate only the bodies of their captives or enemies, whilst others consumed only their relatives or tribesmen.

CANNING, a method of preserving meat, fish, fruit, and vegetables. The food to be preserved is placed in the tin, heated for a sufficient time to expel the air and to destroy bacteria, and the tins are then hermetically sealed. Where oil is used as a preservative the heating is dispensed with.

CANNING, CHARLES JOHN, (EARL), *b.* 1812, *d.* 1862; son of George Canning, a politician who held various offices in the ministries of Sir Robert Peel and Lord Aberdeen. In 1856 he was appointed Governor of India, and in the following year the Indian Mutiny broke out. England owes much to his steady nerve, firm will, and calm courage during that great crisis in her history.

CANNING, GEORGE, *b.* in London, 1770, *d.* 1827: a famous statesman, orator, and scholar. He was a supporter of Pitt, and, as secretary of state for foreign affairs, was largely responsible for the campaign in Spain (Peninsular War), which did so much towards weakening the power of Napoleon. He became premier in 1827, about five months before his death.

CANNING, STRATFORD, (VISCOUNT), *b.* in London, 1786, *d.* 1880; cousin of George Canning, a brilliant diplomatist, who was for many years British ambassador at Constantinople. He occupied this post at a particularly trying time, when Russia was intriguing to obtain control of the Balkan peninsula, and was suspected of aiming at the conquest of Turkey. Canning conducted the negotiations which led to the Crimean War, 1854.

CANNOCK CHASE, a heath-covered district of South Staffordshire, rich in coal and iron.

CANNON. See *Artillery*.

CANON. (1) A church dignitary holding office in a cathedral. (2) In the Roman Catholic church, the register which contains the names of the saints. (3) The name applied to those portions of the Holy Scriptures which are regarded by the Church as inspired (4) In music, a composition in which the several parts take up the same melody in succession.

CAÑON, pronounced *canyon*, a deep gorge with more or less perpendicular sides, which has been cut out in the course

of ages by a river. Cañons occur in districts where the rocks are soft, and the strata arranged horizontally. The most famous is the cañon of the Colorado river in the United States. It has a depth of 6,000 feet, a width of over eight miles in places, and extends for about 200 miles.

CANONICAL HOURS, those times appointed by the Church for daily public worship. In the Western Church these were seven in number, Nocturns or Matins and Lauds, before daybreak; Prime, an early morning service; Tierce, at 9 o'clock; Sext, at noon; Nones, at 3 p.m.; Vespers or Evensong, about 4 p.m.; and Compline, at bedtime.

CANONISATION, the act in the Roman Catholic Church of decreeing that a certain deceased person shall be numbered among the saints. It is so called because the name of the new saint is added to the canon or register of saints. At the same time a festival day is appointed, in most cases the anniversary of the saint's death. Previous to canonisation, adequate proof of the candidate's purity and holiness must be submitted, and, generally, it is necessary to produce evidence that miracles have been performed by the aid of his relics. The ceremony cannot take place within fifty years of the saint's death, and usually the interval is much greater.

CANOPY, originally, was the name given to a mosquito net. It is now applied to the stone covering placed over a statue to protect it from the weather, and to the overhead hangings of a bed.

CANOSSA, a ruined castle, situated in Italy, near the town of Reggio. In 1077 the Emperor Henry IV. of Germany stood outside the castle for three days, bareheaded and barefooted, humbly waiting to be received and pardoned by Pope Gregory VII, who had excommunicated him.

CANOVA, *b.* near Venice, 1757, *d.* 1822; one of the greatest of modern sculptors. Many beautiful examples of his work are to be seen in Rome, Venice, and Florence. Canova was created Marquis of Ischia by Pope Clement VII.

CANSO, GUT OF, a strait 17 miles long, and 2½ broad, which separates Nova Scotia from Cape Breton Island.

CANTERBURY. (1) A city situated in Kent, famous for its cathedral. The Archbishop of Canterbury is the "Primate of all England." In 1170 Thomas à Becket, the archbishop, was murdered on the steps of the altar by four knights in the service of Henry II, and for a long time afterwards Canterbury was visited by pilgrims from all parts of Europe. (2) A province of South Island, New Zealand, which exports wool and an enormous quantity of frozen mutton and lamb.

CANTERBURY TALES, a series of tales, chiefly in verse, written by the poet Chaucer in the 14th century. The tales are told by the members of an imaginary band of pilgrims journeying from London to Canterbury, to visit the shrine of Thomas à Becket.

CANTHARIDES. See *Med. Dict.*

CANTILEVER. (1) In architecture, a bracket which supports a cornice or balcony, or a girder fixed into a wall, with one end free. Upon a series of girders so placed galleries are built and the use of pillars is rendered unnecessary. In modern public buildings, theatres especially, galleries are usually built in this way. (2) In bridge-building, a cantilever is a girder which has one end fixed in a pier and the other end free; in the next pier another girder is similarly fixed, so that the free ends face each other. The intervening space is bridged over by a third girder, and by this means a span of the bridge is eventually completed. The Forth bridge is built on this principle.

CANTON, the chief port of Southern China. It is situated on the Pearl or Canton river, about 60 miles from the sea, and exports tea and silk. It was opened as a treaty port in 1842, and was occupied by a combined French and British force from 1857 until 1861. About a quarter of its inhabitants live on boats moored in the river; population about 1,500,000.

CANTONMENTS, the name given to districts occupied by a military force, when that force, instead of being concentrated in one central camp, is scattered over the district in the various towns and villages. It is also the name given to the military camps in India. These camps are situated at some distance from the cities, and are practically barracks with a small village attached.

CANUTE or **KNUT,** *b.* 994, *d.* 1035; was a King of Norway and Denmark, who fought with Edmund Ironside for the throne of England, and on Edmund's death became sole king. His reign (1017–1035), was on the whole peaceful and prosperous; for he was a wise and just ruler, placing Dane and Englishman on an equal footing.

CAOUTCHOUC. Same as *India-rubber.*

CAPE BRETON ISLAND, an island in the Gulf of St. Lawrence, separated from Nova Scotia by the narrow strait of Canso, with an area of about 3,000 square miles. The inhabitants are engaged in fishing, lumbering, and coal mining. It was discovered by Cabot, and now forms part of the province of Nova Scotia.

CAPE COLONY was originally settled by the Dutch, in the 17th century, and became a British possession in 1806. There were but few British settlers in the colony previous to the discovery of diamonds, 1870. During the Transvaal War, 1899–1902, many of the Dutch settlers in Cape Colony joined their kinsmen and fought against us. The future prosperity of the Colony depends largely upon the harmonious working together of the British and Dutch elements. For its geography refer to "Cape Colony" in *Index.*

CAPERCAILZIE is a bird of the grouse family. The cock is black, the hen mottled brown. It occurs in central Scotland and Sweden. The flesh has a taint of turpentine, due to the fir shoots on which the capercailzie mainly lives.

CAPILLARIES. See *Med. Dict.*

CAPILLARITY, the name given to a property which liquids are seen to possess, when open tubes of small bore are placed vertically in them. If the liquid be one which adheres to the glass, water for example, it is noticed that the level inside the tube is higher than that outside, and the surface instead of being horizontal is slightly concave. If, on the other hand, a liquid be used which does not adhere, such as mercury, the level in the tube is lower than the outside level, and the surface is convex.

CAPITAL PUNISHMENT. Many governments still deem it expedient to inflict the punishment of death for certain offences; while others, including Holland, Portugal, certain Swiss Cantons, and some of the States of the U.S.A. have abolished the death penalty altogether. In the 18th century no less than 160 offences were punishable by death in England, but practically the only crimes that now demand the extreme penalty of the law are murder and treason. Hanging is the method resorted to in the British Islands, decapitation by means of the guillotine in France, and electrocution in certain of the United States. The king may order decapitation in cases of treason, and, by the Articles of War, persons condemned to death by courts martial may be shot.

CAPITOL, the citadel of ancient Rome, situated at the summit of one of the seven hills upon which the city was built. It contained the temples of Jupiter, Juno, and Minerva, and in the first named the state papers were stored. It was destroyed and rebuilt several times. The present capitol was designed by Michelangelo. The name is also applied to the building, situated at Washington, in which the United States Congress holds its sittings.

CAPITULATION, the name given in warfare to a formal surrender upon terms previously accepted by both parties, as distinguished from an absolute surrender, which is not preceded by any such arrangement.

CAP OF MAINTENANCE, an ornament of State consisting of a cap with the brim turned up, deeply in front, but coming to two points behind, borne before the sovereigns of England in their coronation procession. The term is also applied to an ornament carried in front of the mayors of certain cities on state occasions.

CAPON, a young, castrated cock chicken which is fattened for the table.

CAPRERA, a small, rocky, and barren island, lying off the north-east coast of Sardinia. This was the home of Garibaldi from 1854 till his death in 1882.

CAPRI, a small rocky island, situated in the Bay of Naples, and famous for its blue grotto.

CAPSICUM, the name given to several different plants found in the tropical parts of South America and in the East and West Indies. These plants produce a small red or yellow pod, which contains a number of small seeds. The pods are commonly called chillies, and are much used in tropical districts as a condiment. The seeds, when dried and ground, yield cayenne pepper.

CAPSTAN, a cylindrical drum, capable of rotating about a vertical spindle. It is used on ships to lift cables, anchors, and other heavy weights, and is worked by means of long levers inserted horizontally into holes situated at the top of the drum. The capstan is prevented from recoiling by pieces of iron, called "pauls," which fit into notches cut in the base. Capstans worked by steam are very common.

CAPUCHINS, a branch of the Franciscan order of Friars, established 1525. The title was originally a nickname, and is derived from "Capuce," the name of a kind of cowl which the members of this branch wore as a head dress.

CAPUT MORTUUM, "dead head," the name given by the early chemists to the residuum of a substance after the escape of all gaseous bodies; and hence, later, the term applied to anything from which the spirit had departed, although the form remained.

CARACTACUS or **CARADOC,** a British chieftain who ruled the Silures of South Wales, and bravely resisted the Romans from 43 to 50 A.D. Being defeated by Ostorius Scapula, near Church Stretton, he fled to the Brigantes of Cheshire, whose queen surrendered him to the Romans. In 51 he graced the triumph of the Emperor Claudius, whom he much impressed by his noble bearing.

CARAMEL, burnt sugar used for colouring wines and spirits. Sugar, when heated to 160°, melts. If the temperature be raised to about 212°, the water is driven off and the dark brown substance called caramel remains. Caramel is formed whenever substances containing sugar are so heated, as in the roasting of meat or of coffee.

CARAPACE, the name given to the horny shield on the back of such shell-fish

as the crab and lobster, and to the bony covering of such creatures as the turtle and the tortoise. The lower shield is called the *plastron*.

CARAT. (1) A weight of four grains Troy, used in weighing precious stones. (2) The $\frac{1}{24}$th part of any weight of gold alloy. The number of carats of pure gold in any alloy, therefore, indicates the proportion of gold in it; thus "18 carat gold" is an alloy that contains 18 parts out of 24 pure gold, and 6 parts some baser metal.

CARAVANSARY, a kind of inn, situated on the caravan routes of the East, usually at remote distances from towns or villages. Some supply the traveller with shelter only, while others provide him with necessaries for the journey, including guides.

CARBERRY HILL, a ridge 500 feet high, situated about 7 miles south-east of Edinburgh. The English left wing occupied it before the defeat of the Scots at Pinkie, in 1547; and, in 1567, it was the scene of the surrender of Mary Queen of Scots to her nobles previously to her imprisonment in Lochleven Castle.

CARBON occurs in a free state either in the amorphous form of graphite, or black lead, or in the rare crystalline form of the diamond. In chemical combination, however, it occurs in every organic substance, and it is usually to be obtained from them by combustion. Common charcoal is an artificial form of carbon obtained by burning wood. The cindery remains of burnt meat, coals, leaves, or indeed of any charred form of plant or animal life, represent the carbon contained in their composition. We may look upon this element as the material base of organic life. The diamond is the great mystery of carbon. It is a pure crystal of that substance, and yet we have been unable to effect the crystallization artificially. Balzac's great romance, "La Recherché de l'Absolu," deals with the fascinating quest of this gem.

CARBONARI (charcoal burners), a political secret society that sprang into existence in Italy early in the 19th century. Its influence spread to all parts of that country and extended into France. More than half a million persons, including large numbers of the clergy and military, are said to have joined its ranks in a single month of 1820. The society consisted of a number of lodges known as *huts*. There were several degrees, each with its distinct ritual. While the Carbonari somewhat resembled Freemasons in their organisation and ritual, they differed from them in their objects, which were purely political, having for their end and aim the overthrow of despotic governments.

CARBONIC ACID, Carbon di-oxide, or choke-damp, is a gas poisonous to animals, and it will neither burn nor support combustion. It is constantly being poured into the air by the respiration of human beings and animals, and by the consumption of fuel in fires, yet the proportion of the gas in the air remains constant. The cause of this is that carbonic acid is absorbed by vegetation, in much the same way as oxygen is by animals; and, just as the animal world supplies the plant world with the carbonic acid necessary for the formation of wood, so, too, the plants exhale oxygen for the support of animal life. A secondary property of this gas has received much attention of late years, viz., its solubility in water. The solubility is increased by pressure, and so is utilised as a means of aerating waters. Carbonic acid is readily liquefied under extreme pressure, and *sparklets* are now made, containing sufficient liquefied gas to aerate an ordinary syphon of water. The name carbonic acid is not a correct one, unless it be applied to the solution of the gas in water.

CARBURETTOR, that part of an oil-engine in which the vapour from the oil mingles with a current of air, and so forms an explosive mixture. See *Automobile*.

CARDIFF, the largest city and chief port of Wales, situated on the estuary of the Taff, in Glamorganshire. The population increased from about 1,000 in 1801 to above 166,000 in 1901. It has excellent dock accommodation. Its chief exports are coal and iron, and its principal industries iron smelting and ship-building.

CARDINAL, a prince of the Roman Catholic Church, next in rank to the Pope. The Cardinals, seventy in number, constitute the Sacred College, which elects one of its number as Pope, and manages the general policy of the R. C. Church.

CARDINAL VIRTUES. According to the ancient classification of the moral virtues, they are justice, temperance, prudence, and fortitude.

CARDS (playing). The English pack contains 52 cards, divided into four equal suits: hearts, clubs, spades, and diamonds. A duty of 3d. has to be paid upon every pack. Cards are of ancient origin. They were, perhaps, first used in the East, but were common throughout Europe in the Middle Ages. The early cards were painted; and, in the Italian form, cups take the place of hearts, swords of spades, and coins of diamonds.

CAREW, BAMFYLDE MOORE, *b.* 1693, *d.* about 1770; commonly called "the king of the gipsies." The son of a Devonshire clergyman, he adopted the life of a vagrant. He was fond of begging in character, and was the idol of gipsies.

CAREY, WILLIAM, *b.* at Paulersbury, Northamptonshire, 1761. *d.* 1834; a distinguished oriental scholar, and the founder and first missionary of the Baptist Missionary Society. He was professor of Oriental languages at Calcutta for 29 years, and under his direction the whole Bible was translated into six, and the New Testament into twenty-one, Hindustani dialects. He also published grammars and dictionaries of native languages.

CARIBS, an aboriginal American Indian race, which formerly occupied many of the West Indies. These brave, intelligent savages are still found in the north of South America, and a part of Dominica is reserved for them. The Lesser Antilles are known as the Caribbean Isles, and the Caribbean Sea lies between the Antilles and Central and South America.

CARILLON, a series of bells tuned to a musical scale, and made to produce chants and short popular airs. The hammers are lifted by means of a number of pins fixed in a barrel, which is set in motion by clock-work at regular intervals.

CARISBROOKE CASTLE, a Norman castle in the village of Carisbrooke, Isle of Wight, about one mile south-west of Newport. It has a well 200 feet deep from which a donkey in a wheel draws water. It was the prison of Charles I. for thirteen months, in 1647-8. A tesselated pavement and other remains of a Roman villa were found near the castle in 1859.

CARLILE, WILSON, founder of the *Church Army*, which see.

CARLISLE, an ancient city, and the county town of Cumberland, situated upon the Eden. It is an important railway centre, 299 miles from London. The fine cathedral, in which Sir Walter Scott was married in 1797, was founded by William II., who also built the castle. David I. of Scotland died there, after the battle of the Standard, in 1153; and Mary, Queen of Scots, was imprisoned in the Castle in 1568. The Parliamentarians took it twice in the Civil War, and the Jacobites held it in 1745.

CARLISTS, THE, supporters of Don Carlos of Spain, *b.* 1788, *d.* 1855; brother of Ferdinand VII. of Spain. On the death of Ferdinand in 1833, in spite of the Salic Law, the daughter of his fourth marriage, Isabella, aged three years, was proclaimed queen. A fierce civil war arose, which ended, after varied fortune, in the loss of the Carlist cause in 1840. Carlos VII., a grandson of Don Carlos, revived the quarrel which finally closed in 1876.

CARLOVINGIANS, descendants of Charles the Great, commonly called Charlemagne, who ruled the "Holy Roman Empire" of the West of Europe from 800 to 814. His heirs ruled in Germany until 911, and in France until 987.

CARLSBAD or **KARLSBAD,** one of the most fashionable spas in Europe, situated in the wooded highlands of Bohemia, about 75 miles north-west of Prague. The twelve hot mineral springs daily discharge about 2,000,000 gallons of water, containing soda sulphate, at a temperature of 115° to 165° Fahrenheit. The Emperor Charles IV. founded it in 1347; population exceeds 15,000.

CARLSCRONA, the principal and strongly fortified naval station of Sweden. It is built upon rocky islands in the Baltic Sea, in the south of Sweden; population about 24,000.

CARLTON CLUB, the Conservative Club, founded by the Duke of Wellington in 1832. The club premises are at 94 Pall Mall, London, and the membership is limited to 1800.

CARLYLE, THOMAS, *b.* at Ecclefechan, Dumfriesshire, 1795. *d.* at Chelsea, 1881; one of the greatest English authors of the 19th century. At the age of fifteen he entered Edinburgh University to prepare for a proposed clerical life. From 1814, for some years, he was a schoolmaster and tutor. In 1826 he married Jane Welsh, and, though settled upon a Scotch farm, continued the literary labours which he had commenced while teaching. He went to Chelsea in 1834, and lived in Cheyne Row until his death. His principal works are "Sartor Resartus," "The French Revolution," "Heroes and Hero Worship," "Oliver Cromwell's Letters and Speeches," and "Frederick the Great."

CARMAGNOLE. (1) A form of vest worn by the revolutionaries who, in 1792, came to Paris from the south of France to assist in the Revolution. (2) A song and dance indulged in by the Republicans at popular gatherings at the beginning of the French Revolution.

CARMEL, limestone hills of Palestine, which terminate in a cape, ten miles south of Acre. They are thickly wooded with pine, olive, and walnut trees, and contain numerous caves. One of these hills was the scene of the event described in 1 Kings xviii.

CARMELITES, the Order of our Lady of Mount Carmel, founded as a society of hermits in 1156 by Berthold, a Calabrian monk, but claiming to have existed from the days of Elijah. They were driven by the Saracens into Europe, and adopted the monastic mode of life. Previous to 1536 the order possessed 52 houses in England; to-day there are seven.

CARMEN SYLVA, *b.* 1843, the nom-de-plume of the poet Queen of Roumania. She lost her only child in 1874 and turned to literature for consolation. She is much beloved by her subjects.

CARMINATIVES. See *Med. Dict.*

CARMINE. See *Cochineal.*

CARNARVON, situated about eight miles from Bangor, upon the Menai Straits. It was a Roman station, and in 1282 was captured by Edward I., who built the still existing castle, in which his son Edward was born.

CARNATIC, THE, an old division of Hindustan on the eastern or Coromandel coast, 580 miles long, and 60 to 110 miles broad. The principal rivers are the Penaar and Cauvery, and the chief towns Madras, Pondicherry, and Trichinopoli. The climate is the hottest in India. The products include rice, cotton, and sugar. Numerous large temples bear testimony to its former wealth and civilization. It was conquered by the British after a fierce contest with the French, in 1783.

CARNEGIE, ANDREW, *b.* at Dunfermline, 1835; an American millionaire, steel manufacturer, and philanthropist. His father, an emigrant weaver, took him to America while a boy. After filling various humble offices, he made some successful speculations in oil-wells, which laid the foundation of his vast wealth. Later he founded ironworks at Pittsburg, which, giving employment to 20,000 men, are the largest in the world. In 1901 he formed a trust, with 10,000,000 dollars, to provide scholarships tenable by Scotsmen at Scotch Universities. He has founded numerous free libraries, especially in the British Isles; and in 1902 he presented Lord Acton's famous library of 60,000 to 80,000 volumes to Mr. John Morley, by whom it was presented to the University of Cambridge. He has also provided a suitable building at The Hague for the Court of Arbitration, and has extended to the United Kingdom his Hero Fund, for the benefit of those who have been injured in trying to save others or if losing their life in the attempt of those dependent on them.

CARNIVAL, literally "farewell to flesh," is the name of the period of three days immediately preceding Lent. This time is observed in Roman Catholic countries as one of revelry and merry-making, and a relic of the custom is still found in the English observance of Shrove Tuesday. In the south of France, and in Italy, the season is given up to processions, and masquerading, "battles of flowers," and the throwing of confetti. The carnival at Rome is probably the most notable one now held; but the change, on Ash Wednesday, to the religious solemnity of Lent is as striking as the buffoonery of the previous days. Shorthouse's "John Inglesant" contains an excellent account of an Italian Shrove-tide and Ash Wednesday in the days of Charles I.

CARNIVORA is an order of mammals. Although the name signifies "flesh-eaters," certain members of the order feed on a vegetable diet; for instance, some species of bears, though even in their case the teeth are better adapted for a flesh diet. The order does not, of course, include every animal which feeds on flesh. The dog forms the central type, around which are grouped the cat, bear, and weasel tribes amongst land carnivores, whilst the seals and walruses form the marine examples of the order. The latter connect the order with the whales. The carnivora are distributed over the whole world, except Australasia, but are scantily represented in South America.

CAROLINE, AMELIA ELIZABETH, *b.* in Brunswick, 1768, *d.* 1821, the unfortunate wife of "the first gentleman in Europe," as the Prince Regent was called. They lived apart after the first year of married life, and the country looked on her as the victim of the prince's selfish life. She travelled, and is known to have behaved with grave impropriety during a lengthened stay at Como, in the company of an Italian named Bergami. On the accession of her husband, George IV., she entered London in state, to claim recognition as queen. A bill was introduced into the House of Lords to effect her divorce, but the able defence made on her behalf by Brougham, aroused public feeling in her favour, and the bill was dropped. At the king's coronation, however, she was denied admission at the doors of the abbey. She died within a few weeks of this disgrace.

CAROLINE WILHELMINA, of Anspach, *b.* 1683, *d.* 1737; the wife of George II. and a woman of great ability and strength of character. She had great influence with the king, and generally exercised it in the interests of the country. She highly appreciated the services of Walpole, the Prime Minister, in his successful efforts to keep England at peace, and supported his wise measures in her private converse with the king. She also aided the king in selecting suitable men for the public service.

CARP, an edible fresh-water fish found chiefly in deep still waters in Europe and Asia. It is abundant in the British Isles, multiplies very rapidly, and is reputed to live to a great age. It often attains a length of 4 to 5 feet. The beautiful gold-fish in our ornamental ponds and glass globes is a member of the carp family, introduced here probably from China.

CARPENTER, WILLIAM BENJAMIN, *b.* at Exeter, 1813, *d.* 1885; famous for his work in biology and in medicine. His "Principles of General and Comparative Physiology," published in 1838, determined the methods of modern biological teaching. He was a keen advocate of deep-sea dredging, and took part in three expeditions of this nature.

CARRARA, an Italian town, situated close to the Mediterranean coast, about 40 miles north of Leghorn, and celebrated for its inexhaustible supply of excellent marble, derived from the neighbouring hills. The population, exceeding 26,000, depend for a livelihood upon the quarries, which have been worked from the earliest ages.

CARROLL, LEWIS. See *Dodgson.*

CARRON, a Scotch village situated upon the Carron, in Stirlingshire, about two miles from Falkirk, and famous for its ironworks. "Carronades" (a kind of short cannon) were first manufactured here.

CARSE OF GOWRIE, one of the most fertile districts of Scotland, consists of the alluvial land lying along the northern banks of the Tay, and occupying portions of Perthshire and Forfarshire.

CARTEL, (1) a challenge to a duel; (2) a written agreement between hostile nations concerning the exchange of prisoners of war. Cartel ships engaged in this duty must carry no cargo or arms; (3) in Germany a trade "combine."

CARTHAGE, one of the most celebrated of ancient cities and a keen rival of Rome. It was founded by Phœnicians, about 850 B.C., upon a strongly fortified peninsula, 30 miles in circumference, near Tunis, in North Africa. The inhabitants, who were chiefly engaged in commerce, at one time occupied Sicily, Malta, Corsica, Sardinia, and parts of Spain. The Carthaginians waged three wars with Rome, known as the Punic Wars; the first commenced, 265 B.C., and the third concluded with the complete destruction of their city, 146 B.C.

CARTHUSIANS, a monastic order living under a severe order of discipline, founded by St. Bruno at Chartreuse in 1086. The order extended and possessed houses in France, Italy, Switzerland, and Spain. The French monasteries, except La Grande Chartreuse, were destroyed during the revolution, and the inmates of the latter were expelled in 1903.

CARTIER, JACQUES, *b.* St. Malo, 1494; a celebrated French navigator. He made three voyages to Canada, between 1534 and 1541, and explored much of the gulf and river, which he named St. Lawrence.

CARTOON, a pictorial design drawn upon strong paper for fresco painting, or for tapestry. Raphael's cartoons, based upon New Testament subjects, were designs for the noted Vatican tapestries. The seven that still exist are in the Victoria and Albert Museum, South Kensington. This term is also applied to political sketches in the newspapers.

CARTRIDGE, a case of stout paper, metal, or other material containing the charge for a fire-arm. It is always of a size to exactly fit the bore of the firing-piece. When intended for a breech-loading rifle, the bullet is usually attached, and a fulminating cap inserted to fire the charge.

CARTWRIGHT, EDMUND, *b.* at Marnham, Nottingham, 1743, *d.* 1823; a clergyman, and the inventor of the power loom. In 1785 he first used his loom at Doncaster; but in consequence of its unpopularity he removed to Manchester, where, amid riots, his premises were burnt down. He received a Government grant of £10,000, in 1809, as some return for his invention.

CARYAT IDES (i-des) figures of women draped in Grecian garments, used as supporting columns. They were so named from the Greek town of Caryæ, whose inhabitants were reduced to slavery by the Greeks for joining the Persian invaders. Male figures, used in a similar way, are called *Atlantes.*

CASABIANCA, LOUIS, *b.* in Corsica, 1754, *d.* 1798; the captain of the flagship *L'Orient*, at the battle of the Nile. When mortally wounded, he perished with his ten-year old son in the flames of his burning ship. The incident has become familiar through Mrs. Hemans's well-known poem.

CASEMATE, a shell-proof vault constructed in the wall of a fortress, and provided with port-holes for cannon. The name is also given to the heavy-armoured bulk-head of a war-ship, containing guns, which are run out through port-holes, and so trained and fired.

CASE-SHOT, or canister, a metal tube filled with bullets, or, in an emergency, with nails and other articles, and closed with a circular or wooden plate. The charge, when fired, immediately scatters, and is therefore only effective at short range.

CASH, originally a case for money, now the money itself. It includes any readily available medium of exchange, whether coin, bank-notes, bills of exchange, or other similar instruments. Cash is also the name of the thin threaded Chinese copper coins, of which 22 are worth one penny.

CASHMERE, (1) A familiar spelling of Kashmir, a native state among the Himalayas, on the upper waters of the Indus, in north-west India. It is controlled by a British Resident, and is important as a frontier state. The military station of Gilgit watches its northern passes, and Chitral guards the west, and is occupied by British troops. It is a land of valleys, and its chief town, Srinagar, lies in the famous Vale of Cashmere. (2) A fabric woven from the long, light, silky hair of the Cashmere goat. The hair is brought from Tibet and the highlands of Bokhara, to be spun

and dyed by the Cashmere women. The men are the weavers, and they take two or three years to finish a pair of the finest shawls, each colour being worked with a separate needle. Shawls of the best quality fetch upwards of £100 in London. France makes the best imitations, but has to use Asiatic materials. The introduction of the Cashmere goat into Europe and America has not been attended with success.

CASKET LETTERS, a number of letters and other documents said to have been written by Mary, Queen of Scots, to Bothwell. The letters implicated Mary in the murder of Darnley, but doubts have been thrown on their genuineness by many historians.

CASPIAN SEA, the largest inland sea in the world, with an area exceeding 170,000 square miles, situated to the south-east of Russia. It lies in a deep depression, and, in a past age, probably formed with the Black and Aral Seas a vast inland sea. Salmon and sturgeon are abundant and the seal fishery is important. The rivers Ural and Volga flow into it. Astrabad, Baku, and Astrakhan are the chief ports. Waterways, consisting of rivers and canals, connect it with the Black and Baltic Seas.

CASQUETS, a group of very dangerous granite rocks, about 8 miles north-west of Alderney, upon which lighthouses with revolving lights, visible for 15 miles, have been erected. In 1119, William, son of Henry I., was wrecked upon them in the *White Ship*.

CASSANDRA, a beautiful daughter of Priam, king of Troy. Apollo gave her power to prophesy, but, in anger, determined that none should believe her. Her warnings were in consequence disregarded by the Trojans, who considered her mad. On the capture of Troy, she fell to the lot of Agamemnon, whose wife slew her.

CASSATION, a legal term in use on the continent of Europe, signifying the annulling of any act or decision which is contrary to law. The term is applied particularly to the supreme court of appeal in France, which is empowered to revise the finding of any inferior court on a point of law, and to order the case to be retried.

CASSAVA, or manioc, a tropical plant of the West Indies and South America, which has very fleshy roots. By washing the peeled and pulped roots, a starch is obtained, which when roasted is called tapioca, and when dried in the sun Brazilian arrowroot. The roots of one kind of manioc contain poison, which is removed by boiling.

CASTE. Refer to *Index*.

CASTILE, a former kingdom and division of Spain. It is a tableland, above 2,000 feet high, crossed by high mountains, and drained by the rivers Douro, Tagus, and Guadiana. The chief towns are Madrid, Toledo, and Valladolid. In 1479 Ferdinand of Aragon and Isabella of Castile combined their kingdoms, through marriage, and laid the foundation of modern Spain.

CASTLEREAGH, LORD, *b.* 1769, *d.* 1822; a famous politician and diplomatist, was a Member of the last Irish Parliament, and assisted in passing the Act of Union. He became Minister of War in the British Parliament in 1805, and Foreign Secretary in 1812. He was the leading spirit in the coalition against Napoleon, but the home policy of the government made him very unpopular with the people. He committed suicide within a year after succeeding his father as Marquis of Londonderry.

CASTOR AND POLLUX, twin brothers, who in Greek mythology are regarded as the sons of Zeus and Leda. According to Grecian story, they were devoted to each other, and became the two bright stars, known as *Gemini*, "Twins." Castor was a celebrated horseman and Pollux an expert pugilist.

CASTOR OIL, a thick oil forming an excellent and gentle purge, obtained from the seeds of a plant, chiefly cultivated in India. The best, pale yellow in colour, is obtained by the application of pressure to the seeds, without heat. See *Med. Dict.*

CASTRATION, the removal by excision of portions of the reproductive organs of male animals. Men so treated are called eunuchs; horses, geldings; bulls, bullocks or steers; rams, wethers; boars, pigs; and cocks, capons. Such emasculated animals are more tame, work more readily, and grow and fatten more quickly.

CASUISTRY, the branch of morality, which, by means of general principles, found in the Holy Scriptures, in human laws, and in conscience, determines the lawfulness or unlawfulness of a particular act, the moral quality of which it is difficult to determine by the ordinary rules of conduct.

CASUS BELLI, "cause of war," the last act of one State towards another before the outbreak of war, which renders a peaceful solution of the dispute between them impracticable.

CATACOMBS OF ROME, underground caves or passages, miles in length, situated two or three miles from Rome. They were used in ancient times as burying places, and by the early Christians as places of worship. On both sides of these passages or corridors, series of recesses, one above another, were made. After a body had been interred, the recess was closed with a stone, upon which an inscription was carved.

CATAMARAN, a kind of raft of three bamboos, lashed together, the central one being longer than the other two. It is used upon the surf-beaten Coromandel coast of India, where boats are useless, and in Brazil. It is propelled by paddles, and in Brazil is often provided with sails.

CATAPULTS, military engines employed in ancient times and until cannon came into use for the purpose of propelling stones, spears, and arrows against an enemy. The lighter engines served the purpose of the modern rifle, the heavier ones of our great guns being used in the siege of forts and walled towns.

CATECHUMENS. Among the early Christians, this term was applied to all who were being instructed with a view to baptism. It is also used in the same sense by missionaries among the heathen at the present day.

CATEGORIES, the classification of all things that can be named. Such categories are the cause of considerable division of opinion among philosophers. John S. Mill divided all nameable things into, (1) Feelings, or states of Consciousness, (2) Minds, which experience the feelings, (3) External objects, which excite the feelings, and (4) Relations between the feelings.

CATGUT, the material used for strings of violins, guitars, and other musical instruments, and principally made from the intestines of sheep. The intestines, after being thoroughly cleansed, scraped, and fumigated, are twisted into cords. The best are made in Naples and Rome.

CATHARINE, SAINT, a Christian martyr, who, after torture upon the wheel which bears her name, was put to death at Alexandria in 307.

CATHARINE OF ARAGON, *b.* 1483, *d.* at Kimbolton, 1536; daughter of Ferdinand and Isabella of Spain, and first wife of Henry VIII. She was first married to Arthur, Henry's elder brother, who died within a few months. In 1526, Henry, through failure of male issue, determined upon divorce, which was finally effected against the determined opposition of the pious and faithful Catharine, in 1533. The quarrel between Henry and the Pope, on this question, hastened the Reformation in England.

CATHARINE II. OF RUSSIA, *b.* at Stettin, 1729, *d.* 1796; wife of Peter III., and Empress of Russia. Her husband, after much real scandal on the part of both, determined to divorce her; but she frustrated his design by having him seized and strangled in 1762. She was almost immediately crowned Empress. She ruled with great energy and ability, encouraging learning and improving the laws.

CATHAY, the mediæval name of China, and that by which it is still called in Russia.

CATHOLIC APOSTOLIC CHURCH. Refer to *Index*.

CATHOLIC EMANCIPATION, an act of Parliament, passed in 1829, to remove the disabilities of Roman Catholics, who by it became admissible to Parliament, and to all public positions, except those of Regent, Lord Chancellor of England, and Lord Lieutenant of Ireland.

CATHOLIC EPISTLES, the epistles of St. James, St. Peter, St. John, and St. Jude, and so called because addressed to Christians in general.

CATHOLIC MAJESTY, HIS MOST, a title conferred in 1491 upon Ferdinand of Aragon and his successors, by Pope Alexander VI., in honour of the expulsion of the Moors from Spain in the course of his reign.

CATILINA or **CATILINE,** an impoverished Roman aristocrat, a profligate, ambitious man endowed with wonderful powers both of mind and body. Having held all the lower public offices, he was an unsuccessful candidate for the consulship, 65 B.C. He formed an abortive conspiracy to slay the consuls, his successful rivals, and to seize the government. In 63 B.C., while Cicero was consul, he formed a second plot to create a revolution, but all his designs were frustrated by the vigilance and ability of the consul, in a fight with whose troops he was killed.

CAT ISLAND, one of the Bahama Islands, wrongly supposed to be San Salvador, the first landing place of Columbus, in America, when he made his famous voyage of discovery in 1492. Watling Island, about 50 miles south-east of Cat Island, is undoubtedly San Salvador.

CATO, "THE CENSOR," *b.* 234, *d.* 149 B.C., a typical Roman, severe, just, honest, and frugal, who desired a return to primitive ways of pastoral life. He was chiefly engaged, with considerable distinction, in military matters. In 184 B.C., he was elected Censor, and endeavoured to introduce reforms and to check luxury and corruption. Of his many books, "De Re Rustica" is alone extant.

CATSKILL, a group of the Appalachian system of mountains situated in New York State, U.S.A., and famous for much picturesque scenery, and as the scene of Rip Van Winkle's long sleep.

CATTERMOLE, GEORGE, *b.* in Norfolk 1800, *d.* 1868; a celebrated water-colour painter and book illustrator. In early life he, as a pupil of Britton the architect, became a skilled draughtsman. He first became known by his pictorial illustrations of Shakespeare's plays and Scott's novels. Among his paintings are "Sir Walter Raleigh at the Execution of the Earl of Essex," "The Assassination of the Regent Murray," and "Old English Hospitality."

CAUCASIA, a division of the Russian Empire, lying on both sides of the lofty Caucasus mountains. The valleys are

very fertile, producing tobacco, cotton, and rice. It has immense mineral wealth, including coal, iron, copper, and petroleum. The women are celebrated for their beauty. The chief towns are Tiflis, the capital: Baku, the centre of the petroleum district; and Batoum, a port on the Black Sea. The area exceeds 180,000 square miles, and the population approaches 10,000,000.

CAUCUS, a word of American origin applied there to a private meeting of citizens to decide what candidates for office in state or city they shall support and what measures they shall endeavour to carry.

CAUDINE FORKS, two narrow passes, leading to and from a considerable plain surrounded by mountains, and situated on the Appian Way, 20 miles from Capua. In 321 B.C., while at war with the Samnites, a Roman army, with both consuls, marched through one of the defiles into the valley, only to find themselves prisoners there; for on attempting to issue from the valley, they found both exits barred against them. Thus entrapped, they surrendered to the Samnites, but were eventually allowed to return disarmed to Rome.

CAUL, a thin skin sometimes covering the head of a child at birth. It was formerly supposed to foretell good fortune to the child, and its possession was considered a certain safeguard against death by drowning.

CAULKING, (1) The work of filling up the seams of a wooden ship with oakum, to make it water-tight. When this has been effected with a kind of chisel, called a caulking iron, boiling pitch is poured over the whole. (2) The act of closely fitting one plate of an iron vessel tightly against another, so as to make it water-tight.

CAUSTICS. See *Med. Dict.*

CAUTERY. See *Med. Dict.*

CAVENDISH, LORD FREDERICK, *b.* 1836, murdered in Phœnix Park, Dublin, 1882. He was a son of the seventh Duke of Devonshire, and M.P. for the West Riding of Yorkshire from 1865 to 1882. He, with Mr. Burke, was murdered by Irish "Invincibles," while taking a walk in the Park, soon after succeeding Mr. W. E. Forster, as Chief Secretary for Ireland.

CAVENDISH, HENRY, *b.* at Nice, 1731, *d.* 1810; a famous chemist, grandson of the second Duke of Devonshire. Living the life of a recluse, he devoted his energies to science. He devised an experiment to measure the density of the globe, carefully examined the properties of hydrogen, which he showed to be one of the lightest bodies in existence. He was also the first to form water by combining oxygen and hydrogen.

CAVENDISH, SIR THOMAS, *b.* in Suffolk about 1557, *d.* 1592; a celebrated English navigator. In early life he wasted his patrimony in extravagant living, and to repair his fortunes fitted out, in 1586, an expedition against the Spaniards. He sailed from Plymouth round the world, *via* the Straits of Magellan, returning, after an absence of over two years, with much booty plundered from the Spaniards. In a second voyage, which he undertook in 1591, his ships were shattered by a storm, and he died on attempting to return.

CAVIARE, a salted preparation of the roes of sturgeon, and similar fish, made chiefly in the vicinity of the Caspian Sea. The roes, after being skinned, cleansed, and sun dried, are salted and stored in barrels. It is no longer reputed a great luxury.

CAVOUR, COUNT DI, *b.* at Turin, 1810, *d.* 1861; a great Italian statesman. When about 21 years of age he came to England to investigate our system of government. On his return to Italy, he urged the adoption of constitutional rule in his native land. As Premier to Victor Emmanuel, King of Sardinia, he did as much in the Cabinet as Garibaldi in the field, to achieve the union of Italy.

CAWNPORE, an important town of about 200,000 inhabitants, situated in the North-West Provinces of India, 1,000 miles from the mouth of the river Ganges. It is a great railway centre, carrying on considerable trade in agricultural products, and manufacturing cotton and other textile fabrics. It was at Cawnpore that Nana Sahib, in the course of the Indian Mutiny, 1857, caused the European women and children to be massacred, and their bodies to be thrown into a well.

CAXTON, WILLIAM, *b.* in Kent, 1421, *d.* at Westminster, 1491; introduced the printing-press into England. He lived abroad, chiefly at Bruges, for many years from 1441, and there learnt the newly-invented art of printing. He returned to England, about 1471, and set up a printing-press near Westminster Abbey. "The Game and Playe of the Chesse," published in 1474, was the second, if not the first, book printed in England. "The Tale of Troye" was perhaps the first.

CAYENNE PEPPER, a strong red pepper made from the pods of many kinds of Capsicum, which grow freely in the Tropics. The fruit is dried, pounded, baked, and again pounded to produce the pepper. If taken in excess, it is a poison.

CAYMAN, a name applied to the alligator found in Central and South America.

CECIL, ROBERT. See *Salisbury, Marquis of.*

CECIL, WILLIAM (Lord Burleigh), *b.* at Bourne, Lincolnshire, 1520, *d.* 1598; the trusty chief minister of Queen Elizabeth, from 1558 until his death. After six years at Cambridge, he studied law at Gray's Inn. He was private secretary to Lord Protector Somerset, but held no public office during Mary's reign. Elizabeth appointed him Secretary of State at her first council at Hatfield. She exactly described the man when she then addressed to him these memorable words: "This judgment I have of you—that you will not be corrupted with any manner of gifts, and that you will be faithful to the State, and that without respect to my private will you will give me such counsel as you think best." The story of his public life is the history of Elizabeth's reign. She created him Baron of Burleigh, and appointed him Lord High Treasurer.

CECILIA, SAINT, an early Christian martyr, whose *Acts* describe her as being frequently engaged in playing on an instrument of music, and singing the divine praises. She suffered martyrdom by the sword in 230, after a miraculous escape from death by boiling in a cauldron. It is as the patroness of music that she is honoured, and Dryden's "Ode to St. Cecilia's Day," one of the noblest odes in the language, perpetuates her fame. The Church keeps her festival on November 22nd.

CEDAR, a cone-bearing evergreen tree, found principally on the mountains of Western Asia, and in the West Indies. The cedar of Lebanon, which was introduced into England in the 17th century, is the best known. The branches are often nearly horizontal, forming a series of floors, from which the cones spring up. It grows very slowly to the height of 80 to 100 feet, and may attain a girth of 30 to 40 feet. Its red, fragrant wood is very durable, but cannot be highly polished.

CELIBACY, an abstention from married life from religious motives. The priests of Isis, and of Buddha, and the Vestal Virgins, furnish examples of celibacy in the heathen world. In the Christian Church it has been the rule for monks and nuns since the first great Christian monastery was founded by St. Benedict, at Monte Cassino, near Naples, in the 6th century. But it was not until the time of Pope Gregory VII. (Hildebrand), in the 11th century, that celibacy was made compulsory on all in Holy Orders. It is still an inflexible rule with the clergy in the Roman Catholic Church, but since the Reformation it has been repudiated in the Anglican Church.

CELLINI, BENVENUTO, *b.* at Florence, 1500, *d.* about 1571; a famous sculptor. Among his medallions and bronzes are "Leda and the Swans," "Atlas supporting the World," and "Perseus with the head of Medusa." He wrote a most interesting autobiography.

CELLULOID, a substance first made about 1856, composed of paper, camphor, nitric and sulphuric acids. It can be produced in any colour, and in any degree of hardness. When plastic at 175° F., it can be shaped into any form, or when hard, like ivory or coral, can be carved or turned. It is highly inflammable, unless chemically treated. The articles which are manufactured from it are innumerable, such as collars, cuffs, combs, buttons, thimbles, knife handles, billiard balls, and chess-pieces.

CELT, a cutting instrument like an axe head, found in ancient tumuli and barrows, made of stone or bronze. They are still found well preserved, and in most cases more or less decorated.

CELTS, or **KELTS,** a race which in early historic times inhabited most of the centre and west of Europe. Gradually their great and wide-spread power, the centre of which was in Gaul, and at its highest point about two centuries before Christ, was broken down by the Romans. There seem to have been two chief branches, differing in language and in habits; one represented now by the Gaels in the Scotch Highlands; the other by the Ancient Britons, now represented by the Welsh and the Bretons (people of Brittany in France). They practised many useful arts, and possessed a considerable literature, chiefly of a legendary character.

CEMENT, any substance capable of uniting bodies firmly together. Such substances may be classified as (1) adhesive agents, and (2) binders for brick and stone. The former class include *sealing-wax*, a mixture of shellac and resin; *glue*, a jelly obtained by boiling the clippings of hides and the like in water; *paste*, boiled flour and water; and *putty*, a compound of linseed oil and ground chalk. The latter class comprises mortar, Portland cement, Roman cement, and plaster of Paris; *Mortar* is a mixture, with water, of sand and lime; *Portland cement* consists of limestone, chalk, or marble, combined with clay. This mixture, when burnt, forms a quicklime, and this when wetted, swells, becomes hot, and breaks into powder. It sets slowly, with the appearance and firmness of stone. Roman or *Hydraulic cement* is the ground and sifted product of a burnt mixture of lime and clay. It hardens rapidly under water, but is less strong than Portland cement. *Plaster of Paris*, or sulphate of lime, is much used in moulding statues.

CEMETERY, literally "a sleeping place," is the name applied to a burial ground not closely connected with a church as a churchyard. In England, every person is entitled to be interred in the churchyard of the parish in which he dies, unless it is closed to all interments. In 1850 the Board of Health, acting as a Burial Board for the

Metropolis, was empowered to close the city churchyards. The same powers were soon granted, throughout England and Scotland, on appeal to the Home Secretary. Municipal authorities may be constituted burial boards for the provision and management of cemeteries, and parishes may combine for this purpose. Expenses beyond receipts from fees are chargeable to the poor rate. The first English cemetery was opened at Kensal Green, London, in 1832.

CENIS. See *Mont Cenis.*

CENOBITES, the members of religious communities who share a common life, as contrasted with hermits, who live apart from all other human beings.

CENOTAPH, literally "an empty tomb," a monumental tomb raised in memory of one buried elsewhere.

CENSUS. (1) In ancient Rome, a declaration before the censors, by heads of families, every five years, of the value of their property, and the names and ages of their families. This determined the amount of a man's taxation, the degree of his political power, and his liability to military service. (2) In modern times, the official enumeration of the population, together with a statistical account respecting age, sex, occupation, and the like. A census has been taken in Great Britain every ten years since 1801, and in Ireland since 1811. In Germany, France, and the United States a census is taken every five years.

CENTAUR, one of an ancient race of savage men living in the hills of Thessaly, who, according to Greek fable, were the offspring of Ixion and a cloud. In ancient works of art the centaurs are represented as men from head to loins, with the remaining part of the body like that of a horse. This seems to have arisen from the fact that the Thessalians were celebrated horsemen.

CENTENARY, consisting of a hundred; the commemoration of the hundredth anniversary of an important event, or of the birth of a famous person. This has become a common practice in recent times. A *bicentenary*, in like manner, is the commemoration of an event that occurred two hundred years ago.

CENTIGRADE, the name applied to the thermometer introduced by Celsius, about 1742, and now universally used by scientists. The space between the freezing and boiling points of water is divided into 100 equal parts or degrees. The freezing point is 0° and the boiling point 100°; whereas in the Fahrenheit thermometer, commonly used in England, the freezing point of water is taken as 32° and the boiling point as 212°.

CENTRAL AMERICA consists of the republics of Guatemala, San Salvador, Honduras, Nicaragua, Panama, and Costa Rica.

CENTRE OF GRAVITY, a point with respect to any body at which its whole weight may be supposed to act. If the body be supported at this point the body will balance about it in any position whatever. In the case of bodies of regular geometric form and homogeneous structure, the Centre of Gravity corresponds with the geometric centre.

CENTRIFUGAL FORCE, the tendency to fly away from the centre which any body exhibits when constrained to move in a circle. This tendency is clearly felt when a person swings a weight round by means of a piece of string, and may become so great as to break the string if the velocity be sufficiently increased. The principle is well exemplified in Maxim's "Flying-machine." The so-called force is due to the property of inertia (which see).

CEORL, a freeman among the Anglo-Saxons, with no nobility of birth. He could never become an "eorl," but if he acquired 600 acres of land, with a church and a house, he became a "thegn," and his descendant, in the third generation, might claim nobility by birth. A ceorl, without land, although nominally free, was obliged to attach himself to a landed proprietor, and so became practically a serf.

CERBERUS, in Grecian story, the dog which guarded the entrance to Hades. He is usually represented with three heads, and with serpents round his neck.

CERDIC, the founder of the Saxon kingdom of Wessex, from whom the reigning house of Great Britain is descended. In 495 he sailed up Southampton Water, with his son Cynric, and defeated the Britons. Gradually he conquered the southern districts from Surrey to Somerset.

CERES, the Roman name of the Greek *Demeter*, "mother earth," the goddess of agriculture, and of the fruits of the earth. The Romans, who sacrificed pigs to her, honoured her with a festival called *Cerealia*, and placed the decrees of the Senate in her temple. She is frequently represented with ears of corn round her head, poppies in her left hand, and a sceptre in her right. Her daughter, Proserpine, married to Pluto, spent part of the year in Hades with her husband, and part of the year on earth with her mother.

CERVANTES, MIGUEL DE, *b.* near Madrid, 1547, *d.* 1616; the author of the world-famous "Don Quixote." He spent some fourteen years in the army, taking part in operations against the pirates of Algiers, by whom he was enslaved for five years. He devoted the remainder of his life to literature, writing over twenty plays, some poems and romances. His chief title to fame, however, rests upon his "Don Quixote," a romance in which he narrates the diverting adventures of his hero, and humorously satirises at the same knight-errants and their fabulous doings.

CETACEA is an order of mammals, which contains the whale, dolphin, and porpoise. All cetaceans are wholly aquatic, and are so adapted to life in the water that Buffon classed the whale as a fish. In reality, however, they suckle their young, breathe air, and are warm blooded like other mammals. They are shaped like fish in order to traverse the water easily. The fore-limbs are represented by broad flattened paddles, the hind limbs are absent, and the tail is furnished with a horizontal fin, not vertical as in fish. There are no external ears; the nostrils are situated on the top of the head; the skin is hairless, but the body is protected from chill by a dense layer of sub-cutaneous fat, which is known as *blubber*. A special form of fat is present also in the head of the sperm whale, which is known as *spermaceti*. Teeth are present in both jaws in some cases, in the lower jaw only in others, and are absent altogether in the adult in the whalebone whales. *Whalebone* is composed of horny plates that hang from the roof of the mouth in certain species; these plates form a strainer which retains jelly fish and other small fry that enter the mouth of the whale, whilst permitting the water to escape. One of the largest denizens of the ocean is thus enabled to prey on the smallest. In the narwhal only one or two teeth exist in the adult, but these take the form of long tusks in the male, and are of value to man, being sold as *ivory*. One more article of commerce is obtained from the whale, viz. *ambergris*, which is a fatty material found in the alimentary canal, and apparently derived from the half digested bodies of the cuttle-fish, on which the cachalot whale feeds.

CETEWAYO. See *Ketchwayo.*

CEYLON. Refer to *Index.*

CHABLIS, a small town about 90 miles south-east of Paris, surrounded by vineyards which produce the white wine of that name, or at any rate some of it.

CHAD, SAINT, (Ceadda) was Bishop of York and afterwards of Mercia. He died in 672, having gained a great reputation for piety and humility.

CHAIN-ARMOUR. Armour formed of iron links, much used in the Middle Ages. It was much more flexible than plate-armour, but more liable to be pierced by a spear-point. It was often worn under plate-armour. It is still used in the interior of Asia.

CHALCE'DON, an ancient city of Asia Minor, over against Byzantium (Constantinople), near the site of the present Scutari. The Council of Chalcedon, held in 451 A.D. declared its belief in the duality of the natures united in the one person of Christ, the doctrine now held by the vast bulk of Christians.

CHALCED'ONY, a beautiful kind of quartz, found in abundance near Chalcedon, and also in other places. It is much used for making brooches, necklaces, etc. It is found in various colours, and some of the varieties have separate names, as onyx, agate, carnelian, and sard.

CHALGROVE, a village 13 miles south-east of Oxford. Here Hampden, the great Parliamentarian, received his death wound in a skirmish with Prince Rupert's cavalry.

CHALK, of which the Downs and the Dorset Heights, and so many of the rolling hills in England, consist, is a compound of calcium, carbon, and oxygen. Formed ages ago at the bottom of the deep sea, of the shells of minute sea-creatures, it contains the fossilised remains of many animals now extinct, and the process by which it was formed is now going on at the bottom of the ocean. By heating, carbonic acid gas is driven off from chalk, and we get lime.

CHALMERS, THOMAS. *b.* 1780, *d.* 1874; the leader of the great secession which led to the establishment of the Free Church in Scotland, was an ardent Christian, a man of great cultivation and penetration, and one of the most eloquent preachers ever known. Believing that the system of patronage, as exercised, was a hindrance to Christian progress, he and 470 other ministers left the established Church of Scotland, and sacrificed their incomes rather than sanction the continuance of such a system.

CHALONS-SUR-MARNE, an ancient town in the east of France, has considerable trade in champagne wine, and is also largely engaged in making beer. Its history goes back to the Roman times. In 451, A.D., Attila was defeated near Chalons by a combined army of Romans and Franks, and Western Europe was saved from falling into the hands of the Huns.

CHAMÆLEON, a kind of tree-haunting lizard common in Asia and Africa and the south of Spain. Its great peculiarities are its varying colour, the lightning speed with which it darts out its long tongue to catch the insect marked out as its prey, and the fact that its eyes may move independently of one another. Its colour varies from dark brown to bright green, according to the colour of the objects amongst which it is resting at the time.

CHAMBERLAIN (Office). Refer to *Index.*

CHAMBERLAIN, JOSEPH, *b.* in London, 1836, but entered on a business career in Birmingham. He took a very active part in the municipal life of that city, was three times its mayor, and, in

1876, was elected one of its representatives in parliament. In 1880 he became President of the Board of Trade with a seat in the Cabinet, but six years later he broke from Mr. Gladstone on the Home Rule question, joined the Liberal Unionists and co-operated with the Conservatives. His greatest ministerial work was done as Colonial Secretary, 1895-1903. In the latter year he resigned his office in order to obtain greater freedom of action in the promulgation of his views on the closer linking of the colonies to the Mother Country by a system of preferential tariffs.

CHAMBERS OF COMMERCE. See *Commerce, Chambers of.*

CHAMBERS, W. & R. Among the causes which helped the great progress made by Britain in the 19th century, the spread of education takes a conspicuous place. At the beginning of the 19th century hardly a working man could read. Now it would be hard to find one who cannot. The precise part played in this revolution by popular literature, it would be hard to apportion; but, undoubtedly, the healthful literature which the above firm took the lead in producing, was an important factor in it. Commencing in a small way at Edinburgh, in about 1820, the two brothers, William and Robert, went on in steady success until their business attained the large dimensions of to-day.

CHAMBERTIN, a famed brand of red Burgundy produced from the vineyards on the hillsides of the Côte d' Or, in the north-east of France.

CHAMBORD (Henri Charles), **COMTE DE,** *b.* 1820, *d.* 1883; son of the Duc de Berri, and last of the older branch of the Bourbon family, might have been king of France, had his principles been as capable of concealment as those of many who have occupied a throne. Entreated in 1873 to state his views, he refused to abate any of his claims to rule by divine right. In 1875 France was again proclaimed a Republic, and in 1883 the Comte died, leaving his claims, such as they were, to the Comte de Paris.

CHAMOIS, a species of antelope found in the mountains of Southern Europe and Western Asia. About the size of a large goat, its swiftness and sureness of foot are such that pursuit is vain, while its scent and hearing are so keen that approach is difficult. The flesh is much esteemed, and the skin makes a soft wash leather called "Shammy."

CHAMONIX, or **CHAMOUNI,** a valley in the extreme east of France, 50 miles south of Lake Geneva. From Chamonix the ascent of Mont Blanc is usually made, and the inhabitants all depend, more or less, on tourists for their living.

CHAMPAGNE, a district in the north-east of France, comprising the departments of Marne, Aube, and Ardennes, and parts of the surrounding departments. The wine so called is the produce of the vineyards of Champagne, and requires great care in its preparation. It is stored in cellars hewn out of the limestone, in which the district abounds.

CHAMPERTY. Refer to *Index.*

CHAMPLAIN, SAMUEL DE, one of the early French settlers in America, made several voyages of discovery round Canada between 1603 and 1608. He founded Quebec in 1608, and in 1609 discovered Lake Champlain.

CHAMPS ÉLYSÉES, an open space with avenues of trees on the north side of the Seine, between the Pont de la Concorde and the Pont des Invalides. Here, in the season, the fashionables of Paris drive, walk, and lounge, as London people do in Hyde Park. Marie de Medicis planted the first avenue in 1616, and other plantations have been made at various times since.

CHANCELLOR, THE LORD. Refer to *Index.*

CHANCELLOR, RICHARD, an English seaman who, in 1553, made his way by the White Sea to Moscow, where he obtained permission for English ships to trade freely with Russia. Soon afterwards the Muscovy Company was formed.

CHANDOS, SIR JOHN, one of the great captains who served under the Black Prince in France and Spain. He defeated du Guesclin at Auray, and made him prisoner, and won the esteem of the French for his generosity and moderation, as well as bravery.

CHANGELING, It was at one time a common belief that fairies would take away a healthy child, and leave a puny weakling, one of their own, in its place. The child supposed to have been thus left was called a changeling. (See Shakespeare's Henry IV., Part I., Act I., Scene I.

CHANNEL, THE ENGLISH, called La Manche (the sleeve) by the French, is 21 miles wide between Dover and Cape Grisnez, and 140 from Sidmouth to St. Malo. Its general depth is about 200 feet, with a few hollows here and there as deep again. The Channel Tunnel, begun in 1878, near Dover, seems never likely to be finished, but if the coal found in the course of the borings proves workable, the work will not have been wasted.

CHANNEL ISLANDS. These islands, including Jersey, Guernsey, Alderney and Sark, are the oldest oversea possessions of the English crown, having been attached to England since the Norman Conquest. The people, about 90,000 in number, adhere to their old customs, and within well-defined limits make their own laws. They are very industrious and law-abiding. Large quantities of fruit, vegetables, and flowers are exported to the English markets. In the rural parishes a French *patois* is still used, but English is commonly spoken.

CHANTILLY, a town in France, 26 miles north of Paris, celebrated for the beauty of its environments, and for the magnificent castle erected by the Duc D'Aumale, and presented to the French Institute in 1886. With the library, paintings, and other objects of art included, the total value is about £2,000,000. Chantilly is celebrated for its horse races; population 5,000.

CHANTREY, SIR FRANCIS, *b.* 1781, *d.* 1841; was the son of a small farmer in Derbyshire. He began life as a carver and gilder in Sheffield, but soon came to London to study portrait-painting and sculpture at the Academy. His first success, in 1808, was soon followed by numerous commissions for busts and statues. His "Sleeping Children" in Lichfield Cathedral is world renowned. He left a large sum, the interest of which he directed should be spent in the purchase of the best works of contemporary or recent British artists.

CHANTRY. A chapel endowed for the maintenance of one or more priests daily to say mass for the repose of the souls of the donors or other persons named by them.

CHAPEL ROYAL, the ecclesiastical establishment connected with the king's court. It consists of a dean, sub-dean, two domestic chaplains, eleven chaplains in ordinary, and twenty-five honorary chaplains, whose duty it is to take part, as required, in conducting divine service in the Chapel of St. James's Palace.

CHAPMAN, GEORGE, *b.* 1559, *d.* 1634; was a poet, dramatist, and translator of no mean ability. His poetical rendering of the Iliad and the Odyssey have gained enthusiastic admiration from able critics. He wrote many plays, from which numerous passages can be selected worthy of Shakespeare himself.

CHAPTER-HOUSE, the building where the clergy connected with a cathedral meet to transact ecclesiastical business. Some of the chapter-houses, notably those of York, Southwell, and Wells, are of great architectural beauty.

CHARADE, a kind of riddle in which a word has to be guessed. The various syllables of the given word are hinted at by means of pantomime or oral remarks or written lines, and then the whole word in the same way, after which the answer has to be given.

CHARCOAL, the carbonaceous substance left from wood, after its other elements have been driven off by heating, without allowing it to undergo combustion. This is done by burning the wood with only a limited supply of air, so that the other elements are consumed while the carbon remains almost undiminished.

CHARD. See *Rorke's Drift.*

CHARING CROSS, a district in London, on the east side of Trafalgar Square, so named because here stood one of the numerous crosses erected by Edward I. in memory of his "loved queen" Eleanor. The cross in the yard of Charing Cross Station is a good modern representation of the original.

CHARITY COMMISSIONERS, the four members of the commission created by the Charitable Trusts Act of 1853, and empowered to enquire into the nature, objects, and management of charities in England and Wales, with certain exceptions named in the Act. Their powers were extended by subsequent Acts, but some of these powers, as far as they apply to endowments held solely for educational purposes, were transferred to the Board of Education by Orders in Council, issued in 1901 and 1902.

CHARIVARI, originally a mock serenade of pots and pans indulged in to mark the popular displeasure at some act of the persons thus ridiculed. The term is now applied to such periodicals as Punch, in which public characters are satirised and caricatured.

CHARLATAN, a member of a particular branch of the mediæval minstrels of Provence, in France, who amused the populace by their coarse jests and buffoonery. In England the name was applied particularly to the itinerant vendor of quack remedies guaranteed to cure "all the ills that flesh is heir to," and hence to any person who makes a profession of skill or knowledge not really possessed.

CHARLEMAGNE, *b.* 742, *d.* 814; King of the Franks, and Emperor of the Romans, was one of the great warriors and statesmen of the early Middle Ages. He succeeded in extending the dominion of the Franks over Gaul and Italy, as well as over a good part of Spain and Germany, but his successors had not the ability to perpetuate his sway. Like our own Alfred, he had a high idea of the value of education, and did much to promote it.

CHARLES I., king of England from 1625 to 1649, was born in 1600 at Dunfermline, before his father came to England as king. In private life a virtuous and honourable gentleman, as a king he thought he could "do no wrong," even when breaking his plighted word. The theory of the "Divine right of kings" seemed to possess his whole nature, and this, together with his fondness for taking advice from those whom he liked, rather than from those whom he knew to be wise, proved his ruin. Henrietta, Buckingham, Laud, Strafford, each must bear the blame of leading him astray, and he paid with his life for being thus led. The body of the nation was de-

termined to stop his unlawful acts, and, fortunately, it had leaders whose wisdom equalled the importance of the occasion. Hardly a year had passed since his accession when the first conflict arose between Charles and the Parliament over the impeachment of Buckingham. The Petition of Right, agreed to in 1628, had been disregarded by the time Parliament met in 1629, and their remonstrances were met by dissolution. Till 1640 England was without a Parliament, and during this period occurred the death of Sir John Eliot and the prosecution of Hampden for refusing to pay ship-money. Troubles in Scotland, caused by Charles's attempt to introduce Episcopacy, necessitated the calling of a Parliament in 1640. November of that year saw the meeting of the Long Parliament, determined to put an end to Charles's illegal acts. Nothing but war could now decide the dispute, and from 1642 to 1645 the struggle went on with varying fortunes. The defeat at Naseby put an end to Charles's hopes. The Scots, to whom he fled, surrendered him to the Parliament, and after long negotiation he was brought to trial for levying war on the nation. His manly death at Whitehall made his errors forgotten for a time, and paved the way for his son's accession when the strong hand of Cromwell was removed.

CHARLES II., son of Charles I., *b.* 1630, *d.* 1635, determined early in life to let no excess of principle ruin his worldly prospects, as it had done his father's. On the latter's execution, he signed the Covenant for the sake of becoming king in Scotland. Cromwell's successes put an end to his kingship for a time, but his turn came in 1660. From that time till his death he devoted himself to the enjoyments his position could command. The cruel persecution of the Covenanters of Scotland, our naval defeats by the Dutch, his shameful truckling to France; these are but a few of the disgraces Charles brought on England. The Great Plague of 1665, and the Great Fire of 1666, seem fitting preludes to the disasters of the reign. In 1667 the Dutch sailed triumphantly up the Thames and burnt the dockyard of Chatham. Soon afterwards Charles made a secret treaty with Louis XIV., in which he bound himself to try and restore Roman Catholicism in England with Louis' aid, while the latter was to be left free to make the conquest of the Low Countries. But the storm which his "Declaration of Indulgence" (1673) raised made Charles halt in his religious schemes, and the reception of Titus Oates' story of the Popish plot showed him how strong the feeling was against popery. The Rye House Plot, however, in 1683, gave him an opportunity for vengeance on the Whigs who had so long braved him; and it was easy, with the help of servile judges, to get men, like Lord William Russell and Algernon Sidney, beheaded for the crime of attempting the king's assassination, a crime from which their natures would have recoiled. From that time Charles did as he liked, but his reviving plans for restoring Roman Catholicism were cut short by death.

CHARLES V, *b.* 1500, *d.* 1558; Emperor of Germany and King of Spain, was the central figure in Europe during the active part of his life. As King of Spain his anxieties were few, for the Inquisition kept religious matters quiet there, and the New World provided an outlet for the energies of his Spanish subjects. But as Emperor of Germany he had to keep the peace as far as possible between Protestants and Catholics, and to guard his empire from aggression on the side of France. The balancing measures of Henry VIII. of England kept Charles from ever fighting it out with France, and he was well content to be able to hand on his dominions practically intact to his son Philip, afterwards the husband of our Queen Mary.

CHARLES XII. OF SWEDEN, *b.* 1682, *d.* 1718; one of the meteoric characters that dart across the page of history to teach mankind what to avoid, became king in 1697. His accession was the signal for a concerted attack on Sweden, which he most skilfully repelled. In 1709 he advanced into Russia, but his supplies were cut off, and he met with a crushing defeat at Pultowa, at the hands of Peter the Great. Other wars followed, and, exposing himself recklessly, he received his death wound at the siege of Fredericshall, Norway.

CHARLES EDWARD, "THE YOUNG PRETENDER," *b.* 1720, *d.* 1788; grandson of James II., was in early life a gallant and accomplished man, but the destiny that made him a wanderer with a claim to a crown was largely responsible for causing him to end his days as a drunken profligate. His bold attempt to gain the throne in 1745, his wanderings after the Battle of Culloden, and the brave devotion of Flora Macdonald, create an interest in him that his subsequent degradation fails to sustain. He died at Rome.

CHARLESTON, a seaport in the south-east of the United States, is an outlet for much of the rice and cotton produced in that country. It saw the outbreak of the great Civil War; the bombardment of Port Sumter, at Charleston, on April 12th, 1861, being the first hostile act committed by the Confederates; population 56,000.

CHARLOTTE, PRINCESS AUGUSTA, *b.* 1796, *d.* 1817; the only daughter of George IV. and his wife, Queen Caroline; was an amiable and talented girl, who gave promise of a happy destiny. She married, 1816, Prince Leopold of Saxe-Coburg, and died, to the great grief of the nation, in the following year, without issue.

CHARON (ch=k), in classical mythology, the boatman whose office it was to convey souls across the Styx, which flowed round the lower world. A coin was generally placed in the mouth of the dead before burial, to pay the fare.

CHARTER. In historical writings the word refers to documents by which the sovereign promises to confer or preserve certain rights and privileges to his subjects, or some part of them, as "The Great Charter," and the charters of cities.

CHARTERHOUSE (Chartreuse), a school and an asylum or almshouse for the aged, near Aldersgate Street, London. Founded in 1370 as a Carthusian monastery, it underwent various vicissitudes until, in 1611, Thomas Sutton bought it and endowed it for the above purposes. The school is now removed to a site near Godalming, in Surrey. Many famous men, including Addison, Westley, Grote, and Thackeray were educated here.

CHARTER-PARTY. See *Commercial Dictionary*.

CHARTISTS. From 1832 to 1839 a cry for an extension of the Reform Act was pretty general among the working classes, and in the latter year a petition to Parliament was prepared in favour of what was called the "People's Charter," purporting to bear over a million signatures. On its rejection, the agitation culminated in riots in many parts of the country. In 1848 Feargus O'Connor, the Chartist leader, organised a great procession to march to the Houses of Parliament, and demand the passage of the Charter; but the rain, and the sight of the special constables, damped the ardour of his supporters, and from that time the Chartist agitation ceased to be formidable.

CHARTRES, a city situated about 50 miles south-west of Paris, famous for its cathedral: a magnificent Gothic structure, with beautifully designed spires. It is lavishly adorned with statues, and contains about 100 windows filled with stained glass of the 13th century.

CHARTREUSE, LA GRANDE, a famous Carthusian monastery near Grenoble, in France. The monks have kept most successfully the secret of their famous "liqueur," and will most probably continue its manufacture either in Switzerland or England now that they are exiled.

CHARYB'DIS, now Galofaro, a whirlpool in the Strait of Messina, between Italy and Sicily. Opposite, near the Italian coast, was the rock of Scylla, in avoiding which ships were often drawn into Charybdis. Hence the proverb: "to avoid Scylla and fall into Charybdis."

CHASSEPOT, ANTOINE, the inventor of a form of breech-loading rifle adopted in the French Army, and used during the Franco-German War. Its various disadvantages led to its supersession soon after peace was made.

CHATEAUBRIAND, FRANCOIS, *b.* at St. Malo, 1768, *d.* 1848; a great French prose writer. His writings are marked by beauty of language and imagery, and descriptive power. The most famous are "Le Génie du Christianisme," "Les Martyrs," "Atala," and memorials of his life, published after his death under the title of "Mémoires d' outre Tombe."

CHATHAM, a town in Kent, near the mouth of the Medway, owes its importance to its royal dockyard. Here, from 5,000 to 8,000 workmen find employment, according to the number of ships building. The forts round Chatham form an important part in the chain of defences intended for the protection of London against a possible invader.

CHATHAM (William Pitt), **EARL OF**, *b.* 1708, *d.* 1778; spoken of as "Pitt the Elder," to distinguish him from his equally eminent son, and sometimes as "The Great Commoner." He was the great statesman who pioneered England through the wars that led to our acquisition of India and Canada. Entering Parliament early, his oratorical talent soon attracted attention, which was not lessened by the determined stand he made against corruption in every form. From 1757 to 1760 he initiated most of the measures which were crowned with triumph in India and Canada. He tried in vain to avert the measures which led to the revolt of the American Colonies, and he was just as energetic in his endeavours to prevent their independence being recognised. A grateful nation gave him a public funeral and a handsome monument in Westminster Abbey.

CHAT MOSS, a morass in Lancashire, seven miles west of Manchester, the largest piece of bog land in England. It is widely known as the scene of one of George Stephenson's triumphs; for after all engineers had declared it impossible, he carried the Liverpool and Manchester railway over it.

CHATSWORTH, the stately home of the Dukes of Devonshire, is situated on the River Derwent, in Derbyshire. Here Mary Queen of Scots passed a good deal of her imprisonment, although not in the present building, which dates from 1688. The library, paintings, park, and fountains are celebrated throughout Europe.

CHATTERTON, THOMAS, *b.* 1752, *d.* 1770; a melancholy example of genius without balance; was a native of Bristol. He seemed to have a mania for forging ancient manuscripts, while the literary ability he displayed in them would have gained him fame. Coming to London, he found himself in a few months at the end of his resources, and poisoned himself in an attic.

CHAUCER, GEOFFREY, *b.* 1340, *d.* 1400; the father of English poetry; would be more widely read if people could be brought to believe how few the difficulties really are in understanding his language, and how interesting are the pictures he gives us of the time he lived in. Living much at Court, where he held various offices, his pictures of the various social grades are very vivid, while his originality gives to his greatest work, the "Canterbury Tales," a variety that is very charming. His other chief works are: "The Book of the Duchess," "The Parliament of Fowls," "Troilus and Cressida," "The Legend of Good Women," and "The House of Fame."

CHAUVINISM, the French prototype of the English "jingoism," received its name from Nicholas Chauvin, who continued to make a great display of his devotion to Napoleon after that monarch's fall. His name was given by several playwrights to characters in their plays distinguished for their exaggerated patriotism.

CHEDDAR, a village in Somersetshire, among the Mendip Hills, is famous for its cliffs, its caves, and its cheese. It stands at the entrance of a long narrow ravine, which extends about a mile among the hills, and forms the well-known Cheddar Cliffs. The caves in these cliffs contain beautiful stalactites and stalagmites, and one of the caves extends to a depth of 300 feet. The system of cheese making, followed in the village, is perhaps now the most widely adopted in the world.

CHEESE, a food formed by separating the solid parts of milk from the liquid and sugary parts, and then salting it and reducing its bulk by pressure. In few industries has the introduction of machinery worked such a revolution as in this, one factory being able to make up the milk of forty or fifty dairies, with better results on the whole as regards quality, while the saving of labour to the individual farmer is enormous. The various kinds of cheese are produced both by difference in the milk and by variation in the processes of manufacture; thus, Stilton owes its richness to the addition of cream to the pure milk from which it is made, while the rich cheeses of the Continent, Roquefort, Camembert, &c., owe their excellence to judicious blending of materials in the course of manufacture. The cheeses most favoured in England are Stilton, Cheddar, Wensleydale, Cheshire, Gloucester, and Gorgonzola. St. Ivel, made near Yeovil, is now bidding fair to become a popular cheese.

CHELTENHAM, a favourite health resort in Gloucestershire, among the Cotswold Hills. Its handsome buildings and promenades, its healthy climate, and general air of cleanliness and order attract many besides those who come for the sake of its springs. The well-known Cheltenham College accommodates about 700 boys, and other educational institutions abound, including a Ladies' College of high repute.

CHEMISTRY is the science which investigates the elements of which substances are made up, and determines the laws which govern the combinations of such elements.

CHEROKEES, a tribe of North American Indians of the Iroquois family, now occupying portions of the Indian Reservations in the United States of America. They have increased in numbers in recent years, have adopted Christianity, and have made such progress in education and civilisation as to be able to support a native newspaper.

CHERBOURG, a seaport and naval station in the north-west of France, almost opposite Southampton. It is supposed to be one of the best fortified places in the world, and millions have been spent on its fortifications and breakwater. Cherbourg is growing in favour as a place of call for Transatlantic Liners; population, 43,000.

CHERUBINI, *b.* at Florence, 1760, *d.* 1842; an eminent musical composer. His earliest work was performed in Italy, but, after visiting London, he finally settled in Paris as director of the Conservatoire. His operas were popular during his life time, but his fame now rests principally on his sacred compositions, especially his Requiem in C minor and his "Coronation Mass."

CHESIL BANK, or **BEACH,** is a curious ridge of shingle extending from the Isle of Portland to the mainland, at Abbotsbury, a distance of about 11 miles. It consists mainly of pebbles, which, however, get smaller as we recede from the island. It is 200 yards wide, or rather less, and is separated from the shore by a narrow channel called the "Fleet."

CHESS, one of the most intricate, and at the same time most fascinating of indoor games, has its origin far beyond the bounds of history. As an intellectual pursuit it ranks very high, but chess is not for the mere ordinary mortal seeking relaxation and amusement. Nevertheless, the popularity of chess is greatly increasing, and few towns of any size are without at least one chess club.

CHESTER, an ancient city on the river Dee, 20 miles from the sea, is one of the few towns whose character has not been entirely altered by modern improvements. The ancient walls are still entire, and form a promenade round the town, while the "Rows," or foot-ways raised above the road, and sheltered by the upper storeys of the houses, are most interesting; population 46,000.

CHESTERFIELD, LORD, *b.* in London, 1694, *d.* 1773; was a diplomatist, statesman, orator, and author, who was distinguished for his polished manners. His published works include: "Letters to His Son," "Letters to His Godson," critical, moral, and humorous essays, and his parliamentary speeches.

CHESTNUT. The Sweet Chestnut is commonly found throughout the South of Europe. The timber is as durable as oak for inside use, as furniture, stairs, etc., but will not stand exposure to the weather. The nuts do not always ripen in England, but in Italy and Spain form an important article of food among the poorer classes.

CHEVAL DE FRISE, Fr. "horse of Friesland," the predecessor of barbed-wire entanglements as a defence of the approaches to camps, fortifications, etc., received its name from the circumstance that it was first used at the siege of Groningen, in Friesland, by William of Orange, in 1594. It consisted of a heavy beam of wood furnished with spikes placed at right angles to each other, so arranged as to present an array of spears to an advancing enemy.

CHEVALIER, a cavalier, a knight. The term is still used as the courtesy title of the younger sons of the French nobility, and is also applied to members of certain foreign orders.

CHEVY CHASE. See *Otterburn.*

CHICAGO, population 1,930,000; the second city in the United States in population, and fifth in the world, is situate in the State of Illinois, at the mouth of Chicago River, where it flows into the south-west corner of Lake Michigan. A hundred years ago the site of Chicago was uninhabited. A fort was built in 1804, and by 1837 a population of 4,000 had grown up around it. In 1870 this had increased to 300,000, and since that time it has multiplied nearly sixfold. Abundance of grain, preserved beef and bacon, capital railway and sea communication, are the factors in Chicago's progress. Situated nearly a thousand miles from the Atlantic, it is reached by means of the Great Lakes and the St. Lawrence, by almost the largest ocean-going ships. The Great Fire in 1871 destroyed the old wooden buildings, and cleared the way for buildings of a modern type. Americans consider Chicago one of the handsomest business cities in the world; its buildings of twenty storeys or more are known all over the world.

CHICORY, or **SUCCORY,** a plant of the order *Compositæ*, growing wild in the temperate parts of Europe and Asia, and also largely cultivated. Its chief use is to mix with coffee, to which, in small quantities, it is for various reasons often considered an improvement. The roots are washed and cut up, then dried till they are about one-fourth the original weight. Then the chicory is ready to be ground into powder and mixed with ground coffee.

CHILE, or **CHILI,** the former being the spelling of the natives, is a long, narrow strip of country, forming a Republic, along the west coast of South America, stretching from Tierra del Fuego in the south to near Lake Titicaca in the north, a distance of 2,500 miles. Its breadth varies from 40 to 200 miles. The inhabitants are a mixture of Spanish with the native Indians, the upper classes being more purely Spanish than those of South America generally. Since the revolt from Spain in 1810, the government of Chile has undergone fewer changes than most of the once Spanish colonies, and it has kept faith with foreign creditors. Santiago, the capital, has a population of about 350,000, and Valparaiso, the chief port, about half that number.

CHILLIANWALLA, a village in the Punjab, near the river Jhelum, the site of a bloody battle between the English, under Lord Gough, and the Sikhs. The English lost most men, but took their revenge a few days later, by nearly annihilating the Sikh army at Gujerat.

CHILLON, a castle standing at the eastern end of Lake Geneva, in Switzerland. Here Bonnivard, the subject of Byron's lovely poem, the "Prisoner of Chillon," was imprisoned from 1530 to 1536.

CHILTERN HUNDREDS. The forests which once covered the Chiltern Hills used to be infested with robbers, and, in order to check them, the Crown used to appoint an officer called the "Steward of the Chiltern Hundreds," the Hundreds being certain divisions of the county. A member of Parliament not being allowed to vacate his seat, the only way to resign is to apply for the Stewardship of the Chiltern Hundreds, which, being a Crown office, necessarily causes his seat to be vacated. Of course, at the present day, this is a convenient fiction only, for such stewardship is now merely nominal.

CHIMÆRA, in classical fable, a fire-breathing monster, having the head of a lion, the hinder parts of a dragon, and the body of a goat. It is said to have wrought great havoc in Lycia, until slain by Bellerophon, with the aid of his winged horse Pegasus.

CHIMPANZEE, a kind of ape, found round the Gulf of Guinea, about four feet high, coming very near to man in its general construction. It has no tail, but it has one more pair of ribs than man. Its brain is about half as big as the average man's. It does not live long in confinement.

CHINA. China Proper has an area of about 1,500,000 square miles. It has Manchuria and Mongolia on the north, Tibet and Turkestan on the west, and Anam on the south. Of these, all but the last are included in the Chinese Empire, and make it as large again

as China Proper. Of this vast territory, by far the most important part is China Proper, which may be described as sloping gradually from the central plateau of Asia to the sea, and formed mainly of the valleys of the Yang-tse-kiang and Hoang-Ho rivers. These each have a length of about 3,000 miles, and the valley of the Yang-tse-kiang presents one of the most fertile and best cultivated districts in the world. The Hoang-Ho is most famed for the havoc it has wrought by bursting the banks which keep it above the low-lying country in the latter part of its course, and sweeping away everything for miles around. The population of China is one of the most homogeneous in the world. Their records begin about the year 2,400 B.C., and so for about 4,000 years or more they have been working out their own destiny with little interference from foreigners, till early in the last century. Their numbers have been variously estimated, but it is probable that China contains about one-fourth of the population of the world, or 450 million people.

Of the productions of China, the tea-plant comes first, but rice, cotton, and sugar are largely cultivated, and silk is plentifully produced. Coal abounds, and gold, silver, iron, copper, lead, tin, and mercury are extensively distributed, but little has been done in working the mines. The industry of the Chinese is remarkable; they are devoted agriculturists, and raise extraordinarily large crops. The silk and cotton manufactures are highly important; earthenware comes next; then various ornamental arts, such as ivory carving, lacquered ware, and metal working. The total foreign trade is about £69,000,000, chiefly with the United Kingdom and its dependencies. The chief *exports* are tea, raw silk, and silk goods, raw cotton, and ornamental articles; the chief *imports* are cotton and woollen goods, opium, iron goods, and coal.

Peking, the capital, on the Peiho river, which flows into the Gulf of Pechili, is one of the oldest cities in the world; population 1,000,000; it is surrounded by walls, which gave the allied army considerable trouble in the "Boxer rising." Port Arthur, Wei-hai-wei, and Kiao-Chau, are places near the entrance of the Pechili Gulf, leased by Japan, England, and Germany respectively. The Treaty Ports are places to which foreigners are allowed free access. Of these ports, the chief are Canton (population 1,500,000), and Shanghai. There are besides, a score of places in China now open to the trade of the world. Hong Kong, an island off the mouth of the Canton river, fell into our hands in 1841, and is now our chief naval station and centre of trade in the "Far East."

CHINCHILLA, a gregarious rodent, somewhat resembling the rabbit in structure and appearance, which inhabits the mountainous districts of South America, and is hunted for its long, soft, grey fur.

CHINESE. The Chinese language is the best example of that curious group of languages, called mono-syllabic, in which there are no letters, each written character representing a word, and no inflections by which to form words as we do, when we form "looker-on," "overlook," and "looking-glass," from the word "look." Thus there are about 30,000 written characters in the language, each one a word, and any one of these may represent, according to its position, a noun, verb, adjective, or adverb.

CHINOOK, a warm wind prevalent in the valleys between the foot-hills on the eastern side of the Rocky Mountains, and also felt for a considerable distance over the western portion of the great plains. Its influence extends almost as far north as the Arctic Circle. It prevents the snow from lying long, and thus enables the ranchmen to keep their cattle in the open throughout the winter.

CHIPPENDALE, THOMAS, a furniture maker who flourished in the middle of the eighteenth century, was a native of Worcestershire. He came early in life to London, and soon gained renown as a designer. His mahogany cabinets are much esteemed, although too heavy and too highly ornamented for present day taste.

CHITRAL, a mountainous State, with an area of about 7500 square miles, extending along the north-west frontier of Kashmir. The district is of great strategical importance, as it commands the principal passes over the Hindu-Kush. The territory has been occupied by the British since 1895.

CHIVALRY, the whole system of life and conduct expected from a true and loyal knight (chevalier) is comprised in the word *Chivalry*. The French proverb, "Noblesse oblige," perhaps best expresses the spirit on which Chivalry was founded. It owed its origin partly to the Feudal System, which made the lord a superior being to his vassals, and partly to the esteem in which women were held by Teutonic tribes.

CHOCOLATE, a preparation of the seeds of a species of tree growing freely in the West Indies and South America. The seeds are ground to a very fine powder, which, either alone, or mixed with flour or other farinaceous matter, is sold as cocoa. Chocolate is made by the addition of water and sugar, together with some flavouring matter, as vanilla, etc.

CHOKE-DAMP, the name given by miners to carbonic acid gas. Besides being produced in the ordinary way by persons breathing, and by combustion, it is also slowly given off by coal, so that great care is required in entering a pit, or part of a pit, that has been for some time disused.

CHOPIN, FREDERIC FRANCOIS, *b.* 1809, *d.* 1849; was born near Warsaw, in Poland. Of a highly nervous nature, his temperament is expressed in his works. Of these, his pianoforte pieces are by far the most important; opera and oratorio he never attempted. He visited London twice, in 1837 and 1848, but the last half of his life was spent in Paris.

CHORUS, a band of people who sing together, or a piece of music that is sung by a number of people together. In Greek plays the chorus is a number of people who remain on, or in front of, the stage during the play, and utter speeches either explaining the action of the play, or commenting on the events portrayed. Sometimes the chorus addressed, and was addressed by, the actors.

CHOUANS, Royalists who, after the French Revolution, strove to maintain the royal cause in Brittany, and for some time caused the Republican Government great anxiety. They were defeated in 1796 by La Hoche; and Cadoudal, the chief leader, after several attempts to revive the movement, was executed by Napoleon in 1804.

CHRISM, the holy oil used in the Roman Catholic and Greek Churches in baptism, confirmation, ordination, and extreme unction.

CHRISTIAN BROTHERS, a society founded in Ireland in 1802, for the education of the poor. The society maintains a number of primary schools both in Ireland and the Colonies, and much of the secondary education is also under its control.

CHRISTIAN IX., King of Denmark, the father of Queen Alexandra, was born in 1818, and came to the throne in 1851. Since the loss of Schleswig-Holstein in 1864, Denmark has been free from outside trouble, while internal dissensions have been minimised by the love of the people for their ruler, despite their occasional disapproval of his policy; *d.* 1906.

CHRISTIANIA, the capital of Norway, stands at the head of Christiania Fiord, an inlet of the Skager Rack. The king has two palaces here, and it is the seat of Parliament, (the Storthing and the Lagthing). It is named after Christian IV., who founded it in 1624, after the destruction of Oslo, the old town, by fire. The population has increased from 128,000 in 1885 to 225,000 in 1902. The reason for this extraordinary increase is the rapid growth in its manufactures and trade, for Christiania is fast becoming the chief manufacturing town and port of the kingdom. Timber and wood-pulp for making paper are largely exported.

CHRISTIAN, PRINCE, *b.* 1831, is a prince of the house of Schleswig-Holstein. In 1866 he married Princess Helena Victoria, the third daughter of Queen Victoria. Their eldest son, Prince Christian Victor, died 1900 in South Africa during the Boer War.

CHRISTIE'S, a famous auction room for all objects of art, situated in King Street, London. The sum total of a day's auction has exceeded 100,000 guineas.

CHRISTMAS DAY, the day on which Christians celebrate the birth of Christ. In the Early Church there was no fixed day for its celebration, but by the end of the fifth century the 25th December had become the general day. The rejoicings so common in most countries were encouraged originally as an antidote to the pagan revels usually celebrated at the winter solstice. In the Greek and Roman Catholic Churches it is common to have a representation of the Holy Family, the stable, manger, etc., set up in the churches.

CHRISTOPHER, SAINT, a saint of the Roman Catholic and Greek Churches, of whom many beautiful legends are related. A man of enormous strength, he showed his love for God by bearing pilgrims across a broad river. One day Christ came to him in the form of a child, to be borne across, and he marvelled at the weight of the burden till the child said, "Marvel not, for thou hast borne Him who bore the sins of the world." Hence his name Christophoros, "Christ-bearer."

CHRIST'S HOSPITAL, the "Blue Coat School," as it is usually called, was founded by Edward VI., in Newgate Street, on the site of an ancient Greyfriars' Monastery. For three centuries and a half it did its beneficent work there, and now is removed to Horsham, in Sussex. Among the eminent men who have passed through the school may be mentioned Camden, Stillingfleet, Lamb, S. T. Coleridge, Sir Louis Cavagnari, and Sir Henry Maine.

CHRONOLOGY, the science of time, requires a starting point and an agreed method of estimating the interval between one event and another. The Sun has provided the latter requisite, but different peoples having adopted different starting-points, the chronology varies accordingly. [See *Era.*]

CHRYSALIS. The chrysalis stage is the second in the life history of butterflies and moths. The caterpillar, having finally ceased eating, weaves a cocoon or webby shelter, or suspends itself by a silken thread in some quiet nook, or burrows in the earth. It is now in the chrysalis stage, and to all outward appearance quite lifeless. But really it is inwardly undergoing a complete change, and, in a few weeks, emerges as a moth or butterfly.

CHRYSOSTOM, SAINT, the "golden-mouthed," as his name means, was a native of Antioch, born about 347 A.D. He became a priest in his native city, and his

eloquence soon attracted universal attention. In 398 he became Archbishop of Constantinople, but his zeal in reforming abuses brought about his banishment. The sympathy shown to Chrysostom irritated the Emperor Arcadius so much that he commanded him to retire to Pityus, on the very extreme of the Black Sea. The journey on foot, with bare head, proved too much for the feeble old man, and he expired on the way. His writings are among the most valuable the Christian Church possesses, characterised as they are by religious fervour, eloquence, and critical acumen.

CHUNCHUSES, turbulent bands of brigands inhabiting Manchuria and Mongolia. During the Russo-Japanese War they several times cut the railway, and the accusation was brought by Russia that they were secretly in the pay of the Japanese.

CHURCH ARMY, a Christian Mission in connection with the Church of England, founded by the Rev. W. Carlile in 1882. It has been described by the Prison Commissioners as "one of the great reclaiming influences of the age." The organisation includes an Evangelistic Society which trains working men and women for work among the masses; missions to prisons and workhouses; mission vans and tent missions for harvest workers; a social department with labour, rescue, and lodging homes; Boys', Girls', First Offenders' and Inebriates' Homes; mission nurses engaged in parochial and rescue work; and an Emigration Test Farm and Market Garden in Surrey where able-bodied men and youths are instructed in practical farming, and sent when fit to the Colonies.

CHURCHILL, JOHN, DUKE OF MARLBOROUGH, *b.* 1650, *d.* 1722; one of England's greatest generals, covered his nation with glory by his successful campaigns, and his own private character with infamy by his treacheries and acts of dishonesty. He first distinguished himself against the Dutch, and, on the accession of James II., his rise was rapid. He took an active part in suppressing Monmouth's rebellion, but on the landing of William of Orange he deserted the king for the prince. William, however, never really trusted Churchill, although he made him Earl of Marlborough in recognition of his services in Ireland. When Anne came to the throne, Marlborough's time came. He had married Sarah Jennings, the favourite attendant of Queen Anne, who could do nothing that her minion did not approve of. In the war against France that followed, Marlborough added success to success. Donauworth, Blenheim, Ramillies, Oudenarde, Malplaquet, any one of them would have made the victor famous. The Treaty of Utrecht, 1713, which ended the war, was more favourable to the French than they might have expected. Marlborough's enemies had by this time gained the queen's ear, and his wife's day was over. Charged with peculation, he retired to his palace of Blenheim, at Woodstock, the gift of a grateful queen and nation in years gone by, and from that time he took little part in public life.

CHURCHILL, LORD RANDOLPH, *b.* at Blenheim Palace, 1849, *d.* 1895; was the third son of the seventh Duke of Marlborough. He entered Parliament in 1871 as Conservative member for Woodstock, and soon made a reputation as an able debater. As one of the most active of the members of the so-called Fourth Party, he made frequent attacks on Mr. Gladstone, John Bright, and other Liberal leaders. In 1885 he became Secretary for India, and the following year was Chancellor of the Exchequer and Leader of the House of Commons, but resigned within six months. His biography has been written by his son, Winston Churchill.

CHURCHILL, WINSTON, *b.* 1874; a soldier, journalist, and politician, is the eldest son of Lord Randolph Churchill. As a soldier he saw service in Cuba, on the Indian Frontier, in the Sudan, and in South Africa, where he was taken prisoner but cleverly managed to escape. He became M.P. for Oldham in 1900, as a Conservative, broke with his party in 1904, over the Tariff question, and became Under-Secretary for the Colonies in the Liberal Government, 1905. His "Life of Lord Randolph Churchill" is a work of high merit. (2) A well-known American, *b.* 1871; journalist and novelist, the author of "The Celebrity," "Richard Carvel," and "The Crisis."

CIBBER, COLLEY, a dramatic writer and actor, *b.* in London, 1671, *d.* 1757. His plays include "Love's Last Shift," "The Careless Husband," and "The Non-juror." In 1730 he was appointed poet laureate. His "Apology for the Life of Colley Cibber" has been described as one of the most amusing autobiographies in the English language.

CICERO, MARCUS TULLIUS, 106 B.C.—43 B.C., the greatest orator, and one of the greatest statesmen Rome ever produced, lived in times too troublous for a genius like his. Cæsar, Pompey, Crassus, and Catiline were too much for him, while the bold stand he made against Antony after Cæsar's death only brought about his own ruin. The speeches and philosophical writings of Cicero are still read with pleasure, for the gracefulness of the language and for the insight they give us into the life and thought of the time.

CID, THE, Don Rodrigo Diaz, Count of Bivar, *b.* 1026, *d.* 1099, was one of the heroes of the Middle Ages whose exploits have handed down their names to undying fame. Born in Castile at the time when the Moors seemed destined to be masters of Spain through their own prowess and the disunion of the Spaniards, he drove them back from his native land before he was twenty. From that time till his death he was foremost among Spanish knights. Banished through his sovereign's jealousy, he went wherever fighting was, and always with success. The Moors, with whom he was sometimes allied against his Spanish enemies, called him the Cid, or "Lord."

CIDER, a drink made from the juice of apples. Devonshire, Herefordshire, and Worcester are famous for its production. It is usually made by the growers of the fruit, so the results are apt to vary, but when cider is sound, it is a most wholesome beverage.

CIMABU'E, GIOVANNI, *b.* 1240, *d.* 1302, is generally credited with having revived the art of painting in Italy after the neglect of the dark ages. He was undoubtedly the founder of the Florentine School of Painting, which produced the famous masters Raphael, Michael Angelo, and Da Vinci. His mosaics at Pisa and frescoes at Florence are far-famed.

CIMMERII. The Cimmerii were a nomadic people, inhabiting the district north and north-west of the Black Sea. They more than once attempted the conquest of Asia Minor, but were unsuccessful. In early times the fame of their gloomy winter caused people to talk of it as a land without sun, and perpetually dark. Hence the phrase, "Cimmerian darkness."

CIMMERIAN BOSPORUS, a name given to the Strait of Yenikale, by which the Sea of Azov is entered.

CINCHONA, or **CHINCHONA,** a tree from whose bark is prepared the valuable medicine, quinine. It is a native of South America, growing best on the moist eastern slope of the Andes, but it has now been successfully introduced into India, Burma, Ceylon, and the West Indies. The bark is called Peruvian bark, Jesuit's bark, and by other names, as well as Cinchona bark. Sulphate of quinine can now be made in the laboratory, and is displacing that obtained from the cinchona.

CINCINNA'TI, the largest city in the State of Ohio, United States of America, stands on the north bank of the Ohio river, in the midst of a fertile and well-peopled district. Next to Chicago, it is the most important centre of the pork and bacon trade, but its other industries are numerous and important; population 325,000.

CINCINNA'TUS, LUCIUS QUINCTIUS, one of the favourite heroes of the early republic of Rome; was chosen consul in the year 460 B.C. Two years afterwards he was chosen to lead, as Dictator, the army of Rome against the Æquians. The messengers sent to tell him of the honour found him ploughing his little farm. He put on his toga to hear their commands, went to Rome, and after defeating the enemy, was at home again at work in sixteen days.

CINEMATOGRAPH. See *Biograph.*

CINNABAR, a compound of mercury and sulphur, constituting the ore which is the chief source of mercury. The mines of Almaden, in Spain, which have been worked for over 2,000 years, are still very productive. The mercury is obtained by heating the ore under suitable conditions.

CINNAMON, the dried bark obtained from the branches of a tree of the laurel kind. The branches are cut down, and the outer bark scraped off. A slit is then made lengthwise, and the bark gradually loosened from the stem. As it dries, it rolls up, and the smaller rolls are placed inside the larger. Cinnamon grows freely in Ceylon and the East Indies.

CINQUE PORTS, "five ports"—Dover, Sandwich, Hythe, Romney, and Hastings—which, in Saxon and succeeding times, were bound to furnish ships for the purpose of repelling invasion, and in return were granted special privileges. Rye and Winchelsea were afterwards added to them.

CINTRA, a small town of Portugal, 14 miles north-west of Lisbon. Standing high, it is a favourite residence for the wealthier inhabitants of Lisbon. The "Convention of Cintra," by which were thrown away all the advantages Wellesley had gained over the French, was signed here in 1808.

CIRCASSIA, a district extending between the north-west slope of the Caucasus mountains and the Black Sea. The inhabitants of this mountainous region have long been famed for their beauty, bravery, and love of freedom. Unjustly handed over to Russia by the treaty of Adrianople, in 1829, they did not submit without a long and sanguinary struggle.

CIR'CE, in classical mythology, a fabled sorceress who lived on the island of Æaea. Ulysses, in his wanderings, landed on her island, and she changed some of his companions into pigs. Ulysses, however, persuaded her to remove the spell, after which he stayed with her for a year.

CIRCULAR NOTES, bank notes especially devised for the use of travellers in foreign countries. The bank which issues them also gives the holder a letter addressed to its foreign agents, authorising them to cash the notes in favour of the person named. See *Commercial Dict.*

CIRCUMCISION. The practice of this rite was not confined in ancient times to

the Jews, nor is it now. The Egyptians, and other neighbouring nations, practised it of old, and so do Arabs, Egyptians, and Persians to-day, besides many less civilized peoples. Sanitary reasons may account for its origin, although among the Jews it is a sign of religious faith as well.

CISTERCIANS, a religious order of monks and nuns, following the rule of St. Benedict, founded in 1098, and so called from its original convent in the forest of Citeaux (*L.* Cistercium) in France. Within a century from its foundation the orders possessed 800 rich abbeys on the Continent, and before the Reformation the convents of this order were very numerous in England. The habit of the order is a white cassock with a black scapulary and woollen girdle.

CITIZEN KING, THE, Louis Philippe, (*b.* 1773, *d.* 1850), who was *elected* king of the French in 1830, had a chequered existence. Though a member of the Bourbon family (the royal family of France), he sided with those who set up the Republic, but becoming suspected of disloyalty to the republic, he fled to England, and there remained until the restoration of the monarchy, 1814. Elected king after the revolution of July, 1830, he became more and more autocratic with years, and was at length compelled, in 1849, by a popular rising, to abdicate. He fled to England as Mr. Smith, and there died in 1850.

CITRON, the fruit of a tree belonging to the same order as the lemon tree and orange tree. The common citron is much like a lemon both in size and shape, but by cultivation it can be grown up to four or five pounds in weight. The rind is very thick and fleshy, and it is this which gives us the best candied peel. The tree grows freely in warm countries.

CIVET, a carnivorous animal of the cat kind, secreting by means of a gland in its hinder parts an oily substance yielding the perfume once so esteemed. It is found wild in the hot parts of Asia and Africa, and is often kept in confinement, for the sake of obtaining the civet perfume.

CIVIL LIST. Refer to *Index.*

CIVIL SERVICE, a term denoting all officials engaged in carrying on the administration of government in any of its forms, whether it be the collection of revenue, administration of justice, post-office work, or any similar work.

CLAIRVOYANCE, "clear seeing," is the power, alleged by some to exist, of seeing, when mesmerised, what is at the moment occurring in some distant place. Despite the assertions of its believers, no clear case has yet been proved of a clairvoyant being able to do what he claims to do.

CLAN-NA-GAEL, the name of a society of Irish-American Fenians, founded in Philadelphia about 1870. Chicago afterwards became its head-quarters. The policy of its members was to terrorise the British parliament and people in the hope of securing the complete separation of Ireland from Great Britain, or, at least, its virtual independence. To this end dynamite outrages and assassinations were organised.

CLAQUE, a term introduced from France to denote a number of people hired to applaud a piece or a performer at the theatre. The custom of doing so is quite common in France, and it appears to be making some progress in England.

CLARE, RICHARD DE, Earl of Pembroke, better known as "Strongbow," began the English conquest of Ireland. When Dermot, king of Leinster, came to seek help against his rivals, Strongbow agreed to aid the king and obtained his daughter Eva in marriage. On Dermot's death, Strongbow became king of Leinster, and he hastened to do homage to Henry II. as such.

CLARENCE, DUKE OF. (1) The first prince to bear this title was *Lionel*, third son of Edward III. (2) It was also borne by *George*, brother of Edward IV. The duke married a daughter of Warwick, "the King-maker," and joined him in making war on the king. But on the eve of the battle of Barnet he went over to his brother's side, and helped him to gain the victory. Later on he fell under the king's suspicion, and was imprisoned in the Tower, where, it was commonly reported, he was drowned in a butt of Malmsey wine. (3) *William IV.*, before his accession, was known as Duke of Clarence. (4) The same title has since been borne by *Albert Victor*, eldest son of Edward VII. This prince died in 1892, at the age of 28, just before the time appointed for his marriage with Victoria Mary (May) of Teck.

CLARENDON, CONSTITUTIONS OF, a series of laws drawn up by a council of nobles and prelates held at Clarendon, near Salisbury, in 1164. Their aim was to restrict the power of the clergy and bring them more under the secular laws. Archbishop Becket refused to consent to them, and hence arose the quarrel between him and Henry II.

CLARENDON (Edward Hyde), **EARL OF,** *b.* 1608, *d.* 1674; the author of the "History of the Rebellion in England," was well qualified for his work, for he was an actor in most of the events between 1640 and 1660. In the Short Parliament, and in the early months of the Long Parliament, he was with the popular party, but the "Grand Remonstrance" threw him on the side of the king. Faithful to Charles and to his son, he had his reward when the Restoration came. As Lord Chancellor and Earl of Clarendon he occupied posts of the highest dignity. But he soon lost favour with both king and people, the former because he abhorred Charles's vices, and the latter, because of his repressive measures. In 1667 he was impeached of high treason, and had to go into exile, from which he never returned. He died at Rouen. His daughter, Anne, married the Duke of York, afterwards James II, by whom she had a daughter, who reigned as Queen Anne.

CLARET, the name given to the light, red wine, containing from 9 to 10 per cent. of alcohol, obtained from the vineyards in the neighbourhood of Bordeaux. Clarets improve by removal, a voyage rendering them lighter and more delicate. Very good claret is also produced in California.

CLARKSON, THOMAS, *b.* 1760. *d.* 1846; one of the devoted band of workers to whom we owe the abolition of the slave-trade (1807), and the freeing of slaves through the British Empire (1833). He was born at Wisbech, and educated at St. Paul's School and at Cambridge. Here he gained a prize for a Latin essay on slavery, and thenceforward devoted himself to its abolition. His later life was spent in furthering other benevolent schemes, particularly for seamen.

CLASSICS. The early inhabitants of Rome were divided, according to their wealth, into six *classes.* Those who belonged to the highest class were called "classici," i.e., members of *the* "class." Hence the best writers were called "classics," and a period in which eminent writers abounded is called a classical period. Similarly, the Greek and Roman authors, on account of their general excellence, are especially regarded as "classics."

CLAUDE LORRAINE, *b.* 1600, *d.* 1682, was a native of Lorraine, but was taken quite young to Rome, where he spent most of his life. Beginning as a menial in the studio of Tassi, he worked his way up until he became the great landscape painter of his day. Four hundred of his pictures exist in the chief galleries of Europe, about 50 being in England.

CLAUDIUS, Emperor of Rome, 41–54 A.D., was fifty years of age when the assassination of his nephew Caligula made him Emperor. He ruled wisely and well, but his private life was far from happy. He visited Britain in 43 A.D. After putting his wife Messalina to death for her crimes, he married his niece Agrippina, who poisoned him.

CLAUS, SANTA. See *Nicholas, Saint.*

CLAY, a kind of earth, which when wet has a tenacious and plastic character. All the clays consist mainly of aluminium compounds, and they all have the sticky nature when wet, but do not all retain their cohesive power when dried, some rather falling to powder.

CLEARING HOUSE. See *Commercial Dictionary.*

CLEMENS, SAMUEL, *b.* 1835, *d.* 1910; an American writer whom the world knows as *Mark Twain.* Early in life he learned piloting on the Mississippi river, whence his "nom de plume;" for "mark twain" means two fathoms by the mark, in sounding. His descriptions of life in the Nevada silver mines are very fine; but it was the "Innocents Abroad" which established his fame. It records in a humorous manner the doings of a pleasure party visiting the Continent and Palestine.

CLEOPATRA, *b.* 69 B.C., *d.* 30 B.C.; daughter of Ptolemy, king of Egypt, was contending with her brother for her share of the government when Julius Cæsar arrived at Alexandria. Cæsar at once became her helper, and soon her lover. She followed Cæsar to Rome, and after his death made Antony her slave. After the battle of Actium, 31 B.C., Antony took refuge with her in Egypt, but finding that she was about to surrender him to Octavius, he killed himself, and Cleopatra put an end to her life by the poison of an asp.

CLEOPATRA'S NEEDLE, a monolith of red granite, on the Victoria Embankment, London, was presented to England, in 1819, by Mehemet Ali, Pasha of Egypt. It was brought to this country by Mr. John Dixon, the engineer, at the expense of Mr. Erasmus Wilson, in 1878. It weighs 180 tons.

CLEP'SYDRA, an instrument for measuring time by regulating the escape of water from or into a vessel. The common form was that of a float in a tall vessel, which rose by the influx of water from an orifice above, thus pointing in succession to lines at regular intervals on the sides of the vessel.

CLEVELAND. (1) The north-eastern portion of Yorkshire, a hilly district containing a rich deposit of iron-ore, which is smelted at Middlesborough, a town which owes its prosperity, and almost its existence, to its iron-works. (2) A city in Ohio, U.S.A., on the south shore of Lake Erie, where the Ohio Canal connects the lake with the Ohio river. Cleveland is both an important manufacturing town and a busy port. Its chief industries are the iron manufacture and petroleum refining, while its ample railway facilities make it second only to Chicago as a lake port; population, 380,000.

CLEVES, a small town of Prussia, a few miles west of Nimeguen in Holland, and near the river Rhine. Anne of Cleves, Henry VIII.'s fourth wife, was born in

the fine old castle which commands the town.

CLIFFORD, ROSAMOND, "the fair Rosamond," was the daughter of Walter, Lord Clifford. That King Henry II. loved her and visited her at Woodstock, seems clear, also that she died about 1176, and was buried at Godstowe, near Oxford. The details about the labyrinth and the cup of poison are probably romantic additions.

CLIMACTERIC YEARS are critical or important years in a person's life. These are supposed to be the seventh, and years with odd multiples of seven, i.e., the 21st, 35th, etc. As the 63rd is regarded as the most critical year, especially for men, it is called the "grand climacteric." There is no real ground for these notions. The only climacteric is the change of life in a woman when menstruation ceases.

CLIMATE, the general state of the atmosphere in respect to temperature and humidity. The climate of a place depends mainly on its latitude; but there are certain modifying causes, the chief of which are—(1) altitude of the place, (2) its proximity to the sea, (3) the winds that usually prevail, and (4) the nature of the soil, and whether wooded or bare.

CLIMAX, "a ladder," is a rhetorical device in which the conclusion is led up to by a series of particulars, each one more striking than the preceding. The last statement, or proposition, is often called the "climax." (See 1 Sam. iv. 17.) When details of slight importance succeed the climax, an *anticlimax* is reached.

CLIVE, ROBERT, one of the founders of our Indian empire, was born near Market Drayton, in Shropshire, 1725. At school he loved fighting better than he did learning, and he was for ever in trouble. At eighteen he was packed off to Madras in the service of the East India Company, and the monotony of his work made him attempt suicide. In 1746 he enlisted as an ensign in the Company's army, and by 1751 had gained renown for daring, dash, and success as a commander. The victory of Plassy, in 1757, made him the real master of Bengal, though a native prince was the nominal ruler. In 1760 he came home to the honours he had earned. He went out again in 1765, and with a strong hand corrected the abuses of the Company's officials. On his return to England, in 1767, he found that the enemies he had made by his reforms had blackened his name. From then till his death, in 1774, he was the victim of accusations that caused him at last to take his life.

CLOSE TIME. Refer to *Index*

CLOSURE. Refer to *Index.*

CLOTILDA, SAINT, *b.* 475. *d.* 545, A.D., daughter of Chilperic, king of Burgundy, and wife of Clovis, king of the Franks. Her saintly life converted her husband, who did much to forward Christianity in France. She was canonised soon after her death.

CLOUDS consist of minute particles of water suspended in the air, each particle having for its centre a speck of dust, from which the purest air is never free. The production of the watery particles is due to the condensation of the vapour in the atmosphere caused by a fall of temperature. When, for instance, a warm wind strikes the side of a cold mountain, it is cooled, and, in cooling, the vapour it contains condenses, just as dew is formed by the rapid cooling of the air in contact with the ground at night. [See *Fog.*]

CLOVES, the flower buds of a kind of myrtle. Before being gathered they are of a red colour. They are dried either in the sun or artificially. The clove-tree is a native of the East Indies, but grows freely in moist and warm climates.

CLOVIS, *b.* 465, *d.* 511, A.D.; king of the Franks, succeeded his father Childeric in 481, and in 30 years he greatly extended his sway in Gaul, defeating the Alemanni, or Germans, in the north-east, and the Visigoths in the south-west. His conversion, due to the religious example of his wife, Clotilda, did much towards spreading Christianity in Gaul.

CLYDE, THE RIVER, rising in the Lead Hills, in the south-west of Scotland, flows in a general north-westerly direction into the Firth of Clyde, past Lanark, Hamilton, and Glasgow, after a course of 100 miles. Near Lanark are the celebrated Falls of Clyde, where the river descends about 250 feet in a few miles. The Firth of Clyde may be said to begin at Glasgow. It is one of the busy waterways of the world, having Glasgow at its head, and a fringe of busy ports and watering-places right down its course. Dumbarton, on the north, and Greenock on the south bank, come next to Glasgow in importance.

CLYTÆMNESTRA, in Greek legends, wife of Agamemnon, king of Mycenæ. On his return from Troy, Clytemnestra murdered her husband for the sake of Ægisthus, her paramour, during Agamemnon's absence. Orestes, her son, shortly afterwards slew her to avenge his father.

COAL, a mineral formed of vegetation by pressure, heat, and chemical action. The forests of bygone ages have been submerged, and then covered with a deposit of sand, clay, or limestone. The same process having been repeated several times, many layers of compressed vegetation are found one above another, with rock of varying thickness and substance between. Such a series of layers, containing coal at varying depths, constitute what we call the "Coal Measures." Coal varies in kind according to the extent to which certain gases and water have, or have not, escaped from the squeezed vegetation. The extent of ground beneath which we expect to find coal is called a coal field. The two chief kinds of coal are (1) anthracite, which gives little smoke or flame in combustion, and (2) bituminous coal, which, containing a large quantity of gas, gives a good deal of flame.

COAL GAS. See *Gas, Coal.*

COALING STATIONS, places conveniently situated along the main trade-routes, and at certain strategic points, where supplies of coal are kept to re-stock our liners and men-of-war. Along the great trade route to India and Australia, we find Gibraltar, Malta, Aden, Bombay, Karachi, Colombo, Singapore, and Hong Kong. On the route to South Africa are Gibraltar, Sierra Leone, and St. Helena. In the West Indies, Jamaica is our great coaling station. All these are strongly fortified.

COAL TAR. When coal is heated in a closed vessel, gas is produced and also a thick, black liquid, insoluble in water, which is called coal tar. The uses of coal tar are various and important, but its chief value lies in the substances obtained from it, among which are aniline dyes, benzine, naphtha, creosote, saccharine, etc.

COASTGUARD. This force, originally intended only to guard against smuggling, is now more a body of men for coast defence, although its original duties remain. The coasts of Great Britain are divided into eleven districts, each under a captain, who has a cruiser and smaller boats, at his disposal. The men have, as a rule, served in the navy, and receive high pay, besides quarters and other privileges.

COATBRIDGE, a rapidly growing town of Lanarkshire, in Scotland, 9 miles east of Glasgow. Situate in the great mineral district of Scotland, it makes iron goods of all kinds, as well as heavy earthenware; population over 40,000.

COAT OF ARMS. Refer to *Index.*

COBBE, FRANCES POWER, *b.* near Dublin, 1822, *d.* 1904, a talented essayist, lecturer and author. She had strong views on religion, women's rights and duties, and the question of vivisection, and was an able exponent of her ideas, contributing largely to some of our leading newspapers.

COBBETT, WILLIAM, *b.* at Farnham, 1762, *d.* 1835; was a fine example of untaught and unregulated genius. Till the age of 21 he was a ploughman, with literary tastes; then he went to London, and, after working nine months as a lawyer's clerk, enlisted. Having gone through various adventures he settled down as a political writer, and his out-spokenness brought him the usual reward of those days, imprisonment. After many futile attempts, he succeeded in entering Parliament, but made no mark there. His writings, where not marred by prejudice and personal feeling, are extremely interesting, and rise sometimes to a pitch of excellence quite striking. His "Rural Rides" are well worth perusal.

COBDEN, RICHARD, *b.* near Midhurst, 1804, *d.* 1861; the great leader of the "Free Trade Movement" of last century, was the son of a Sussex farmer, and came to London as a boy to learn the drapery trade. In 1830 he and some friends set up a calico printing establishment in Manchester, which was a great success. In 1838 he began to advocate the repeal of the Corn Laws, and the work of the Anti-Corn Law League fell mostly on his shoulders. When the heat of battle was over, it was found that Cobden, in his zeal for others' welfare, had neglected his own, but a national subscription of £80,000 made amends for that. He was the founder of what is often called the "Manchester School" of politicians, and till the end of his life he insisted on the importance of peace, free trade, economy, and non-intervention in the affairs of other nations.

COBLE, a low flat-floored boat much used by the fishers of the north-east coast. The rudder projects two or three feet below the bottom, thus securing great stability and manageability. It is about 20 feet long and 4 or 5 broad.

COBLENZ, a city of Western Prussia, is situated in a commanding position at the junction of the Moselle and Rhine. Opposite is the strong fortress of Ehrenbreitstein, and the two places are connected by an iron bridge. Its strong situation has made Coblenz an object of attack in nearly all warlike movements in Germany. It is a great centre of the wine trade; population 45,000.

COBRA DA CAPELLO, or Hooded Snake, one of the most deadly of poisonous snakes, is about 5 or 6 feet long when full grown. It derives its name from puffing out its neck when excited, so as to form a kind of hood about its head. Its bite is almost certain death, and in India, where it is common, about 10,000 deaths are due to it annually.

COCA, a shrub growing freely in South America, whose leaves are chewed by the natives. They have a soothing and at the same time stimulating effect, so that one can for a time both do with less food, and sustain more prolonged exertion.

COCAINE. See *Med. Dict.*

COCHIN-CHINA, a name formerly used for Anam, but now generally restricted to the French colony in the south of that

country. The latter has an area of 23,000 square miles, and a population of about 2,000,000, of whom about 4,000 are Europeans, chiefly French officials and their families. Comprising the fertile delta of the Mekong river, Cochin-China is one of the best rice-producing districts in the world. The monsoons are very regular, the south-west one bringing abundance of rain. Besides rice are grown sugar, tobacco, indigo, tea, and hemp. Saigon, the capital, about 60 miles up the river Mekong, is a handsome modern city. It is the chief port of the country, and trades principally with Singapore; population 60,000.

COCHINEAL, a small insect frequenting a kind of cactus found originally in Mexico and Central America, but now cultivated in many warm countries. The dye consists of the dried bodies of the insects, 70,000 of them being required to make a pound of it. Of late years, the cochineal industry has suffered from the competition of aniline and other chemically prepared dyes.

COCHRANE, THOMAS, EARL OF DUNDONALD, *b.* 1749, *d.* 1831; was one of those impatient geniuses who seem out of place in modern civilization. He entered the navy in time to serve all through the Napoleonic wars, in which he distinguished himself again and again. Ruined by powerful enemies, he left England in 1818, and spent the next ten years fighting gallantly for the independence of the South American States and Greece. At length, in 1831, his unjust condemnation was reversed, and the latter part of his life was spent in the enjoyment of his merited honours.

COCKADE, a bow or knot of ribbons, or rosette of cloth or leather, worn on the hat. By soldiers and sailors it is worn simply as a decoration, but in times past, cockades were worn as signs of adherence to one or other political party. Thus the white cockade was long the distinctive mark of a Jacobite.

COCKAIGNE, LAND OF, an imaginary country, often alluded to in literature, where all good things are to be had for the taking.

COCKATOO, the name given to several kinds of parrot found in Australia and the East Indies.

COCKATRICE, a fabulous monster, the existence of which was thoroughly credited in ancient times, and indeed till quite lately among the more credulous. Supposed to be hatched by a serpent, from a cock's egg, it was credited with deadly and malignant powers, so as to kill with a touch or look. The weasel alone could resist its venom and encounter it successfully.

COCKER, EDWARD, *b.* 1631, *d.* 1674, was the first author of a connected treatise on Arithmetic. He had great success as a teacher of Arithmetic and writing, but his great work was not published till after his death. It was such a success that "according to Cocker" became a proverb.

COCK-FIGHTING, a sport which was common among the Greeks and Romans, is still common in many half-civilized countries, as China, Persia, and South America, and has hardly even yet died out in England, although its cruelty has raised public opinion decidedly against it. For centuries it had the approval and support of all classes of society, from the throne downwards, and the rules of the contest were very strict. The area where the fighting took place was called the cock-pit; much art was shown in the choosing and rearing of the birds, generally of the kind called game-fowl: the spurs, usually of steel or silver, were very carefully fastened on; and the weighing of the birds was a most important process. A certain number of birds on each side having been found to match in weight, within certain limits, were set to fight two by two, and the side which won the greater number of contests was adjudged to have won the "main." In the reign of Edward III. cock-fighting had become so rife that it was forbidden in 1366 by proclamation. So far, however, was it from dying out, that Henry VIII. had a cockpit built in Whitehall, and James I. was extremely fond of witnessing the sport there. It is a curious fact that cock-fighting was once a recognised amusement in public schools; the boys brought game-cocks to school on Shrove Tuesday, and spent the morning in seeing them fight. The birds which ran away became the perquisites of the master.

COCK LANE GHOST. In 1762 London was agog with reports of spirit rappings heard in the house of one Parsons, of Cock Lane, Smithfield. Even Dr. Johnson seemed to believe in their supernatural origin. Eventually it was found that Parsons, in collusion with his daughter, had produced the sounds, and he was pilloried.

COCKPIT. (1) The floor of a building with rising seats all round where people sat to watch cock-fighting (which see). (2) The part of a ship set apart for the reception and treatment of the wounded during a battle. (3) The Privy Council office at Whitehall, because built over the old palace cockpit.

COCOA or **CACAO.** See *Chocolate.*

COCOANUT, the fruit of a species of palm growing freely in tropical regions, especially near the sea. It grows to a height of 80 or 90 feet, with a gigantic tuft of feathery leaves at the top. It produces about 100 nuts annually, which are enclosed in a fibrous covering called coir when detached. Every part of the cocoanut tree is useful, the leaves for thatching and the coir for weaving mats, etc., the shell of the nut for drinking-vessels, the wood for building, etc.

COCOON, the silky covering spun by many caterpillars as a protection during the chrysalis stage. The finest example is, of course, the cocoon of the silkworm. The thread is formed as a glutinous liquid in certain glands, and issuing from the mouth of the creature, hardens as it comes in contact with the air. Spiders also, spin a cocoon, which serves as a bag to hold their eggs, and in which to carry them off, if in danger.

CODE NAPOLÉON, now called the "Code Civil," is the standing body of law in France. Drawn up under the direction of Napoleon, between 1804 and 1810, it unified and simplified the laws prevailing locally in different parts of France, and at the same time greatly simplified legal procedure. Napoleon set a high value on his Code, and not without reason, for it has stood the test of time.

COD FISHERY. The cod, a fish from 2 to 4 feet long, weighing from 30 to 100 pounds, is an inhabitant of the temperate waters of the North Atlantic. The cod-fishery is mostly centred at Newfoundland and on the coast of Norway. From Newfoundland large quantities of dried cod are exported to Roman Catholic countries, while Norway supplies the bulk of the cod-liver oil now so extensively used.

CODEX, a written volume or manuscript, usually an ancient one. The name is generally reserved for ancient classical or Scripture manuscripts.

CODICIL, a short addition to a will. A codicil must be signed by the testator, and witnessed in the same way as a will, and is then of equal validity.

COD-LIVER OIL, as its name implies, is oil obtained from the liver of the cod, and also of allied fishes. It is obtained from the liver by heating or pressure, that which comes off first being the purest and most delicate. It is a valued remedy in all cases of consumption, rickets and scrofula, and where used perseveringly for some weeks, rarely fails to produce beneficial results.

CODRINGTON, ADMIRAL SIR EDWARD, *b.* 1770, *d.* 1851, entered the navy at thirteen. He commanded the Orion at the Battle of Trafalgar. He took part in the American War of 1812 to 1814, and was present when the English were repelled from New Orleans. He commanded the combined English, French and Russian fleets at the Battle of Navarino, 1827, when the Turkish fleet was destroyed, and the independence of Greece assured.

COFFEE, the ground and roasted seeds of the coffee tree, a native of East Africa and Arabia. When the fruit is ripe, it is shaken off the tree, and caught in cloths. The husks, when dried, are cracked between heavy rollers, and the seeds, two to each pod, collected and dried still more. They are then ready for use. The use of coffee originated in Abyssinia and Ethiopia, whence it spread to Arabia. It was introduced into England about 1650, and in the succeeding century the coffee houses were a part of everyday town life. Arabia now exports but little coffee, our chief supplies coming from Central America, India, Brazil, and Ceylon.

COFFER DAM, an enclosure round the spot where the foundation of a pier or wall has to be placed under water, for the purpose of shutting out the water, so that the work may be done in the dry. It consists of parallel rows of closely arranged piles, having the space between the rows filled with clay.

COGNAC, a small town in France, about 70 miles north of Bordeaux. The chief industry is the distillation and export of brandy, sold under the name of Cognac; population about 20,000.

COHESION, a name applied to the force with which the molecules of a body resist separation. Thus the particles of which a piece of wood is made up are more easily forced asunder than those of a piece of iron, those of chalk more easily than wood, and so on. Liquids have very little cohesion, and gases none at all, the particles repelling one another. Cohesion is weakened by heat.

COHORT, a division of the ancient Roman army. The army consisted of a certain number of legions, a legion containing about 6,000 men, divided generally into ten cohorts.

COINAGE. See *Numismatics.*

COIR, or cocoa-nut fibre, is the fibre obtained from the outer covering of the cocoa-nut. The husks are steeped for some months, then taken out and beaten to separate the fibres. It is extensively used for making matting, and also for ropes and cables. Its lightness gives it some advantage over hemp in this respect.

COKE, SIR EDWARD, *b.* at Mileham, Norfolk, 1552, *d.* 1634; one of England's greatest lawyers, and an upholder of freedom in troublous times. His fame as a lawyer has obscured the part he took in resisting the encroachments of the Stuarts, but he lost office, and even suffered imprisonment rather than compromise the liberties of the realm. He had a great share in drawing up the famous "Petition of Right" of 1628. His legal works are a masterpiece of erudition and acumen.

COLBERT, JEAN BAPTISTE, *b.* 1619, *d.* 1683, a great finance minister of France in the reign of Louis XIV. It was, in-

deed, owing to Colbert's financial skill that Louis was able to carry on his ruinous wars. He re-organised every department of the State, and put down abuses, and used his position to promote commerce, agriculture and science.

COLCHESTER, a town of eastern Essex, on the river Colne, about 12 miles from the sea. It is the centre of a large corn-growing district, an important military depôt, and the market for the valuable oyster fisheries of the Colne and the neighbouring coast. It was probably the seat of the British King, Cunobelinus (Shakespeare's Cymbeline), and the site of the first Roman town in Britain. The old Roman walls are still entire for a considerable extent, and many Roman remains have been found here; population 40,000.

COLDSTREAM GUARDS, a regiment of the Household Brigade of Guards, so called from the village of that name in Berwickshire, on the left bank of the Tweed. When General Monk was preparing for his march on London, in 1659, he raised here a regiment of troops, which has retained its corporate existence ever since, under the above name.

COLENSO, a village on the Tugela in Natal, where the British, under General Buller, suffered a severe reverse in the Boer war, 1899; ten of our guns having to be abandoned.

COLENSO, JOHN WILLIAM, *b.* at St. Austell, in Cornwall, 1814, *d.* in Natal, 1883; took high place as a mathematician at the University of Cambridge, and for some years after taking his degree was engaged at Harrow and Cambridge in tutorial work. Appointed Bishop of Natal in 1853, he set himself zealously to learn the Zulu language, and make himself acquainted with the character of the natives, and from that time to the end of his life he was devoted to the interests of his flock. His outspoken criticisms of the Pentateuch—especially its numbers and measurements—brought him much obloquy; but his studious moderation of language in the heat of contention compelled respect. His manuals on Algebra and Arithmetic long remained the stock text books on the subjects.

COLERIDGE, SAMUEL TAYLOR, *b.* at Ottery St. Mary, 1772, *d.* at Highgate, 1834; was one of the "Lake Poets," the others being Southey and Wordsworth. Educated at Christ's Hospital ("Bluecoat School"), he went to Cambridge, but left without a degree. He enlisted in the Dragoons, but soon returned to civilian life. Married at 23, he had hard work to maintain a home by the sale of his poems until an annuity of £150, from the brothers Wedgwood, set him at any rate above the reach of want. After a tour on the Continent he settled for some time in the Lake district, first at Keswick with Southey, and afterwards at Grasmere with the Wordsworths. While there he contracted the opium habit, which proved his curse for many years, though he shook it off somewhat towards the end of his life. As poet, prose writer, and critic he occupies an almost unique position, and as a conversationalist he seems to have been worthy to rank with Johnson. His chief works are "Wallenstein," "Remorse," "Christabel," "Kubla Khan," "Youth and Age," and the "Ancient Mariner." Hartley Coleridge, his eldest son, with much poetic talent, had a weakness of character that ruined his prospects for life, though some of his poetry has been much admired. Derwent, another son, was a distinguished educationist, making his mark as first Principal of St. Mark's Training College. Sara, the poet's daughter, inherited the greatest share of her father's talent, and did the greater part of the work involved in editing his works.

COLET, JOHN, *b.* in London, 1467, *d.* 1519; Dean of St. Paul's, was the eldest son of Sir Henry Colet, twice Lord Mayor of London. Educated for the church, he made a tour on the Continent before being ordained. There he met Savonarola, whose teaching seems to have sunk into his mind, if we may judge from the boldness which he showed in censuring what he thought abuses in the church. The wealth which came to him on his father's death he devoted to the establishment of St. Paul's School, still one of the most flourishing in London. It has educated many able men, among whom we may mention Halley, Leland, Marlborough, Milton, and Pepys.

COLIGNY, GASPARD DE, admiral and general of France in her wars against Spain, is best remembered as the leader of the Huguenots, in their struggle for religious freedom. Fearing his influence, Catharine de Medicis, Queen Dowager of France, arranged the bloody "Massacre of Saint Bartholomew," in which the great admiral fell a victim, 1572.

COLLIE, a kind of dog common in Scotland and the north of England, valued on account of its usefulness as a sheepdog. Of late years, the collie has become very fashionable, but its rather uncertain temper with strangers renders it a dangerous pet.

COLLINGWOOD, CUTHBERT, LORD, *b.* at Newcastle, 1750, *d.* 1810, was one of the brave sea captains who helped to gain the victories that Nelson planned. He had a share in most of the naval battles of the Napoleonic wars, and at Trafalgar he was second in command. His gallantry during the battle, and skilful conduct afterwards, gained him a peerage. His body lies near Nelson's in St. Paul's Cathedral.

COLLINS, WILKIE, *b.* in London, 1824, *d.* 1889, novelist, was educated for the law, but was attracted to literature. His early ventures were fairly successful, and with time he still further improved. He had a strong turn for the marvellous and intricate, some of his plots being extremely ingenious. "Armadale," "The Woman in White," and the "Moonstone" are his best works.

COLLOTYPE, a photographic process depending on the fact that gelatine mixed with bichromate of potash becomes insoluble when exposed to light. The negative it is desired to reproduce is exposed over a paper coated with such gelatine, and thus a print is obtained, which by suitable treatment is rendered strong enough to reproduce from.

COLLUSION, literally a playing together, an acting in concert, generally with a view to deceit or fraud. Collusion in legal cases between parties apparently opposed is very difficult to detect. It occurs mostly in bankruptcy and divorce cases.

COLOGNE, or **KÖLN,** whose very name (Latin, *colonia*, a colony), bespeaks its antiquity, is a city of Prussia on the left bank of the Rhine. The cathedral, begun about 1270 and finished in 1880, is one of the finest Gothic buildings in the world. Cologne is the centre of the Rhine traffic, its ships trading with Holland, Belgium, and even more distant countries. The famous Eau de Cologne is made here; population about 400,000.

COLOMBIA, a republic occupying the north-western portion of South America, has had a chequered history since the great revolt from Spain in 1810. It has an area of about 500,000 square miles and a population of perhaps four million, of various races, having little sympathy with one another. The loss of Panama, which in 1903 declared its independence under the protection of the United States, was a great blow. The gold and silver mines of Colombia are still capable of great production, with improved working. Bogota, the capital, population 110,000, is nearly in the middle of the country. Carthagena, the chief port, population 20,000, is on the Gulf of Mexico.

COLOMBO, the capital and chief port of Ceylon, is on the west coast, right in the track of steamers bound for Australia and the far East. The population is very varied in race. The Portuguese took possession of Colombo in 1517, the Dutch in 1656, and the British in 1796; population about 100,000.

COLONNA, VITTORIA, *b.* near Rome, 1490, *d.* 1547, a member of the celebrated Colonna family of Italy, was married at seventeen, and left a widow at thirty-five. After that event she devoted herself to poetry, producing much admirable work, which is still widely read. She is said to be the only woman that won the admiration of the great Michelangelo.

COLORADO BEETLE, an orange-coloured beetle, rather less than half-an-inch long, unfortunately rather common in North America. It commits great ravages among the potato crops both in the States and in Canada, and in 1877 got as far as Liverpool, but has never yet succeeded in evading the stringent regulations made to keep it out of this country.

COLORADO RIVER, THE, drains the south-western portion of the plateau which covers a good deal of the western United States. For hundreds of miles the river and its tributaries flow through deep channels, called cañons, whose walls rise for hundreds, and even thousands of feet on each side. The last few miles, before it flows into the Gulf of California, are in Mexican territory; total length, 2,000 miles.

COLOSSEUM or **COLISEUM,** a gigantic building erected at Rome by Vespasian and Titus, and finished about the year 80 A.D. Of about the same shape as the Albert Hall, London, its length and breadth were each about 2¾ times as great. It covered about 5 acres of ground, and accommodated about 100,000 spectators. For nearly five centuries it stood entire, then the Emperor Theodoric began using its material for various buildings, in which he was followed by later rulers. Enough, however, is left, especially of the lower courses, to give us an idea of its grandeur. Here assembled the people of Rome to view the amusements of the time, conducted in the central space called the arena; the chariot race, the encounters of men with wild beasts, the meetings of gladiators in single and in general combat, and worst of all, the tortures of helpless Christians done to death by wild beasts, or by some still more cruel fate devised by a Nero. As an example of the extent to which the building was used, may be cited the fact that at its dedication the games lasted 100 days, and 5,000 wild animals were slain. Britain furnished many of the gladiators who exhibited their skill and courage there.

COLOSSUS OF RHODES, a gigantic statue set up at the entrance of the harbour. It is said to have stood astride the entrance, but this is doubtful. Erected about 280 B.C., it was thrown down about 60 years afterwards, and eventually broken up and sold as old metal.

COLOUR. All objects owe their colour to the light which they reflect to our eyes. See *Light*.

COLOUR BLINDNESS, i.e., inability to distinguish colours. Cases where a person

is totally unable to appreciate colour are very rare, but a large number of people are apt to fail to distinguish colours under varying circumstances. Unfortunately, red and green are the colours on which people are weakest, hence the necessity for testing the sight of railway employés and seamen.

COLOURS, MILITARY. The flags which most regiments possess, and carry on parade and on other official occasions, are called the "colours." One is the royal colour, and is the same for all regiments; the other, the regimental colour, has embroidered on it the names of the battles and campaigns the regiment has shared in. The colours are not now carried into battle.

COLOUR-SERGEANT. In former times each company in a regiment had a flag, which the senior sergeant carried, and hence he was called the colour-sergeant, a name still used to denote the senior sergeant, although he carries no colours.

COLT, SAMUEL, *b.* 1814, *d.* 1862; was a native of Hartford, Connecticut. He invented the revolver when quite a youth, and in 1835 he secured a patent for it in France, England, and the United States. At first it did not find much favour, but the Mexican war proved its value, and from that time its use extended.

COLUMBA, SAINT, *b.* 521, *d.* 597 A.D., a native of Ireland, founded a monastery in Iona, a tiny island on the west of Scotland, in 563. From Iona he made repeated missionary journeys through the Highlands, converting the Picts and establishing monasteries among them. His life of labour ended before the altar of his chapel at Iona.

COLUMBIA, BRITISH. See *British Columbia.*

COLUMBIA, DISTRICT OF. See *Washington.*

COLUMBINE. See *Pantomime.*

COLUMBUS, CHRISTOPHER. Refer to *Index.*

COLZA OIL, an oil obtained by crushing the seeds of rape, a plant of the turnip family. It is much valued for lubricating delicate machinery, and for burning in lamps.

COMÉDIE FRANCAISE, or **THÉATRE FRANCAIS,** the great state-aided theatre of Paris. Here, as a rule, the plays are of the highest class, and the performers at the head of their profession. In March, 1900, it was burnt down, but the beautiful exterior was little harmed.

COMET, a small body, or collection of bodies, revolving around the sun. Their orbit, instead of being nearly circular, like those of the planets, takes the shape of an ellipse, or even of a parabola or hyperbola. The tail, sometimes millions of miles long, probably consists of gases in a high state of combustion. See *Halley's Comet.*

COMMEMORATION, the great event of the year at Oxford University, is the time when Masters of Arts and Doctors receive their degrees. Advantage is usually taken of the occasion to present honorary degrees to distinguished men in other walks of life.

COMMENSALISM is the living together of two animals or plants for mutual benefit. Many examples could be given; thus an anemone is commonly found on the whelk shell which contains a hermit crab. Many animals prey on the hermit crab, but the anemone is nauseous to them all, and thus affords protection to its companion by its presence. The hermit crab, in turn, when tearing up its food, necessarily allows many fragments to escape, some of which come within reach of the anemone. By living together both animals thus derive mutual benefit. In the plant world the most striking example is seen in the lichens. A lichen is not a single plant, but is composed of a fungus, containing within its meshes microscopic green plants, or algæ, allied to seaweed. The fungus dissolves the bark of the tree, and feeds both itself and the algæ; the algæ, being green, are able to make starch from the atmosphere, and so to feed both themselves and the fungus. Each plant thus obtains a double food supply, which it could not obtain when acting alone.

COMMERCE, CHAMBERS OF, associations of traders now to be found in most important towns. Their function is to safeguard and extend the local trading interests; they collect information and statistics, and make representations to the government on matters affecting their district. The London Chamber of Commerce does a great work in promoting commercial education and in publishing commercial information.

COMMINATION, literally "a threatening." The Commination Service of the Church of England was introduced at the Reformation as a substitute for the formal expulsion of notorious sinners from the Church on Ash-Wednesday, with their equally formal re-admission, after professed repentance, on Maundy Thursday. It consists of a series of statements chiefly from Deut. vii., that certain sinners are accursed, and the congregation express their agreement by saying *Amen* to each.

COMMISSARY, a person who has certain functions committed to him. In ecclesiastical matters a colonial bishop often appoints a commissary to act for him during his absence from England. In the army the name is generally applied to the officer whose special duty it is to provide food.

COMMISSIONAIRES, on the Continent, hotel attendants who await trains and steam-boats to secure customers for their hotels, bring their luggage up, and so on. In England the name is usually reserved for a body of men picked from pensioned soldiers and sailors, who perform various duties, as hotel attendants, watchmen, etc. Sir Edward Walter founded the Corps in 1859.

COMMISSIONS, ARMY. Refer to *Index.*

COMMODORE, the commander of a number of ships detached from the rest of the fleet for a special purpose. The title only lasts for the duration of the special duty; but while his authority holds good, the commodore is above a captain.

COMMONS, HOUSE OF. Refer to *Index.*

COMMONWEALTH, a name given to the form of government between 1649 and 1660, during which England was without a king. Some, however, restrict the name to the period 1649–53, Cromwell's Protectorate beginning in the latter year. The name is now given to the federated colonies or states of Australia.

COMO, LAKE OF, a beautiful lake in North Italy, 30 miles long, but nowhere above 2¾ miles wide. It lies among enchanting scenery, and the district is exceedingly healthy.

COMPARATIVE ANATOMY, the branch of science which has for its object the comparison of the structure of different animals, with a view to accounting for the presence or absence of some part or organ, and thus learning the history of the creature in question. It may be called the portal to Biology.

COMPASS. See *Mariner's Compass.*

COMPOSTS, a term for manures formed by mixing horse-dung or cow-dung, leaves or decaying vegetation of any sort, with earth in the form of sand or lime, and allowing the mixture to stand for some time to thoroughly amalgamate. They are very valuable on pasture land that is getting exhausted.

COMPOUND HOUSEHOLDER, a tenant of a portion of a house or building on which the landlord does not reside. The latter *compounds* for the rates for the whole of the building, and this is regarded as a payment by the tenant, who thereby becomes a "compound householder" enjoying the full franchise.

COMPURGATOR, the origin of our modern juryman. Under the old Anglo-Saxon law an accused person could produce twelve persons to declare on oath their belief in his innocence. They were thus witnesses to character rather than judges of fact, but from them arose our modern jury.

COMTE, ISIDORE AUGUSTE, *b.* 1798, *d.* 1857; the most practical of the group of philosophers whose teaching may be said to owe its origin to the French Revolution, will go down to history as the founder of "Positivism." Surveying the progress of mankind in all branches of knowledge, he concluded that the time was at hand for some *positive* results to be gained from philosophy and science, for man's good. It is true that the system by which he proposed to obtain the good is fantastic and impossible, but undoubtedly his teaching contained the elements of many practical reforms.

COMUS. (1) In later classical times, the name of a divinity supposed to preside over festive proceedings, and represented as a youth with wings. (2) A pastoral drama, or masque, written by Milton, in 1634, for the Earl of Bridgewater, whose children had met with the accident on which the drama was founded.

CONCERTO, a musical composition for one instrument chiefly, the others acting in subordination. As a rule, a concerto is divided into three movements, the *allegro*, the *adagio*, or *andante*, and the *rondo*.

CONCHOLOGY, the branch of knowledge which treats of the structure and composition of shells. As a serious study it may be called dead, the shell being now always considered together with the animal it belonged to; but the collection and arrangement of shells will probably go on as long as the world lasts.

CONCLAVE, a suite of apartments in the Vatican in which the cardinals meet to elect a Pope. Hence a meeting on any serious subject is called a "conclave."

CONCORDANCE, a book in which the key-words of the various passages of an author are arranged alphabetically, with reference numbers, indicating the place where such passages may be found in the author in question.

CONCORDAT, a convention or agreement between two high contracting parties, generally the Pope of Rome and some temporal power. The concordat of 1801, between Napoleon and Pope Pius VII., by which the Roman Catholic religion was re-established in France, has outlasted the century. The Austrian concordat of 1855, which gave the clergy control of public instruction, lasted only till 1870.

CONCRETE. (1) In philosophy, a term denoting something which can actually be felt, handled, or weighed, as opposed to the abstract, which exists only in our minds. Thus "blind man" is a concrete term, while "blindness" is abstract. (2) A mixed mass of mortar and stones used to form the foundation of a wall or building, especially in damp places, where it lasts longer than stone or brick.

CONCUBINAGE, a form of cohabitation quite usual among the Greeks and Romans, is not now practised among Christian

nations. The only trace of it now sanctioned by law, is the "morganatic marriage" (which see), of the Germans, and that is not much used.

CONDENSER, an apparatus for concentrating anything, and making it occupy less space. Thus the condenser of a steam-engine turns the used steam into water, and so makes room for more to come from the cylinder; an electric condenser binds electricity on a sheet of metal, or other conductor, and renders the metal free to receive more.

CONDIMENT, something which we eat with our food to heighten its taste or flavour. As a rule the condiment is not a food itself, as salt, pepper, vinegar, etc.; but butter and the various sauces whose basis is milk, have a high food value, besides being condiments. The use of condiments in moderation is a sensible tribute to nature's demands, but in excess they ruin the digestion.

CONDOR, a large kind of vulture found in the Andes, in South America. It is a little over three feet from tip of beak to tip of tail, and its wings, when extended, measure 14 feet from tip to tip. These birds live far up the mountains, at a height of 14,000 or 15,000 feet, and from thence soar far up again till lost to sight. But even at that immense height, they can recognise a dying or dead sheep, or other animal, and soon appear to feast on its flesh.

CONDOTTIERI, a class of Italian mercenary soldiers and adventurers, who played an important part in the wars of the Italian States, in the 14th and 15th centuries.

CONDUCTION. See *Heat*.

CONFEDERATE STATES, the name adopted by the "Southern" States, when they attempted to secede from the "Union" in 1860–61, which attempt led to the great American Civil War.

CONFEDERATION OF THE RHINE, a confederation of many of the lesser German States formed at the instigation of Napoleon in 1806 as a counterpoise to the power of Prussia and Austria. The Kings of Bavaria and Würtemberg and the Elector of Baden were at the head, supported by about a dozen lesser rulers. As long as all went well, the confederation was a powerful aid to Napoleon, but after his Russian disasters, 1812–13, it melted away.

CONFIRMATION, a rite which follows baptism in Christian Churches. There is no settled limit of time between the two ceremonies. In the Roman Catholic Church, seven years at least must intervene; in the English and Lutheran Churches, Confirmation is not administered until the person confirmed is of an age to understand the obligations thereby assumed.

CONFUCIANISM. Refer to *Index*.

CONFUCIUS. Refer to *Index*.

CONGÉ D'ÉLIRE, "permission to elect," a document under the Great Seal, giving permission to the dean and chapter of a vacant bishopric to elect some one to fill the office. A letter accompanies the congé d'élire, nominating the person for election, and in reality leaving the electing body no choice in the matter.

CONGLOMERATE, a geological term for a mass of rock composed of a number of small stones or pieces of rock bound together by a kind of cement of chalk, clay, or sand; it is also called "pudding-stone."

CONGO, the great river of Central Africa, rises under the name of Luapula, in Lake Bangweolo, and flows northwards into Lake Moero. Leaving Lake Moero, under the name of Lualaba, it still flows north past Nyangwe, to the Stanley Falls, (near the Equator), after which it turns west, and eventually south-west to flow into the Atlantic Ocean. From Stanley Falls it is called the Congo. The two largest tributaries are the Mobangi on the north and the Kassai on the south. Its length is about 3,000 miles, and despite occasional cataracts and falls, the Congo and its tributaries furnish an admirable system of internal communication.

CONGO FREE STATE, THE, includes nearly the whole basin of the Congo, extending from the sea to Lake Tanganyika, and covers an area of 800,000 square miles. It is administered by the Belgian Government, but is constituted a neutral state with free trade for all. The wealth of the state consists chiefly, at present, of rubber, palm oil, nuts and ivory; but the Katanga district in the Upper Congo, on the borders of Rhodesia, is particularly rich in copper. This is rendered available by the so-called Cape-to-Cairo railway, which has already crossed the Congo border. The capital of the Congo State is Boma at the mouth of the river, which is navigable from the sea for about 100 miles, as far as Matadi, where ships unload and re-load. Thence to Leopoldville, on Stanley Pool, a railway, 240 miles in length, carries the traffic past the rapids. Steps have already been taken to open up a route between Boma and the Katanga district, by the construction of railways where the river is unnavigable. The native population is over 14 millions, some of whom are cannibals, and others of a comparatively high degree of civilisation. Sleeping sickness, a deadly disease, for which there has not yet been found a remedy, carries off increasing numbers of the natives each year, particularly in the Lower Congo.

CONGREGATIONALISTS. The earliest Congregational churches were established in the latter half of the 16th century. The members were at first called Brownists, but in the time of Cromwell were known as Independents. They are appropriately designated *Congregationalists*, since they maintain that each congregation constitutes a Christian church competent to manage its own affairs independently of any other Christian body. There are now in the United Kingdom more than 3000 Congregational ministers and nearly half a million church members. They have 12 colleges in which nearly 400 students are being trained for the ministry, and they raise about £1,000,000 per annum for religious and philanthropic purposes (Refer to "Congregationalists" in *Index*).

CONGRESS, "a meeting together," an assembly of people for some high purpose, such as settling international disputes, as in the case of the "Berlin Congress" of 1878. The word is also specially used to denote the legislative body of the United States, which, under the name of "Congress," consists of (1) the Senate, whose members are elected by the legislatures of the various States, and (2) the House of Representatives, directly elected by the people.

CONGREVE, SIR WILLIAM, *b.* 1772, *d.* 1828; the inventor of the rocket called by his name, was educated for the army, in which he gained the rank of lieutenant-colonel, and retired in 1816. He devoted much time to chemistry, and his invention brought him great fame both in England and abroad.

CONGREVE, WILLIAM, *b.* 1670, *d.* 1729; a clever and original dramatic author, was born in Leeds, and educated in Ireland, graduating at Dublin University. His first play, entitled the "Old Bachelor," gained him the patronage of Lord Halifax and a post under government. Soon followed "The Double Dealer," "Love for Love," and the tragedy of "The Mourning Bride." "The Way of the World" was his last, and probably his best play. The language and allusions of his plays render them quite unfit for the modern stage.

CONIFER is the name of a group of cone-bearing trees which includes the pine, fir, larch, juniper, cedar, yew, and cypress. The conifers differ from other flowering plants in producing seeds which lie exposed in the flower instead of being enclosed in a seed case or ovary. The majority are evergreen, the larch being an exception. Conifers range from the Arctic Zone to the Equator, and were the earliest flowering plants to appear on the earth.

CONNAUGHT, the most westerly province of Ireland, is the poorest, the most purely Irish, and the most devotedly Roman Catholic of the four provinces. In 1840 it had a population of about 1,400,000, which has now sunk to less than half. Famine and emigration have caused the decrease. Agriculture is the chief industry. The tourist will find the scenery grand and picturesque.

CONNEMARA, the western portion of the county of Galway, in the west of Ireland. Abounding in picturesque mountains, lakes, and streams, it is a favourite resort for tourists. It is also called Ballynahinch.

CONNOISSEUR, (lit. "one who knows,") a person particularly well acquainted with some art subject, as music, painting or sculpture, without being himself an artist.

CONSANGUINITY, relationship by blood as distinguished from affinity, or relationship by marriage. In all civilised countries both consanguinity and affinity have been always more or less regarded as a bar to marriage. The law on the subject is less strict than before the Reformation, and now all persons are allowed to marry who do not fall within the prohibitions of the Levitical law. By the Deceased Wife's Sisters Act, 1907, marriage with a deceased wife's sister is rendered legal in the United Kingdom. See page 568B.

CONSCIENCE, the power or faculty within us which decides whether our actions are morally right or wrong; or that exercise of consciousness which points out to us the moral bearing of our acts, words, and motives.

CONSCIENCE CLAUSE, a clause introduced first into the Endowed Schools Act of 1860, and afterwards into the famous Elementary Education Act of 1870. Under it a person sending children to any school assisted by ancient endowment or public money may claim exemption from the religious teaching given at the school.

CONSCIENCE MONEY, money sent to the Chancellor of the Exchequer by persons who have somehow not paid their due share of some tax, generally of the income tax. It is usually sent anonymously, and amounts to several thousands a year.

CONSCRIPTION, the system under which every man is liable to serve in his country's army, his name being enrolled as soon as he reaches the required age, generally twenty, unless he is exempt by reason of physical infirmity, of being the eldest of a family of orphans, the only son of a widow, etc. He generally serves three years in the regular army, followed by twelve or more in the various forms of army reserve. This system is adopted in the chief European countries except our own.

CONSECRATION, the act or ceremony by which a person or thing is solemnly dedicated to the service of God. Among Christians the word is used to denote (1) the ordination of bishops, (2) the dedication of churches and sometimes of

cemeteries, and (3) the act of hallowing the elements in the Holy Eucharist.

CONSERVATION OF ENERGY. Energy or force is the term used to denote capacity to perform work, or to overcome resistance. When a railway train is moving, it possesses a certain moving force. When the train is brought to a standstill, that moving force or energy is not annihilated, but transformed into the energy of heat by the action of the brakes on the rails. The train is re-started by the energy of steam; the steam derived its energy from coal; coal is a product of plant life, whose energy came from the sun. Each of these transformations forms a link in the chain of causes that enabled the train to regain its energy of motion. There is always an apparent loss of energy in whatever way it is applied, but, though dissipated, it still exists in one or more forms, and the aggregate of these forms of energy remains unchanged. In fact, conservation of energy means that the sum total of the energy of the universe is constant, and that all the processes of nature are due to transformations of energy from form to form; as from motion to heat, from heat to chemical change, from chemical change to heat again, and so on.

CONSERVATIVE PARTY, THE, a convenient name for that political party which is less ready to adopt political changes, and, as its name implies, is disposed to preserve the existing state of things until some need for change is proved.

CONSISTORY, the court held by a bishop or archbishop to determine matters exclusively ecclesiastical. In the Roman Catholic Church, the assembly of Cardinals, which meets every week to advise the Pope on various matters, is called the Consistory.

CONSOLS. See *Com. Dict.*

CONSTABLE, JOHN, *b.* 1776, *d.* 1837; one of England's best landscape painters, was born at East Bergholt, in Suffolk. He joined the Royal Academy in 1799, and exhibited in 1802. But turning from conventional landscape painting to represent what he saw, he was long in gaining support, and not till he was between forty and fifty years of age did he gain the recognition he deserved. "The Valley Farm," "The Haywain," "The Cornfield," and "Salisbury Cathedral" are among his best pictures.

CONSTANCE, COUNCIL OF, a great ecclesiastical council held at Constance in 1414–18 with a view to ending the dissensions in the Church, and combating the preaching of John Huss. The latter, a staunch supporter of Wicliff's doctrines, was summoned before the Council under a safe-conduct, but on refusing to recant was burnt at the stake in 1415. The existing Pope, John XXIII., was deposed, and his rivals, Gregory and Benedict, forced to resign their claims. Martin V., a member of the Colonna family, was made Pope, and did much to raise the character and power of the Popedom.

CONSTANCE, LAKE, the only large lake in the course of the river Rhine, is situated in the north-east of Switzerland. Its length is 44 miles; greatest breadth nine. The shores are generally flat or undulating, and the soil extremely fertile. It contains a great variety of fish, and aquatic birds are numerous.

CONSTANT, BENJAMIN, *b.* 1845, *d.* 1902, a great French painter, who made the portrayal of Eastern subjects his chief aim. He was also an admired portrait-painter, and took a great share in the decoration of many public buildings. "Prisoners in Morocco," "Mahomet II.," "The Harem," and "The Emir's Favourite," are some of his chief works.

CONSTANTINE "THE GREAT," *b.* 274, *d.* 337 A.D.; succeeded his father Constantius as "Emperor of the West" in 306. For some years he had to struggle with his rival Emperors for the title and power. At length, in 312, he gained a great victory near Rome, over his last rival, Maxentius. It was before this victory that he saw, or imagined he saw, the portent of the fiery cross in the sky, promising him victory, which led him to become a Christian, and prompted the Edict of Milan (313), giving complete toleration to Christians. A war between Constantine and Licinius, the Emperor of the East, ended (325) in the defeat and death of the latter, and Constantine became sole Emperor. He made Byzantium his capital, which he almost entirely rebuilt and called *Constantinople*—"Constantine's city."

CONSTANTINOPLE, founded 330 A.D. by Constantine the Great, on the site of the ancient and famous Byzantium, stands at the southern end of the Bosporus. The Golden Horn, an inlet running up about five miles inland from the strait, separates the city into two parts, in the more northerly of which Christians mostly reside. Stamboul, the Turkish name for the southern part, or Constantinople proper, contains most of the wonderful buildings that delight the traveller, pre-eminent among which is the Mosque of Saint Sophia. The manufactures of Constantinople are not important, but it is a great entrepôt of commerce, the trade amounting, exports and imports together, to £10,000,000 per annum; population 1,125,000.

CONSTANTINOPLE, COUNCIL OF. Of the many councils of the Church held at Constantinople, that held in 381 A.D. claims the pre-eminence for its importance and its far reaching results; for it is on the version of the Nicene Creed, as promulgated by this council, that the Greek Church bases its claim to be *the* orthodox church.

CONSTELLATION, a group of stars. All the fixed stars are divided into groups by imaginary lines, joining each member of a group to its neighbour and then some more or less suitable name is given to the group, generally from a fancied resemblance, as in the case of "Charles's Wain."

CONSTITUTION, the established and recognised form of government of a country. The constitution may be a written one, as that of the United States, or an unwritten one that has grown up, through a series of precedents, round an existing framework, as the English constitution has grown up round "King," "Lords," and "Commons."

CONSUBSTANTIATION, the doctrine that the body and blood of our Lord Jesus Christ are actually present in the bread and wine after consecration, although these elements are not themselves changed.

CONSUL, (1) an officer maintained by a State in a foreign country to conserve the rights and support the just claims of its citizens in that country. The status, privileges, and duties of consuls are very varied, the consul, or consul-general, at places like New York or Constantinople holding a very high position, and receiving a corresponding salary. (2) One of the two chief magistrates of Rome.

CONTANGO. See *Commercial Dictionary.*

CONTRABAND OF WAR, articles which must not be supplied to either belligerent in time of war. Whoever engages in such traffic does so at his own risk; his government will not protect him from having his goods captured and confiscated. Obviously, guns, and military stores generally are contraband of war, but with regard to food, coal, railway material and the like, all depends on their ultimate purpose. These are called conditional contraband, and are not seizable without compensation unless clearly destined for the seat of war.

CONTRALTO, the lowest or deepest musical voice among boys and women. The emotional effect of good contralto singing has long been recognised, and the best contralto singers are much sought after.

CONVECTION. See *Heat.*

CONVENTICLE, (lit. a little meeting), a name given by way of reproach or contempt to religious meetings held by the Nonconformists of England and Scotland in defiance of the law in the 17th century.

CONVERSION. Starting from the literal meaning of this word, namely a changing round, we get the (1) religious, (2) scientific, and (3) commercial uses of the word. Thus, in theology, the word implies a change of heart, prompting to a new life; in science we speak of the conversion of ice to water, iron to steel, etc.; while in commercial parlance, the conversion of a thing is its application to a purpose it was not intended for.

CONVOCATION. Refer to *Index.*

CONVOY, a ship or ships of war detailed to escort a fleet of merchant vessels, and keep them safe against the enemy. Sometimes the merchant ships themselves are spoken of as the "convoy;" also a train of waggons conveying supplies under an escort of troops is called a "convoy."

CONWAY, a charming and picturesque little seaport on the shore of North Wales, at the mouth of the river Conway. Conway Castle, built in 1284 by Edward I., rising abruptly above the river, with walls over 12 feet thick, is a famous ruin, and a favourite subject for illustration; population 4,600.

CONWAY, HUGH, *b.* 1847, *d.* 1885, a sensational and dramatic novelist, was born in Bristol and there made the *coup* which brought him almost instant fame. His "Called Back," published in 1884, had an enormous sale, and "Dark Days" proved quite as great a success. He wrote many short stories and some poetry.

COOK, ELIZA, *b.* 1818, *d.* 1889, the poet of the domestic affections, was born in Southwark. She early achieved success in the comparatively humble path she laid down for herself, and till health began to fail, her articles and poems maintained her in comfort. It is probable that no one poem had so many readers as, at one time, her "Old Armchair." In 1864 she was awarded a Civil List pension of £100.

COOK, JAMES, *b.* at Marton, 1728, the great navigator and discoverer, was the son of a labourer in Yorkshire. After serving in the merchant service, he entered the Navy, and soon rose. His voyages, on account of his accuracy in the observations he made, added much of great value to our geographical knowledge. He did more than any one by his discoveries, as an explorer, to get Australia and New Zealand added to our Empire. In the course of his third voyage he landed at Hawaii in the Sandwich Islands, when he was suddenly attacked by the natives, and clubbed or stabbed to death at the water's edge, 1779. Refer to "Cook" in *Index.*

COOK, THOMAS, *b.* 1808, *d.* 1892; the pioneer of co-operative and organised travel, was a native of Derbyshire. A large temperance meeting at Loughborough prompted him to arrange for a train to take Leicester sympathisers there and back, at a shilling a head. He at once deserted his wood-turning, and

took to organizing similar excursions, with the result the world knows.

COOK, MOUNT, the highest mountain in Australasia, situated nearly in the middle of South Island, New Zealand, rises to a height of over 12,000 feet. It is surrounded by other snow-clad peaks, and by glaciers, surpassing in magnitude those of the Alps.

COOLIES, labourers, generally Indians or Chinese, hired at a fixed rate of pay, for a fixed time, to work in some country not their own, as Mauritius, Guiana, South Africa, etc. The contract usually includes free conveyance to the place of labour and home again. Sometimes, ordinary hired labourers in India and China are called "coolies."

COOMASSIE. See *Kumasi.*

COOPER, ANTHONY ASHLEY, first Earl of Shaftesbury, *b.* 1621, *d.* 1683; one of the most versatile and wittiest of men, seems to have lived only to illustrate the fact that genius without principle brings good neither to its possessor nor to his fellows. He took a share in the Civil War, and sat in the Parliaments that Cromwell held. The Restoration made him a leading man in the country, and as a member of the "Cabal" he must be held responsible for its infamous doings. The "Test Act" (1673), caused him to break with the Court, and from that time he became a violent Whig. The "Habeas Corpus Act," (1679), was largely his production. In 1682 he thought it prudent to retire to Holland, where he died.

COOPER, ANTHONY ASHLEY, seventh Earl of Shaftesbury, *b.* 1801, *d.* 1885; determined in early life to devote himself to the relief of the downtrodden and the humanising of the debased. Being as a child wholly neglected by his parents, he owed all his high principles, as he never ceased to declare, to the sympathy and moral teaching of his nurse, Maria Millis, whose watch he wore all his life. Lunatics, child chimney-sweeps, women working in mines, all had their lot ameliorated largely by his efforts. The Ragged School movement, and that for improving the dwellings of the poor, owed much to him. Every form of suffering called out his sympathies, and he took a leading part in all the beneficent schemes of his day.

COOPER, JAMES FENIMORE, *b.* 1789, *d.* 1851; was a prolific American novelist, whose works had an immense vogue in the last century, and will continue to be read as long as the love of adventure remains in the human breast. His "Deerslayer," "Pathfinder," "Prairie," and "Last of the Mohicans," perhaps excel, but another half-dozen could be found nearly as good.

COOPER, SIR ASTLEY, *b.* 1768. *d.* 1841; a famous surgeon. He published important works on hernia and on dislocations, and by his lectures at Guy's Hospital, did much to advance surgery. He operated successfully on George IV. He became President of the Royal College of Surgeons, and Vice-President of the Royal Society.

COOPER, THOMAS SIDNEY, *b.* at Canterbury, 1803, *d.* 1902, early evinced a talent for art. From 1827 to 1830 he travelled in the Low Countries where he developed his talent for animal and landscape painting. He became A.R.A. in 1845, and R.A. in 1867. He exhibited at the Royal Academy from 1833 to 1898.

COOTE, SIR EYRE, *b.* 1726, *d.* 1783; was a soldier who did England immense service in India. He went out in 1754, and spent there practically the rest of his life. He had a hand in all the great engagements of the time, including Plassy (1757), and Wandewash (1759). It was he who routed Hyder Ali, at Porto Novo, in 1781, and saved Southern India.

COPAL, the hardened resinous juice of various trees found in warm climates. It makes an almost colourless varnish when melted and mixed with turpentine or boiled linseed oil.

COPENHAGEN, the capital of Denmark, is on the east side of the island of Zealand. It is not remarkable for objects of interest. Manufactures are unimportant, but almost all the commerce of Denmark passes through it to the value of about £26,000,000, imports and exports together; population 420,000.

COPERNICUS, NICHOLAS, *b.* 1473, *d.* 1543; was a native of Germany, but was early attracted to Italy, then the centre of all learning. Returning to Germany in 1505, he spent his life in working out the theory of the Solar System, as we have it now.

COPHETUA, a legendary king of Africa who loved and married a beggar maid.

COPPER, a red metal, specific gravity 8·8, probably the first worked and employed by man. It is found native, and is also easily extracted from its ores. Next to silver, it is the best conductor of heat and electricity. Its compounds furnish many blue and green colours, widely used.

COPPERAS, sulphate of iron, or green vitriol, is largely used in making ink and in producing black dyes. It also plays a great part in the production of sulphuric acid.

COPRA, the dried and crushed kernel of the cocoa-nut, from which cocoa-nut oil is obtained.

COPROLITES, the fossilised excrement of animals. Containing a large quantity of phosphate of lime, they form a valuable manure, of which large quantities are obtained from the deposits of Suffolk, Cambridge, Essex, and Norfolk.

COPTS, the Christian descendants of the ancient Egyptians; they formerly spoke the Coptic language. After the fourth General Council at Chalcedon, 451, they separated from the orthodox Church and have since remained separate, under their own Patriarchs. Their present head is the Patriarch of Cairo. The Abyssinian Christians belong to the Coptic communion, and, like the Copts in general, regard all other Christians with hatred and contempt.

COPYHOLD. Refer to *Index.*

COPYRIGHT. Refer to *Index.*

CORACLE, a canoe or boat made of wicker-work, and covered with skins. Some of the Welsh and Irish fishermen use to-day a coracle practically identical with that used by the ancient Britons.

CORAL, a rock formed of a chalky substance secreted by myriads of polyps, little soft-bodied creatures with tentacles similar to those of the sea-anemone, to which they are allied. There are many varieties, but these may be roughly divided into the two classes, deep water and shallow water corals. As a rule, the former embrace the solitary types, and the latter, the congregating and reef-building. Again, the solitary types exist in almost all seas, the reef makers in shallow, warm seas only. The Mediterranean yields the rose-tinted coral of commerce, which is dredged off the coast of Italy, to be manufactured or prepared for sale in Naples and the coast towns. Coral reefs abound in the South Pacific Ocean, in the form of atolls, barrier reefs, and fringing reefs. The two latter forms occur off the coasts, the *barrier reefs* having a continuous channel or roadstead between them and the mainland, whilst the *fringing reefs* are connected at intervals with the land. The *atolls* consist of a ring enclosing a lagoon, which is usually connected with the open sea by a single opening. They vary in circumference from 100 yards to several miles. No explanation of the structure of these atolls has yet received general acceptance. It is difficult to explain how so many circular islets could be constructed in a deep ocean by creatures that cannot work at a depth of more than 120 feet. The forms and colours of coral formations are as beautiful as they are varied, and they look particularly brilliant when seen through the clear waters of the shallows that surround the atolls of the Pacific.

CORAL SEA, that part of the Pacific Ocean lying between Australia, New Guinea, Solomon Islands, and the New Hebrides.

CORBAN, a gift or offering, especially to God. The term is also applied to a vow which a person might make to do, or abstain from doing, a given act. Our Lord rebuked the Jews for making the means of relieving their parents "corban," and thus evading their natural obligations.

CORBEL, a piece of stone, wood, or iron projecting from the face of a wall to form a support for a pillar, girder, etc.

CORDAY, CHARLOTTE, the slayer of Marat, the chief author of the dreadful September massacres of 1792. It is said that her lover's death was due to Marat. Certainly either this, or Marat's excesses, caused her to go to his house and stab him in his bath. She died glorying in her deed.

CORDILLERAS, from a Spanish word meaning a cord or chain; a chain of mountains in America. We speak of the Cordilleras of the Andes, of the Rocky Mountains, and of Central America.

CORDITE is the form of smokeless powder used in the British Army and Navy. It was first made by Sir Frederick Abel, the perfecter of gun-cotton, and was adopted by the Government in 1891. It consists of nitro-glycerine, gun-cotton, and a jelly, the ingredients being mixed until they form a paste, which is then pressed through apertures according to the dimensions of the cartridge for which it is required. Its cord-like appearance after it has been dried has led to its name.

CORDOVA, a city of Southern Spain, on the right bank of the Guadalquivir river. It has a handsome market-place, and a magnificent cathedral, once a Moorish mosque. Under the Moorish rule, Cordova was the capital, and is said to have had a million inhabitants, and walls fifteen miles in circuit. Cordovan leather comes now chiefly from the Levant; population about 60,000.

CORDUROY ROAD, a road constructed over bogs or swamps by laying logs of wood side by side, across the track. It is so called from its similarity to the corded cloth, "corduroy."

COREA, a kingdom or empire in the east of Asia, consisting chiefly of a peninsula separating the Japan Sea from the Yellow Sea. It has an area of 71,000 square miles, and a population estimated at about 10 millions. Every industry is in a backward state; there are few roads worth mentioning, and hardly any bridges. But there are now some hopes of progress; for since 1905 the management of State affairs has fallen into the hands of the Japanese, and Corea has virtually become a Protectorate of Japan. Seoul, the capital, near the west coast, is surrounded by a wall 11 miles round and 20 or 30 feet high. It has a population of about 220,000. Chemulpo, its port, 25 miles distant, is now reached by railway. Of the other treaty ports Fusan stands first. The bulk of Corean trade is with Japan.

CORELLI, MARIE, a writer of Italian extraction, was brought up and educated chiefly in England, in the house of the late Mr. Charles Mackay. Among her works are "A Romance of Two Worlds," "Barabbas," "The Sorrows of Satan,"

and "The Mighty Atom," some of which have been translated into every European language, and even into Persian and Hindustani.

CORFE CASTLE, the scene of the murder of the Saxon king Edward, by his stepmother, Elfrida, is near Swanage, in Dorsetshire. It was the scene of fighting in the reign of John, and in the Civil War gallantly resisted the Parliamentarians for six weeks. Its picturesque ruins cover over three acres.

CORINTH, a celebrated ancient city of Greece, was situated on the isthmus of that name, which joins the Peloponnesus to the mainland. In ancient times its situation brought it great gain, ships from the east and west unloading on either side, and getting their goods transported across. St. Paul stayed here some time, and to the Corinthians addressed two of his epistles. The canal across the isthmus, projected ages ago, and begun by Nero, is now complete. The present town of Corinth (population 4,000) is about 3½ miles away from the ancient site.

CORIOLA'NUS, a famous Roman warrior, a patrician, Caius Marcius by name, gained the above surname by his valour at the taking of Corioli, a town of the Volscians. His haughtiness and his severity to the plebeians caused his exile, whereupon he took refuge among the Volscians, and led their armies against Rome. His mother's tears induced him to lead his army away, and soon afterwards he was stabbed.

CORK, the bark of a kind of oak tree found chiefly in Spain and Portugal. The bark is not taken until the tree is about 20 years old; after that a crop is taken every eight or ten years, and the tree attains an age of about 150 years. The use of cork for floating purposes, and as a non-conductor of heat, is very old, but it was not used to make stoppers for bottles, etc., till the 15th century.

CORK, the third city in Ireland, and the chief outlet for the products of the south and south-west, is on the river Lee, about fifteen miles from the sea. Cork harbour, the estuary of the Lee, is one of the safest in the world, and large enough to contain the British navy. Grain, butter, bacon, hams, and live stock are largely exported, chiefly to Bristol. Almost all the liners between Liverpool and New York visit Queenstown, to take up or put off passengers and mails; population about 100,000.

CORMAC, the name of two of the early kings of Ireland, contemporary with Fingal, the Scottish hero, who flourished in the latter half of the 3rd century, and who aided them both against their enemies.

CORMORANT, a kind of bird, a good deal like the pelican, found in most parts of the world in the vicinity of water, in which they find the fish they delight to feed on. The Chinese train them to give up the fish to their master, and one cannot go far on a Chinese river without seeing some of these birds at work.

CORNEILLE, PIERRE, *b.* 1606, *d.* 1684; the first great French dramatic author, wrote a good many plays before he produced his immortal "Cid" (see *Cid.*) The historical dramas "Horace," "Cinna," and "Polyeucte" followed not long after, as well as his great comedy "Le Menteur." His other plays were not up to the level of these.

CORNELIA, a Roman matron who lived in the 2nd century B.C. She was a daughter of Scipio, the conqueror of Hannibal, and wife of Tiberius Sempronius Gracchus, after whose early death she devoted herself to the education of her children. Her two sons, Tiberius and Caius, distinguished themselves by their zeal in the popular cause, and were murdered at the instigation of the nobility.

CORNELIUS, a Roman centurion belonging to the garrison stationed at Cæsarea in early Apostolic times. He was directed in a vision to send to Joppa for Peter, who would tell him more plainly the truths he was so anxious to learn. The Apostle came and baptised Cornelius and his family, who were thus the first Gentiles admitted into the Christian Church.

CORNELL UNIVERSITY, named after its founder, Ezra Cornell, is in the town of Ithaca, New York State. Supported by State gifts and private benefactions, in addition to its original endowment, it provides education for some 3,000 students, women as well as men, in many cases free of all fees.

CORNER. See *Commercial Dictionary.*

CORNET, formerly the lowest rank of commissioned officer in the cavalry, as the ensign was in the infantry, both of them having to carry the standard into battle. With the abolition of the purchase of commissions in the army, in 1871, the names went out of use.

CORN LAWS, REPEAL OF THE. The Corn Laws were statutes dating from the 14th century for the regulation of the trade in grain and for protecting the agricultural and landed interests. An Anti-Corn Law League was formed in 1839, Cobden and Bright being the most notable members. In 1846 Sir Robt. Peel, who had become a convert to Free Trade, was able to pass a measure, repealing the Corn Laws, and the duty entirely ceased in 1849.

CORNUCOPIA, "horn of plenty," a horn filled to overflowing with flowers, fruit, corn, etc., symbolical of the blessings of peace and plenty.

CORNWALL, the most westerly county of England, containing the two capes—Land's End and the Lizard, which form the most westerly and the most southerly points, respectively, in the country. The greater part of the county is hilly, the Devonian range stretching right through and terminating at the Land's End. The soil generally is not fertile, and the sea winds which sweep the land add to its unproductiveness. The climate is mild, and continued frost rare, so that tender plants, as the fuchsia, hydrangea, and others flourish outdoors all the year round. The Cornish mines, producing tin and copper, besides other metals, have been known since the dawn of history. Bodmin is the county town, and Truro has a Cathedral and is the seat of a (restored) bishopric. Penzance and Falmouth are the only other towns of much importance.

CORNWALLIS, CHARLES, MARQUIS, *b.* 1738, *d.* 1805; English general and statesman, had to surrender in the American War of Independence with all his men at Yorktown, Virginia, 1781. This loss was probably due to the blunders of others; at all events, Cornwallis escaped all censure, and continued to hold high offices till his death. In India he did good service by crushing Tippoo Saib, 1792, and as Lord Lieutenant of Ireland he did much to crush the rising of '98, and to restore tranquillity afterwards.

COROLLARY, a proposition the truth of which is so evident on some other proposition being shown to be true, that it only needs to be stated.

CORONA. (1) In architecture a broad slab forming the lower member of the projecting part of a cornice. (2) A luminous radiating appearance round the sun observed in total eclipses, due chiefly to the combustion of hydrogen and helium.

CORONATION. Refer to *Index.*

CORONET. Refer to "Degrees of Nobility" in *Index.*

CORPORAL. (1) The lowest grade of non-commissioned officers in the army, ranking just above the private. He is distinguished by two "chevrons," or angular stripes, on the sleeve, the serjeant having three. A "lance-corporal," or corporal on probation, has only one stripe. A ship's corporal is an officer who undertakes similar petty responsibilities on board ship. (2) A name given to the fine linen cloth with which the officiating minister covers the remaining elements in the Holy Communion after all have partaken, while he concludes the service.

CORPORATION. There are two kinds, aggregate and sole. A corporation sole consists of one person, the holder of a public office and his successors. e.g., a bishop or vicar. A corporation aggregate is a society of persons authorised by law to act as one person, e.g., the dean and chapter of a cathedral. A corporate body must always bear a corporate name by which it sues and is sued, and it must possess a common seal to be applied to certain legal documents. It can inherit property and hold it in perpetuity, being unaffected by the death of its individual members, if only care be taken to fill vacancies according to its constitution.

CORPUS CHRISTI, FESTIVAL OF, the grandest festival of the Roman Catholic Church, was instituted in 1264 by Pope Urban IV. In purely Roman Catholic countries, as Spain and Italy, gorgeous processions go through the streets with music and incense, and the day is observed as a general holiday. The Thursday after Trinity is the day appointed for its observance.

CORREGGIO, ANTONIO ALLEGRIDA, *b.* 1494. *d.* 1534; a famous painter, was the son of a tradesman of Correggio, near Parma, in Italy. His works were mostly executed at Padua, Parma, or his native town. Padua has still some beautiful frescoes, executed by him there in 1518. His frescoes at Parma are also celebrated. His best pictures are the "Night," "St. Jerome," "Christ in the Garden of Olives," and "The Penitent Magdalen."

CORRELATION OF FORCES. Under "Conservation of Energy" we pointed out that energy cannot be destroyed or lost. The term "Correlation of Forces" is a convenient expression implying that one form of energy can be converted into another. Thus the kinetic energy of a bullet produces heat when its motion is arrested by the target; chemical action gives rise both to heat and kinetic energy when a bullet is fired from a gun, and so on.

CORRIE, a name given in Scotland and Ireland to a circular or semi-circular recess among mountains, generally surrounded by steep cliffs. At the bottom of many corries is a mountain lake or tarn.

CORROBOREE, a gathering of aborigines in Australia, generally held by moonlight, when dancing of a very vigorous order, accompanied by pantomimic action, is the chief amusement.

CORRUGATED IRON, or fluted iron, is formed by passing thin sheets of iron between revolving fluted rollers, the projections of one fitting into the hollows of the other. The fluting enormously increases its strength and rigidity. Coated with zinc it is largely used for roofs and walls of temporary buildings, also for the flues of steam boilers.

CORSAIRS, the pirates who infested the coasts of South Europe and the East Atlantic, came chiefly from Algiers, Tunis, Tripoli, and Sallee, their ships being licensed as privateers by the princes of Barbary. Up to 1801 they were subsidised by European naval powers, but in 1804

and 1815 the Barbary States were attacked by the U.S. Admiral Decatur, and Christian prisoners were released. In 1816 Lord Exmouth bombarded Algiers and destroyed the Algerine fleet. This put an end to the Corsairs.

CORSICA, an island belonging to France, in the Mediterranean lying south of Genoa, from which it is distant about 100 miles. Its area is about 3,400 square miles, and population 300,000. The great Napoleon was a native of Ajaccio, its capital. The vendetta, or blood-feud of the Corsicans, has caused many frightful tragedies.

CORSO, an Italian name for a procession of carriages through the principal streets of a town, such as is usually made in Italy on festival days. The name is hence given to the principal street itself, and the Corso of Rome, nearly two miles long, with its handsome buildings on each side, presents a striking picture at the Carnival.

CORTES, the name given in Spain and Portugal to the national parliament.

CORTES, HERNANDO, *b.* 1485, *d.* 1547; the Spanish conqueror of Mexico, and the hero of one of the most daring and successful expeditions the world has seen. He had served under Velasquez in the reduction of Cuba, when the latter conceived the idea of conquering the flourishing empire of Mexico, and offered the command of an expedition for the purpose to Cortes. He set out, in 1518, with about 550 Spaniards, 300 Indians, a dozen horses, and 10 brass guns to conquer an empire. Montezuma, the emperor, received him in the city of Mexico as a friend and master, but was slain by a stone in trying to pacify his enraged subjects, who had risen against the strangers. For a time Cortes had to leave the city, but returning with augmented forces he took the town after an obstinate siege of 75 days, and this was the last organised resistance he had to meet. In 1540 he returned finally to Spain, and met with coldness and neglect, dying a poor man after working wonders for his sovereign.

CORT, HENRY, *b.* at Lancaster, 1740, *d.* 1800, was for some years a navy agent in London. In 1775 he had a forge and a mill near Fareham, Hants, where in 1784 he invented a process called "puddling" for converting pig iron into malleable iron. This had an enormous effect on the manufacture of iron, and for this and other inventions he has been called the "Father of the Iron Trade." A dishonest partner involved him in financial difficulties and he was ruined. Government awarded him a pension of £200 a year.

CORUNNA, a small but flourishing seaport in the north-west of Spain, with a good harbour. Here Sir John Moore turned to bay and defeated the French army that was trying to cut off his retreat, but lost his life in the moment of victory, 1809.

CORVÉE, a system under which the inhabitants of a country are forced to give their labour to their lord or sovereign, in performing certain public works, such as road-making, etc. The abolition of corvée in Egypt is one of the many beneficial results of the British administration of that country.

CORVETTE, a name formerly given to a ship of war, below a frigate in size, flush-decked, and carrying from 18 to 20 guns in one tier.

CORYBANTES, priests of Cybele in Phrygia, who celebrated her worship with wild enthusiastic dances to the sound of the cymbal and drum.

CORYPHÆUS, the name given to the leader of the chorus in ancient Greek drama. The word is now applied to a recognised leader in some art or science; also, in its French form *coryphée*, it is used to designate the principal *danseuse* in a ballet.

COSMETICS. The use of cosmetics is as old as history, probably older. The best that can be said for such adjuncts to beauty is that *some* of them are comparatively harmless; many are most dangerous. Even the most innocuous, as oatmeal powder, must choke up the pores of the skin and prevent its healthy action.

COSSACKS, a people with strongly marked characteristics, inhabiting the south and east of Russia, divided into two main branches, the Cossacks of Little Russia and the Cossacks of the Don. They pay no taxes, performing instead the duty of guarding the frontier. They are, as a rule, slighter and more intelligent-looking than the true Russians. Their system of society is based upon military needs, and thus they can be called to arms without any delay. Though little adapted for regular military operations, as scouts and skirmishers they are invaluable, being able to cover 60 or 70 miles a day for several days in succession. The development of Russia in Asia is largely due to the services of the Cossacks.

COSTA RICA, a small republic of Central America, having on the north Nicaragua, and on the south Panama. With an area of 21,400 square miles, its population only amounts to about 200,000, chiefly of Spanish descent. Minerals are abundant, the climate excellent, except along the coast, and the soil is fertile. San José, the capital (population 15,000), is nearly in the centre of the country.

COSTA, SIR MICHAEL, *b.* at Naples, 1810, *d.* 1884, musical conductor and composer. He composed cantatas, operas, and masses when in his teens. He came to England in 1829 and there remained throughout his life. His best known works are two oratorios, Eli and Naaman. But it is as a distinguished conductor that he is chiefly remembered. He was knighted in 1869.

CÔTE D'OR, "golden hill," a ridge of hills in the east of France, extending for about 100 miles to the south from the Plateau of Langres. It gets its name from the excellent wine produced from the vineyards of the district, which forms part of the ancient province of Burgundy.

COTILLON, originally a French dance for eight dancers, somewhat similar to the quadrille. It is still popular on the Continent and in the United States, but has changed to a much more lively dance offering much scope for manœuvring for partners.

COTOPAXI, a lofty volcanic peak of the Andes, 19,500 feet high, situated in Ecuador, about 35 miles from the city of Quito. It is remarkable as the loftiest active volcano in the world. It is rarely altogether quiescent, smoke generally issuing from its summit, and a red glow being frequently seen at night. Many violent eruptions have been recorded, the worst being in 1768.

COTTON, the downy seed-covering of a kind of shrub flourishing in warm climates. At present our main supply comes from the United States, the cotton so largely grown in India and China being hardly more than enough for their own needs, but there are many parts of the Empire quite suitable for its production. The picking and cleaning of the cotton is an operation requiring much care, and the attention bestowed upon this in the United States is evident to any one comparing a sample of United States cotton with one from elsewhere. It is packed in bales weighing 400 pounds each, and at present three out of every four bales imported here come from the United States.

COTTON, SIR ROBERT BRUCE, *b.* 1571, *d.* 1631, famous in the reign of James I. for his antiquarian learning, was a great favourite with that king until the king's encroachments threw him on the constitutional side. Under Charles I. the pamphlets he published, in the cause of liberty, brought him to prison. He is chiefly remembered as the founder of the Cottonian library, now in the British Museum.

COUNCILS, ECCLESIASTICAL, originally meetings or synods of the clergy of a city or district, convened to discuss and settle questions of Church discipline and doctrine. When Constantine adopted Christianity as the religion of the Roman Empire, he summoned an œcumenical council, that is, a council of the whole Church, at Nicæa, in Bithynia, to settle the Arian controversy respecting our Lord's divinity. Such councils continued to be summoned by the Emperors in the East, and afterwards by the Popes in the West. The four general councils recognised by all the Churches are those of Nicæa (325), Constantinople (381), Ephesus (431), and Chalcedon (451).

COUNTERSCARP, in military language, a term for the side of the ditch of a fort nearest to the besiegers, the other side being called the *scarpe* or *escarpe*.

COUNTERSIGN, in military language, a word or words used to detect strangers trying to gain admission to a camp or fortified place. The sentry has orders to stop and arrest all who cannot give the "countersign," which is changed every day.

COUNTRY PARTY, a name given to the Opposition in the latter part of Charles II.'s reign, as they resisted the king's arbitrary measures and insisted on their "country's" rights, while those who supported Charles formed the "Court Party."

COUNTY BOROUGHS, boroughs which are exempt from the government of the county in which they are situate, and with certain specified exceptions, manage their local affairs entirely. All boroughs which on June 1st, 1888, had a population of 50,000 or more, were made county boroughs, and a few have been added since.

COUNTY COUNCILS, bodies elected every three years to manage the local matters of every part of an "administrative" county, except what falls within a "County Borough." These bodies were established in 1888. Refer to "County Councils" in *Index*.

COUNTY COURTS, as we now know them, were established in 1846, with the two-fold purpose of lessening the press of business in the Higher Courts, and making justice more accessible to the poorer classes. Refer to "County Courts" in *Index*.

COUNTY PALATINE. See *Palatine*.

COUP D'ÉTAT, "a stroke of State," is a sudden violent course of action intended to effect some revolutionary change in the government of a State, such as, the sudden and successful attack made upon the leaders of the French National Assembly, by Louis Napoleon in 1851, in consequence of which he became the Emperor Napoleon III.

COUPLET. Two lines which rhyme constitute a "couplet," but the name is more especially reserved for those in which the sense is complete with the end of the second line. Take one of Pope's for an example:—

" Honour and shame from no condition rise ;
Act well your part, there all the honour lies."

COUPON. See *Commercial Dictionary.*

COURIERS, a term applied to those who travel about, either taking messages, generally on government business, or guiding others who hire their services for the purpose. A good courier is an invaluable adjunct to a travelling party who want to make the most of a limited time.

COURTESY TITLES are titles given by custom to persons having no legal claim to them ; thus the eldest son of a duke is styled a marquis. Refer to " Degrees of Nobility " in *Index.*

COURT MARTIAL, a court of naval or military officers, to try offences against naval or military law, such as mutiny, abandonment of a fortress, disobedience, and desertion. The assembly and constitution of courts-martial vary according to the rank of the offender and other circumstances : the trial is public, the members of the court sit as both jury and judge. Procedure is similar to that in civil courts. In naval courts the sentence is final, but in military it must be confirmed by the king or the convening officer.

COURT OF ARCHES, the Archbishop of Canterbury's Court of appeal, presided over by the Dean of Arches, was originally held in the Church of St. Mary-le-Bow (*de Arcubus*), whence its name. The Dean is now the chief law-officer of the Archbishop of Canterbury and also of the Chancery Court of the Archbishop of York. Though called a dean, he is a layman.

COURT OF CASSATION. See *Cassation.*

COURT OF SESSION, the supreme civil court in Scotland, instituted by James V., 1532, consisted originally of fifteen members, reduced to thirteen in 1830. The court now consists of two houses—the outer and the inner. The inner is separated into two divisions, in each of which sit four lords. Each of the five lords in the outer house has his own separate court. Appeals go from them to a division of the inner house. There is no appeal against the Court of Session except to the House of Lords.

COURT PARTY. See *Country Party.*

COURT, PRESENTATION AT, an introduction to the Sovereign by one who has previously been presented. The names of those who wish to be presented must be submitted to the Sovereign for approval through the Lord Chamberlain, and the one who introduces is responsible for the character and suitability of the person presented.

COUVADE, the name of a singular custom in savage lands whereby the father plays the part of an invalid on the birth of a child. About the time the birth is expected, he takes to his bed, where he continues for some weeks, religiously abstaining from ordinary food, from washing, from smoking, and indeed from all the proceedings of every-day life. This curious custom is widespread, for it has been met with in parts of China and Borneo, as well as of Africa and America.

COVENANTERS. There are two celebrated covenants mentioned in Scottish history : (1) The National Covenant, and (2) The Solemn League and Covenant. Both were intended for the defence and maintenance of the Presbyterian form of the Reformed Religion. The latter was also intended for the defence and maintenance of civil liberty and played an important part in the struggle with Charles I. by uniting the Scottish nation with the Parliamentary party in England. The name " Covenanters " refers especially to those who upheld the Covenants in the period between the Restoration and the Revolution, when they were declared to be unlawful. The *Cameronians* were a fanatical section of the Covenanters founded by Richard Cameron, 1680.

COVENT GARDEN, an extensive market place in London, near Charing Cross, for the sale of fruit, vegetables, and flowers. Here the bulk of the above commodities used in London come to be disposed of wholesale, and the regularity with which the needed quantities appear, and are distributed to the retail dealers, is an object lesson in the art of division of labour. About 6 a.m. is the best time to see the market in full activity.

COVENTRY, an interesting old city and modern manufacturing town of Warwickshire, 18 miles from Birmingham, and associated for ever with the legend respecting the ride of Lady Godiva. Two of its old gates and a portion of the wall still exist, and houses with projecting upper storeys are common. Its three chief churches, St. Michael's, Holy Trinity, and St. John's are well worth a long visit. The manufactures of silk ribbons, watches, cycles, motors, and art metal objects flourish. (For population, etc., see p. 902.)

COVERDALE, MILES, *b.* 1488, *d.* 1568 ; translator of the Bible into English, was trained to be a priest in the Roman Catholic Church, but he early embraced the Reformed doctrine. In 1535, under the authority of Henry VIII., to whom he dedicated the work, he published his English version of the Bible, a noble work to which we owe some of the finest phrases in our "Authorised Version." The Psalms as they stand in the Prayer Book are from Coverdale's Bible.

COW-CATCHER, a pointed, slanting projection in front of an engine on American railways, intended to throw aside any obstruction the engine may encounter. As many American railways are unfenced, the reason of the name is obvious.

COWES, a seaport and watering-place on the north side of the Isle of Wight, situate on either side of the river Medina, the parts being called East and West Cowes respectively. It is the head-quarters of English yachting, and to see the yachts anchored in lines just before great regattas is a sight not soon forgotten. There is good steamship communication with Portsmouth and Southampton; population about 10,000.

COWLEY, ABRAHAM *b.* in London, 1618, *d.* 1667, when only fifteen published his " Poetic Blossoms." He was attached to the Court party and in 1646 followed the queen to Paris. On his return, in 1656, he was arrested as a spy. Dr. Johnson thought him the last and best of the metaphysical poets, and Milton classed him with Shakespeare and Spenser.

COWPER, EDWARD, *b.* 1790, *d.* 1852 ; an inventor of various processes in printing, including the use of inked rollers.

COWPER-TEMPLE CLAUSE. Refer to *Index.*

COWPER, WILLIAM, *b.* 1731, *d.* 1800 ; was a native of Great Berkhamsted, in Hertfordshire. As a young man his want of cheerfulness was marked, and later in life he was subject to melancholia. It was after his first attack that he met with the Unwins, who were to have much influence on his destiny. Most of his poetry was written at Olney, Buckinghamshire, where Mrs. Unwin resided after the death of her husband. To her and Lady Austen we owe his best work ; for it was their insistence that caused the composition of " John Gilpin," and " The Task." His letters are models, and among his minor poems the lines, " On Seeing My Mother's Picture," are remarkably beautiful.

COWRY SHELLS, found chiefly in the Maldive and Philippine Islands, were long used as currency by the tribes of Southern Asia and Western Africa. They are still so used in Africa from the Guinea Coast to the Central Soudan.

COX, DAVID, *b.* 1783, *d.* 1859 ; landscape painter and artist in water-colour, was the son of a blacksmith in Birmingham. He began life as a scene painter and actor, but soon devoted himself to painting. He lived for many years at Hereford, and derived most of his subjects from country scenes in North Wales.

COXWELL, HENRY TRACY, *b.* 1819, *d.* 1900, a famous aeronaut, who in the course of forty years made some 700 ascents, the most remarkable of which was one he made with James Glaisher in 1862, when he attained the record height of 7 miles.

CRABBE, GEORGE, *b.* 1754, *d.* 1832 ; the East Anglian poet, came to London to " try his luck " as a poet, when all other avenues seemed, if not closed, at any rate difficult to enter. It was long before he found a hearing, but he endured bravely. His appeal to Burke turned the tide. Before long he was well off, and became ordained as curate in his native Aldeburgh, in Suffolk. In various comfortable livings he spent his remaining life, describing in poetry the every-day life of his East Anglian kinsfolk with a fidelity seldom equalled. " The Library," " The Village," " The Borough," and " Tales of the Hall " are his chief works.

CRACOW, a strongly fortified town on the Vistula, in Galicia, Austria ; population 92,000. It was the capital of Poland till 1609, and on the partition of that State, in 1795, it fell to Austria. By the Congress of Vienna, in 1815, Cracow became the capital of a small republic, and remained so till 1846, when a Polish insurrection led to its annexation by Austria. In the Castle church many Polish kings and heroes lie buried. The University dates from the 14th century. Cloth and leather are the leading manufactures, and its transit trade is considerable.

CRAIGENPUTTOCK, a lonely farm in the county of Dumfries, Scotland, bequeathed by Thomas Carlyle, at his death, to Edinburgh University. Here from 1828 to 1834 Carlyle, like the prophets of old, lived remote from the world, devoting himself to intense study and deep meditation, and laying the foundations of the great works on which rests his fame as a writer and philosopher.

CRAIK, DINAH MARIA (née Mulock), *b.* Stoke-upon-Trent, 1826, *d.* 1887 ; was the author of several novels, poems, and essays. Her best work, " John Halifax, Gentleman " (1857), has a wide circle of admirers, and has been translated into several European languages. All her works are characterised by simplicity, a broad sympathy with humanity, and a cheerful outlook on life generally. She married George Lillie Craik, publisher, in 1865.

CRANMER, THOMAS, *b.* 1489, *d.* 1556 ; Archbishop of Canterbury in the reigns of Henry VIII. and Edward VI. When Henry was vainly seeking from the Pope a divorce from Catharine of Aragon, Cranmer attracted the King's notice by suggesting that the question of the legality of the marriage should be laid before the universities of Europe. An answer favourable to Henry was given, but the Pope remained obdurate. Cranmer was made Archbishop of Canterbury in 1533, and his granting of the divorce led to England's separation from the Church of Rome. He promoted the Reformation by encouraging the transla-

tion of the Bible and recommending the dissolution of the monasteries. All his work as a reformer in Henry's reign is marred by a weak submission to the royal will. As one of the Council of Regency in Edward VI's. reign, he pushed forward the Reformation rapidly. On the restoration of Roman Catholicism in Mary's reign he was imprisoned for supporting Lady Jane Grey, and for heresy. Old and feeble he weakly agreed to recant. At a meeting convened at Oxford for his public recantation, he regained his spirit and boldly spoke in his own defence. He was hurried to the stake and died with cheerful courage.

CRAPE, is a light, gauzy material made from silk, though an inferior quality is now made from cotton. In crape-weaving, silk with the natural gum retained is used, and it is the process of afterwards removing this gum which leads to the distinctive character of the fabric. The wavy appearance of soft crape, such as is made in China, is produced by the partial untwisting of the silk threads when dipped in water to remove the gum. The process by which the hard, crisp nature is given to English crape is a trade secret.

CRAWFORD, MARION, *b.* in Italy, 1854, a well-known novelist. He is the son of American parents, and leaving Italy at the age of 12, studied successively at Concord, U.S., Cambridge, Heidelberg, and Rome. He edited the Allahabad Indian Herald for eighteen months, and his first novel, "Mr. Isaacs" (1882), is based on his Indian experiences. He is a most prolific writer, producing on an average two works a year from 1885 to 1898. Since 1884 much of his life has been spent in Italy, and his delineation of Italian life is highly interesting. "Marzio's Crucifix," "Saracinesca," and "A Cigarette Maker's Romance," are typical works; died 1909.

CREASY, SIR EDWARD SHEPHERD, *b.* in Kent, 1812, *d.* 1878; a historian, and the author of the widely-read work, "The Fifteen Decisive Battles of the World." He was elected a Fellow of King's Coll. Camb., in 1834, called to the Bar in 1837, and practised on the Home Circuit for twenty years; was made Professor of History at London University in 1840, and was appointed Chief Justice of Ceylon in 1860. He served for twelve years in the last capacity, and on his return to England, in 1873, was knighted.

CRÈCHE, a nursery, generally supported by charitable funds, where parents working from home during the day may leave their infant children to be cared for, at a small charge, until their return in the evening. There are many such institutions in the industrial portions of the large cities of England and America.

CRECY, a village 10 miles north of Abbeville, memorable for the great victory gained by Edward III. over the French in 1346.

CREDENCE TABLE, the small table in churches placed beside the altar or communion table, on which the bread and wine are placed before being consecrated. In the Middle Ages the credence table was a side-board on which the food was placed and tasted before being set before the guests, to assure them there was no fear of poisoning.

CRÉDIT FONCIER, a kind of mortgage bank established in 1852 under the patronage of the French Government. It lends money at a low rate of interest on real or *immovable* property, to the extent of one half its value. The loan is repayable in a certain number of annual instalments. Since 1860 it has been empowered to advance money to local authorities for public improvements.

CRÉDIT MOBILIER, a banking company, founded in 1852 with the sanction of the French Government for the purpose of advancing money on *movable* property as the Credit Foncier was doing on immovable property. Its main object was to advance the necessary capital for making railways, working mines, and carrying on other industrial undertakings. It is still running, but its operations and profits are small compared with those of its early years.

CREEDS, professions of belief summarising the fundamental doctrines of a religious faith. The 8th of the 39 Articles of Religion in the English Prayer Book states that the Apostles' Creed, the Nicene Creed, and Athanasius's Creed ought thoroughly to be received and believed. The simplest of these, the *Apostles' Creed*, was not the work of the Apostles, and was probably embodied in its present form in the 8th century, though it has been traced, with some variations, back to the 4th century. The *Nicene Creed* was the outcome of a long dispute as to the precise nature of Christ. Arius and his followers claimed that Christ was the highest of created beings, differing both in nature and power from God the Father. At the Council of Nicæa, held in 325, the equality of the Father and the Son was solemnly affirmed. The Nicene Creed received its present form at Constantinople, 381, when the Divinity of the Holy Ghost was plainly asserted. The *Athanasian Creed*, which was probably drawn up in the 6th century, about two centuries after the death of Athanasius, states, with much minuteness of detail and careful elaboration, the doctrine of the Trinity as taught by Athanasius.

CREFELD, a town between the Meuse and Rhine in the Rhine Province, Germany; population 107,000. It is situated on the Ruhr coalfield, and among European towns is second only to Lyons for the manufacture of silks and velvets. Its manufactures of dyes, chemicals, and sugar are important.

CREIGHTON, MANDELL, *b.* 1843, at Carlisle, *d.* 1901, a celebrated historian and bishop. In 1885 he was made professor of Ecclesiastical History at Cambridge, having previously given evidence of his historical learning and research by publishing the first two volumes of his chief work "The History of the Papacy during the Reformation Period." He was made bishop of Peterborough in 1891, and translated to the see of London in 1896. He was a man of first-rate ability, sterling character, and broad sympathies. He held the scales fairly between the two extreme parties in his diocese and exercised a marked influence among the leading men of the day.

CREMATION, the burning of human remains, was frequently practised in ancient times, and was the common method adopted in Greece and Rome till the spread of Christianity made it unpopular. Its supporters claim that if no noxious fumes are allowed to escape during the process, cremation does not endanger the health of the living as does the ordinary method of burial. The objectors base their reasons on Scripture and the impossibility of detecting poisoning cases if suspicion arises after the body has been cremated. A test case in 1884 legalised cremation in England, but the system has made very slow headway. At Woking Crematorium, however, 1877 bodies were cremated in three years (1901–4.) In order to insure cremation it is not sufficient merely to insert a direction to this effect in a will, for having no effect in law it would not bind unwilling executors. The only safe course is to appoint executors who would undertake to respect the testator's wishes in this matter.

CREMONA, a city of Lombardy, Italy, on the Po. Its strong natural position made it a town of some importance in Roman times, and it is still well guarded with walls and moats. Silk throwing is the principal industry. Cremona, in the 16th and 17th centuries, was famous for violins, the best-known makers being Andrea and Antonio Amati, Antonio Stradivarius and Guiseppe Guarnerius; population 38,000.

CREOLE, a person of European descent born in the West Indies, Mexico, Central America, or South America. There is no tinge of negro or Indian blood in a pure Creole. The name is also applied to descendants of French settlers in the Southern United States. Before the secession of the Spanish colonies from Spain, strong social distinctions existed between Creoles and Spanish residents born in Europe. Creole dialects exhibit many curious deviations in grammar from the European languages on which they are based.

CREOSOTE, an oily, colourless liquid extracted from wood-tar, but more frequently from coal-tar. It has the property of arresting animal and vegetable decay. Its uses are many. It is largely employed in the manufacture of disinfectants, relieves toothache, and renders wood and timber better able to resist the effects of the weather.

CRESSID, a type of inconstant womanhood. She figures under the name of Cressida in a mediæval romance, the scene of which is laid in Troy, during its siege by the Greeks. Troilus, one of the sons of Priam, King of Troy, becomes enamoured of Cressida, who is a Greek prisoner in the hands of the Trojans. The two swear eternal fidelity to one another. An exchange of prisoners takes place, Cressida becomes the charge of the Greek hero, Diomed, and shortly after breaks her vow of constancy. The story has served as the basis of a long poem by Chaucer, and a play by Shakespeare.

CRESSY. See *Crecy*.

CREST, originally the thick protecting ridge, then the drooping tuft of horsehair or the plumes of a helmet, and occasionally the figure of some animal or bird wrought in metal served as a crest. In the 13th century the crest began to figure in the armorial bearings of noble families. The crest, in this connection, is a device, resting on a wreath or issuing from a crown or ducal coronet, which appears above the helmet or shield. The crest serves to distinguish different families of the nobility, or different branches of the same family. Detached, the crest serves as a mark for plate, livery, or panels of carriage doors.

CRESWICK, THOMAS, R.A., *b.* 1811, *d.* 1869; a painter who was especially gifted in depicting the country and coast scenery of Great Britain. His trees and foliage are much admired. "The Pathway to the Village Church" is in the National Gallery, and "A Scene on the Tummel" and "A Summer's Afternoon" are in the South Kensington Museum. He was also a successful illustrator of books.

CRETE, an island in the Mediterranean Sea, south-east of Greece. The Turks captured it in 1669 from the Venetians, after terrible fighting lasting over twenty years. The rule of the Turks was marked by great oppression and religious persecution. From 1821 to 1897 nine distinct risings of the Christians occurred, all of

which were crushed by the Turkish authorities. In 1897 Greece interfered to stop these atrocities, and this led to combined action by the Great Powers. Crete was given autonomy under a High Commissioner—Prince George of Greece, appointed by the Powers, the Sultan retaining the purely nominal title of suzerain. The Turkish troops were expelled in 1898. The industries are chiefly agricultural. Wheat, fruit, olive oil and cheese are exported. Candia, the leading commercial town, and Canea, the capital, are the chief ports; area 3,330 square miles; population 310,000, of which over four-fifths are Christians.

CRETINISM, a disease prevailing in certain mountain valleys, particularly of the Alps. Cretins, the victims of this disease, are usually weak-minded, and may also suffer from goître. See "Cretin" in *Med. Dict.*

CREVASSE, a fissure across a glacier, caused by the unevenness of the ground over which it travels. The existence of crevasses, often hidden by a recent fall of snow, makes the crossing of glaciers somewhat hazardous.

CREWE, an important railway junction in Cheshire. It is quite of modern growth, and dates its rise from the establishment there of the N.W. Railway works. The bulk of the male population are employed in the works, which have turned out over 4,000 locomotives in the last 60 years; population 43,000.

CRICHTON, JAMES, "The Admirable Crichton," *b.* in Scotland about 1560, *d.* about 1585; was a Scotch adventurer, who won a great reputation for his learning, his many social accomplishments, and his skill in arms. Educated at St. Andrew's University, he passed to Paris, where he is said to have offered to dispute with the most learned doctors of Paris in any one of twelve languages, a feat which he accomplished with success. At Mantua he killed a famous fencer, who had issued a public challenge. He became tutor to the son of the Duke of Mantua, and was stabbed to death by his pupil, a dissipated youth, in a street brawl. The fragments of his writings preserved bear no evidence of his reported abilities.

CRICKET. A game bearing this name is frequently mentioned by writers previous to the 18th century, but practically no details are given of the manner in which it was played. In the middle of the 18th century cricket seems to have taken a strong hold, and the Hambledon Cricket Club, which had its ground at Hambledon, a small village about eight miles north of Portsmouth, occupied for many years a position similar to that held now by the M.C.C. In 1774 the first set of written laws of the game was framed at a meeting of gentlemen in London. About 1820 round-arm bowling, later on developing into the modern over-arm style, became general, and necessitated the use of gloves and pads by the batsmen. The Marylebone Cricket Club, the ruling authority of the cricket world by the tacit consent of all cricket clubs of the Empire, was founded in 1787. It was at first composed chiefly of members of the defunct White Conduit Club, who advised Thomas Lord, a bowler in their employ, to procure a piece of land on which they could play matches. Lord hired some fields where Dorset Square now stands, and in 1814 removed to the present (*Lord's*) ground at Marylebone. County cricket, as now existing, began in 1845, with the founding of the Surrey Club. In 1859 an English team opened international cricket by a visit to America. The first Australian team visited England in 1878.

CRIMEA, THE, a large peninsula of the Black Sea, joined to the Russian mainland by the narrow isthmus of Perekop; area 10,000 square miles. Population 500,000. Russia seized it from the Turks in 1783. Sebastopol, the chief town, on a fine harbour of the south-west coast, is strongly fortified, and is an important station of the Russian Black Sea fleet. It was besieged by the English and French in the Crimean war (which see). A railway through Simferopol, the capital, connects it with the mainland.

CRIMEAN WAR, THE, was the outcome of the aggressive attitude assumed by Russia, in 1852, towards Turkey. The Czar Nicholas I., one of the most astute and ambitious of Russian rulers, claimed the right of protecting Christians of the Greek Church under Turkish rule. The Sultan was recommended by the great Powers to accede to the Czar's demand. The Sultan refused and Russia precipitated war by occupying Turkish territory near the mouth of the Danube. England and France, unwilling to see Russia dominant in the Balkan States, allied themselves with Turkey, and sent a powerful combined fleet and army to the Crimea, with the main object of destroying Sebastopol, which had been strongly fortified as a menace to Turkey. In 1854 the Russians sustained three severe defeats at the Alma, Balaclava, and Inkerman. Sebastopol, which had been invested immediately after the battle of the Alma, was evacuated by the Russians in September, 1855, after holding out for nearly a year. The British troops in the winter of 1854–5 suffered terribly from the mismanagement of the commissariat department. By a treaty of peace, signed at Paris, in 1856, Russia promised not to keep a fleet of war ships in the Black Sea, and not to re-fortify Sebastopol. The former agreement she was released from by the Great Powers in 1871, the latter she has ignored.

CRIMP, a low type of lodging house keeper who works for gain on the credulity of sailors. During the Napoleonic wars they were very common in the naval ports of England, and devoted much attention to sailors who had been paid off after a voyage. Crimps of the worst type still abound in many of the great ports of the United States.

CRINAN CANAL, a canal in Scotland, separating the peninsula of Kintyre from the mainland of Argyllshire. It is about nine miles long, and accommodates vessels up to 200 tons burthen. Small passenger boats going from Glasgow to Oban are saved nearly 70 miles by using this canal. It was opened in 1801.

CRINOLINE, originally the name of a kind of cloth made of horsehair, used for stiffening ladies' skirts, was later extended to a bell-shaped underskirt consisting of a frame work of steel hoops. Crinolines became fashionable in 1856, and after a vogue of ten years common sense prevailed, and they dropped into disuse.

CRISPIN, SAINT, the patron saint of shoemakers. According to an old legend, two brothers, Crispin and Crispian, sons of Roman parents, settled at Soissons, in Gaul, and were beheaded, in 287, for preaching the gospel. During their mission they supported themselves by shoemaking. The battle of Agincourt was fought on the anniversary of St. Crispin's day, October 25th, 1415.

CRITICISM, HIGHER. See *Higher Criticism.*

CRITIQUE OF PURE REASON, a work dealing with the nature of the mind, published by the great German philosopher, Kant, in 1781.

CROCODILE, a great lizard-like reptile found chiefly in the rivers of Africa and Southern Asia. The largest grow to a length of about 24 feet. The upper surface of its body, tail, and head are protected by thick, bony plates. Its ferocity and the terror it inspired led the ancient Egyptians to deify the crocodile, and a special priesthood was devoted to its worship. Few crocodiles are now found in the Nile below the first cataract. The alligator of the rivers of the New World resembles the crocodile in its general features. Many crocodiles found as fossils were marine creatures; none are so to-day.

CRŒSUS, king of Lydia, in Asia Minor, about the middle of the 6th century, B.C., acquired riches so vast that his name became proverbial for wealth. His kingdom was conquered 546 B.C., by Cyrus, the founder of the Persian monarchy.

CROFTER, the name given to a small tenant of land in certain parts of Scotland. Roughly speaking, crofters are located in the western islands and Highlands, the counties of Inverness, Sutherland, Ross, Caithness, and the Orkney and Shetland Islands. The majority of them occupy, in separate tenancy, a small plot of arable land near or surrounding the dwelling-house, and they combine with other crofters in renting pasture land on the mountains. High rents, insecurity of tenure, and general grievances against landlords, led to the passing of an Act in 1886 for their protection.

CROME, JOHN, *b.* at Norwich, 1769, *d.* 1821; landscape painter. Son of humble parents, he became a house-painter and devoted his evenings to the study of art. He attained much skill in painting trees and foliage. One of his best paintings, "Mousehold Heath," is in the National Gallery.

CROMER, EVELYN BARING, EARL, *b.* in Norfolk, 1841, a famous diplomatist and financier. He was appointed one of the Commissioners on the Egyptian debt in 1877, Finance Minister of India in 1880, and British Minister and Consul-General in Egypt from 1883 onwards. Under his administration Egypt has undergone a marvellous transformation. He was created Baron Cromer in 1892, Viscount in 1899, and Earl in 1901. Appointed a member of the Order of Merit, and on his retirement, in 1907, was awarded a Parliamentary grant of £50,000. He has written "Modern Egypt."

CROMPTON, SAMUEL, *b.* 1753, *d.* 1827; the inventor of the "mule" employed in cotton-spinning. His father, a cotton-spinner and farmer, a combination common in the days of the domestic system of manufacture, died when Samuel was five years of age, and the boy was instructed in cotton-spinning by his mother and an aged uncle. At the age of twenty-one he invented the mule, so called because it combined the principles of Hargreave's spinning-jenny and Arkwright's water frame, both invented earlier. The modern complicated mules are simply developments of that of Crompton. In 1812 Parliament voted him £5,000, but the scandalous way in which manufacturers had taken advantage of his invention without permission, brought him in a return by no means commensurate with the immense profits made by its use.

CROMWELL, OLIVER, *b.* at Huntingdon, 1600, *d.* September 3rd, 1658; was the great-grandson of a nephew of Thomas Cromwell, Earl of Essex. From his marriage in 1620 to the outbreak of the Civil War he lived the life of a gentleman-farmer, chiefly near Ely, in which locality he led the opposition to Charles I.'s arbitary rule, from 1629 to 1640. He represented Cambridge in both the Short and Long Parliaments and won a name for sturdy common-sense and blunt speaking. On the rupture between King and Parliament, in 1642, he raised a troop of horse,

which afterwards grew into his famous regiment of Ironsides. The series of defeats suffered by Parliament, in 1643, convinced him that the only way to make head against the courage and dash of the Cavaliers, was to foster a deep religious spirit among the Parliamentary troops. Piety and discipline eventually gave that solidity to the Roundhead forces which led to the downfall of the Royalist cause. As leader of cavalry, Cromwell distinguished himself at Marston Moor; and later, at Naseby, in 1645, Cromwell, as second in command to Fairfax, won a great victory with an English army trained on the model of his own Ironsides. In the struggle between the military and the Presbyterian parties in Parliament, 1646-8, he came to be regarded as the leader of the former. In the second Civil War he crushed the Royalist Scots at Preston, and was largely responsible for the execution of Charles I. Under the Commonwealth he subdued the Royalists of Ireland with great severity, and on September 3rd, 1650, defeated the Scots under Leslie at Dunbar. At Worcester, September 3rd, 1651, his defeat of Prince Charles, afterwards Charles II., shattered the Royalist hopes for years to come. As Protector, from 1653 to 1658, he strove at first to rule constitutionally, but, to prevent a reign of anarchy, he was compelled to maintain an army, and rule almost as an absolute monarch. His foreign policy was marked by great sagacity and firmness. He helped to develop English trade by a successful war with the Dutch; his alliance was sought by France and Spain; he compelled the pirates of the North American coast to respect English shipping, and brought the Navy to a high state of efficiency. In religion, he was an Independent, and more in favour of toleration than most men of his day.

CROMWELL, RICHARD, *b.* 1626, *d.* 1712; succeeded Oliver Cromwell as Protector of England, in 1658. He had neither the strength of mind nor the energy of his father, and finding himself incapable of controlling the dictatorial officers of the army, he voluntarily resigned, after an inefficient rule of seven months. At the Restoration he fled to France, and, returning in 1680, peacefully passed the remainder of his life at Theobald's Park, Cheshunt.

CROMWELL, THOMAS, *b.* about 1490, *d.* 1540; was the son of a Putney blacksmith. After a varied life on the Continent, he became secretary to Wolsey, about 1525. He attracted Henry VIII.'s notice by a vigorous defence of his fallen master in the House of Commons. Entering Henry's service, Cromwell, as a reward for the ready way in which he furthered the king's ends, gained rapid advancement, and was finally made Earl of Essex, in 1539. The suggestions for the separation from Rome, and the dissolution of the monasteries, emanated from him. With the idea of increasing Henry's power as a Protestant ruler, he arranged the king's marriage with Anne of Cleves. The latter's lack of beauty caused Cromwell to fall under the king's displeasure, and, accused on a trumped-up charge of high treason, he was executed by Bill of Attainder.

CRONJE, PIET, *b.* 1835, a Transvaal general, of Huguenot birth, in 1880 fought against the British at Doornkop and Majuba Hill, and in 1895 against the Jameson raiders at Krugersdorp. On the outbreak of the Boer War in 1899 he was appointed general and besieged Kimberley. He defeated Lord Methuen at Magersfontein, but a few months later was surrounded and compelled to surrender to Lord Roberts at Paardeburg with 4,000 men. He was sent prisoner to St. Helena, and there remained till peace was declared.

CRONOS, a Greek god, the son of Uranus and the father of Jupiter, Neptune, Juno and Ceres, took the throne of heaven from his father and was himself expelled by his son, Jupiter. Cronos corresponds to the Roman god Saturn.

CRONSTADT, a naval station and port of Russia on an island in the Gulf of Finland. It was founded, in 1710, for the defence of the newly-established St. Petersburg, under the supervision of Mentchikoff, the favourite minister of Peter the Great. It has a good harbour, and its fortifications make it almost impregnable; population 60,000.

CROOKES, SIR WILLIAM, *b.* 1832, a prominent chemist and physicist. In 1861 he discovered a new metallic element, *thallium*. He is a leading expert in sanitation, and, while engaged in experiments for testing London water, he invented the Radiometer, and also produced extreme vacua in tubes and bulbs, which have proved of great service in the construction of incandescent lights, and in the manipulation of X-rays.

CROSIER, the straight, richly-ornamented staff surmounted by a cross, usually borne before an Archbishop. It must not be confounded with the Pastoral Staff with its crooked handle, borne before a bishop. When pronouncing the pastoral benediction, archbishops hold the crosier in the left hand.

CROSSBOW. See *Arbalest*.

CROSSLEY, SIR FRANCIS, *b.* 1817, at Halifax, a great manufacturer and philanthropist. Securing the patents of an improved carpet loom, he largely extended the carpet factory founded by his father, lowered the price and vastly increased the output of carpets from his mills. He presented Halifax with a park, orphan homes, and almshouses, and gave munificent donations to the London Missionary Society.

CROSS, SOUTHERN, a brilliant star group in the southern hemisphere, first reckoned a constellation in 1679. The four principal stars form a sort of cross. The upper and lower serve as a pointer to the south pole. It cannot be seen from the northern hemisphere except very near the Equator.

CROSS, THE, the leading symbol of the Christian faith, commemorates the crucifixion of Christ. In ancient times the Carthaginians crucified defeated generals, and the Romans reserved this form of death for criminals of the lowest type. The custom among Christians of making the sign of the cross has been traced back to the 3rd century, but it was not till the reign of Constantine the Great, who died 337 A.D., that the cross lost its associations of degradation, and rose to be the most revered of Christian emblems.

CROWN, THE. This term, used to signify the State, dates back to a time when the sovereign was supreme in State affairs. Such terms as crown lands, crown lawyers, officers of the crown, &c., no longer imply a close connection with the sovereign. The Crown Solicitor prepares evidence for prosecutions by the State. Crown lands is the name applied to State property, once very extensive, now controlled by the Commissioners of Woods and Forests. Unappropriated land in many British colonies is still called crown land.

CROWTHER, SAMUEL, *b.* near Dahomey, 1812, *d.* 1891, was the first negro bishop. He was captured and sold as a slave but rescued by a British ship and landed at Sierra Leone. He became a Christian and laboured among the negroes first as teacher, then as a clergyman, and lastly as bishop. He was consecrated bishop of the Niger territory in 1864, and did noble service as a preacher and translator of the Bible into the Yoruba language, his native tongue.

CROYDON, a remarkably healthy town in Surrey, and now a large residential suburb of London, with which there is excellent railway service. Population increased from 10,000 in 1851 to 140,000 in 1901. See also p. 902.

CRUCIBLES, vessels made of fireclay or other materials capable of resisting the effects of great heat, in which substances are fused. Some writers assert that the name originated in the custom of marking such vessels in the Middle Ages with the sign of the cross to prevent the evil spirit spoiling the result of the fusion.

CRUCIFIX, a cross with the image of Christ attached, placed in Roman Catholic churches over the high altar. Small crucifixes are made for personal use. Crucifixes appear to have been first used in public worship towards the end of the 6th century. Probably the degradation of crucifixion—a mode of death inflicted only on malefactors of the worst type—delayed its general adoption as a Church symbol. Before the 11th century, Christ was represented on crucifixes as alive and pierced with four nails, one through each hand and each foot.

CRUDEN, ALEXANDER, *b.* at Aberdeen, 1701, *d.* 1770, went to London in 1722, where he became a teacher, bookseller and corrector of proofs of learned works. He published in 1737 his "Concordance to the Bible," the most famous and valuable in any language.

CRUIKSHANK, GEORGE, *b.* in London, 1792, *d.* 1878; a caricaturist of great ability and remarkable originality. Up to 1821 he devoted himself chiefly to political drawings and caricatures. As a book illustrator, his etchings are probably unequalled. His illustrations to Dickens's "Oliver Twist," and Ainsworth's "Jack Sheppard," "Tower of London," and "Windsor Castle," are among the finest of his works. Though his etchings brought large profits to the publishers, the latter showed little generosity towards him, and in 1866 he was glad to receive an allowance of £50 a year from the Royal Academy's Turner Annuities.

CRUISERS, armed ships, smaller than the ordinary battle ship, built especially for speed, and used to protect commerce, capture the enemy's ships, watch the movements of the enemy's fleets, and carry despatches.

CRUSADES, THE, a series of wars waged by the Christian nations of Europe for the recovery of the Holy Sepulchre from the Turks. In 1095 the preaching of Peter the Hermit, and his exposure of the bad treatment to which Christian pilgrims in Palestine were subjected by the Mohammedans, led to the First Crusade, which ended in the capture of Jerusalem and the election of Godfrey of Bouillon as king of Jerusalem. The Second Crusade, which ended disastrously, was undertaken in 1144, under the leadership of Louis VII. of France and Conrad III. of Germany, to prevent Jerusalem falling once more into Turkish hands. The Third Crusade, in which Richard I. of England took part, failed, after much bloodshed, to attain its object—the recovery of Jerusalem from the hands of Saladin, sultan of Egypt. Baldwin of Flanders, who led the Fourth Crusade in 1203, used his army to possess himself of the Byzantine Empire, and never reached Palestine. Frederick II. of Germany led the Fifth Crusade and obtained Jerusalem by treaty, but, the town having once more

fallen into infidel hands, Louis IX. (St. Louis), led two more fruitless Crusades, one in 1249 and another in 1270, in which Edward I. of England took part. No permanent conquests resulted from these wars, but they developed the power of the commons in England by removing numerous turbulent barons, they improved the relations between European Powers, they opened up the East to trade, and by crippling the might of the Turks and Saracens on the plains of Palestine they arrested the tide of Mohammedan conquests.

CRUSTACEA are animals of the crab and water-flea type. They are all encased in a shell, and provided with numerous jointed appendages, some of which serve as jaws, others as claws, and others as legs for swimming or walking. They all breathe by gills, and most are of active free-swimming habits. The barnacles, however, in their adult state, live a sedentary life attached to rocks or hulls of ships, and were for a long time mistaken for molluscs. The common woodlouse is one of the few crustacea which never enter the water; it, however, lives in damp places and breathes by gills. Certain shore crabs are remarkable; one of them climbs palm trees and bores its way into the heart of the cocoa-nuts on which it feeds.

CRUTCHED FRIARS, or Cross Bearers, so called from the cruciform staff they carried, came to England in the 13th century and set up monasteries in London, Oxford, Reigate, and elsewhere. They were suppressed in the 17th century; the site of their monastery in London is marked by the street "Crutched Friars."

CRYPT, a chamber constructed underground beneath many ancient churches and cathedrals and used generally as a burial place. The word literally means, "a place hidden," and was first applied to the vaults and catacombs in which the Early Christians held their services.

CRYPTOGRAPHY, or "hidden writing," is the art of writing in such a way that only those in the secret can unravel the real meaning of the words. It is frequently employed in the writing of important State messages.

CRYSTAL PALACE, THE, a beautiful structure of glass and iron at Sydenham, in Surrey. A company, in 1851, bought up the materials of the wonderful glass palace, which was the most admired feature of the Great Exhibition in Hyde Park, and had it reconstructed with vast improvements, under the supervision of its architect, Sir Joseph Paxton. The nave is 1,600 feet long and 110 feet high. It is admirably adapted for exhibitions, shows of various kinds, concerts and the annual outings of large societies. The London County Cricket Club has its headquarters here, and for several years past the Palace football ground has been the venue of the final tie for the Association Cup.

CUBA, the largest of the West India Islands, belonged to Spain from 1492 to 1898, when the oppressed inhabitants, with the help of the United States, gained their independence. Since 1902 it has enjoyed self-government under what is practically the suzerainty of the United States. Material improvements in roads, railways, trade, and sanitation are being now carried out chiefly with American capital. The interior is healthy, but fever prevails on the coast. Valuable forests of mahogany, dyewoods, and cedar abound. Tobacco and sugar are the leading exports. The United States, with which there is a preferential tariff, absorbs most of its trade. Havana, the capital, and Santiago, the chief centre of the naval fighting in 1898, are the chief ports. Area about 36,000 square miles; population about 1½ millions.

CUCKOO, a migratory bird, the British variety of which is found in English woods from early April to the end of July. The cuckoo, with extremely rare exceptions, lays its eggs in the nests of other birds, generally one egg to each nest. The nest of the hedge sparrow is usually chosen for this purpose, and, when hatched, the young cuckoo proceeds to eject any eggs or young birds that it finds in occupancy, and then receives the undivided attention of its foster parents until it is fully fledged.

CUDDESDON, a village about six miles from Oxford. Near it is the palace of the bishops of Oxford and a theological college founded by Bishop Wilberforce in 1854.

CUIRASSIERS, heavy cavalry wearing the cuirass, a metal breast plate and back piece, which now serves more as a cumbrous ornament than as a protection. The name cuirassiers is not applied to any British regiment, though the Household Cavalry, when not on active service, still wears the cuirass. Russia and Germany have each twelve regiments of cuirassiers and France four.

CULLINAN DIAMOND, THE, found in the New Premier mine, twenty miles from Pretoria, in 1905, weighs 3.025 carats or 9,566 grains and is the largest diamond ever known. It was presented to the King, 1907, by the Transvaal Government. It has now been cut into two of the largest brilliants in the world, weighing respectively 516 and 309 carats, with about 100 smaller brilliants. The celebrated Koh-i-nur (which see) seems small in comparison.

CULLOD'EN, a moor in Scotland, five miles from Inverness. Here, in 1746, the Duke of Cumberland, with 9,000 men, defeated 5,000 Highlanders under Prince Charles Edward, and crushed finally the hopes of a second Stuart restoration.

CUMBERLAND, a county in the extreme north-west of England. The Cumbrian Mountains, of which Scafell Pike, Helvellyn, and Skiddaw are the culminating peaks, contain some lovely lakes—Derwentwater, Buttermere, and Ullswater being the best known. A portion of the Pennine Chain occupies the east of the county. The Eden, on which stands Carlisle, the county town, and the Derwent are the chief rivers. Agriculture and sheep and cattle rearing are the leading industries of the interior; while on the coast Whitehaven, the centre of a small but rich coal field, Maryport, and Workington have manufactures of steel and iron, and a rising shipping trade. Lead, slate, and a little plumbago of the finest quality are worked; area 1,520 square miles; population 267,000.

CUMBERLAND, WILLIAM AUGUSTUS, DUKE OF, *b.* 1721, *d.* 1765 · was the second son of George II. He fought beside his father at Dettingen, 1743, and was defeated at Fontenoy, 1745. In the Seven Years War he was defeated at Hastenbeck, and soon after, by the convention of Kloster-Zeven, was forced to disband and disarm his forces, leaving Hanover helpless against the French attack. At Culloden Moor, 1746, he crushed the Jacobite rising under Charles Edward Stuart. The treatment meted out to prisoners and wounded by his sanction after this victory earned him the name of "The Butcher."

CUNARD LINE, a line of fast steamships running between Liverpool and New York, was established in 1878 by the combination of two companies, one of which had been founded by Mr. Samuel Cunard in 1839. The company owns a large fleet of the fastest and best fitted vessels, some reaching a speed of 20 to 22 knots an hour. In 1903 the company entered into an agreement with the British Government by which it undertook to remain a purely British undertaking and to place its fleet at the service of the British Government in any emergency during the next twenty years.

CUNARD, SIR SAMUEL, *b.* at Halifax, Nova Scotia, 1787, *d.* 1865. He came to England, 1838, and with two British shipowners founded the steamship company which later grew into the great Cunard Line. The contract from the British Government, in 1840, for the mail service between Liverpool and Halifax, Boston and Quebec, helped considerably to put the new company on a sound basis, and the readiness with which Cunard adopted new inventions connected with steamships did much to advance ocean travelling.

CUNEIFORM, writing in which the letters, and sometimes the syllables, consist of combinations of wedge-shaped strokes, was used chiefly by the ancient Assyrians, Babylonians, and Persians. The deciphering of this ancient writing, begun by Grotefend in 1802, forms one of the most striking examples of scholarly detectivism, and has not only cleared history of many false traditions, but is gradually bringing back to us the records of civilisations existing, perhaps, as long as 9,000 years ago. The writing was done by some hard-pointed instrument upon bricks or cylinders of clay, which were afterwards baked. The excavations of Botta and Layard at Nineveh, from 1840 onwards, brought to light hundreds of these queer books, which students are still busy deciphering. The cuneiform inscriptions cut upon stone are generally in the three languages—Persian, Scythic or Median, and Babylonian.

CUPID, the god of love in Roman mythology, was the son of Venus. He appears as a mischievous little winged boy, armed with a bow and arrows, which he is occasionally represented shooting with his eyes blindfolded.

CURATE. In Elizabeth's reign this term was employed in much the same way as the French now use the word curé, and was applied to resident pastors of parishes. Later it was given only to deputies of non-resident incumbents, and in modern times it is applied to clergymen of the Church of England who are engaged to assist the rector or the vicar of a church in performing his duties.

CURFEW. In feudal times it is said that a bell was rung at sun-set in summer and about 8 p.m. in winter, to warn the inhabitants of towns and villages to extinguish their fires and retire to bed. Its institution in England is ascribed, probably erroneously, to William I., and is set down as an instance of his oppressive rule.

CURRAGH, THE, the Aldershot of Ireland, is an extensive down in Kildare, about 32 miles east of Dublin. It is used as a camp and training ground for British troops, and provides a splendid racecourse.

CURRAN, JOHN PHILPOT, *b.* in County Cork, 1750, *d.* 1817, a great Irish advocate and orator, famous for his defence of political offenders, especially Wolfe Tone. His pathos, drollery, and brilliant wit have never been surpassed. He was one of the greatest of Irish patriots.

CURRANTS. The dried variety sold by grocers is obtained from a vine which grows best in the countries and islands of the eastern Mediterranean. They came to us originally from Corinth, the French pronunciation of which gave us

the name. The island of Zante—one of the Ionian Islands—produces the finest currants.

CURRENCY. Refer to "Coinage, British and Foreign," in *Index*.

CURSE OF SCOTLAND, the nine of diamonds, owing it is thought to the nine lozenges on the arms of the Earl of Stair, who was popularly held responsible for the Glencoe massacre.

CURULE CHAIR (*sella curulis*), the Roman chair of state, said to have been used in very early times as an emblem of kingly power. It was in shape like a folding-stool, with curved legs, and from the first was ornamented with ivory. Under the republic the right of sitting upon this chair belonged solely to the highest dignitaries of state, and subsequently the curule chair, overlaid with gold, became the throne of the emperor.

CURWEN, JOHN, the promoter of the Tonic-Solfa system of teaching music, and the author of many publications on that subject. For many years he worked as a Nonconformist minister, but in 1864 devoted himself entirely to spreading the Tonic-Solfa system, which he had begun to advocate in 1841. He built up a flourishing music-publishing business, and lived to see the system adopted in practically all the primary schools of England.

CURZON OF KEDLESTON, LORD, *b.* at Kedleston, in Ireland, 1859, educated at Eton and Balliol College, Oxford, where he became President of the Union. He held the post of Private Secretary to Lord Salisbury, and afterwards in 1891, was appointed Under-Secretary for India, and in 1895 Under-Secretary for Foreign Affairs. He has travelled extensively in Central Asia, Persia, Afghanistan, Siam and Corea. His term of office as Viceroy of India (1899–1905) was marked by statesmanlike and bold reforms. After returning to India in 1905 to undertake a second term of office, an *impasse* arose between the Viceroy and Lord Kitchener in the negotiations touching the dual control of the Indian army. The home government supported Kitchener in his condemnation of the dual system, and Lord Curzon resigned.

CUSTOMS. See *Commercial Dictionary*.

CUSTOMS DUTIES are duties placed upon certain articles of import and export. The name was originally applied to duties such as tonnage and poundage which the sovereign appropriated by custom. At one period, during the Napoleonic Wars, as many as 1,200 articles were liable to these duties. Smuggling was prevalent, and much trouble and difficulty were entailed in collecting these dues. The Customs Consolidation Acts of 1787 and 1825, by imposing one duty instead of several on each taxable article, simplified the collection; and the liberation of numerous articles from customs duties, especially by Peel and Gladstone, eased the burden of taxation and greatly increased trade. In 1903 customs duties were imposed on twelve articles of import, and the revenue drawn from them was £34,433,000.

CUTHBERT, SAINT, one of the pillars of the early English church, was born, it is said, near Melrose, about 635 A.D. A tradition fixes his birthplace in Ireland. He became a monk, and about 661 was made prior of Melrose, in which office he struggled hard to suppress paganism among the people. He later became prior of the monastery of Lindisfarne, but yearning for a hermit's life he retired to one of the Farne Islands, where he lived alone in a hut for eight years. He accepted the bishopric of Hexham in 684, and died in 687. After being carried from place to place for safety from the Danes, his body found its last resting-place at Durham, where the cathedral now stands.

CUTLERY, formerly a general term for cutting instruments of every description, but at present not applied to many edged tools, such as saws, chisels, &c. From very early times Sheffield has been noted for this trade, and it is still the centre of the industry for the whole world. In this trade the division of labour is so minute as to have a bad effect, morally and socially, on the operatives. Cutlery grinding is also a most unhealthy occupation, owing to the atmosphere being loaded with fine dust of steel and silica, causing injury to the lungs. Means, however, have been adopted in recent years for reducing the evil.

CUVIER, GEORGES LEOPOLD, *b.* 1769, *d.* 1832; a famous naturalist and a great authority on comparative anatomy. His original researches in marine animal life, made while acting as tutor to the family of a nobleman near Caen, attracted the notice of the great naturalists of France, and while quite a young man he was appointed Professor of Comparative Anatomy at the Jardin des Plantes. From that time he laboured with indefatigable energy, and produced most exhaustive treatises on Natural History. He was the first to elaborate scientifically the connection between prehistoric and existing animal forms. He was a councillor of State under Napoleon I., and was made Chancellor of the University of Paris by Louis XVIII.

CUXHAVEN, a fortified port at the mouth of the Elbe, about 70 miles below Hamburg. A commodious harbour capable of receiving the liners of the Hamburg-American Line was completed in 1895, and the port has rapidly grown in importance.

CUYP, ALBERT, *b.* 1605, *d.* 1691; a Dutch landscape painter of great excellence. Many pictures by him are in the National Gallery, London.

CYB'ELE (e-le), was the Phrygian goddess who personified the fruitfulness of the earth, and was worshipped as the mother of the gods. Rhea in the Greek and Ops in the Latin mythology, have practically the same position and the same powers assigned to them.

CYCLING. This mode of locomotion has passed through many changes since the days when the "dandy-horse," a two-wheeled structure propelled by pushing the ground alternately with each foot, provided material for satire to Cruikshank and his contemporaries. Pedals fixed to cranks connected with the back wheel were introduced about 1840. In the "boneshaker" of 1866 the pedals were arranged to turn the front wheel. The introduction of rubber tyres, some years later, rendered the latter instrument of torture less terrible, and with the adoption of one large fore wheel and a small back one, cycling was made moderately pleasant. H. L. Cortis, in 1882, travelled more than 20 miles in an hour on a machine of the latter type. In 1885 the Starley "Rover," a machine consisting of two wheels of equal diameter, and driven by a chain passing over a gear wheel, revolutionised cycling, and made it possible for persons of nearly all ages and of either sex to derive pleasure from the pastime. The principal improvements in the modern cycle, with the dates of their introduction, are as follows: Steel wire tension spokes, 1870; ball bearings, 1877; J. B. Dunlop's invention of pneumatic tyres, 1888; the "free wheel," 1901.

CYCLONE. There are, in general, two main currents in the atmosphere, a polar current of cold air and an equatorial of warm. The various meetings and crossings of these currents cause eddies, which are circular or spiral, and seldom less than 500 miles in diameter. Such eddies or circling currents of air are named cyclones, and within them the barometric pressure is low, whilst outside the pressure is high. The lowest barometrical reading occurs in the centre of the cyclone or cyclonic area. The direction of the wind is from places where the atmospheric pressure is high to places where it is low; but the centre of the cyclone is comparatively calm, the full force of the wind being felt where the barometric differences are most marked. A violent east wind, for instance, occurs whenever the barometer stands high in Norway and low on the east coast of England. The term *anti-cyclone* is applied to the belt of high pressure surrounding the cyclonic area. As the lowest barometrical readings indicate the centre of the cyclone, so the highest readings mark the locality of the anti-cyclone.

CYCLOPS or **CYCLOPES,** giants of Greek mythology, in which two distinct sets are mentioned. Homer's Cyclops are a wild, ferocious race of giants, who with their one-eyed chief, Polyphemus, dwelt on the coast of Sicily. The Cyclops of the older mythology are three Titans, each with one eye fixed in the centre of the forehead, who forged the thunderbolts of Zeus, and were eventually slain by Apollo. Later additions to this story make them servants to Hephæstus (Vulcan), assisting him, below Mount Etna, to forge the armour and weapons of the gods and demi-gods.

CYCLORAMA. See *Panorama*.

CYMBELINE, a British king and father of Caractacus. In Shakespeare's play he occurs as a man of weak character, under the evil influence of a second wife. *Imogen*, the child of his first wife is one of the most charming of Shakespeare's heroines.

CYMRI, the latest of the Celtic immigrants of Britain, who probably drove out the Gaels. They themselves were driven out by the Angles, Saxons, and Jutes into Wales, Cornwall, the north-west of England, and Brittany. The Cymric dialect of the Celtic tongue is still spoken in Wales.

CYNICS, a school of Greek philosophers who flourished from 380 B.C. to about 60 B.C. They affected great contempt for the ordinary comforts and pleasures of life, and their aggressive snarling at the conduct of others made them very unpopular. Antisthenes of Athens, the founder, and Diogenes of Sinope, are the best-known of the Cynics.

CYNOSURE, that on which the attention of beholders is centred. The Phœnician mariners used to steer their vessels by the "Little Bear," a constellation which the Greeks called Cynosura, "dog's tail." Hence Cynosure denotes anything that strongly attracts attention.

CYNTHIA, one of the many names of Diana, the Greek goddess who represented the moon. According to mythology, she and her twin brother Apollo were born at Mount Cynthus, in the island of Delos, a circumstance which gave her the name Cynthia.

CYPRIAN, SAINT, *b.* at Carthage about 200 A.D., one of the Fathers of the Church. He embraced Christianity in 246, and from that time devoted his wealth to the poor. He was made a bishop in 248. After several years of exile from Carthage, owing to the persecution under the Emperor Decius, he returned, and in a council held in 255 challenged the authority of the bishop of Rome over other bishops. He was beheaded, 258, for preaching Christianity in defiance of the imperial decree. Many of his writings are preserved.

CYPRUS, a large island off the coast of Syria, which has, since 1200 B.C., belonged successively to most of the dominant powers in the Eastern Mediterranean. England took it over from the Turks under an agreement made in 1878, by which she is to retain the island until Russia restores Batoum and Kars to Turkey. Agriculture is the leading industry and is slowly improving under British rule. Wine, oranges, wheat, barley, silk, and tobacco are the chief products, but the absence of good harbours hinders the development of foreign trade. In 1882 the island was granted partial autonomy; area, 3,700 square miles; population about 210,000.

CYRUS THE GREAT, founder of the Persian monarchy, was the son of Cambyses I., king of Elam. He conquered Astyages, king of Media, in 549 B.C.; crushed Crœsus, king of Lydia, about 540; and in 538 took Babylon from its king Nabonidus without striking a blow. He freed the Jews from their captivity in Babylonia, and allowed them to return to Palestine, 536. Before his death, he had conquered all that part of Asia which comes between the Mediterranean and the Indus Valley. The accounts given by ancient Greek writers differ greatly from the results of modern enquiry.

CZECHS, a Slav race which settled in Bohemia about the 6th century A.D. They became so powerful that the name was applied later to all the Slav inhabitants of Austria-Hungary. They now number over 7,000,000.

CZERNY, GEORGE, *b.* in Servia. 1766, *d.* 1817, a Servian patriot who raised a band of volunteers and drove the Turks out of Belgrade, forcing them to acknowledge him as ruler. The Turks subsequently regained Belgrade and Czerny became an exile. He was captured and beheaded during a second attempt to win the freedom of his country.

DACCA, a district in Eastern Bengal, India. Also the capital of the new province of Eastern Bengal and Assam.

DACIA, under the Roman Empire the district north of the Danube, comprising what is now Roumania, Transylvania, &c., and extending from the Pruth to the Theiss.

DACOTA, a territory of the United States, on the northern border, adjacent to Manitoba, in the valley of the Missouri, about 200 miles west of Lake Superior.

DÆ'DALUS, a mythical Greek architect and sculptor, whose most famous work was the labyrinth in Crete. To escape from that island he made himself wings with which he flew to Sicily.

DÆMON, with the Greeks a spiritual being, intermediary between the gods and men, regarded often as the source alike of inspiration and of madness. In the Bible, an evil spirit or devil taking possession of human beings.

DAGON, the fish-god of the Philistines, whose principal temple was at Ashdod (1 Samuel v.).

DAGUERRE, *b.* 1789, *d.* 1851, a French scene painter, the inventor of the process called after him, Daguerreotype.

DAGUERREOTYPE, the earliest process of photography, in which was used a silvered plate sensitized to light by iodine fumes, the image being developed by mercury vapour, and fixed by hyposulphite of soda. Also, a photograph produced by this process.

DAHOMEY, a petty kingdom in Western Africa on the Gulf of Guinea, of which Abomey is the chief town and Whidah the chief port. It was notorious for its slave traffic and for its cruel religious rites and human sacrifices.

DAIMIO, the title of a class of Japanese officials. Till 1871 the daimios were feudal lords, some being entirely independent, others only nominally subject to the Mikado. Now they are governors of the districts over which they used to be sovereigns.

DAIMLER, GOTTLIEB, *b.* 1834, *d.* 1890, a German engineer and specialist in oil and gas engines. He was associated with Otto in the production of the Otto gas-engine, and in the last three years of his life he was engaged in the invention of the motor-car that bears his name.

DAIRY FACTORIES, in which machinery replaces manual labour, were first tried in the United States in 1860, cheese being made first and butter later. Their success in Canada and the United States, where they are numbered by thousands, has led to their introduction into England, especially in the counties of Cheshire, Gloucestershire, and Wiltshire. The stream of milk runs into a revolving cylinder, where the cream adheres to the axis of the cylinder, and the remainder is then drawn off by taps.

DALAI-LAMA, literally the "ocean priest," the name of the Buddhist high priest, who dwells at Lhassa, in Tibet.

DALE, DR. ROBERT WILLIAM, *b.* 1829, *d.* 1895, a Congregational minister, and famous theologian, whose work on the Atonement is regarded as a masterpiece by all schools of thought.

DALHOUSIE, MARQUIS OF, *b.* 1812, *d.* 1860. He succeeded Mr. Gladstone as President of the Board of Trade under Sir Robert Peel in 1844, and from 1848 to 1856 he was Governor-General of India. He added to our Empire the Punjab and several other native states, and greatly developed the resources of India, especially its railways and canals.

DALKEITH, a town on the Esk, near Edinburgh, where is the family seat of the Duke of Buccleuch.

DALMATIA, the most southerly province of the Austrian Empire, stretching along the north-east shore of the Adriatic Sea; a narrow strip of coast, with excellent harbours, and separated on the land side from Bosnia and Herzegovina by the Dinaric Alps.

DALMATIC, the vestment worn by the deacon at High Mass in the Roman Catholic Church.

DALRYMPLE, VISCOUNT STAIR, *b.* in Ayrshire, 1619, *d.* 1695; a famous lawyer, whose *Institutes of the Law of Scotland* is still unsurpassed as an authority. He acted as Commissioner under Cromwell, and was Lord President of the Court of Session under Charles II.

DALRYMPLE, FIRST EARL OF STAIR, son of the preceding, and Secretary of State for Scotland at the time of the Glencoe massacre in 1692.

DALTON, JOHN, *b.* in Cumberland, 1766, *d.* 1844, a chemist of world-wide fame. He formulated the laws of pressure and elasticity of gases, while his Atomic Theory has vindicated itself by leading to many brilliant discoveries which have since been made in Chemistry.

DAMA'RALAND, with Namaqualand, forms what was recognised in 1884 as a German Protectorate in South-West Africa, lying to the north of the Orange River and encircling the British territory of Walfisch Bay. It is thought to be rich in silver and copper ores, and is drained by the Fish River, a tributary of the Orange River.

DAMASCENING, the art of inlaying one metal with another; especially the decoration of sword blades with a pattern of gold inlaid, first practised at Damascus.

DAMASCUS, the largest city in Syria, about 130 miles north-east of Jerusalem, is famous for its bazaars and for its Great Khan or Mart. It is probably the most ancient city in the world.

DAMASK, a figured fabric, either of silk, as originally made at Damascus, (whence its name), or of linen as made in Scotland and Ireland.

DAMIEN, FATHER, a Belgian priest, who in 1873 devoted his life to the lepers confined in Molokai, an land of the Hawaian Archipelago in the North Pacific. He acted for them not only as priest, but also as magistrate, cook, carpenter, &c. After twelve years' heroic service he contracted the disease himself, and from it he died in 1889.

DAMIENS, ROBERT FRANCOIS, a Frenchman who attempted to assassinate Louis XV. in 1757, and was executed with the most horrible tortures.

DAMIETTA, a town on the main eastern mouth of the Nile, as Rosetta is on its main western branch. As a port it is overshadowed by Alexandria.

DAMOCLES, the flatterer of Dionysius, tyrant of Syracuse, 405–367 B.C. To teach him the unenviable lot of princes, and to rebuke his flattery, the tyrant seated him at a gorgeous banquet with a naked sword hung over his head by a single horse-hair.

DAMON, who lived in the first half of the fourth century B.C., is famous for his friendship with Pythias. The latter having plotted against the life of Dionysius of Syracuse was condemned to die, but was permitted to return home to arrange his affairs, on Damon offering to die in his stead, should he fail to return by an appointed day. At the last moment Pythias returned. Dionysius was so struck with their mutual fidelity, that he pardoned the offender, and begged to share their friendship.

DAMPIER, WILLIAM, *b.* in 1652, a famous sailor, who made many discoveries along the western and northern coasts of Australia.

DAN'AË, a maiden shut up in a tower at Argos by her father, but nevertheless visited in a shower of gold, by Zeus (Jove) by whom she became the mother of Perseus.

DANA'IDES, (i-des) the fifty daughters of Danaus, who with one exception put to death their husbands, the fifty sons of Ægyptus, on their bridal night, and consequently in the lower world were sentenced to draw water in a sieve.

DANCE OF DEATH, an allegorical drama, portraying the power of death over all men, common in France and Germany during the 14th and 15th centuries. It afterwards became a subject of pictorial representation.

DAN'DOLO, ANDREA, *b.* 1317, *d.* 1354, Doge of Venice, and historian of that republic. Through his successful wars with the Turks he opened the ports of Egypt and Asia Minor to Venetian trade.

DANEGELD, a land tax imposed to provide means for raising forces to resist the Danes, but afterwards employed by Ethelred the Unready to buy them off. It was abolished in the reign of Henry II.

DANELAGH, the country east of Watling Street which ran from London to Chester; ceded to the Danes in 878 by Alfred. The name is also given to the laws and customs which the inhabitants of that district observed.

DANES, THE. A race akin to the Anglo-Saxon; they first landed in England in 787, and continued their incursions for the next 150 years. Alfred allowed them to settle peaceably in the east of England, but their kinsmen continued to raid other parts of England. Ethelred the Unready caused the Danes, who had settled in Wessex, to be treacherously murdered on

St. Brice's Day, 1002. The result was a terrible revenge on the part of Sweyn, and the rule of the Danish kings, Canute and his two sons, Harold I. and Hardicanute (1017–1042).

DANIEL, a Hebrew prophet, carried captive from Jerusalem to Babylon in 597 B.C. By his skill in interpreting dreams he gained the favour of Nebuchadnezzar, and was made chief among the magi, and ruler of the province of Babylon. Darius put him next to the sovereign, but jealousy at this advancement caused him to be thrown into the lions' den. Soon afterwards he retired from court, but apparently continued his prophetic work till the reign of Cyrus.

DANIEL, BOOK OF, written partly in Hebrew, partly in Chaldee or Aramaic; its first six chapters purport to be historical, the remainder being an apocalypse or revelation in which prophecy takes the form of vision. Many modern critics would date the composition, or at least the compilation of the book, about the Maccabean times in the second century B.C.

DANTE ALIGHIERI, the Italian poet, born at Florence in 1265 of a noble family, died 1321. After playing an important part in Florentine politics, he spent the last twenty years of his life in banishment at Paris, Ravenna, &c. His love for Beatrice Portinari, which seems to have begun when he was a boy of nine and she a girl of eight, was the inspiration of his life, though Beatrice was afterwards married to Simone Bardi, an Italian noble, and Dante married Gemma. This passion was the theme of his first published work, a collection of poems called the *Vita Nuova;* but the undying fame of the poet is due to his *Divina Commedia* (a Comedy being a representation of life which reaches a happy ending), in which is portrayed man's life after death, the poet describing in order his visions of hell, purgatory, and the heavens, under the guidance first of Virgil and then of Beatrice.

DANTON, GEORGES JACQUES, the guiding spirit of the French Revolution for two years, but destined to perish by the monster he had himself begotten. His fall was due to the jealousy of Robespierre, who was his superior in cunning, as he was his inferior in courage; he was executed in 1794.

DANTZIC, a port of West Prussia, near the mouth of the Vistula, doing a huge transit trade, especially in wheat, the granaries for storing which are on the adjacent island of Speicher.

DANUBE, the longest river of Europe, except the Volga, rising in the Black Forest in Baden, only 30 miles from the Rhine, and flowing in a generally eastern direction for 1,700 miles into the Black Sea. Of its sixty great tributaries, the most important are the Drave, Save, and Morava, on the right bank, and the Theiss, Sereth, and Pruth on the left. The chief towns on its banks are Vienna, Pressburg, Buda Pest, and Belgrade.

DAPHNE, a river nymph, who became a laurel tree to escape the pursuit of Apollo. Also the name of the paradise or park near Antioch in Syria, where was a sanctuary of Apollo.

DAPHNIS, a Sicilian shepherd, son of Hermes (Mercury), said to be the inventor of bucolic poetry.

D'ARBLAY, MADAME. See *Arblay, Madame D'.*

DARBY AND JOAN, the hero and heroine of an old ballad which celebrates the mutual love and devotion of an old couple after more than fifty years of married life.

DARDANELLES, whose classical name was the Hellespont, is a strait connecting the Sea of Marmora and the Ægean Sea,

DARFUR, an African state in the east of the Soudan, now part of Egypt. Formerly a great centre of the slave trade. Its inhabitants are Mohammedans.

DARIEN, ISTHMUS OF. See *Panama.*

DARIUS I., king of Persia, 521–485 B.C. in whose reign the East and the West came into keen conflict. He made a fruitless expedition across the Danube in 516 B.C., but succeeded in subduing the coast of Thrace and Macedonia. But after the revolt of the Ionian Greeks in the west of Asia Minor, his punitive expeditions in 492 B.C. under Mardonius, and in 490 B.C. under Datis and Artaphernes, were failures. In the latter year was fought the memorable battle of Marathon, near Athens, when Miltiades inflicted a crushing defeat on the Persian hosts.

DARJEELING, a district in Bengal at the foot of the Himalaya Mountains, due north of Calcutta, famous for its sanatorium, 7,000 feet above the sea, and still more for its tea plantations, which occupy half the tea-growing area of India, and yield 450 lbs. to the acre.

DARLEY, THE ARABIAN, one of the three eastern stallions from which all horses in the stud book trace their descent, and the founder of the chief male line of thoroughbreds.

DARLING, GRACE, born at Bamborough, 1815; died, 1842. She was the daughter of a lighthouse keeper at the Farne Islands, near Berwick. In September, 1838, the *Forfarshire,* a steamer from Hull to Dundee, was wrecked a mile away; and the heroine and her father between them rowed their small boat through a raging sea to the wreck and saved nine lives. This noble act roused the utmost enthusiasm through the country.

DARLING, an Australian river, traverses the Colony of New South Wales, flowing in a south-westerly direction till it joins the Murray.

DARLING DOWNS, a rich pastoral and agricultural district in the south of Queensland and due west of Moreton Bay.

DARLINGTON, a town 18 miles south of Durham, in the county of Durham, near the Tees. Here are the locomotive works of the N.E.R., besides iron and brass foundries and worsted mills; population about 45,000.

DARNLEY, LORD, great-grandson of Henry VII., and husband of Mary Queen of Scots; their son was James VI. of Scotland, afterwards James I. of England. The tragedy of Darnley's death—whether simply due to an explosion in the house where he was lying ill, or whether he was first killed by the agents of Bothwell, the Queen's favourite—has never been entirely explained; *d.* 1567.

DARTMOOR, a table-land in West Devon, 22 miles by 20, containing the remains of a Druid temple. The convict prison was originally built to receive prisoners of war during our struggles with Napoleon.

DARTMOUTH, a port in Devon, on the estuary of the Dart, about 30 miles south of Exeter. Here is situated the Royal Naval College, which occupies a beautiful site 200 feet above the river. Accommodation is provided in it for 320 cadets and staff; architect, Mr. Aston.

DARWIN, CHARLES, *b.* 1809, *d.* 1882, son of a Shrewsbury physician, and grandson of the well-known Erasmus Darwin. From 1831 to 1836 he made his voyage round the world in H.M.S. *Beagle,* on which he was naturalist. In 1859 he published the *Origin of Species* (see *Darwinism*), while subsequently he wrote many treatises to elaborate and defend the theory therein maintained. Among these works was the "Descent of Man," which gained great attention.

DARWINISM, the theory of the history of organic life, propounded by Darwin in his *Origin of Species,* and formulated independently about the same time by Dr. Alfred Russel Wallace. Instead of maintaining the ultimate independence of the chief types of vegetable and animal life (the "Special Creation" theory), Darwin adduced facts to show that a few ultimate types might be capable of many variations, particular variations being induced by the stimulus of external circumstances. In the struggle for existence throughout nature, the "fittest" to survive, i.e., those best able to respond to the stimulus from environment, would survive; this process is natural selection; and when this has been repeated throughout ages upon ages, it could account for the multitudinous and highly developed species of the present day being *evolved,* not from one another, but from a few simple original types. This scientific theory was transferred by Mr. Herbert Spencer and others from biology to questions of ethics, politics, religion, &c., and the resulting philosophy of *Evolution,* though not regarded as the final word on the subject, has helped greatly to advance thought during the last thirty years.

DATE PALM, the palm tree of Scripture, still found in many of the countries at the east end of the Mediterranean. An upright stem of 50 feet is capped by a cluster of some fifty leaves, each 8 feet long, with heavy bunches of fruit on the female plant.

DAUDET, ALPHONSE, *b.* 1840 *d.* 1897, "the French Dickens." Of his novels, the most famous is *L'Immortel,* and of his plays *Sapho;* he was also a contributor to the *Figaro* (Paris).

DAVENANT, SIR WILLIAM, *b.* 1605, *d.* 1668, a dramatic poet, manager of Drury Lane Theatre, and poet laureate after Ben Jonson.

DAVID, of the tribe of Judah, Saul's successor in the Hebrew kingdom, was born at Bethlehem (the "city of David"), *d.* 1000 B.C. He was one of the greatest Old Testament heroes; his character was marked by courage, generosity, loyalty to his friends, and deep sincerity. His dynasty reigned over Judah till the Babylonian captivity, and from him was our Lord descended. The books of Samuel record the events of David's life, and most critics accept the tradition which regards him as the author of some of the Psalms.

DAVID, SAINT. Archbishop of St. David's about 600 A.D., patron saint of Wales.

DAVID I., king of Scotland 1124–1153, uncle of Queen Matilda, whose claims to the English crown he defended against Stephen, though with little success. He greatly encouraged learning and civilization in Scotland.

DAVID II., son of king Robert Bruce, and king of Scotland from 1330 to 1370. He was defeated and taken prisoner at Neville's Cross, in 1346, by Queen Philippa, wife of Edward III.

DAVID, JACQUES LOUIS, one of the greatest of modern French painters. His "Rape of the Sabine women" is in the Louvre. He was an ardent revolutionist, and a supporter of Robespierre; *d.* 1825.

DA VINCI, LEONARDO, Florentine painter, sculptor, and art-critic. The *Last Supper,* painted on the wall of a convent at Milan, was his most famous work; *d.* 1519.

DAVIS, JEFFERSON, leader of the Confederate (slave-holding) States during the American War of South versus North, on the slavery question; taken prisoner in 1865, released in 1868. A man of marked ability and the highest character; *d.* 1889.

DAVIS, JOHN. One of the heroes and navigators of Devon in Queen Elizabeth's reign; discoverer of Davis Strait.

DAVIS' STRAIT, the channel between the Arctic and Atlantic Oceans on the west of Greenland; discovered by Davis in 1585.

DAVITT, MICHAEL, *b.* 1846, *d.* 1906, a prominent member of the Irish Nationalist party, lost his right arm as a lad while working in a Lancashire mill. He was sentenced to penal servitude in 1870 for his part in Fenian outrages. He was released in 1877, but rearrested and imprisoned on several subsequent occasions. He was a secretary of the Land League, and has written much, as an ardent patriot, in fiery language. For some years he was a member of Parliament.

DAVOS, or **DAVOS-PLATZ,** a famous health resort in the Swiss canton of Grisons, 5,000 feet above the sea level.

DAVY, SIR HUMPHRY, *b.* at Penzance, 1778; *d.* 1829. He was a great natural philosopher and chemist, and President of the Royal Society from 1820. He was the first to discover that such substances as potash, soda, &c., were not elements, but compounds of oxygen with a metallic base (potassium, sodium, &c.); his efforts founded the science of Agricultural Chemistry, and his investigation of the nature of fire-damp led to his invention of the safety-lamp.

DAVY LAMP. See *Safety Lamp.*

DAVY JONES'S LOCKER. Among sailors Davy Jones is a polite name for the Devil, and his Locker is the sea, the grave of seamen, because the sea keeps all that is committed to its care.

DAWSON, a city in Klondyke, at the confluence of the Klondyke and Yukon rivers, only two degrees south of the Arctic Circle; gold was discovered there in 1896.

DAY; the *sidereal day* is the time taken by the earth to make exactly one rotation measured by the interval between two consecutive appearances of a fixed star on a meridian; the *solar day* is about four minutes longer, but varies and is measured by the interval between two consecutive appearances of the sun on a meridian. The solar or sun-day is longer than the sidereal or star-day, because of the sun's apparent motion forward in the heaven, which distance the earth has to make up before the sun will be on a given meridian again. The solar day is of varying length, partly because the sun's apparent motion (really, the earth's motion in her orbit), varies, and partly because the equator is inclined to the ecliptic or plane of the sun's path. The average of these variations has been worked out, and is known as the *mean solar day.* The inclination of the earth's equator to the ecliptic is also the cause of the inequality of the periods of light and darkness throughout the year, for this inclination causes any circle of latitude (except the equator), to be divided unequally by the circle on the earth bounding the area of the sun's illumination—so at any point in that latitude the days and nights are correspondingly unequal in length.

DAYS OF GRACE. See *Commercial Dictionary.*

DAYS OF THE WEEK. The names of the days of the week are survivals from the times when the Anglo-Saxon race worshipped heathen divinities. Sunday and Monday are named in honour of the Sun and Moon respectively; Tuesday is the day of Tiw (Jupiter), Wednesday of Woden (the god of war), Thursday of Thor (the god of thunder), Friday of Frigu (the goddess of love), and Saturday of Saturn (the early Roman god of the seed-time and harvest).

DEACON (1) The lowest of the three orders of the Christian ministry. (2) The assistant of the celebrant at High Mass. (3) In the Presbyterian bodies, a lay official.

DEAD BOOK OF THE. A collection of prayers for the souls of the dead among the ancient Egyptians, copies of which were buried with the mummies. An edition has been published by Edward Naville, at Berlin

DEADLY NIGHTSHADE. See *Belladonna.*

DEADLY SINS, as distinguished from venial. The former are considered to need special confession and forgiveness, while the latter need only to be dealt with in general terms. The deadly sins are traditionally given as seven in number:—anger, pride, gluttony, lust, avarice, envy, and sloth.

DEAD RECKONING, the calculation of a ship's probable course by using the compass, considering the rate of sailing, and allowing for currents, winds, etc.; and therefore needing correction when possible by astronomical observations.

DEAD SEA, a lake in the south-east of Palestine, into which the Jordan flows; the site of the cities of the Plain (Gen. xix.). Its level is 1,300 feet below that of the Mediterranean, and its waters are very buoyant and brackish.

DEAF AND DUMB. In most cases deafness is due to a physical defect, and dumbness is not organic, but simply the result of the deafness—the power of speech being only exercised through imitation of what has been heard. To establish communication with deaf-mutes, recourse must be had to manual signs, which are associated first with various ideas and then with words, so that an alphabet can ultimately be constructed; various methods of education connect the signs, in varying degrees of closeness, in some cases with ideas, in others with external objects, and in others merely with words. Deaf-mutes can be taught to articulate sounds, though rarely with any degree of clearness, but the latest system of visible speech gives promise of enabling the afflicted to communicate by the motion of the lips.

DEAKIN, ALFRED, *b.* 1856, an Australian lawyer and statesman. He held successive offices in the administration of Victoria, and in 1901 joined the Commonwealth Government as attorney-general. He became premier for a short time, in succession to Sir Edmund Barton, again became premier in 1905, and for the third time in 1909.

DEAL, timber obtained from the Scotch fir (red deal) or from the spruce fir (white deal). Both are largely exported from the Baltic ports. The term is also used to denote all ready-sawn pine timber, whether from Europe or America.

DEAN. (1) An ecclesiastical officer, who presides over his cathedral chapter or council of canons. (2) A college tutor, who is usually in charge of the college discipline. (3) A judge in the Court of Arches.

DEAN, FOREST OF. In Gloucestershire, west of the Severn, famed for its coal and iron mines; most of the timber for the navy used to be grown here.

DEBORAH, the Hebrew prophetess who inspired Barak to give battle to Sisera, the commander of the forces of Jabin, king of Canaan (Judges iv. v.).

DECAMERON, literally the *ten days;* a collection of one hundred tales supposed to be told to while away ten days of the plague at Florence; written by Boccaccio (*d.* 1375). The idea of the "Canterbury Tales" was probably suggested to Chaucer by the "Decameron."

DECAP'OLIS, the district round the upper course of the Jordan, chiefly on the east, containing ten Greek or Gentile cities colonised by the Romans soon after Pompey's visit to Syria (63 B.C.).

DECCAN, the peninsula of India between the rivers Nerbudda and Krishna, including Nagpore and Hyderabad; sometimes the term is applied to the whole peninsula south of the Nerbudda.

DECEM'VIRATE, the office of the college or body of ten magistrates who had supreme power at Rome, 449–447 B.C., till the insult of one of their number, Appius Claudius, to Virginia, a Roman maiden, led to the downfall of all.

DECIMAL SYSTEM. See *Commercial Dictionary.*

DECIMATION, a military punishment of the Romans who dealt with large bodies of rebels or prisoners by executing one man in ten.

DECIUS, emperor of Rome, 249–251, and one of the most severe persecutors of Christianity.

DECKEN, BARON VON DER, a native of Brandenburg, Germany, an African explorer, who discovered Mount Kilimanjaro (1861) and penetrated into Somaliland; *d.* 1865.

DECLARATION OF INDEPENDENCE, made on July 4th, 1776, by the Congress of the American States, which then formed themselves into the republic of the United States of America; recognised by the English Government in 1783 on the conclusion of the War of Independence.

DECLARATIONS OF INDULGENCE, (1) Issued in 1672 by Charles II., extending toleration to Nonconformist (including Romanist) worship. (2) Issued in 1687 by James II., and re-issued in 1688, when the Seven Bishops appealed against its being read in churches. They were consequently put on their trial for sedition, but acquitted.

DECLARATION OF PARIS, signed by all the European Powers at the Congress of Paris in 1856. It defined international law as regards neutral goods, and maritime traffic in general, during time of war.

DECLARATION OF RIGHTS, the charter of rights (as to taxation, a standing army, election of members of Parliament, &c.), presented to William III. and Mary, in 1689, by Parliament. It was afterwards embodied in the *Bill of Rights.*

DECLINE AND FALL OF THE ROMAN EMPIRE, the *magnum opus* of Edward Gibbon, written between the years 1775 and 1787. See *Gibbon, Edward.*

DECOY, a bird or animal trained or used to assist in the capture of its wild kindred. In England, the decoy-duck is commonly used by fowlers in the capture of water-fowl. These abound in the pools and marshes of the Eastern Counties. A secluded haunt is chosen, and tame ducks accustomed to feed in artificial channels leading out of the main pool, are used as decoys. The channels or "pipes" are cunningly made, screens of osiers and grasses enabling the fowler to pass unseen from one to another. The pipes have wide mouths and are netted over hoops, a cage-net being placed at the narrow end of the pipe. The decoys, on entering the pipes to feed, are usually accompanied by some wild birds. The fowler then closes the mouth of the pipe and drives the birds into the cage-net at the other end.

DECRE'TALS, or papal decrees, edicts, rescripts, &c., giving decisions on points of law. The most famous are the *Forged Decretals* of the Pseudo-Isidorus (in the ninth century), on which at one period the papal claims rested almost entirely.

DEE. (1) A river in England, flowing through North Wales past Chester into the Irish Sea. (2) A Scotch river, flowing eastwards through Aberdeenshire past Balmoral into the North Sea at Aberdeen.

(3) A Scotch river flowing southwards through Kirkcudbrightshire into the Solway Firth.

DEER are distinguished from other cud-chewing or ruminant animals by their antlers, which are carried by the males of all but the musk-deer. In the reindeer alone are both sexes thus armed. Britain possesses two wild deer, the red deer and the roebuck. The *fallow deer*, so commonly preserved in our parks, is said to have been introduced by the Romans, though found here in a fossil state. The *roebuck* is comparatively rare; it is a small deer with small antlers. The *red deer*, on the other hand, is a large animal with great branched antlers; it is still hunted on Exmoor and shot on the Scotch moors. The great Irish elk, now extinct, is found fossilised in the Irish peat. [Refer to *Antler*, *Elk*, *Reindeer*, *Musk Deer*.]

DEER-FORESTS are wild tracts of moorland country in which deer are preserved, mainly for sport. Such forests now occupy a large extent of ground in the Highlands of Scotland. The largest of these forests are about 100,000 acres, and the smallest about one-tenth that size. Cattle and sheep are excluded, a "sanctuary" in which the deer are safe from intrusion is provided, and the heather is periodically burned to favour the growth of grasses for food.

DEFENDER OF THE FAITH, *Fidei Defensor*, a title bestowed on Henry VIII. by the Pope for writing against Luther; it was confirmed by Parliament in 1544; on our coins it is abbreviated as *Fid. Def.*

DEFOE, DANIEL, *b.* in London, 1661, *d.* 1731; a political pamphleteer, still more famous as a writer of fiction. He was unfortunate in his business career, and so took to literature; his political views, and men's failure to understand his irony, brought him repeatedly into trouble, and caused him to find his true *métier* in fiction. The *True-born Englishman* (1701) was a defence of William III.; the *Shortest Way with the Dissenters* was so delicately ironical that both parties felt themselves attacked in it; the *Hymn to the Pillory* testified his appreciation of the conduct of his opponents; and the *History of the Union* is a first-hand source of information as to the manner in which the Union with Scotland was effected. But Defoe's immortality is assured by *Robinson Crusoe*, which did not appear till 1719, and which was followed by several other imaginative works, of which the *Adventures of Roxana* is perhaps best known. He excelled in giving an air of reality to his creations by the accuracy and persuasiveness of their circumstantial details.

DEGREE. (1) An arc of a circle consisting of the 360th part of its circumference (2) The angle between two radii drawn to the extremities of such an arc, ninety of which make a right angle, (written 90°). (3) In Algebra, the description of an equation according to the highest power of the unknown quantity. See *Latitude* and *Longitude*.

DEGREES, titles of distinction (Bachelor, Master, Doctor) in various subjects or faculties (Arts, Science, Divinity, Laws, Medicine, Music, &c.), granted by Universities, (1) to those who have passed the required examinations, and (at the older Universities) have completed a prescribed period of residence; (2) to persons of special distinction or merit, *honoris causa*, without fulfilling any such requirements. At the newer Universities women are eligible for degrees equally with men. The Archbishop of Canterbury also has the right of conferring degrees.

DE IMITATIONE CHRISTI, "Concerning the Imitation of Christ," ranks with St. Augustine's *Confessions* among our noblest devotional literature, next to the Psalms in the Bible. Its author was probably Thomas à Kempis, who died in 1470.

DEIRA, one of the old Anglian kingdoms, founded by Ella in 560, and united with Bernicia into Northumbria by Edwin in 626. Deira consisted of Durham, Yorkshire, and parts of Lancashire and Westmoreland.

DEISM, the system of belief of a *Deist*, in which the Deity is regarded as the First Cause of the Universe, who has given the original impetus to all phenomena, but which thereafter proceed without Him. Consequently He is thought of as apart from His creation, with which He does not meddle; therefore miracle or a supernatural revelation is not deemed credible or necessary, only "Natural Religion" can be believed, and unaided reason is man's only faculty by which to apprehend the Deity. The theory of evolution has exhibited the weaknesses of any such creed which does not recognise the presence of God in the *course* of Nature (see *Pantheism*); but deism was popular in the 17th and 18th centuries, its most famous adherents being Lord Herbert of Cherbury, Hobbes, Bolingbroke, and Tindal.

DELACROIX, FERDINAND, 1799–1863, a French painter of the *Romantic* school, in which faithfulness to nature is subordinated to the power of imagination, and oftentimes accuracy of drawing is sacrificed to brilliancy of effect.

DELAGOA BAY, on the east coast of South Africa, opposite the centre of the Transvaal, discovered by, and originally named after Lorenzo Marques, a Portuguese, in the 16th century; claimed by both Great Britain and Portugal for half a century, but awarded to the latter Power by the French President acting as arbitrator, in 1875. A railway, 400 miles long, connects Delagoa Bay with Pretoria and Johannesburg (and so with Cape Town). Before the Boer War Delagoa Bay was a serious rival to Durban for the trade of the Transvaal goldfields.

DELAROCHE, PAUL, *b.* Paris, 1797, *d.* 1856; a French historical painter, of the *Eclectic School*, which combines the brilliant colouring of the Romantic school with the correctness of the Classic school. His mural decorations of the Paris School of Fine Arts, and his picture of Cromwell contemplating the dead Charles I., are considered his best works.

DELAWARES, a tribe or rather confederacy of tribes of North American Indians, which formerly dwelt by the River Delaware, but were driven inland to the Ohio, and thence to Arkansas.

DELECTABLE MOUNTAINS, THE, whence, towards the end of his journey, Christian, in the *Pilgrim's Progress*, gains his first glimpse of the heavenly Jerusalem.

DELFT, a town in Holland, eight miles north-west of Rotterdam; from it was named the pottery, which was once famous but now is little in demand.

DELHI, in the Punjab, on the Jumna, due south of Simla, is famous for its Mogul's palace (dating from the time when Delhi was the Moslem capital of India) and other ancient buildings, as well as for its Government College for Native Education. Its embroidery and goldsmiths' work are renowned; but it is chiefly celebrated as the centre of the Indian Mutiny in 1857, when it was only retaken by the British after a three months' siege.

DELI'LAH, the Philistine courtesan, who first learned the secret of Samson's strength and then betrayed him to his enemies (Judges xvi.).

DELITZSCH, FRANZ, *b.* Leipsic, 1813, *d.* 1890, theologian and critic, marked equally by acumen and caution. His commentaries on the Psalms and his work on Biblical psychology are noted.

DELOS, a small island midway between Asia Minor and Greece, sacred to Apollo. This island was selected to be the treasury for the contribution made by the Confederacy of Greek states (476 B.C.) in order to provide against Persian invasion.

DELPHI, in Greece, on the north of the Corinthian Gulf, where oracles were delivered by the Pythoness or frenzied priestess of Apollo.

DELTA, a tract of land formed of soil which has been brought down by a river and accumulated at its mouth. The shape of the delta of the Nile (an equilateral triangle), like the Greek capital letter Δ (Delta), originated the name. The phenomena of the age-long formations of geological strata are often reproduced by deltas under our very eyes in miniature.

DEMAVEND, a volcano in the Elburz Mountains, in Persia, south of the Caspian Sea; height, 18,570 ft. It is now extinct.

DEMERARA, a river and province of British Guiana, South America: its capital is Georgetown. The interior is covered with dense forests, but along the coast and river-banks sugar, tobacco, and cotton are produced in great abundance. There are two rainy seasons in the year, occurring about the time of our mid-winter and mid-summer respectively.

DEME'TER, literally "Earth Mother," the Greek goddess of corn and fruit, the Roman *Ceres*. She was the mother of Proserpina or Persephone, who was carried off to the under-world by Pluto.

DEMOCRACY, the form of government in which the supreme power ultimately rests with the body of the people or commons. In ancient democracies the functions of government were under the control of the popular assembly, which consisted of all male citizens of full age; but in modern times the commons elect representatives in whose hands such control lies.

DEMOCRATIC PARTY, THE. See *Republican Party*.

DEMON. See *Dæmon*.

DEMONOLOGY, knowledge about demons, the Greek equivalent for the Biblical *angels*, spirits whether good or bad; Jewish usage has caused the worse sense to predominate with us. See *Dæmon*.

DEMOS'THENES, *b.* 385, *d.* 322 B.C., the great Athenian orator, who tried to defend Greek independence against the aggressive policy of Philip of Macedon, father of Alexander the Great. The speeches in which he attacked Philip were called Philippics.

DEMURRAGE. Refer to *Commercial Dictionary*.

DENARIUS, the principal Roman silver coin. It is referred to in the New Testament as "a penny." It was named *denarius* because it was originally equivalent to ten of the copper coins, called ases (*deni*="ten apiece").

DENDERA, in Egypt on the Nile, near which are the ruins of the temple of Isis. On the temple's ceiling was drawn what is probably a planetary table or zodiac, now preserved in the National Library at Paris. Denderah is on the trade route across the Libyan Desert.

D'ENGHIEN, DUC, *b.* Chantilly, 1772, *d.* 1804; left France at the Revolution, and took refuge near Strasburg. When Pichegru's conspiracy to restore the Bourbons was discovered, Napoleon imagined that D'Enghien was implicated,

and had him seized, brought to Paris, and shot.

DENIS, SAINT, missionary from Rome to France about 260 A.D., first bishop of Paris, six miles from which is the famous abbey founded in his memory.

DENMARK, a Scandinavian kingdom, including besides the peninsula of Jutland, the islands of Zealand, Funen, and Laaland (which lie in the Cattegat, or strait leading to the Baltic), Bornholm (in the Baltic), the Faroe Isles and Iceland (in the North Atlantic), and Greenland. The capital is Copenhagen, on Zealand, opposite the Swedish coast, and the other towns are Aarhuus, Odensee, Elsinore, and Aalborg. The chief exports are provisions, specially butter; the chief imports are textile goods. Its area is 14,100 square miles, and its population including that of the Faröe Islands is over two and a half millions.

DENTATUS, M. CURIUS, Roman consul in 290 B.C. He succeeded in driving Pyrrhus, king of Epirus, out of Italy; in later days he was revered as a typical Roman, both in his patriotism and in the simplicity of his life.

DENT BLANCHE, a peak in the Alps, just north-west of the Matterhorn, in Valais, 14,300 feet high.

DENTISTRY, the work of the dentist, whether *mechanical*, to provide artificial teeth, or *surgical*, to scale, stop, or extract the natural teeth. The use of anæsthetics (such as ether, nitrous oxide, &c.), has facilitated the dentist's work in late years, and great improvement has been made in the construction of artificial teeth, which are mostly of porcelain, fitted into the mouth on a plate of gold or vulcanite.

DENT DU MIDI, a peak in the Alps in Valais, between the Rhone and the Savoy frontier, about 16 miles south of the east end of the Lake of Geneva. Height, 10,750 feet.

DENUDATION, the process by which water (rain, rivers, &c.), gradually wears away the surface of the rocks of the earth's crust, and carries the soil off to deposit it elsewhere. See *Delta*.

DENVER, a city in Colorado, U.S.A., on the Pacific side among the Rocky Mountains; the centre of a mining industry which is most flourishing, the mines being specially productive in silver, lead, iron, gold, and coal.

DEODAND. Until 1846, when the law was abolished, any personal chattel that was the cause of human death was confiscated to the crown to be applied to some pious use (*Deo dandum*="to be given to God").

DE PROFUNDIS, "out of the deep," the Latin or Vulgate commencement of the 129th Psalm (Prayer Book Version), one of the seven penitential psalms.

DE QUINCEY, *b.* Manchester, 1785, *d.* 1859; a famous essayist, and the author of "Confessions of an Opium Eater," a series of papers for the *London Magazine*, in which he analysed his own experiences. He was the friend of Charles Lamb, Coleridge, Wordsworth, and Southey.

DERBY, the county-town of Derbyshire, famous for its porcelain and silk. It is the centre of the Midland Railway system, and a good tourist centre for the scenery of the Peak district. The eastern part of the county comes within the Leeds and Nottingham coal field. (For population, etc., see p. 902.)

DERBY, EARL OF. (1) The title was conferred in 1485 after the battle of Bosworth, on Thomas, Lord Stanley, who had contributed largely to the success of Henry VII. in that battle. (2) Edward Stanley, 14th Earl of Derby, *b.* 1799, *d.* 1869, a prominent statesman of the 19th century, was Secretary of State for the Colonies in the Whig administration of 1833. He opposed Peel as a protectionist in 1845, and became Prime Minister in 1852, subsequently returning to power again in 1858 and in 1866. A vehement orator, he was known as the "Rupert of Debate." He cared, however, little for office, and left a mark of his scholarly attainments in his translation of Homer.

DERBYSHIRE, one of the midland counties, south of Yorkshire. In the north is the rugged Peak district, with lovely dales and caverns. Here are the health resorts of Buxton and Matlock with their warm mineral springs. The county is famous for its splendid halls and mansions, such as Haddon Hall and Chatsworth, as well as for its abbey ruins and fine churches. Derbyshire is singularly rich in metals and minerals. Its chief manufactures are silk, cotton, hosiery, lace, and porcelain. Its chief towns in addition to the two already named, are Derby, Chesterfield, Glossop, and Ilkeston.

DERBY, THE, a horse race of one and a half miles run at Epsom on the last Wednesday in May (sometimes the first in June). It is named after Lord Derby, who instituted it in 1780. To breed and run a Derby winner is recognised as winning the blue ribbon of the turf.

DERVISHES, Mohammedan monks, vowed to poverty and celibacy, often living as beggars (Arabic, *fakirs*). Their inspiration, or rather frenzy, is intensified by dancing and howling. In the war with the Mahdi, in the Soudan, the name "Dervishes" was commonly applied to his troops.

DERWENTWATER, the most beautiful lake in the Lake District, in the south of Cumberland, with Keswick on its north side, backed by Skiddaw; through it flows the Derwent.

DERWENTWATER, EARL OF. In 1715 he took the lead in England in the Jacobite rising which was to place the Pretender on the throne instead of George I.; the rising was utterly crushed at Preston, and Derwentwater was beheaded on Tower Hill, 1716.

DESCARTES, RENÉ, 1596–1650; the forerunner of modern philosophers as distinguished from the Schoolmen of the Middle Ages. His system is called the *Cartesian*, and attempted to find the criterion of truth within rather than without, in the thinking subject rather than in either the object of thought or any external authority. *Cogito, ergo sum*, "I think, therefore I exist," was the formula at the basis of his philosophy.

DESMOULINS, BENOIT CAMILLE, *b.* 1760, guillotined 1794; one of the leaders in storming the Bastille in 1789; voted for the death of Louis XVI.; supported Danton and the less extreme Revolutionists against Robespierre, and this led to his fall.

DESPOBLADO, (literally *desert*), a waste plateau more than 9,000 feet above the sea level, on the borders of Bolivia and Argentina.

DESTROYERS, or torpedo boat destroyers, are vessels varying from about 300 to 350 tons displacement, with a speed of about 30 knots, designed to act against torpedo boats. They carry torpedoes and quick-firing guns, and when acting in squadrons are capable of effective harassing tactics against battle-ships and cruisers.

DETONATORS are employed to explode dynamite or gun cotton in a manner that increases the effectiveness of the discharge. They are cartridges of copper tubing containing compressed fulminate of mercury, and are fired by a fine train of gunpowder enclosed in a waterproof braiding.

DETROIT, in Michigan, U.S.A., on the river of the same name, possessing a first-class harbour and excellent communication by rail and water. By means of canals, the Mississippi effects a junction with the St. Lawrence at Detroit, which is an important centre for the timber trade and for boat-building.

DETROIT RIVER, connecting Lake St. Clair (and so Lake Huron) with Lake Erie, in the basin of the St. Lawrence. Its banks are lined with fruit orchards, and it forms part of a most valuable highway from the centre of the continent of North America to the Atlantic.

DETTINGEN, in north-west Bavaria, on the Main, 24 miles above Frankfort, the scene of the victory of England and Austria over France and Spain in 1743. This was the last occasion when an English monarch (George II.) commanded our army in person on the field of battle.

DEUCALION, a mythical hero, who built a ship, and thus with his wife, Pyrrha, was saved from the flood sent by Zeus. The oracle bade the couple repeople the earth by throwing the bones of their mother behind them; these they rightly interpreted as stones. From those flung by Deucalion men sprang up; from those by Pyrrha, women.

DEUTERONOMY, literally, the "Second Law," the fifth book of the Bible. It claims to contain the addresses delivered by Moses to the Israelites shortly before his death, in which were recapitulated God's blessings to them and their duties to Him. The tendency of some modern criticism is to assign a far later date to the book, and to identify it with the "Law of the Lord" found (and compiled, some critics add), in the Temple in the reign of Josiah (622 B.C.); some critics, however, admit the literary unity of the book, though not ascribing it to Moses.

DEVEREUX, PENELOPE, a lady who married Lord Rich, but with whom Sir Philip Sidney (1554–1586) fell in love, and whom he celebrates as Stella in his sonnets *Astrophel and Stella*.

DEVEREUX, ROBERT (second Earl of Essex), 1567–1601, who succeeded the Earl of Leicester as favourite of Queen Elizabeth, was present at the taking of Cadiz. As Lord Lieutenant of Ireland he failed to subdue Tyrone's rebellion, and soon after his premature return to Court he tried to rouse a revolt in London, but failed and was beheaded.

DEVEREUX, ROBERT (third Earl of Essex), son of the preceding, commander of the Parliamentary army at the beginning of the Civil War in Charles I's reign. He was too cautious and slow for the vigorous Cromwell, whose *Self-Denying Ordinance* caused his retirement from command in 1644.

DEVIL'S ADVOCATE. The act of canonisation in the Roman Church follows upon a form of trial in which the reasons against the proposal are stated by the *advocatus diaboli*, or devil's advocate. See *Canonisation*.

DEVIL, THE, or **SATAN,** the former word meaning *accuser*, the latter *adversary*. The Jewish belief, which we find in the New Testament, in the devil seems to have developed mainly after the Exile, when Persian influence was strong (from 530 B.C.), but it was ever free from the dualism which tainted Zoroastrianism, in which were postulated two *independent* powers of light and darkness, good and evil. Some theologians now deny the personality of the devil, and account for our Lord's teaching on the matter as an accommodation to the ideas prevalent in His day.

DEVIL'S BRIDGE, THE, by which the road over Mount St. Gothard spans the

Reuss, a tributary of the Rhine which flows through Lake Lucerne. The bridge crosses a deep chasm, 4,600 feet above the sea level. In other places bridges are similarly named when they occupy difficult positions.

DEVONPORT, on the mouth of the Tamar, in Devonshire, two miles west of Plymouth. Here is a naval arsenal, and dockyards line the estuary. It forms, with the adjoining town of Plymouth, an important naval station. (For population, etc., see p. 902.)

DEVONSHIRE, a county in the south-west of England, forming with Cornwall a peninsula between the English and Bristol Channels. The tableland of Exmoor occupies the north, that of Dartmoor the south. The chief rivers are the Exe, Tamar, Torridge, and Dart; the most important towns are Exeter, Plymouth, Devonport, Barnstaple, Bideford, with several seaside resorts, such as Torquay and Ilfracombe. Agriculture and dairy-farming are the chief industries.

DEVONSHIRE, DUKE OF. The house of Cavendish attained ducal rank in the reign of William III. For distinguished members of the house see under *Cavendish, Lord Frederick; Cavendish, Henry;* and *Devonshire, Duchess of.* The eighth duke (*b.* 1833), who succeeded to the title in 1891, and had been long known as the Marquis of Hartington, was a prominent member of the ministries of Lord John Russell and Mr. Gladstone. In 1885 he severed his connection with Mr. Gladstone on the Home Rule Question, and became leader of the Liberal Unionist party. In 1903 he left Mr. Balfour's ministry on the question of Tariff Reform, and became president of the Unionist Free Food League. The Duke was well known as a princely host, a sound and cautious politician, and a great and beneficent landowner; *d.* 1908.

DEW. The amount of water-vapour that the atmosphere can hold at any given time depends largely on the temperature of the atmosphere at the moment. A continued fall in temperature will lead to a point when the vapour will begin to condense as dew. A cloudy night is unfavourable to the deposition of dew, for clouds radiate heat back to the earth and so prevent the fall of temperature necessary to its formation, whilst winds interfere with the stillness necessary to condensation. If the temperature of the surface of the ground be below freezing-point, the vapour is deposited as hoar frost.

DEWAR, SIR JAMES, *b.* at Kincardine, 1842, an eminent chemist. He became professor of chemistry at Cambridge (1875) and at the Royal Institution (1877). He has achieved wonderful results in the liquefaction and solidification of gases at low temperatures, and was associated with Sir F. Abel in the invention of cordite.

DE WET, CHRISTIAN RUDOLF, *b.* 1854, a celebrated guerilla warrior who, after bringing about the surrender of two British battalions at Nicholson's Nek, was appointed chief commandant of the Orange Free State forces in the great Boer War (1899). He captured a huge convoy at Waterval Drift, ambushed Broadwood at Sanna's Post, capturing a convoy and six guns, and took 470 prisoners at Reddersburg—all within two months (February–April, 1900). Driven across the Vaal, he captured the garrison at Dewetsdorp (November). In February, 1901, he evaded Kitchener's great "sweeping movement," and made a raid into Cape Colony, where he lost all his guns and transport. He was still uncaptured when peace was concluded at Vereeniging.

DEWEY, GEORGE. An American Admiral, *b.* 1837, at Montpelier, U.S.A. In the Spanish-American War he destroyed the Spanish Fleet off Cavité, in the Bay of Manila, 1898. A few months later his fleet aided the troops under General Merritt in the capture of Manila.

DE WITT, JAN, *b.* at Dort, 1625, *d.* 1672, a Dutch statesman of republican principles, the inveterate foe of the House of Orange, whose head was Prince William, who afterwards became William III. of England. De Witt perished with his brother Cornelius in a riot at the Hague.

DHAWALAGIRI, a peak in the Himalaya Mountains, 26,826 feet high, only some 2,000 feet less than Everest, the highest mountain in the world, both peaks being situated on the border of Nepal.

DIALS, SUN instruments for ascertaining the time of day by measuring the shadows thrown by the sun on to a plate (mostly a plane of metal), on which is fixed a metal style. The latter is mostly made parallel to the earth's axis, and points to the North Pole. The plate is usually either horizontal or vertical, and the divisions for the various hours have to be marked off after trigonometrical calculations based on the latitude of the place where the dial is to be used.

DIALOGUE, or conversation. In literature, a form of composition which enables the author to advance various aspects of the subject under discussion without identifying himself necessarily with any of them. Plato thus used the dialogue with great success in philosophy, its form doubtless being suggested to him by the conversations and catechisms which his master Socrates employed. In the theatre, a dialogue is the opposite of a soliloquy, and in the ancient drama it was opposed to the chorus (which was a kind of recitative).

DIAMONDS, precious stones consisting of pure carbon crystallised, and varying in colour from pure white to deep black. They are often found at the bottom of the clay or mud that underlies the finer sandy deposit of rivers, but are also found embedded in sandstone or quartz, as in Brazil; consequently so-called diamond mines are either merely washings of river mud, or simply diggings for stones that may happen to be cased in the rock. In the South African mines, shafts are sunk much as for coal, the earth is brought up in buckets, washed in "cradles," and then sorted—all these processes being now performed by machinery. The oldest diamonds were found in India, notably at Golconda (near Hyderabad, in central India), and in some of the East Indies; smaller ones have been found during the last two centuries in the Brazilian mines. During last century they were found in the Ural Mountains, in Australia, and in North Carolina and Georgia, U.S.A. In 1870 came the discovery of a rich diamond field near Kimberley. Since that time the mines of Kimberley have yielded an average return worth between two and three millions per annum.

DIANA, a Roman goddess, identified with the Greek Artemis; the twin-sister of Apollo; born at Delos; the goddess of the moon and of hunting. Her temple at Ephesus was one of the seven wonders of the world.

DIAPASON, the term used by the Greeks for an octave. In French it denotes musical pitch. In England the name is given to certain stops of an organ that extend throughout the whole compass of the keyboard.

DIAPHRAGM, literally a partition, denotes (1) in anatomy, the midriff, a muscle separating the chest from the abdomen (See *Med. Dict.*); (2) in optics, a disc which moves across a tube narrowing the aperture through which light may pass. The term is also applied to the vibrating plate of a telephone.

DIARY, a daily register of the occurrences of each day. Morley's Life of Gladstone contains copious extracts from the statesman's diary, which filled forty small volumes in double columns. Among the great diaries of our literature may be mentioned those of Samuel Pepys, John Evelyn, Madame D'Arblay, and Thomas Moore.

DIATOMS, minute plants of the class *Algæ*, abounding on rocks in the sea, on the moistened surfaces of stones, in river mud, &c. They sometimes reproduce by conjugation, but oftener increase by mere division. The fossil remains of their silicious (or flinty) envelopes, which are practically indestructible, have accumulated in myriads of myriads to form some of the later rocks of the earth's crust, and tripoli stone is composed entirely of them.

DIAZ, BARTHOLOMEW, a Portuguese navigator who prosecuted the exploration of the coast of West Africa, and was the first to pass the Cape of Good Hope; he died in 1500.

DIBDIN, CHARLES, *b.* Southampton, 1745, *d.* 1814; the writer of many famous sea songs, including *Tom Bowling,* which fostered the naval spirit of Englishmen much as the poems of Tyrtæus are said to have encouraged the Spartans in the seventh century B.C.

DICKENS, CHARLES, *b.* Landport, 1812, *d.* 1870. His novels are marked by humour, wit, pathos, and purpose, though sometimes criticised for their extravagance, exaggeration, and superficiality. He began life as a newspaper reporter; his "Sketches by Boz" (1836), and "Pickwick Papers," made his fame, and among his novels there then followed "Oliver Twist," "Old Curiosity Shop," "Barnaby Rudge," "Martin Chuzzlewit," "Dombey and Son," "David Copperfield," "Tale of two Cities," "Our Mutual Friend," &c. For a little while he was editor of the *Daily News,* and later of *Household Words* and *All the Year Round*; but his true greatness can be best judged when it is remembered that he was the creator of Mr. Pickwick, Sam Weller, Mrs. Gamp, Mark Tapley, Agnes, Dora, Uriah Heep, and hosts of other characters who are the intimate friends of most English speaking people on both sides of the Atlantic.

DICTATOR, the name of an extraordinary magistrate in the Roman republic. In a public crisis with which the ordinary officials were incapable of dealing, a dictator would be nominated to take supreme command of the State for not more than six months. As his word was law the name is often applied now to any irresponsible, supreme magistrate.

DIDDLER, JEREMY. A name for an unprincipled, impecunious adventurer, originating in a character in James Kenny's *Raising the Wind* (written in 1803), who does every thing at other people's expense.

DIDO, the mythical foundress of Carthage (about 853 B.C.), and daughter of Belus, king of Tyre. Virgil, in the beginning of the Æneid, makes her fall in love with Æneas after the fall of Troy (about 1100 B.C.), and commit suicide by burning herself on her own pyre when that hero continues his voyage to Italy.

DIEPPE, on the French coast, in Normandy, between Calais and Havre, a favourite watering-place, and specially known to English travellers in connection with the Newhaven-Dieppe route to the Continent.

DIES IRÆ, "Day of Wrath," a 13th century Latin hymn, a translation of which is contained in "Hymns Ancient and Modern," among the hymns for the Burial of the Dead.

DIFFUSION, the process by which two gases or two liquids intermingle, when brought into contact with one another, although their densities may differ. It is owing to this process that the atmosphere is of a uniform character, that noxious fumes speedily are dissipated, and that the saltness of the sea is evenly distributed.

DIGBY, SIR EVERARD, *b.* 1581, hanged 1606, for complicity in the Gunpowder Plot. His son, Sir Kenelm Digby (1606-1665), gained considerable reputation for his philosophical and literary works.

DIJON, in France, in the valley of the Saone (a tributary of the Rhone), the chief town in the province of Burgundy, and the centre of its wine trade.

DINGO, the Australian dog. It is of wolf-like appearance, and given to ravaging the sheep, for which vice it has been now almost exterminated.

DINIZULU, son of the Zulu chief, Cetawayo, was sentenced in March, 1909, to 4 years' imprisonment for harbouring rebels and members of Bambaata's family in 1906. He was released by the new Union Government of Africa in 1910.

DINOCE'RATA (lit. *terrible horns*), an extinct order of mammals found in the Eocene strata of North America, having on each foot five toes, each ending in a hoof.

DINOSAURIA (lit. *terrible lizards*), so named by Professor Owen, and classified by Professor Huxley among the Ornithoscelida, an extinct order of Reptiles nearly allied in development to the Aves or Birds.

DINOTHERIUM (lit. *terrible beast*), a fossil mammal somewhat resembling the elephant, but larger, and semi-aquatic, with tusks curving downwards. There is considerable conjecture about its characteristics, as at present the skull is the only part of the skeleton that has been discovered.

DINWIDDIE, ROBERT, 1692-1770, a Scotchman, who was Governor of Virginia from 1752 to 1758, and through whose advice Ohio was formally annexed.

DIOCLETIAN, Roman emperor from 284 to 305 A.D, in which year he voluntarily abdicated. On the division of the Empire, Diocletian governed the East. He initiated the final (and probably most severe and general) persecution of the Christians, in which our first martyr, St. Alban, was killed.

DIO'GENES, born 412 B.C. at Sinope on the Black Sea, died 323 at Corinth, a cynic philosopher, whose ostentatious contempt for life's comforts is said to have led him to take up his residence in a tub. When Alexander the Great, standing in front of his tub, asked what boon he could grant Diogenes, the latter merely said, "stand out of my light."

DIOME'DES, a mythical Greek hero, son of Tydeus (therefore called Tydides), who took part in the expedition against Thebes, and in the siege of Troy, and greatly distinguished himself for valour.

DIONY'SUS, the Roman Bacchus, god of wine and representative of the reproductive powers of nature, son of Zeus and Semele. His wanderings in the East, in the course of which he spread the elements of civilization through all the countries of the known world, are the subject of many myths. The dithyrambic hymns in his honour afterwards developed into the classical Greek drama.

DIORAMA. See *Panorama.*

DIORNIS (lit. *a terrible bird*), a genus of extinct, wingless birds peculiar to New Zealand. One species was probably the most gigantic bird that ever existed.

DIPLODOCUS CARNEGII is a fossil reptile discovered in the Jurassic strata of Wyoming. It belongs to the Dinosaurs an extinct order occurring in European strata. The reptile had a short body but a neck and tail of great length, the total length being 80 feet, and the height at the shoulders 11 feet. It was aquatic and herbivorous. A cast of the skeleton was presented to the Natural History Museum of London by Mr. Carnegie in 1905.

DIP'TERA (lit. *two-winged*), an order of insects, which includes the gnat, the common house fly, the mosquito, and other insects which sometimes act as scavengers, but often are pests. They disseminate many diseases, notably malaria, yellow fever, typhoid, and sleeping sickness. They are essential to many flowers for effecting fertilisation. Their distinguishing marks are the antennæ or horns, the proboscis, the three small eyes on the back of the head (in addition to the two at its side), and the delicate suckers on the feet by which (aided by a sticky fluid secreted in the feet) the insects can adhere to any surface, walk on the ceiling, &c.

DIRECTORY, THE. (1) In the Roman Church, the name of the book enumerating the sins to be enquired about at confession. (2) The book of directions for public worship drawn up at Westminster in 1644 to supersede the Prayer Book. (3) The Committee of five which formed the Executive Government of France from the end of the reign of Terror and the death of Robespierre, down to the sole Consulate of Napoleon Buonaparte, that is from 1795 to 1799.

DISCOUNT, the sum deducted from an account in consideration of prompt payment, the difference between the *credit price* and the *cash price*. In banking operations the holder of a Bill of Exchange (that is, a promise to pay a certain sum on a certain date), often prefers to receive ready money, and so sells his bill in the market at a reduction (which will vary according to the current rate of interest, and the time the bill has "to run;") the difference between the face value of the bill and the cash received for it is its *discount*. (See "Discounting a Bill," in *Commercial Dictionary*).

DISRA'ELI, BENJAMIN, *b.* in London, 1805, *d.* 1881; son of Isaac D'Israeli, a well-known author. At first he was articled to a solicitor, then he embarked in literature, his earliest novel being *Vivian Grey*. In 1837 he entered Parliament as Conservative member for Maidstone, after having twice contested Wycombe unsuccessfully as a Radical. His first speech, though a failure at the time, has become famous for its prediction to the House, "The time will come when you will hear me." In 1841 he became member for Shrewsbury, and began his attack on Sir Robert Peel's Free Trade Policy. On the death of Lord George Bentinck, in 1848, he became Protectionist leader in the Commons. He was Chancellor of the Exchequer in Lord Derby's three Administrations (1852-3, 1858-9, 1866-8), and in 1868 became premier. It was due to his insight that the Conservatives passed the Reform Bill of 1867, but his resignation at the end of the next year brought in a Liberal Ministry under Mr Gladstone, which lasted till 1874. The Conservatives then returned to office with a strong majority in the Commons. In 1877 Mr Disraeli went to the Upper House as Earl of Beaconsfield, and the following year attended the Congress of Berlin on the Eastern Question, from which he returned with Lord Salisbury bearing "peace with honour." Nothing has more brilliantly vindicated his political sagacity than his acquisition of a preponderating influence for Great Britain in the Suez Canal by the purchase of the Khedive's shares at the cost of £4,000,000. In 1880 the Liberals returned to power, but few would be found to deny that the present popularity of the Conservative party among the masses, and the imperialist ideals so prevalent now, are the heritage of Mr. Disraeli's prescience; and these two features have been rendered permanent by the "Primrose League," formed in his memory. His many novels, (of which *Lothair* was the last), though widely popular at one time, are rarely read now—their brilliancy being disfigured by an utter inadequacy of conception both of characters and conditions.

DISSENTERS. Refer to "Nonconformists" in *Index*.

DISSOLVING VIEWS, given by two magic lanterns, each of which in turn throws its image on to the same area of the screen. When oil light is used, a shutter is arranged which alternately covers and uncovers the aperture of each lantern; when lime light is employed, a "dissolving tap" simply turns the light off in one lantern and on in the other, alternately.

DISTEMPER, a kind of catarrh which often attacks young dogs, the symptoms being a hard cough and running from the eyes and nose, which result in a gradual wasting away of the tissues.

DISTRICT OF COLUMBIA. See *Washington.*

DISTRINGAS. See *Commercial Dictionary.*

DIVAN, a Persian word applied to a state council, or room in which it is held; also the cushioned seats of a reception room. The word has the further meaning of a collection of poems.

DIVIDE, THE GREAT, the name given to the watershed formed by the Rocky Mountains in the United States, separating the long rivers flowing to the Atlantic from the short ones flowing to the Pacific.

DIVINA COMMEDIA. See *Dante.*

DIVINE RIGHT, the theory that royal power is derived direct from God, to Whom alone the monarch is responsible; accordingly he is above the law, with which he can dispense, (the "dispensing power,") when he thinks fit. As has often happened, what was intended to withstand papal aggression became itself a means of oppression. The king's insistence on his divine right in actual practice led to the execution of Charles I. and the abdication of James II. On the Continent this doctrine provoked the extreme form of the counter-theory that "the people is the sole source of sovereign power," which was elaborated into the Social Contract Theory by Rousseau and others, and paved the way for the ideals of the French Revolution at the close of the 18th century. In England, a century earlier, Milton and Algernon Sidney led the attack on divine right, while the philosopher Hobbes was its most notable defender.

DIVING BELL, an apparatus to enable persons to remain under water a considerable time. Two principles are involved in its working—(1) the pressure that a liquid can exert at any point within itself is proportional to the depth of that point; and (2) the pressure that a gas can exert is proportional to its density which increases as the bulk or volume of the same amount of gas decreases. If an

inverted tumbler be forced straight down into water so that the air in it does not escape, the deeper the tumbler goes the greater will be the pressure of the water on the contained air, and the greater the pressure on the air, the less will be its volume, and the higher in the tumbler will the water rise. The same thing exactly takes place in the diving-bell. And so to keep a sufficient volume of air in the bell, and to supply the men with fresh air for breathing, a supply of fresh air is constantly forced into it through a tube from above. Often now a diving dress of India-rubber is used instead of a diving bell. The helmet, however, is of strong metal, and serves as the air-reservoir; or the air reservoir is placed on the diver's back, with a tube by which he may inhale the air, while he expels air into the water by a second tube, which is fitted with a powerful valve to prevent water getting in.

DIVINING ROD, a forked branch, usually of hazel, which is carried by the diviner, and is said to dip where water (or sometimes various minerals) is concealed in the earth. Some of the phenomena associated with the use of the divining-rod are too well authenticated to be wholly ascribed to charlatanism, and are often now referred to animal magnetism by way of explanation.

DIXIE, LADY FLORENCE, *b.* 1857, *d.* 1905, poet, novelist, and explorer. She explored Patagonia with her brother, Lord Francis Douglas, who afterwards was killed on the Matterhorn. She acted as war-correspondent in the Boer War (1881–2), and took a leading part in questions of women's rights.

DIXIE'S LAND, a term for the Southern States in the Civil War, and for nigger land in general; derived from the refrain of a nigger song about a slave owner named Dixie.

DIXON, WILLIAM HEPWORTH, *b.* 1821, *d.* 1879, for sixteen years editor of the Athenæum, a biographer, historian, and traveller. Chief works:—"Life of John Howard," "William Penn," "Personal History of Lord Bacon," "The Holy Land," "Spiritual Wives," and "Her Majesty's Tower."

DNIEPER, a river 1,230 miles long, draining the south-west of Russia, and flowing into the Black Sea at Kherson, about 80 miles east of Odessa. There is a magnificent suspension bridge over this river at Kiev, and engineering works have overcome the impediments caused to navigation by the cataracts below Ekaterinoslav.

DNIESTER, a river 700 miles long, rising in the Carpathians, and flowing through Austrian Galicia and the south-west of Russia into the Black Sea about 30 miles south of Odessa. Its numerous falls and its general shallowness render it of little use for navigation.

DOAB, in India, the name for any district between two rivers, but specially for the country between the Ganges and its tributary the Jumna.

DOCETÆ, (Greek *dokeo*, I appear,) an early heresy which tried to explain the Incarnation by saying that our Lord's human nature and form were only *apparent*. This theory was often due to the Gnostic notion of matter as the source of evil.

DOCKS (1) *Tidal docks* have an open entrance and are therefore subject to *tidal variations* which interfere with the discharge of cargoes. (2) *Wet docks* have dock-gates and so can keep a uniform water level. Vessels can, however, only enter at certain states of the tide. (3) *Dry* or *graving docks* are used for repairing vessels. They have sluice gates and are full when the vessel enters. The water is pumped or slowly run out and the vessel settles upon the keel blocks over which she has been trimmed. (4) *Floating docks* are also used for repairing vessels up to a certain tonnage. They require deep water and a safe berth. They are cheaper than dry docks, but as they work by lifting the vessel, they cannot be economically used for the largest ships.

DOCKYARDS, enclosed places near harbours, provided with slips for shipbuilding, docks, wharves, basins, workshops, and magazines, containing stores and all requisites for the building or repairing of ships. The royal dockyards in England are at Chatham, Devonport, Pembroke, Portsmouth, Sheerness, and Woolwich. There are dockyards at many points in our Empire abroad, e.g., at Gibraltar, Malta, the Cape, and Hong-Kong; but since steam has been introduced, and iron has replaced wood, many of the ships for the Royal Navy are built in private yards.

DOCTORS' COMMONS, demolished in 1867, was situated near St. Paul's Churchyard. It was the headquarters of the advocates and proctors who practised in the old Ecclesiastical Courts. Marriage licences used to be issued here. Here also wills were registered and kept, but in 1874 the Will office was removed to Somerset House.

DODGSON, CHARLES LUTWIDGE, 1833–1898, a Fellow of Christ Church, Oxford, who, under the name of Lewis Carroll, wrote "Alice in Wonderland" and "Through the Looking Glass."

DODO, a bird bigger than a turkey and too heavy to fly (as its wings were only rudimentary). It was very common in Mauritius when that island was discovered (1644), but its flesh was so good to eat and it was so incapable of self-protection, that within forty years it became absolutely extinct.

DOE AND ROE. John Doe and Richard Roe were the fictitious plaintiff and defendant respectively in the quaint system of ejectment procedure that was followed until 1852 when the legal farce was abolished.

DOG DAYS, the hottest period of the year, part of July and August, at which season the dog star, Sirius, used to rise just before the sun; but this conjunction, owing to the precession of the equinoxes, does not now come within the period we continue to call the dog days.

DOGE'S PALACE, in Venice. It has been five times rebuilt since its first construction in 800. It was restored twenty years ago, and contains the library of St. Mark's, as well as paintings by all the great Venetian masters.

DOGGER BANK, a sand bank in the North Sea, with an average width of 40 miles and depth of 18 fathoms, stretching from a point 36 miles off Flamborough Head in an easterly direction to within 60 miles of Jutland. It is famous for its cod-fisheries, which are in the hands of the English and the Dutch. Here occurred (October, 1904) the outrageous attack by some Russian war-ships, on their way to Japan, upon the Hull trawling fleet, sinking the *Crane* and damaging two other boats. Two fishermen were killed and others wounded. An international commission, presided over by Admiral Fournier, determined that the order to fire was "not justifiable," and found that the Russian Admiral, Rojdestvensky, was responsible. Compensation was accordingly paid by the Russian Government to the families of the victims.

DOGGETT'S COAT AND BADGE, a sculling prize of a red coat with a silver sleeve badge, founded by the actor Thomas Doggett (*d.* 1721), to be annually competed for by Thames watermen who have just completed their apprenticeship. The course is from London Bridge to Chelsea.

DOGMA (lit., what appears good), a principle which appeals for support to authority rather than to individual experience; in religion, an authoritative expression of an article of faith, as representing the Church's consciousness, and recognised through her accumulated experience.

DOG WATCH. See *Watch*.

DOLDRUMS, a belt of calms near the equator between the south-east and north-east trade winds. Long calms, and a brazen torrid sky, broken by violent and sudden squalls, make the Doldrums a dangerous area for sailing vessels.

DOLPHIN, a species of whale only six or eight feet long, met with chiefly in the Mediterranean and North Atlantic. Large shoals are sometimes seen following a ship in full sail and gambolling amid the waves. Ancient mariners regarded their appearance as the presage of a storm.

DOME, a feature of architecture specially common among the Arabs and Turks. The oldest dome known is that of the Pantheon at Rome, which dates from the beginning of our era. Strictly, the external part of the roof is the dome, and the internal part is the cupola. The basis of the dome may be a circle, an ellipse, or a polygon, and often the dome is surmounted by a lantern.

DOMESDAY BOOK, a register containing the results of the survey of England made by William I. in 1086. (Doom = valuation, judgment). It is in two volumes, one folio, the other quarto, and contains minute details as to the value, tenure, and condition of the land. It may be seen in the Museum of the Record Office, in Chancery Lane, London.

DOMINIC, SAINT, Domingo de Guzman, *b.* Old Castile, 1170, *d.* 1221; founder of the Order of Dominicans, by whose efforts he hoped to convert the Albigenses, an heretical sect in Southern France. Failing in this, he initiated a ruthless persecution, which set an example to, if it did not actually originate, the notorious Inquisition. See *Albigenses*.

DOMINICA, or Dominique, in the Leeward Islands, British West Indies, just north of Martinique, of volcanic origin, discovered by Columbus in 1493. Its capital is Roseau, and its chief products are sugar, cotton, coffee, and cocoa.

DOMINICANS, or Black Friars, an order founded by St. Dominic in 1216. Their special work was preaching and teaching. The most famous Dominican was St. Thomas Aquinas, the organizer of theology in the Middle Ages, whose followers the Thomists were the rivals of the Franciscan Scotists. In theology they insisted on St. Augustine's doctrines of free-will and grace.

DOMITIAN, Roman emperor, of the Flavian line, which began with his father Vespasian in 69 A.D. He reigned from 81 to 96 A.D. In cruelty and vice Domitian quite came up to the tradition of Nero's later years. Under him the Christians were extensively persecuted. He was fittingly denounced by the satirist Juvenal and the historian Tacitus.

DON, (1) a river draining the south of Yorkshire, flowing near Sheffield, a tributary of the Ouse; (2) a river in the south of Aberdeenshire, flowing eastwards into the North Sea at Old Aberdeen, a famous salmon stream; (3) a river in central southern Russia, flowing into the Sea of Azov (chief tributary the Donetz), with important fisheries.

DONATION OF CONSTANTINE, now admitted by all to be a forgery, but purporting to be a decree by the Emperor

Constantine in 324, conferring the sovereignty of the West on the Bishop of Rome. At one time it was used as a great support to the Papal claims.

DON CARLOS. See *Carlists.*

DONCASTER, on the Don, in Yorkshire, 26 miles south-east of Leeds, well known for its splendid race course, on which at the Autumn Meeting is run the St. Leger. The parish church is a fine specimen of modern architecture; population about 30,000.

DONEGAL, the north-western corner of Ireland, between Lough Foyle and Donegal Bay. It is thinly populated, the soil is poor, and the methods of agriculture primitive. The surface is mountainous, (Mount Errigal being 2,462 feet high), with much bog land, and the fisheries are the chief means of sustenance for the inhabitants. Lifford on the Foyle, and Ballyshannon on the Erne, are the chief towns.

DON'GOLA, NEW, in Nubia, on the Upper Nile, between the third and fourth cataracts. It was captured by the Mahdi, but regained by Egyptian troops under General Kitchener, 1896.

DONIZETTI, GAETANO, *b.* in Italy, 1798, *d.* 1848, a famous operatic composer, whose artistic life centred chiefly at Naples and Paris. His later years were clouded by impaired reason. His operas are tuneful and pretty, the most popular being Lucia di Lammermoor, La Fille du Regiment, and Lucrezia Borgia.

DONJON, the master tower of a Norman castle, with walls of tremendous thickness, containing the most important rooms, and also the prison. It usually stood in the centre of the Inner Bailey, round which space ran a wall, beyond which was the Outer Bailey. The donjon or keep was the last retreat of the garrison when pressed by siege.

DONKEY-ENGINE, a small auxiliary engine on board ship, driven by steam from the main boilers, and used to work derricks, pumps, &c.

DONNYBROOK, a village just outside Dublin. Here used to be held a fair which became proverbial for its disorderly scenes, and was put a stop to in 1855, after being held for over 500 years.

DON QUIXOTE, a romance written by Miguel de Cervantes in 1605, in which the absurdities of the days of chivalry are satirised. The hero, after whom the book is named, turns knight errant, tilts at windmills, and has many ridiculous adventures. His lady-love is a peasant girl whom he names Dulcinea del Tobosa, and his squire is a peasant, the matter-of-fact Sancho Panza.

DOOLEY, MR. See *Dunne.*

DOOMSDAY BOOK. See *Domesday Book.*

DOONES, THE, a family or small clan of marauding outlaws who lived in the Badgeworthy valley on Exmoor. Blackmore gives a romantic but exaggerated description of the valley and their life in "Lorna Doone."

DORCAS or **TABITHA,** a Christian disciple at Joppa, who was restored to life by St. Peter, and who was famed for her good works, and specially for her clothing the poor (Acts ix. 36–42).

DORCHESTER, the county town of Dorsetshire on the Frome, with most interesting remains of the Roman occupation of Britain, including a camp and wall and an amphitheatre cut in the chalk hills.

DORÉ, PAUL GUSTAVE, *b.* Strasburg, 1832, *d.* 1883; a French painter and sculptor, his most famous paintings being "Christ leaving the Praetorium," and the "Entry into Jerusalem." His colouring was brilliant, but permanence was sacrificed to immediate effect. He is rather a popular artist than a great one, at least if the verdict of art critics such as Ruskin is to be accepted.

DORIC ORDER, the earliest of the Greek styles of architecture, embodying manly simplicity and strength, while the Ionic rather shows feminine delicacy, and the Corinthian is marked by wealth of adornment. As a man's height ought to be six times the length of his foot, so a Doric column's height was six times its diameter. In imitation of the trees of the forest, some Doric columns have no base, and while the Ionic and Corinthian columns have volutes or scrolls at the top of the shaft, the Doric has none. The shafts are fluted in all three orders, but the Ionic and Corinthian columns have a much less sturdy appearance, their heights being nine and ten diameters respectively.

DORT, SYNOD OF, a Protestant assembly which met at Dort or Dordrecht (on the Maas, south-east of Rotterdam in South Holland), in 1618–19, and confirmed the doctrines of Calvin against those of Arminius, who taught that God's predestination was conditioned by His foreknowledge of the use which man would make of grace.

DOTHEBOYS HALL, the name given to Mr. Squeers' Academy by Charles Dickens in his novel, *Nicholas Nickleby,* in which he denounced the iniquities of many of the boarding schools of his day, notoriously some in Yorkshire.

DOUAI, in the department of Nord, south of Lille, about 70 miles south-east of Calais. A Romanist seminary for English Education was established here under Cardinal Allen in the reign of Elizabeth, when the break between England and Rome became final. Here was made the English translation of the Bible which is used among Roman Catholics, as it has the Pope's recognition. It was published in 1609 as the Douai Bible.

DOUGLAS, a popular seaside resort in the Isle of Man, on the south-east coast, famous for its bathing facilities. Here is the House of Keys, the meeting place of the Manx Legislature.

DOUGLAS, ARCHIBALD, fifth Earl of Angus, who died in a monastery in Galloway in 1514. His grandson married the widow of James IV. of Scotland, and their grandson was the Lord Darnley who married Mary Queen of Scots, and became the father of our James I. This Douglas was known as "Bell the Cat," because he volunteered to carry into execution the project of the other Scotch nobles for the murder of the Earl of Mar, favourite of James III.

DOUGLAS, SIR JAMES, called the Good, and also the Black (because of his dark complexion). He repeatedly harried the north of England and achieved such exploits that the mere mention of his name was enough to inspire terror. He commanded under Bruce at Bannockburn (1314), and was killed in Spain, 1330, when on his way to Palestine, where he hoped to deposit Bruce's heart in accordance with that king's dying request.

DOULTON, SIR HENRY, *b.* 1820, *d.* 1897, began work at his father's small Lambeth pottery. In 1846 he began the substitution of earthenware drain pipes for the old loose-jointed brick draincourses, and in 1848 established his great pipe works at Rowley Regis in the Potteries. At Lambeth he revived art pottery and by his beautiful Doulton ware, art stone ware, and terra cotta work won a world-wide reputation.

DOVEDALE, the name of the valley of the River Dove, a tributary on the left bank of the Trent, in Derbyshire, famous for its beautiful scenery.

DOVER, a seaport on the Kent coast, 66 miles from London, 21 from Calais. The Dover-Calais route gives the shortest sea passage to the Continent, while the Dover-Ostend route is also a favourite one. The Admiralty Pier is strongly fortified, and its construction has rendered the harbour secure. There are many other fortifications, the most striking being the Castle which surmounts the white cliffs, nearly 400 feet above the sea. At the foot of the Castle cliffs is being constructed a naval harbour, which is to accommodate fifty men of war; it is expected that about four millions will be expended on the works before their completion.

DOVER, STRAIT OF, connecting the English Channel with the North Sea, and separating England from France, is from 20 to 24 miles wide. The geological evidence of both coasts shows that the rocks were once continuous, forming an isthmus which made our island a peninsula and part of continental Europe.

DOVER, TREATY OF, a secret treaty made in 1670 under which Charles II. sold himself to the French king for £200,000, and promised to introduce Romanism, at the very time when his ministers were making the Triple Alliance with Sweden and Holland against France.

DOW, GERARD, *b.* at Leyden, 1613, *d.* 1675; a Dutch painter, pupil of Rembrandt, and justly famous for the accuracy of detail and delicacy of finish which all his work exhibits, while his mastery of light and shade (*chiaroscuro*) is unsurpassed.

DOWIE, JOHN ALEXANDER, *b.* at Edinburgh, 1848, the self-styled "first apostle of the Lord Jesus the Christ," was ordained, as a Congregational minister, in Australia, where he founded the "Divine Healing Association." After gaining notoriety by his teaching and pretensions in the United States, he founded Zion City, near Chicago (1901) to exemplify the possibility of adherence to the teaching of the Decalogue and the Sermon on the Mount. There (1905) he presided over 10,000 members of "The Christian Catholic Apostolic Church in Zion." From that time his influence began to wane, and disbelief in his integrity spread rapidly among his disciples.

DOWNS, THE. (1) Smooth hills, chiefly used for pasturage, such as the North and South Downs, which run across the south of England. (2) Ridges or sandbanks, running along by the seashore (=dunes). (3) The roadstead off Kent, between the two Forelands, a natural harbour formed by the Goodwin Sands.

DOXOLOGY, or ascription of praise, such as the one used at the end of the Psalms, (*Gloria Patri,* Glory be to the Father, &c.), or the longer one used in the Communion Office, (*Gloria in Excelsis,* Glory be to God on high, &c.).

DOYLE, SIR ARTHUR CONAN, *b.* at Edinburgh, 1859, novelist, nephew of Richard Doyle the artist, who designed the cover of Punch. He studied medicine in Edinburgh under Mr. Joseph Bell, the original of his famous "Sherlock Holmes." Reminiscences of his student days appear in "Round the Red Lamp" (1894). He wrote "The White Company," an historical romance of great charm, in 1890, whilst practising as a doctor. He acted as war-correspondent to the Westminster Gazette in the Soudan War (1896), and served as a physician in a South African field-hospital in 1900. His "Story of Waterloo" was one of the most popular plays in Irving's répertoire. Amongst his other works may be mentioned his novels "Micah Clarke" and "Rodney Stone," his poems "Songs of Action," and his "Cause and Conduct of

the (Boer) War," a work of singularly clear judgment.

DRACHMA, the chief silver coin among the ancient Greeks, and the unit (equal in value to a franc) in the monetary system of modern Greece. The "dram" in our British weights is another form of this word. Formerly there were two weights so called: one in Avoirdupois Weight=$\frac{1}{8}$ oz., the other in Apothecaries Weight=$\frac{1}{8}$ oz. The latter is no longer used.

DRAGA, QUEEN. See *Servia.*

DRAGON, a mythical monster, having the form of a huge serpent or a winged crocodile, &c., often belching out flames and noxious fumes, thus symbolizing the powers of evil. Great renown as dragon-slayers was won by many ancient heroes, such as Hercules, who killed the hydra of Lerna; Jason, when he gained the golden fleece at Colchis; Perseus, and our own St. George.

DRAGONADES, or persecutions of the French Protestants in the reign of Louis XIV., when the soldiery were quartered among the Protestants with licence to commit any outrage or extortion. Prominent among the soldiers were the dragoons, and they gave their name to the persecution.

DRAGON-FLY is an insect with four transparent, richly veined wings, belonging to the order of *Neuroptera.* It is of active habit, preying on small flies, and holds the same position in the insect world that the swallow does among birds. It has no sting and is harmless to man. The eggs are laid in water; the larva is aquatic, breathing by gills and feeding on water-fleas and the like. Before changing into the perfect insect it passes through a resting stage corresponding to the chrysalis of the butterfly.

DRAGON OF WANTLEY, THE, an old ballad of a dragon who, after exacting the usual tribute of maidens, &c., was conquered and slain by More of More Hall. [See Percy's *Reliques of Ancient English Poetry,* published in 1765.]

DRAGON'S BLOOD, a reddish resin obtained from the fruit of a palm found in Sumatra and Borneo, from the dragon-tree of the Canary Islands, and from the Australian resin-gum tree. Soluble in alcohol it is used in preparing varnishes, and for staining leather, wood, &c.

DRAGOON, so called either from the carbine used by the soldiers, or from the dragon carried by them as a standard. Dragoons were first employed in France, and served as mounted infantry. Apparently in England the earliest dragoon regiment was the Scots Greys (raised in 1681). The equipment of our Dragoon Guards is now considerably heavier than that of the old Dragoons.

DRAINS. See *Med. Dict.*

DRAKE, SIR FRANCIS, *b.* at Tavistock, in Devonshire, 1539, *d.* 1595, one of the "Devon sea-dogs" who wrested the supremacy of the sea from Spain, and prepared the way for our world-wide Empire. Four voyages he made to the West Indies with great loss to the Spaniards both in wealth and prestige; but his most famous voyage was in 1577–9, when he passed through the Straits of Magellan into the Pacific, plundered the Spaniards along the coasts of Chili and Peru, and then, not being able to get back into the Atlantic, crossed the Pacific and Indian Oceans and reached home after rounding the Cape of Good Hope. In the fight with the Spanish Armada (1588), Drake was vice-admiral to Lord Howard. His last two expeditions were failures.

DRAMA, a form of literary composition in which the words spoken to the audience are aided by the action seen by the spectators. Its two main kinds, which we owe to the Greeks, are *Tragedy* and *Comedy*—the former leading to a serious termination, the latter to a happy one. As Greek tragedy developed from Bacchus worship, so the modern English drama has developed out of the mediæval Mystery, or Miracle Play. The term *drama* also includes melodrama (in which a stirring succession of incidents is sought rather than a development of character), burlesque, farce, opera, &c.

DRAPIER'S LETTERS, written by Dean Swift, when Walpole had granted to one, William Wood, the right to coin copper for Ireland in 1722. Swift's attack, though greatly exaggerated, was very popular, and caused "Wood's halfpence" to be withdrawn.

DRAYTON, MICHAEL, *b.* Hartshill (Warwick) 1563, *d.* 1631; poet-laureate in 1626. His *Polyolbion* is a description of English scenery in verse, and is his longest and best known work. He was buried in Westminster Abbey.

DREADNOUGHT, a new type of battleship, having its main armament entirely of 12-in. guns, with guns of small calibre to repel torpedo attack. Her first cruise in 1907; average speed 17 knots.

DREAMING. See *Med. Dict.*

DREDGING is carried on either to remove obstructions of mud, silt, &c., from a river bed or harbour, or to obtain ballast. The dredger is a vessel which lets down successively into the water buckets on an endless chain, whose depth can be adjusted according to need. The buckets commit their mud to a lighter at the stern as they come to the top of the chain and begin to descend. If the material is to be got rid of, the bottom of the lighter is movable, so that its contents can be left in mid-ocean.

DRESDEN, capital of the kingdom of Saxony, on the Elbe, 25 miles from the Erz-gebirge Mountains and the borders of Bohemia. Its picture gallery contains some of the finest pictures in the world, by painters of all schools—above all, Raphael's Sistine Madonna. The famous Dresden china is chiefly made at Meissen, 15 miles lower down the Elbe.

DREYFUS, ALFRED, an Alsatian Jew and captain in the French Army, unjustly convicted in December, 1894, of selling military secrets to a foreign power, and sentenced to imprisonment for life. Thanks to the agitation initiated by Zola and Colonel Picquart, he had a fresh trial in 1899, but was declared guilty and sentenced to ten years' imprisonment. He was, however, set free within a fortnight, and has since (1906) been pronounced innocent, reinstated in the army, and raised to the rank of *chef d'escadron.*

DROGH'EDA, on the Boyne, on the east coast of Ireland, about half way between Dublin and Dundalk. It has manufactures of linen and cotton, and exports local products, chiefly to Liverpool. It suffered cruelly under Cromwell in 1649, and near it William III. gained a decisive victory over the Irish and French forces under James II. at the Boyne in 1690.

DROWNING. See *Med. Dict.*

DRUIDS, the priests of the ancient Britons and Celts, of whose rites and privileges Cæsar has given a description. They appear to have resembled the Persian magi; they were sun worshippers, and believed in the immortality of the soul, but offered human sacrifices.

DRUMMOND, HENRY, *b.* at *Stirling,* 1851, *d.* 1897, scientist, evangelist, and traveller. He became Professor of Natural Science at the Free Church College in Glasgow, where his influence on youths and young men was very great. He travelled in the Rockies, Central Africa, Japan and the New Hebrides. His "Natural Law in the Spiritual World" and "Ascent of Man" aim at reconciling the teaching of natural science and religion, the latter work bearing particularly on Evolution in the spiritual emotions.

DRUMMOND, JAMES, 1675–1720 the leader of the Jacobite rising in Scotland in 1715. He managed to escape with the Pretender, and took refuge at the French Court, dying at St. Germain.

DRUSES, Syrian Arabs who inhabit south Lebanon, and are regarded as heretics from Mohammedanism. They consider the Egyptian caliph Hakim (1029 A.D.) as an incarnation of the Deity, to which faith they were converted by Ed-Derazi; their moral precepts are partly Christian, partly Mohammedan, and include truthfulness, contentment, submission, &c., while the unity of God is strongly insisted on. Their hostility towards the Maronites (the Christians who inhabit north Lebanon) culminated in shocking massacres in 1860, and led to the appointment of a Christian governor of Lebanon by the Porte.

DRYADS, woodland nymphs of Greek mythology.

DRYBURGH ABBEY, near Melrose on the Tweed, in Berwickshire, a beautiful ruin where is the burial place of Sir Walter Scott, who died in 1832.

DRYDEN, JOHN, *b.* Aldwinkle (Northampton), 1631, *d.* 1700; poet laureate, 1670–1689; educated at Westminster School, and buried in the Abbey. His plays were highly thought of in his own times, but it is by his poems that his memory lives. His satire, *Absalom and Achitophel* (pourtraying Monmouth and Shaftesbury respectively), appeared in 1681; the *Hind and the Panther* announced his conversion to Romanism; his noble translation of Virgil and his *Ode on St. Cecilia's Day,* were published in 1697; and by all these, as well as by his prose *Essay on Dramatic Poesy,* he worthily led the way from the Shakespearian to the modern period of literature.

DRY ROT, a disease which attacks timber, especially when it is allowed to get damp, and fresh air cannot approach it. It is due to a fungus which gets implanted in the wood, and then spreads, reducing the substance of the wood to a fine powder.

DU BARRY, COMTESSE, *b.* 1741, *d.* 1793, the beautiful mistress of Louis XV. After the outbreak of the French Revolution she fled to England, but, returning to France, was guillotined during the "Terror" (1793).

DUBLIN, capital of Ireland, at the mouth of the Liffey, and at the head of Dublin Bay, which stretches between Howth Head and Kingstown. The chief buildings are Dublin Castle, the Bank of Ireland (formerly the House of Parliament), Trinity College (which constitutes the University of Dublin), and St. Patrick's Cathedral; while in the beautiful Phœnix Park (where Lord Frederick Cavendish and Mr. Burke were murdered in 1882), is the Lord Lieutenant's Viceregal Lodge.

DU CHAILLU, PAUL, *b.* 1837, an African traveller and explorer. He was chief of General Gordon's staff in 1874, explored Lake Victoria, and has contributed much to our knowledge of the zoology of African species, specially of the gorilla and other monkeys.

DUCHESS OF DEVONSHIRE, the famous "Gainsborough," painted in 1783, bought by Messrs. Agnew, in 1876, for 10,000 guineas, stolen a few days later from their rooms, but restored to them in 1901. Sir Joshua Reynolds also

painted a famous picture of the Duchess with her infant son (1786), which is now in the collection of the Duke of Devonshire.

DUCKING STOOL, a development of the *cucking stool*, a chair which served the purpose of a pillory, while the ducking chair was fastened to the end of a beam and by a see-saw arrangement could be dipped into the water and out again. This punishment for scolding wives was actually in use till a hundred years ago.

DUDLEY, LORD GUILDFORD, fourth son of the Duke of Northumberland, who persuaded Edward VI. to settle the English crown on Lady Jane Grey, the grand-daughter of Henry VIII.'s younger sister. Dudley was Lady Jane's husband and after Sir Thomas Wyatt's rebellion both Dudley and his young wife were beheaded, 1554.

DUDLEY, JOHN, *b.* 1502, *d.* 1553. father of the preceding, successively Viscount Lisle, Earl of Warwick, and Duke of Northumberland. Left under Henry VIII.'s will as one of the guardians to Edward VI,, he supplanted the Duke of Somerset in the young king's favour, and endeavoured to secure the succession to the throne for Lady Jane Grey. The plot failing, he was beheaded on Tower Hill.

DUDLEY, ROBERT, Earl of Leicester, *b.* 1532, *d.* 1588; son of the preceding, one of the special favourites of Queen Elizabeth, and consequently the holder of many public offices. Sir Walter Scott's novel *Kenilworth* deals with one period of his life.

DUDLEY DIAMOND, THE, a famous diamond found in Africa, 88½ carats in weight originally, but cut down to 44½ carats, was bought for £12,000 from its finder, and sold to Earl Dudley for £30,000.

DUELLING, probably a development of the old trial by combat which was prevalent among Teutonic nations. Though illegal in both England and France for the last three centuries, it was the fashionable way of vindicating one's personal honour with us from the time of Charles II. to that of George IV., while in France the political duel, though rarely dangerous, is not yet extinct. Still more harmless are the German University students' duels, which are rather to be called fencing matches.

DUFFERIN AND AVA, (Frederick Blackwood) **MARQUIS OF,** *b.* 1826, *d.* 1902, a great British diplomatist, was Governor-general of Canada, Ambassador at St. Petersburg, Constantinople, Rome, and Paris, and Viceroy of India. During his rule in India he achieved the annexation of Upper Burma (1888), whilst his rule in Canada was marked by the development of Manitoba. His last year of life was embittered by the disastrous failure of a Financial Corporation of which he was Chairman. He was a brilliant administrator, a charming writer, and a powerful orator. His "Letters from High Latitudes" deal delightfully with a yachting cruise to Iceland.

DU GUESCLIN, *b.* Rennes, 1314, *d.* 1380; Constable of France, famous alike for personal prowess and military skill. He gradually retrieved the fortunes of France after its disasters in the wars with Edward III. and the Black Prince, and eventually cleared France of the English.

DUKERIES, THE, a district around Worksop, Nottinghamshire, so named from the four ducal seats it contains, viz., Worksop Manor and Clumber Park (Duke of Newcastle), Welbeck Abbey (Duke of Portland), and Thoresby Park (formerly Duke of Kingston, now Earl Manners).

DUKOBORS, a Russian sect of non-conformists that arose about 1740. They have been subjected to much persecution by the Russian Government. A colony emigrated to Canada (1898). assisted by Tolstoi. and certain British and American Quakers. They are communists. they reject priesthood and formal marriage. and they are peculiarly simple in their religious thoughts and habits.

DULCE DOMUM, "Home, Sweet Home," the song of the Winchester College boys, when breaking up for the vacation.

DULCIMER, one of the oldest of musical instruments, perhaps the Jewish *psaltery*, consisting of a wooden frame across which wires are stretched, and these, when the instrument is played, are struck by a hammer; a sounding board is attached, and pegs tighten the wires in order to tune them. Thus in principle the instrument is the same as the pianoforte, wherein the several keys replace the single hammer.

DUMA, national assembly of Russian representatives, 442 in number, elected for five years, corresponding to our House of Commons, and sharing with the Council of the Empire the power to make new laws and modify existing ones.

DUMAS, ALEXANDRE, *père*, *b.* 1803, *d.* 1870; a French romance writer, whose chief works are the *Count of Monte Cristo* and the *Three Musketeers*. His writings are marked by barbaric splendour and voluptuous imagination, but it is a moot question how far they are the product of Dumas' own genius. After his fame was assured, he certainly retained a staff of writers to do the bulk of the work which he issued as his own.

DUMAS, ALEXANDRE, *fils*, *b.* Paris, 1824, *d.* 1895; son of the preceding, the author of the famous (or infamous) *Dame aux Camelias*, on which Verdi based his opera *La Traviata*.

DU MAURIER, GEORGE LEWIS, *b.* 1834, *d.* 1896, an artist in black and white and a novelist. He succeeded Leech on the staff of Punch in 1864. and became famous for his delightful satires of English social life. Of his novels, "Trilby," with its vivid portraiture of artist life in the *Quartier Latin* is the best.

DUMBARTON, situated where the Leven from Loch Lomond joins the Clyde. At the mouth of the Leven and in front of the town is a peninsula, consisting of a rock 200 feet high rising abruptly from the water. This is capped by an ancient castle which makes a most striking landmark along the estuary of the Clyde. The town has become a centre of the shipbuilding trade.

DUM-DUM, a place near Calcutta famous for its small-arms factory, which has given its name to the "dum-dum" or expanding bullets. Here the Sepoys made their first demonstration against the use of greased cartridges in 1857. (See *Indian Mutiny*.)

DUMFRIES, on the Nith, a few miles above its mouth in the Solway Firth, is famous for its cattle markets and for the tomb of the poet Burns. In Greyfriars' Church, John Comyn was stabbed by Robert the Bruce in 1306.

DUMOURIEZ, CHARLES FRANCOIS, *b.* 1739, *d.* 1823, a French general, whose greatest exploits took place between the years 1789–93, when his tactics preserved France from the hostility of Prussia and Austria.

DUNBAR, a port in Haddingtonshire, at the entrance to the Firth of Forth, 26 miles east of Edinburgh. Near it was won Cromwell's famous victory over General Leslie and Charles II.'s Scotch supporters in 1650. So complete was their defeat that the battle was known as the Race or Drove of Dunbar.

DUNCAN, ADAM, Viscount Camperdown, *b.* Dundee, 1731, *d.* 1804, a British Admiral, whose great achievement was his victory over the Dutch fleet in 1797, off Camperdown.

DUNCIAD, THE, the famous satire in which Pope, in 1728, avenged himself effectually on his critics, whose malevolence had been almost equal to their incompetence. Colley Cibber is most severely treated in this satire.

DUNDEE, in Forfarshire, on the north of the Firth of Tay. Its public buildings, docks, and harbour are very fine; the seal and whale fisheries find here their headquarters; its marmalade and butterscotch are known all over the world. Next to the Clyde, it is the centre of Scottish ship-building and engineering; but above all, in importance, are its manufactures of flax and hemp (imported from the Baltic) and jute (from India). From the latter substance all kinds of packing cloth, sacking, and even carpets are made. Just above Dundee was the famous Tay Bridge, which was blown down in 1879, little more than a year after its completion, when a train was passing across it. It has been replaced by a more substantial structure.

DUNDONALD, THOMAS COCHRANE, EARL OF, *b.* Perthshire, 1775, *d.* 1860. His career in the Navy was marked by the greatest gallantry and success, and his exploits off the coasts of France and Spain were especially notable; but unfortunately in 1807, in Parliament. he accused his official superior, Lord Gambier, of incompetence in action against the French fleet, and this ruined his chances of promotion; while in 1814 he was himself unjustly accused of dishonest commercial transactions. In 1818 he threw in his lot with the South American States, which were trying to throw off the Spanish yoke, and their success was greatly due to his personal daring and brilliant genius. He organised the Chilian Navy, blockaded Callao, and took Lima (1820), and so brought the war to an end. He then transferred his services to the Brazilians, while in 1828 he helped the Greeks to recover their independence. With the accession of William IV. he was restored to the honours in England of which he had been so unjustly deprived.

DUNDREARY, LORD, an amusing character in *Our American Cousin*, a play by Tom Taylor, produced in 1863. He represents a young nobleman whose gentlemanly manners, kindness of heart, and ludicrous lack of sense, combine to produce an intensely humorous effect on a sympathetic audience.

DUNE'DIN, on the south-east coast of South Island, New Zealand. The discovery of gold-fields in 1861 laid the foundation of its prosperity, which has been since maintained through the development of the wool and frozen meat trades.

DUNG BEETLE, so called because the female lays its eggs in a pellet of dung, which it then drags away and buries; thus it acts both as scavenger and fertilizer, and consequently was highly venerated by the ancient Egyptians, being frequently represented in their monuments and carvings. A common variety with us is the Shard-born beetle, whose drone can so often be heard towards evening time.

DUNKIRK, a French sea-port on the Strait of Dover, 20 miles north-east of Calais. Oliver Cromwell took it in 1658, but Charles II. restored it four years later for £400,000.

DUNMOW, a village in Essex between Braintree and Bishop Stortford, famous for the Flitch of Bacon which is offered yearly to any married couple that can satisfy a jury of bachelors and maidens that for a year and a day they have neither

quarrelled nor repented of their bargain. This prize was first offered in the 14th century, but never awarded till 200 years later, and in the 400 years following only five times. Now, most years witness the successful claim of at least one couple.

DUNNAGE. See *Commercial Dictionary.*

DUNNE, FINLAY PETER, *b.* at Chicago. 1867. began as a reporter. and subsequently edited two Chicago papers. He is famous as the creator of " Mr. Dooley," a saloon keeper whose comments on the Spanish American War and other " philosophical " reflections are in the best style of American humour.

DUNOON, a pleasure resort on the west of the Firth of Clyde, with a castle formerly belonging to the Stuarts.

DUNSINANE, a hill with rude earthworks, north-east of Perth. See *Macbeth,* Act. v.

DUNS SCOTUS, *b.* about 1270 in Scotland, *d.* 1308. A philosopher and theologian, who lectured at Oxford and Paris Universities; a stern critic of the teaching of Thomas Aquinas who, accepting the philosophy of Aristotle, seemed to attribute insufficient importance to the dependence of faith upon will. Their rival schools continued to be known as Thomists and Scotists. The latter opposed the restoration of classical scholarship under the renaissance, and thus the name *dunce* or Duns-men came to be applied to illiterate folk.

DUNSTAN, SAINT *b.* 925, at Glastonbury, *d.* 988. He became abbot of Glastonbury, and instituted reforms in the church. Under Edgar the Peaceful he was made Archbishop of Canterbury, and is credited with the quietness and prosperity of the reign. He urged rigorous observance of monastic rules, and raised the tone and status of the clergy generally.

DUPLEIX. JOSEPH FRANCOIS, *b.* 1697, rose by merit to be governor of the French Indies after success in official and commercial work. He aroused the alarm of the English East India Company, quarrelled with the French Naval commander, La Bourdonnais, about the restoration of Madras to the English, and defended Pondicherry brilliantly against an attack of an English fleet under Admiral Boscawen. He intrigued successfully with native princes for French predominance, but was finally defeated by the energy and genius of Clive. The French Company refused to reimburse him for his outlay in their interests, and his country failed to recognize his patriotic services. He died in poverty, 1763.

DUQUESNE, FORT, on the Ohio, built by the French, who routed an English army under General Braddock there in 1755. It was captured by the British in 1758. Pittsburg now stands on its site.

DURBAN, the chief port of Natal, has an excellent harbour in direct railway communication with the Transvaal. The town takes its name from Sir Reginald D'Urban who took the town from the Boers who had trekked to Natal in 1836. Durban was the chief base of the Imperial troops in Natal during the Boer War, (1899–1902).

DURBAR, a reception in state held by the Viceroy of India, or by a native Prince. The proclamation of Edward VII. as Emperor of India was made the occasion of a memorable durbar held by Lord Curzon in 1903.

DÜRER, ALBRECHT, *b.* at Nuremberg, 1471, where he died, 1528, is the greatest of German painters. He twice visited Italy, and was much employed by the Emperors Maximilian I. and Charles V. His work as an engraver establishes his fame not less than his painting.

DURHAM COUNTY, one of the three counties palatine, lies between the Tyne and the Tees, and has about 30 miles of sea coast with busy ports at South Shields, Sunderland, Hartlepool, and Stockton. It is rich in minerals, especially in coal, and its breed of cattle, the Durham shorthorns, is highly esteemed.

DURHAM CITY is the ancient seat of the Prince Bishops of Durham, whose castle stands, with the venerable Norman cathedral, on a steep wooded rock whose base is almost encircled by the Wear. The cathedral is perhaps the most magnificent existing example of Norman architecture. and it contains the bodies of St. Cuthbert and of the Venerable Bede. The castle is now used as one of the " halls " of Durham University.

DURHAM, (John George Lambton), **EARL OF,** *b.* 1792, *d.* 1840, was sent to Canada in 1838 to report upon the advisability of changes in the existing form of administration against which the Canadian French had rebelled. His report, with its statements of Colonial grievances, and his proposed remedies, forms a new era in our colonial history. Most of his recommendations were carried out with excellent results, and thus was laid the foundation of Colonial self-government.

DURRA is a grain-yielding, broad-leaved grass that grows well in hot climates. The grain is used for food, the leaves as fodder, and the pith yields sugar. It is largely cultivated as an annual crop in India, Africa, and the United States. It is also called millet or sorghum.

DÜSSELDORF is a railway and manufacturing centre at the junction of the Rhine and Dussel in Prussia. It has long been noted for its school of art. It was the birthplace of the poet Heine; its population now exceeds 200,000.

DUST is of interest because of effects produced by its presence throughout the atmosphere. The reflection of light from it is held to be the cause of the blue colour of a cloudless sky, and it is said to be owing to its presence that the vapour in the atmosphere is able to condense and form clouds.

DUTCH METAL, an alloy of copper and zinc, resembling gold leaf. It is used to imitate gilding, but may be distinguished from gold by its solubility in Nitric Acid.

DUVAL, CLAUDE, *b.* 1643, in Normandy, hanged 1670, at Tyburn; a gallant highwayman who became famous in England in the reign of Charles II.

DVORAK, ANTONIN, *b.* 1841, *d.* 1904, the famous Bohemian composer of a setting of the Latin hymn, "Stabat Mater," was the son of a butcher, and won his way to recognition after dreary work in Prague. He made considerable use of the rhythmic effects of his native folk music in his orchestral compositions.

DWARF. Pygmy or dwarf races, denizens of the forests, harassed Stanley's march across Central Africa, and showed themselves expert archers. Some of these tribes average only 4 feet 1 inch in height. The Bushmen of South Africa, some of the Malayan Islanders, the Lapps, and the Fuegians are dwarf peoples. Tom Thumb (31 in.), and General Mite (21 in.), American dwarfs, were exhibited in England during the last century.

DWARFED TREES, growing in small pots are regarded as an ornament in Chinese and Japanese gardens. This curious product is the result of spare diet. The seedlings are planted in small pots of poor soil, care being taken that the roots do not pass into the ground beneath; the soil is sparingly watered: the strongest branches are nipped off and the remaining ones contorted. A tree more than 100 years old may be less than a foot in height. Some specimens may be seen at Kew Gardens.

DYAKS, the natives of Borneo, a people of savage disposition, but of much ingenuity in industrial arts. are akin to the Malays, though taller in stature and more honest in character.

DYEING. Until 1856 the dye stuffs in use were natural products, but since then great advances have been made in artificial dyes by the discovery that the distillation of coal tar yields products such as aniline, benzene, anthracene, and napthalene, each of which is the basis of a series of colours. The discovery of the brilliant aniline dyes was begun by Perkins, an English chemist, in 1856, when he found the first aniline dye stuff, known as mauve. Now, the number of coal-tar dyes is extraordinary, and though some are not fast colours, yet many are permanent.

DYKES occur in the geological formation known as igneous rocks. They represent fissures or veins, which have been filled either from below or by a flow of lava from above. Where the enclosing rock has yielded to the corrosion of weather, the dyke remains as a prominent mass; otherwise, it may appear as a deep hollow. The name is also applied to mounds raised to protect low-lying lands from inundation.

DYNAMICS is the science which treats of the phenomena of matter and motion. It investigates causes of motion, the nature of momentum, and conditions of equilibrium.

DYNAMITE is a violent explosive formed by the mixture of nitro-glycerine with a peculiarly absorbent siliceous earth found largely in Aberdeenshire. It is used in mining and blasting, and must be handled with great care; even in water it loses little of its explosive power. It is exploded more readily by a blow than by a flame.

DYNAMO, a machine for the conversion of the energy of an engine, a fall of water, or other source of power, into an electric current. The current is induced by causing coils of wire to revolve very rapidly in a magnetic fluid, as suggested by Faraday's experiment. Refer to *Electricity.*

EAGLE, the largest of the birds of prey of the falcon family, is remarkable for its keenness of sight and strength of flight. It nests in rocky places, and preys upon the smaller animals. The Golden Eagle, a magnificent bird, three feet in length, is still to be found in Sutherland. The eagle was an emblem of Jove, and, in consequence, became the symbol of the sovereignty of the Romans, and of the empires that trace their power to the Romans. The German Imperial Eagle is one-headed, and its claws are outstretched; the Austrian is two-headed, and it grasps a sword and sceptre in the right claw, an orb in the other; the Russian, likewise two-headed, carries only the sceptre and orb. The United States have adopted a one-headed eagle holding arrows and an olive branch.

EARL MARSHAL. Refer to *Index.*

EARLY ENGLISH, the term generally used to denote the pointed or lancet style of ecclesiastical architecture that followed upon the round-arch Norman style. Its period lasted from about 1175 to 1250.

EARTH, THE, one of a number of non-luminous planets in the solar system, whose centre is the sun, a self-luminous star. Each planet makes an annual circuit of the sun, and has a daily rotatory motion on its own axis. The period of the earth's annual circuit contains about

365¼ of its rotatory periods or days. Mercury, the planet nearest the sun, takes 88 of our days for its annual journey, whilst Uranus completes its circuit in 84 of our years.

EARTHENWARE. See *Pottery.*

EARTHQUAKES, or vibratory movements of the ground, are more frequent than was supposed before seismology received the attention that has recently been given to it. Violent shocks, which are usually confined to well known areas, chiefly in volcanic districts, are preceded by a series of increasing tremblings. The movement is generally lateral, but notable vertical shocks have occurred in South America. The motion of earthquakes is in the form of waves radiating from a common centre, so that places equidistant from the centre are affected at about the same time. Probably the centre of disturbance is seldom more than a few miles deep. The origin of the movement is held to be the flashing of water into steam, or the explosion of gas or vapour, and it is thus akin to volcanic action. In the case of submarine shocks, a dangerous sea-wave is generated, an occurrence that is frequent in the Pacific, whose shores mark the great volcanic belt of the globe. The area affected by a great shock is enormous ; that affected by the great earthquake of Lisbon, 1761, is thought to have been several times greater than Europe. Japan is more subject to earthquakes than any other country, hence the slightness of structure of Japanese buildings.

EARTHWORM. Darwin has established the extraordinary usefulness of this creature, which feeds on leaves and vegetable matter, transforming them into mould. It is constantly perforating and loosening the soil, thus opening it up to the action of air and water. Darwin stated that on an acre of ground, which he kept under observation, ten tons of soil passed annually through the bodies of these creatures.

EARWIGS, insects well known to gardeners, akin to cockroaches, and having pincer-like appendages behind. They avoid the light, and are easily caught in dark shelters made for them. They eat fruit, the petals of flowers, and leaves.

EASEMENT. Refer to *Index.*

EAST AFRICA. 1. British East Africa includes (1) the East Africa Protectorate, extending from the mouth of the Umba to the Juba River with a splendid harbour at Mombasa, (2) Uganda, which lies north-west of Lake Victoria, 600 miles from the coast ; and (3) Zanzibar, an island with a city of the same name offering great facilities for shipping. A railway connects Mombasa with Lake Victoria.

2. *German East Africa,* bounded on the north-east and north by British East Africa, on the west by the Congo Free State, and on the south by the river Rovuma and Portuguese territory. A railway runs from Tanga on the east to Korogwe.

3. *Portuguese East Africa,* including the two provinces of Lorenzo Marques and Mozambique. Railways run from Delagoa Bay to join the Transvaal system, and from Beira to Salisbury in Rhodesia. The climate on the coast is malarial, but the Lembobo Mountains afford a healthy retreat.

EAST ANGLIA formed one of the Anglo-Saxon kingdoms, and included what are now the counties of Norfolk and Suffolk.

EASTBOURNE, a handsome, well built, modern seaside resort, near Beachy Head, on the south coast. It owes much of its prosperity to the Duke of Devonshire, the ground landlord, and not a little to the enterprise of its inhabitants. It has a long sea-front, beautifully laid out, and is a good centre for inland excursions to places of historic interest.

EASTER is the name of the Christian Feast, commemorative of the resurrection of Jesus Christ. Of the many customs observed in different countries at Easter, the presentation of eggs as emblems of renewed life is the most universal. In early times controversies arose in the Church as to the proper day for keeping Easter, some keeping it on the anniversary of the actual day of resurrection, whatever the day of the week, others on the Sunday following. The Council of Nicæa (325) decreed in favour of the latter. The earliest day for Easter is March 22nd ; the latest April 25th.

EASTERN ARCHIPELAGO. See *Malay Archipelago.*

EASTERN EMPIRE. See *Byzantine Empire.*

EASTERN ROUMELIA, in the Balkan peninsula, was created an autonomous province by the Treaty of Berlin, 1878 ; but a revolt in 1885 led to its incorporation with Bulgaria.

EAST INDIA COMPANY. Of the various English companies chartered to trade with India, that founded by London merchants in 1600 absorbed the rest, and by 1710 stood as the representative of English influence in India. Headquarters were established in Madras, Bombay, and Calcutta. Founded only for purposes of trade, the Company began none the less to make capital out of quarrels among the native princes, and thus became the proprietor of large domains. Renewals of the charter were usually accompanied by loans to government. In 1858, after the Indian Mutiny, India passed to the Crown. The East India Company was popularly known as " John Company."

EAST INDIES, a general name for India, Further India, and the Malay Archipelago.

EAU DE COLOGNE, a well-known scent made in Cologne by over thirty firms, each bearing the name of the reputed inventor, Farina.

EBENEZER, " stone of help," was the name of a memorial raised by Samuel after his victory over the Philistines. See 1 Sam. vii.

EBIONITES, a sect of Jewish Christians of the first century, whose teaching was considered heretical. They retained many Jewish religious observances, whilst recognizing Jesus Christ as the Messiah.

EBONY, is a hard wood which takes a fine polish. It exists in three varieties, red, black, and green, and is imported from Mauritius, Madagascar, and Ceylon.

EBOR'ACUM, the Latin name of York, a contracted form (Ebor.) still being retained by the Archbishops of the Province of York.

EBRO, the principal river of north-east Spain, is navigable for about 180 miles but is much obstructed by shoals. Canals have been constructed for 100 miles parallel to the river.

ECCE HOMO. (1) Pilate's words—" Behold the man," St. John xix. 5. In art, the name of any painting of the Saviour crowned with thorns. (2) A book written anonymously by the Cambridge historian, Sir J. R. Seeley, in 1865, which insisted on the practical and human side of Christ's work.

ECCLESIASTES is the Septuagint title of a didactic poem traditionally attributed to Solomon. The writer, who calls himself " the Preacher," was probably an aged Hebrew thinker of the third century B.C. He reviews the various activities of human life, and sees in them nothing that can yield abiding satisfaction ; " All is vanity, saith the Preacher." This book has at all times appealed to the thoughtful as a human outcry for something better than the fleeting things of time. With St. John, the writer could emphatically affirm, ' The world passeth away and the lust thereof," and he would fain have been able to say with the apostle, " but he that doeth the will of God abideth for ever." 1 John ii. 17.

ECHIDNA is an Australasian mammal allied to the duck-billed platypus. These two animals are the lowest known mammals and present many reptilian characters in their anatomy and physiology ; for instance, they hatch from an egg and have a body temperature of only 80° F. Echidna is covered with spines like a porcupine and is about the size of a large hedgehog. It possesses strong claws for digging, a small mouth and no teeth, and a long sticky tongue with which it licks up the ants on which it feeds.

ECHO. (1) As the rays of a lighted candle placed before a mirror are reflected so as to form an image of the candle, so the waves of sound caused by a sounding body in front of a wall are reflected, and give back a sound. A steep cliff in the distance may thus send back, somewhat reduced in intensity, a shout, the report of a pistol, &c. But if the resisting surface be nearer the origin of sound than 60 or 70 feet, the sound and its echo are mingled and confused ; hence the bad acoustic properties of many public buildings. Just as a luminous object may give a succession of images when placed between two reflecting surfaces, so a trumpet blown between two high cliffs will produce a succession of echoes. Killarney offers a famous example of repeated echoes thus produced.

(2) " Echo " is also the name of a nymph who, according to Greek fable, was transformed into a rock, because her talkativeness hindered Juno from overhearing Jove's converse with the nymphs. She was allowed to retain the power of repeating the last word she heard. Another Greek myth makes " Echo " pine away until only her voice is left, because of her love for Narcissus.

ECK, JOHANN VON, *b.* 1486 at Eck, in Swabia, *d.* 1543 ; a clever controversialist, and a somewhat self-opinionated opponent of the teaching of Luther and Melanchthon. He took part in public disputations with these reformers, and made three journeys to Rome to obtain a papal bull against them. He is suspected of vanity and low motives.

ECLIPSE, a famous race-horse unbeaten in any of its eighteen races. Mr. O'Kelly undertook to place the horses in his first race in 1769, and his declaration " Eclipse first, the rest nowhere," was justified by the result.

ECLIPSES (1) of the *moon* occur whenever that satellite passes wholly or partially through the cone of shadow formed by the earth ; (2) of the *sun* are caused by the interception of all or part of the sun's surface by the passage of the moon between it and the earth.

ECLIPTIC, the great circle traced among the fixed stars by the sun's annual apparent retrograde motion. This circle was anciently divided into twelve stages, known as the Signs of the Zodiac, and each was named after a prominent constellation within the area of the sign.

ECONOMICS, the science that treats of the nature of wealth, and the laws governing its production, consumption, distribution, and exchange.

E'CUADOR. A republican State on the west of South America, and lying on either side of the equator. It contains several

of the highest of the peaks of the Andes, including Chimborazo (21,525 feet), and Cotopaxi (19,613 feet.) Guayaquil is the chief port and Quito the chief inland city.

EDDA, the name given to two Icelandic works, one in verse the other in prose, dating from the 13th century. They are our source of information about Scandinavian mythology.

EDDY, MRS., *b.* 1821, Brookline, Mass.; founder of Christian Science, a movement which starting in Massachusetts, 1886, is now widely spread. In 1907 she was decorated by the French Government as an Officier d'Académie, and is greatly esteemed by her fellow-citizens in America. Refer to *Christian Science* in Index.

EDDYSTONE, three ridges of rock in the fairway from Start Point to the Lizard, and therefore necessarily a place for a light-house. The first two light-houses were of wood; the one was washed away, the other burnt. Smeaton's celebrated stone erection lasted from 1759 until 1882, when the present building was erected. He dovetailed his granite blocks into the rock and to one another, but the undermining of the foundations at length rendered a new site necessary, and his work has had to be superseded. The upper part of this celebrated light-house has been re-erected on Plymouth Hoe. The present light-house is 133 feet above the rock, and can be seen for upwards of 17 miles.

EDELWEISS, "noble-white," a perennial plant belonging to the same natural order as the daisy. It grows in the high Alps of Switzerland, and in parts of Austria and Siberia, usually in places difficult of access.

EDEN. (1) The residence of our first parents. For Eden, Milton uses the name Paradise, a Greek adaptation of a Persian word meaning a park or walled garden. The conception of the garden and of the tree of life occurs widely in eastern tradition, but the tree of knowledge of good and evil is a Hebrew conception which elevates the narrative to a moral significance. (2) A river that passes by Appleby and Carlisle and falls into the Solway Firth after a course of 40 miles.

EDENTATA, lit. "toothless," a misleading term applied to an order of mammals including sloths, ant-eaters, and armadillos.

EDGAR, King of England, 959–975, known as the "peaceful." His reign was a time of national prosperity; the Danes were peaceful, and under the guidance of Dunstan, the work of reform and consolidation was carried out effectually.

EDGAR ATHELING, grandson of Edmund Ironside, and heir of Edward the Confessor, was superseded by William the Conqueror, 1066.

EDGEHILL, a bleak ridge of hills north-west of Oxford, where Charles I. met the parliamentary troops under the Earl of Essex in an indecisive encounter on Sunday, 23rd October, 1642. This was the first battle of the Great Rebellion.

EDGEWORTH, MARIA, a novelist, *b.* 1767, *d.* 1849; the lifelong comrade of her father, for whose sake she refrained from marriage. Her masterpieces of Irish life are *Castle Rackrent* and *The Absentee.* She was a friend of Scott, and was much lionised in London and Paris.

EDIBLE BIRDS' NESTS are found in Ceylon, Java, and the Eastern Archipelago. They are formed of the mucus secreted in the highly developed salivary glands of a kind of Swift, which thus constructs a nest that looks like isinglass. The Chinese use them for making soups.

EDICT OF NANTES. This was issued by Henry IV. of France on 30th April, 1598, securing freedom of religious usages to all Protestants in France, and opening all official appointments to them. Its revocation in 1685, by Louis XIV., was disastrous to France, as it led to the voluntary exile of thousands of her worthiest subjects.

EDINBURGH is unique among the cities of the United Kingdom for its picturesque beauty and historical interest. It is situated about two miles south of the Firth of Forth, and consists of the Old Town and the New Town. The former stands on the ground between Arthur's Seat and the Castle Rock, with the High Street occupying the ridge between the Castle and Holyrood Palace. The New Town is separated from it by a valley laid out in public gardens, with Princes Street flanked by Calton Hill as its main thoroughfare. Among the public buildings may be mentioned the Castle, St. Giles's Cathedral, Holyrood Palace, Parliament House, and the National Gallery. Edinburgh abounds in colleges, schools and philanthropic institutions. It has a famous university dating from 1582, and is the home of the learned societies of Scotland.

EDISON, Thomas Alva, a celebrated American inventor, *b.* at Milan, Ohio, 1847. At the age of twelve he was a newsboy and afterwards a telegraph operator. Among his numerous inventions are many telegraphic appliances of great value, the phonograph, megaphone, electric pen, and incandescent electric light.

EDMUND IRONSIDE, the brave son of Ethelred the Unready, fought, on his father's death, with Canute for the English crown. After much indecisive fighting the two rivals agreed to divide England between them. About a month after this partition of the kingdom, Edmund died, 1016, leaving Canute sole king.

EDMUND, SAINT, a king of the East Anglians, killed by the Danes in 870, because he refused to abjure his faith. The monastery and town of St. Edmundsbury rose round his place of burial.

EDWARD THE CONFESSOR, King of England, 1042–1066; educated in Normandy; married Edith, the daughter of Godwin, died childless, and was succeeded by Harold, Godwin's son. The English laws were codified in his reign. He was buried in Westminster Abbey, which he had founded. He was canonized in 1161.

EDWARD THE ELDER, son of Alfred the Great; king of the West Saxons, 901–925; co-operated with his sister Ethelflaeda in coercing the Danes to submission; became master of the Danelagh and overlord of the Northern counties.

EDWARD THE MARTYR, *b.* 963, succeeded Edgar as King of England in 975; was supported by Dunstan and thwarted by his stepmother Elfrida, by whose orders he was murdered, 979.

EDWARD I., *b.* at Westminster, 1239; King of England, 1272–1307; son of Henry III. and Eleanor of Provence; defeated Simon de Montfort at Evesham, 1265; conquered Wales; made Balliol King of Scotland; made war on Balliol, and brought the Coronation stone from Scone; defeated and subsequently executed Wallace; instituted many constitutional reforms; died on his way to Scotland vowing vengeance on the Scots, 1307.

EDWARD II., *b.* at Carnarvon, 1284; King of England, 1307–27; son of Edward I. and Eleanor; fell under the influence of a favourite, Gaveston; defeated by Bruce at Bannockburn, 1314; murdered at Berkeley Castle, 1327.

EDWARD III., *b.* at Windsor, 1312; King of England, 1327–77; son of Edward II. and Isabella of France; won, with his son the Black Prince, a great victory over the French at Crecy, 1346; took Calais, 1347; signed the treaty of Bretigny, 1360.

EDWARD IV., *b.* at Rouen, 1441. His father was the Duke of York, whose claim to the crown in the reign of Henry VI. gave rise to the wars of the Roses. The Duke was defeated and slain at Wakefield; but his son, on gaining a decisive victory at Mortimer's Cross, was crowned King, 1461. He was driven for a short time from the throne by the Earl of Warwick, whom he afterwards overthrew at Barnet, 1471. This victory, followed by another at Tewkesbury, seated him firmly on the throne until his death in 1483.

EDWARD V., *b.* at Westminster, 1470; King of England, April–June, 1483; son of Edward IV. and Elizabeth Woodville; murdered in the Tower, June, 1483, by order of his uncle, Richard III.

EDWARD VI., *b.* at Hampton Court, 1537; King of England, 1547–53; son of Henry VIII. and Jane Seymour; being a minor, a regent was appointed to carry on the government. He took a warm interest in the Reformation, and willed the crown to Lady Jane Grey, because Mary, his eldest half sister, was a Roman Catholic.

EDWARD VII., eldest son of Queen Victoria and Albert, Prince Consort, "by the Grace of God of the United Kingdom of Great Britain and Ireland, and of the British Dominions beyond the Seas, King, Defender of the Faith, Emperor of India," was born at Buckingham Palace, Nov. 9th, 1841, and died at Buckingham Palace, May 6th, 1910. He married, March 10th, 1863, Alexandra, eldest daughter of the King of Denmark; in 1859 visited Italy and Spain, in 1860 the States and Canada, in 1862 the Holy Land (with Dean Stanley), in 1869 Egypt, in 1875 India, where he remained 17 weeks. In 1887 and 1897 much of the responsibility of the Jubilee and Diamond Jubilee of the Queen fell to him. After his father's death, in 1861, he had as Prince of Wales to support or fill the place of the Queen on many occasions of public interest. His recovery from a serious attack of typhoid fever in 1871 was the occasion of a memorable Public Thanksgiving at St. Paul's. In 1892 the Prince and Princess suffered a heavy blow by the death of their eldest son, the Duke of Clarence and Avondale. An unsuccessful attempt was made upon the Prince's life as he was passing through Brussels by a young fanatic, Sipido, April 4th, 1900.

In 1901 he succeeded to the throne as Edward VII., and two months later saw the departure of the Prince and Princess of Wales on the "Ophir" to inaugurate the confederation of the Australian Colonies, and to visit New Zealand, the Cape, and Canada. A sudden attack of perityphlitis caused a postponement of the King's Coronation from June 26th, 1902, until August 9th. On October 25th a Royal Progress was made through London, and the King and Queen attended on the following Sunday a Public Thanksgiving at St. Paul's. In January, 1903, the King was proclaimed Emperor of India at a great Durbar held by Lord Curzon at Delhi. In the summer, the King visited Portugal, Italy, and Paris, and received a most enthusiastic welcome. The French President came to England as the guest of the King in July, and the King and Queen of Italy in November. The Kaiser and Kaiserin came on a visit to King Edward in November, 1907. King Edward and Queen Alexandra paid a state visit to the German Emperor and Empress at Berlin, February, 1909.

Edward VII. was popular with every class of the British people. His scrupulous and untiring attention to the duties of his position as Prince of Wales fitted him to

occupy the throne with brilliant success. As a lover of outdoor life, of agriculture and sport, and as an ardent Freemason, he reflected the characteristic tastes of the majority of his subjects. As a patron of the theatre, of art, and of letters, he did much to encourage the pursuits of culture. His zeal in the interest of hospitals, in the question of housing the poor, was unbounded. In 1897 he founded the King Edward Hospital Fund. But it is chiefly in regard to his wonderful influence in international diplomacy, so remarkably in evidence in the Anglo-French Treaty of 1894, that his name will live in history as one of the greatest of our kings. His sudden death plunged the whole Empire into mourning. The affection of his people was strikingly demonstrated by the crowds which attended the public lying-in-state of the dead king in Westminster Hall on May 17th, 18th, and 19th. Upon each of these days the thousands of people who were awaiting their turn to be admitted into the Hall, formed at times a queue of nearly five miles in length. The king's body was borne on the same gun carriage which bore Queen Victoria to her last resting place, in solemn procession through the streets of London to Paddington, and thence by train to Windsor where he was buried in St. George's Chapel, May 20th, 1910. As an instance of the regard in which King Edward was held abroad, no less than eight foreign monarchs including the Kaiser of Germany, followed his coffin in the funeral cortége, in addition to a dazzling array of princes and potentates, whilst unprecedented crowds assembled in the capital to watch the last progress of their dead king. The achievments of King Edward in thepromotion and maintenance of international peace have won for him the well-deserved title of "Edward, the Peacemaker."

EDWARD, Prince of Wales, known as the Black Prince, *b.* at Woodstock, 1330; *d.* 1376; eldest son of Edward III. (See *Black Prince).*

EDWARDS, JOHN PASSMORE, *b.* in Cornwall, 1824. At the age of eighteen he joined the staff of a London publishing house, and eventually became the proprietor of the London *Echo*, the *Building News*, *English Mechanic*, and *Weekly Times*. From 1880 to 1885 he represented Salisbury in Parliament, but he is best known for his philanthropic works.

ÉGALITÉ, PHILIPPE, (Duc d'Orléans), *b.* at St. Cloud, 1714, guillotined, 1793; associated himself with the revolutionary party and adopted this name; voted for the death of the king and himself suffered death at the hands of the Jacobins.

EGBERT, king of Wessex, 802–37. His authority as overlord of all England was acknowledged in 827.

EGGISCHHORN, a mountain near the head of the Rhone Valley in Switzerland; height 9,625 feet.

EGYPT proper reaches southwards from the Mediterranean up the Nile Valley as far as Wady Halfa, near the second cataract, and is bounded by the Red Sea on the east, and desert on the west. South of Assouan and Egypt proper lies the Soudanese Province with its capital at Khartoum. Egypt is entirely an agricultural country, and its cultivable land is narrowly confined to the irrigated tracts along the Nile that are affected by the annual flood. The floods occur with great regularity each June, and last until September. No rain falls in Egypt, the floods being entirely brought about in the upper waters of the river. The width of fertile soil varies from 120 miles to 12 or 15, and much has been done of late years to regulate and utilise the water by the erection of dams, the greatest of which is at Assouan (see *Assouan*). The population of Egypt proper is about 10 millions.

The history of Egypt reaches back to B.C. 5000. Between that date and B.C. 332 were 31 dynasties, of which the Ptolemaic was the last. The great pyramids were built in the fourth dynasty, 3000 B.C. The 19th dynasty was the greatest of all, and Rameses II., its greatest representative, was the builder of the wonderful temples at Luxor, Karnak, and Abydos. He has been identified with the Pharaoh of the oppression, but there is little monumental evidence that bears upon Israelitish history at all. Under Alexander, B.C. 332, Egypt came under Greek influence, and Alexandria became a famous seat of learning. The country passed into the hands of the Saracens in the 7th century A.D., and Cairo was founded in 969 In 1250, the Mamelukes usurped supreme power, and wielded it in a creditable manner. The Turks succeeded them by conquest in 1517, and three centuries of weak misrule resulted. In 1798 the country was invaded by the French under Bonaparte, but they were expelled with the aid of the English in 1801. An era of tyrannous activity commenced under Mehemet Ali, who became Pasha in 1806. M. de Lesseps completed, 1869, the Suez Canal under Ismail Pasha, the grandson of Mehemet Ali, and first possessor of the title of Khedive. Ismail began a series of great internal improvements, and met his financial difficulties by selling 177,000 shares in the Suez Canal to England. In 1880 Egyptian finance was placed under international control, and in 1882 a national rebellion against Europeans began with a massacre at Alexandria. The British bombarded Alexandria and defeated the rebels at Tel-el-Kebir. From that time British influence has been predominant in Egypt, and wonders have been worked in economical, administrative, and social reform. The treaty signed in April, 1904, by France and England has given to England the right to administer the surplus of £5,000,000 accumulated by the International Caisse de la Dette, and has given a frank recognition of the predominance of British interests in Egypt.

EHRENBREITSTEIN, a town and fortress of 6,000 inhabitants on the right bank of the Rhine, is connected with Coblentz by a bridge of boats. The fortress looks down on the river from a sheer height of 387 feet.

EIDER DUCK, a bird common in the North of both hemispheres, which lines its nest with its own feathers. These feathers grow specially during the breeding season and are much prized for bedding.

EIFFEL TOWER, a colossal iron structure built 1887–9, by Gustave Eiffel, on the Champs-de-Mars, in Paris. It is 985 feet high, is of three stories and served by lifts. It cost the State £60,000 and the designer £140,000, which he hoped to recover from admission fees during a twenty years' concession.

EIKON BASILIKE (i-ke), a work published immediately after the death of Charles I., by whom it was supposed to be written. It is an autobiographical review of the king's life, and is almost certainly the work of Dr. John Gauden, who became Bishop of Worcester.

EISTEDDFOD, an assembly or congress of bards and minstrels held periodically in Wales.

ELBA, a Mediterranean island belonging to Italy, and lying between that country and Corsica. It is mountainous and produces iron ore. Napoleon was an exile here from May, 1814, to February, 1815.

ELBE, THE, rises in Bohemia, and joins the North Sea after a course of 725 miles. It is navigable to Prague, via the Moldau. It connects Hamburg by canals with Berlin, and is the main means of intercourse in Saxony, one of the most densely peopled parts of Europe. Its course through "Saxon Switzerland" is most beautiful.

ELBERFELD, 16 miles from Düsseldorf, on a tributary of the Rhine, is a busy, manufacturing centre. It has large cotton factories, supports a great local weaving industry, and is also an engineering centre.

ELBRUZ or **ELBURZ,** (1) The highest peak in the Caucasus (18,300 feet). (2) A range of mountains extending for 450 miles along the south of the Caspian Sea.

EL DORADO, a region of fabulous wealth existing in the imaginations of Spanish and English adventurers of the 16th and 17th centuries, and supposed to lie about the sources of the Orinoco in South America. An account, in 1540, by Orellana of his voyage down the Amazon and his discoveries led to this belief.

ELEANOR OF CASTILE, wife of Edward I., *d.* at Grantham, 1290. Twelve memorial crosses are said to have been erected by Edward I. at places where the body of his wife rested on the way to Westminster. Three of these remain at Walsham, Northampton, and Geddington.

ELECTRIC ACCUMULATORS. See *Electric Motor Cars.*

ELECTRIC BELLS for household purposes are generally set in motion by a current of electricity supplied by a dry cell or battery. In its course through the apparatus the current converts a core of soft iron into an electro-magnet (see *Magnetism*). This attracts a steel arm to which the hammer is attached, draws it forward and causes the hammer to strike the gong. The forward movement of the arm withdraws it from contact with a screw through which the current had been continued, and thus causes a break in the circuit. The magnet loses its induced magnetism, the arm is set free, and its elasticity restores it to its former position. Contact is again established, the soft iron remagnetised, and there is another blow of the hammer against the gong. These operations continue as long as the current is allowed to flow from the cell.

ELECTRIC CABLES for establishing telegraphic communication between countries separated by the ocean, or for conveying the current underground for purposes of electric lighting or traction, consist usually of a core of several strands of the purest copper wire covered with a sheath of insulating and protecting material. The outer strands are wound spirally round a central wire. The insulating material consists of layers of gutta-percha, vulcanised india-rubber, jute soaked in tar, oiled paper, etc. For protection the cable is covered with a sheath of steel wire or ribbon, or encased in lead. Underground cables are further protected by being laid in earthenware or iron pipes or iron troughs filled in with pitch

ELECTRIC CONDUCTORS are substances that permit the free flow of electricity. The best are silver and copper while all the metals, charcoal, and water are good conductors. The human body, cotton, and dry wool are partial conductors.

ELECTRIC FISHES. The Electric Eel, the African Cat Fish, and the Electric Ray have the power of discharging an electric shock sufficient at times to disable a man. The currents have all the usual characteristics of electricity, and find their origin in a peculiar modification of muscular tissue. The organs are excited

by nerve action from the brain, and are exhausted by a series of discharges.

ELECTRIC INSULATORS, or non-conductors, are substances that resist the flow of an electric current. Among the most effective insulators are dry air. glass, paraffin, ebonite, shellac, gutta-percha. silk. wool, and oils.

ELECTRICITY. Science is still unable to give a definite answer to the question, "What is Electricity?" From the fact that, under certain conditions, it flows from one point to another, it has been spoken of as the *electric fluid*, though it resembles no other known fluid except in this one particular. It was long considered a form of energy, but recent investigations have disproved this theory, and rather suggest that Electricity is the basis of every form of matter.

Ancient Greek philosophers knew that a piece of amber, when rubbed, possessed the power of attracting and then repelling light bodies. Towards the close of the 16th century, Dr. Parker discovered that a large number of other substances, including the diamond glass, sulphur, sealing-wax, and resin possessed the same property. Later it was observed that a flash of light accompanied by a sharp cracking sound was obtained when highly electrified bodies were discharged, suggesting in miniature the lightning flash and the accompanying thunder. Machines were constructed for the production of Electricity in larger quantities. A cylinder of glass, or a disc of plate-glass, was made to revolve against a cushion of leather coated with an amalgam of zinc or tin, and the charge of Electricity thus generated was collected on a hollow metal cylinder mounted upon a glass leg, and known as the *prime conductor*. Improvements in frictional machines were introduced by Holtz and Wimshurst.

The next important development was due to Volta, Professor in the University of Pavia. He placed a clean sheet of zinc and another of copper in a vessel containing dilute sulphuric acid, and found that, when the two metal plates were connected by a short length of copper wire, a current of Electricity flowed through the wire from the copper plate to the zinc, and that the latter slowly wasted away, while a few bubbles of hydrogen gas collected on the former. The energy necessary to drive the current through the wire is due to the chemical action of the acid on the zinc. Such an arrangement is known as a cell. The copper strip, whence the current starts through the wire is called the *positive pole*, and the zinc strip the *negative pole*. Zinc and platinum, or zinc and carbon, also form good combinations for cells. A combination of two or more such cells is called a battery.

An experiment performed by Faraday in 1830 before the Royal Society has produced far-reaching results. A length of copper wire was coiled many times round a hollow cylinder of wood, the ends carried a short distance along the table, and wound into another coil over which a magnetic needle was suspended by a silken thread. When the demonstrator passed a bar magnet into the hollow of the first coil, the needle was seen to oscillate. While the magnet remained at rest within the coil the needle occupied its normal position. The same results followed if the magnet was fixed and the coil moved forward and backward over it, the deflection of the needle increasing as the movements of the coil became more rapid. The experiment proved that the movement of a coil of wire in a magnetic field—that is, the space around a magnet within which the magnetic force acts—induced a current of Electricity in the wire, and that the strength of the induced current increased with the rapidity of the motion. The apparatus used contained all the essentials of the modern dynamo, in which the current is induced by causing coils of wire to revolve very rapidly in a magnetic field. By this means Electricity is produced on a commercial scale, and electric lighting and locomotion are rendered practicable.

ELECTRIC LAUNCHES. See *Electric Motor Cars*.

ELECTRIC LIGHTING. For the lighting of public places the electricity is produced at a generating station by means of dynamos, and conveyed to the various lamps by cables laid in pipes under the ground. For a powerful light *arc lamps* are used. Two pencils of artificial coke-carbon, called *electrodes* are kept end to end and almost in contact,by some mechanism. After contact the current is able to leap the *arc* or short distance between the electrodes, and, in doing so, volatilises a small portion of the carbon between the points. The carbon vapour becomes so intensely heated that a flint would melt if placed in the arc. The carbon points also become very hot and, being solid, emit a brighter light than the arc itself. For smaller lights incandescent electric lamps are used. Carbonised filaments mounted on conducting wires are sealed into glass bulbs which are then exhausted of air. The passage of the current raises the filaments to a white heat. The light emitted varies from two to fifty candles, according to the size of the lamp. The Board of Trade unit, it may be mentioned, is a quantity of electricity sufficient to sustain a sixteen candle power light for thirteen hours.

ELECTRIC LOCOMOTION. The various systems of electric traction as applied to trains and trams have certain points in common. (1) A *Power Station* where the Electricity is generated by means of dynamos. (2) Some means of conveying the Electricity from the generating station to any point on the system. (3) A contrivance known as a "Motor," for reconverting the Electricity into engine power, and so producing motion. In the case of trains, the Motor is often placed on the engine, while with regard to trams, it is slung underneath the car. Its action depends on the principle that a current of electricity passing through a wire placed in a magnetic field causes the wire to move. In the "*Overhead System*" of trams the Electricity is conveyed along stout wires mounted on poles and conducted to the Motor by a long arm known as a "trolley." This is the system most commonly in use, and has the advantage of a much smaller initial cost. The "Conduit System" is at work on the L.C.C. lines in South London, the first section of which was opened by the Prince and Princess of Wales in May, 1903; and on a short section in Bournemouth. In this system the electric conductors are T shaped rails of soft metal, laid on insulators in a concrete conduit. The Motors pick up the Electricity by means of a "plough" trailing in the rear of each car, and reaching down to the conductor through a narrow slit in the ground. In the case of trains the current is usually conveyed along a third metal placed between the other two.

ELECTRIC MOTOR CARS. The current for the propulsion of electric launches and electric motor cars is derived from accumulators. These consist of plates of lead coated with red-lead or some other oxide of the metal, and placed in dilute sulphuric acid. The passage of a strong current of electricity through such a cell gives rise to certain chemical changes in the plates, and, on disconnecting the wires which conveyed the charge, they may remain for several days in such a condition, thus storing up the energy of the current. Hence, such a contrivance is sometimes called a *storage battery*. If, however, the plates are connected by a wire, it is found that another chemical change takes place; the plates gradually regain their former condition and, during the time this second change takes place, a current of electricity passes along the wire in the opposite direction to that in which the charging current entered. When the car is required for use, the accumulators are connected with the motor, and the motion of the latter is transmitted to the wheels. The disadvantages of the system are, the initial cost of the accumulators, their comparatively short period of effective service, the need for frequent recharging, and the time taken in the operation. Further, the weight of the apparatus amounts in some cases to more than half the total weight of the car. Many attempts have been made to construct accumulators of lighter materials, and Edison has recently patented a cell in which nickel plates, nickel oxide, and finely divided iron replace the lead of the ordinary pattern. The cell appears to have a greater capacity than usual in proportion to its weight, but at present it has scarcely passed beyond the experimental stage.

ELECTRIC TELEGRAPH. Cooke and Wheatstone brought the first form of their needle telegraph into practical use in London in 1837, though many systems of transmitting signals through wires had been invented before that time. In the single-needle instrument a magnetic needle lightly hung in a vertical position is surrounded by a coil of wire. The needle is deflected to the right or left, when a current of Electricity is passed through the wire in the one direction or in the other, and a combination of movements to the right or left indicates a certain letter of the alphabet. The whole of the letters are comprised in a code of movements understood by the operators. The current is provided by a battery of several cells linked together. To send currents in either direction through the coil, two projecting levers, known as "signalling keys" or "tappers," are fixed to the instrument and the tappers at one end of the line work the instrument at the other. [See *Wireless Telegraphy*.]

ELECTRIC WIRING for the lighting of houses consists in tapping the cable conveying the current from the generating station, by jointing to it a smaller cable from which the insulated wires supplying the various lamps radiate. At convenient points the circuit through these wires is broken, the distance between the two ends, to each of which a small metal block is fused, being greater than the current will leap. At each of these points a bar of metal is so placed that, by depressing a small lever, the ends of the bar are brought in close contact with the two metal blocks. In this way the break in the current is bridged, and the current is able to flow through the metal bar and on to and through the lamp. Such a contrivance is known as a *switch*. To guard against shock the lever is insulated from the bar and the switch is fixed to a base of porcelain or other insulating material.

ELECTROPLATING is a process by means of which baser metals are covered with a thin coating of silver or gold. The commercial process was introduced by Messrs. Elkington about the year 1840. The plating vat resembles a voltaic cell. A plate of metallic silver or gold takes

the place of the zinc strip, and the articles to be plated replace the copper strip, the liquid being a solution of a soluble salt of silver or gold. When an electric current is passed through the apparatus, the plates are slowly dissolved in the liquid, and the articles become coated with an equal quantity of the more valuable metal. In gilding the insides of cups or jugs, the vessels are filled with the gilding solution, and a plate of gold connected with one pole of a battery is suspended in it, while the side of the vessel is connected with the other pole.

ELECTROTYPING is much used for reproducing works of art in facsimile, and for multiplying copies of wood-blocks for printing. Moulds of plaster or wax, coated with a film of plumbago, are suspended in a saturated solution of copper sulphate and connected with one pole of a battery, while the other pole is connected with a plate of copper which also dips into the solution. The copper gradually dissolves and is deposited at an equal rate on the moulds, the exact impress of which it takes, but in reversed relief.

ELECTRONS. The atom is no longer held to be the ultimate particle of matter. In 1899 Professor J. J. Thompson established the fact of the existence of bodies within the atom and composing it, and to these bodies he gave the name corpuscles. These corpuscles have a mass one thousandth part of a hydrogen atom, and it may be that they are the ultimate particles of matter, atoms of different substances differing in the number of corpuscles they contain. The name electrons has taken the place of the name corpuscles, because their activity seems to afford a reasonable explanation of electrical phenomena. Electrons are in a constant state of rapid motion within the atom. When some of them pass from atom to atom in a metal conductor, an electric current is set up. The same passage in a liquid is the cause of chemical change. Recent research on radio-active bodies has led to the theory that such substances emit rays which are really electrons travelling with the speed of light. It has been suggested that the energy of the sun is attributable to similar activities. The future of this department of scientific research promises to lead to very considerable advances in our knowledge of the constitution of matter, the hitherto unexplained phenomena of magnetism and electricity, and, possibly, of the nature of energy.

ELEGY, a poem generally of a mournful or plaintive nature. The Greeks first applied the term to a funeral ode, and afterwards to any composition consisting of hexameter alternating with pentameter lines.

ELEMENTAL SPIRITS are those spirits which, in the Middle Ages, were supposed to inhabit and have dominion over the four so-called elements—fire, water, air, and earth.

ELEMENTS. Modern Chemistry has dislodged the assumption of the ancients that the universe was built up of the four elements air, water, fire, and earth. Chemists now designate as elements those bodies which have not been shown to be of compound structure, such as oxygen, carbon, sulphur. The list of elements at present recognised as such numbers 80, and is necessarily provisional. Lord Rayleigh discovered a new atmospheric element which he named *argon*, in 1894, and Ramsay soon afterwards found another gas in many ways resembling argon, and now known as *helium*. Three other gases were found in minute quantities. Even more remarkable has been the discovery of radio-active elements from uranium salts, by their photographic effects. Of these, *Radium* is the most remarkable. See *Radium*.

ELEPHANTA ISLAND, in the harbour of Bombay, got its name from the figure of an elephant that formerly stood there. The island, four miles in circuit, is famous for its rock temples hewn out of the hard stone, and still used by the natives on festivals. The caves are columnated and contain many sculptured figures, of which the bust of Siva with three heads is unique.

ELEPHANTIASIS is a tropical disease due to a certain parasitic worm [Refer to *Med. Dict*].

ELEUSIS, a town of Attica, situated N.W. of Athens, famous for its temple, dedicated to Demeter (Ceres), in which were celebrated the Eleusinian mysteries.

ELEVATORS are granaries at the river ports of North America for the reception and lading of corn. A revolving chain of buckets carries the grain to the hold. A farmer is credited with a deposit of a certain grade of corn, and all corn of the same grade is mixed, whilst variant grades are assorted. At shipment the farmer is credited with the quantity and quality deposited, though his grain went to a common stock.

ELF, the wicked magician of northern folklore, squat of figure, ugly of feature, and with long matted hair. The elves wounded cattle and men with their elf-arrows—stone arrow-heads—and children were removed from their cradles and replaced by imbecile elf-children.

ELGAR, SIR EDWARD WILLIAM, *b.* at Broadheath, near Worcester, 1857, is a famous English composer. His most celebrated work is "The Dream of Gerontius." Among his other productions the best known are "Lux Christi," "Caractacus," "A Coronation Ode," "The Apostles," and a symphony. In 1904 he was appointed to the chair of music in the Birmingham University, and was knighted the same year.

ELGIN MARBLES, sculptures now in the British Museum, were taken by the Earl of Elgin, English Ambassador to the Porte, from the Acropolis of Athens in accordance with a firman empowering him to measure, examine, and remove certain stones with inscriptions. The British Government bought the marbles for £35,000, in 1816. The chief works were taken from the pediments, metopes, and frieze of the Parthenon, or Temple of Minerva.

ELI, for forty years high priest and chief judge of Israel. He suffered, in his old age, the curse that followed upon his neglect of the evil courses of his sons, Hophni and Phinehas. On hearing that the ark of the Lord was taken by the Philistines, he fell from his seat at the gate of Shiloh and broke his neck; 1 Sam. iv. 18.

ELIJAH, or **ELIAS,** one of the most notable of the prophets of Israel, lived during the reigns of Ahab and Ahaziah, in the 9th century B.C. See 1 Kings xvii.-xxi., and 2 Kings i. and ii.

ELIOT, GEORGE, the nom de plume of Mary Ann Evans, *b.* in Warwickshire, 1819, *d.* 1880, a famous novelist. The strenuousness and robust character of her father appear in the delineation of Adam Bede, and of Caleb Garth in "Middlemarch." "The Mill on the Floss" also reflects much of her early home life. Her first story, "The Sad Fortunes of the Rev. A. Barton," appeared in 1856, and within the next ten years "Scenes of Clerical Life," "Adam Bede," "The Mill on the Floss," "Silas Marner," "Romola," and "Felix Holt" were published. Her power of characterisation, as shown in her treatment of middle-class people of the Midlands, is remarkable, and she is certainly to be placed among the first novelists of the 19th century.

ELIOT, SIR JOHN, born in Cornwall, 1592, *d.* in the Tower, 1632; in the reign of Charles I. acted as leader in the House of Commons of a patriotic party that resisted the king's illegal actions in raising money without the consent of Parliament. In 1629 Eliot with nine other members was sent to the Tower for their violent speeches, and there he died in 1632, having refused to utter a word of apology. He may be regarded as a martyr to the cause of freedom of speech in Parliament.

ELIOTT, GEORGE, Baron Heathfield, *b.* in Roxburghshire, 1717, *d.* 1790; an English general who became governor of Gibraltar, which he defended against the French and Spaniards, 1779–82.

ELISHA was chosen by Elijah to be his successor as a Prophet of Israel; he lived in the 9th century B.C., and prophesied through four reigns, a period of 55 years (see 1 Kings xix. 19; 2 Kings ii.–ix., xiii. 14–21).

ELIXIR, a term in alchemy denoting a soluble substance capable of transmuting to gold or silver the grosser metals. Also a potion that confers eternal youth.

ELIZABETH, QUEEN, *b.* at Greenwich, 1533, *d.* 1603; queen of England 1558–1603; daughter of Henry VIII. and Anne Boleyn; was brought up as a Protestant; became a good classical scholar under Roger Ascham; remained unmarried, though her hand was sought by the kings of France and Spain; her peace was marred by a series of plots by Roman Catholics to seat on the English Throne Mary, Queen of Scots, whom she executed in 1587. The following year saw the defeat of the Spanish Armada. Her reign was one of enterprise and intellectual activity, and the spirit of the time was reflected in the character of the Queen. Her womanly sympathies and weakness were controlled by great strength of will, and she put the interests of the State before her personal desires.

ELIZABETH, QUEEN OF BOHEMIA, *b.* in Falkland Palace, Fifeshire, 1596, *d.* 1662, was the daughter of James VI., of Scotland and James I., of England. Her husband, the Elector Palatine of the Rhine, was the leader of German Protestantism, and in 1619 accepted the throne of Bohemia from the revolted Protestants. Defeated in battle by the Emperor Ferdinand in 1620, he lost both Bohemia and his hereditary dominions, and sought with his wife refuge in Holland. Rupert and Maurice, the two sons of Elizabeth, were distinguished cavalry leaders during the Civil War, and her daughter Sophia became Electress of Hanover and the mother of George I.

ELIZABETH, QUEEN OF ROUMANIA. See *Carmen Sylva*.

ELK, or **MOOSE,** the largest deer extant, a full grown animal being six feet high at the shoulders. It is long limbed and short in the neck, and browses off bushes; it has a broad, hairy, overhanging upper lip, and basin-shaped antlers. It is found in the marsh and forest lands in northern latitudes, and chiefly in North America. Lonely in habits, and timid in disposition, it is difficult to stalk.

ELLEN'S ISLE, in Loch Katrine, the favourine resort of Scott's heroine in his "Lady of the Lake."

ELLIPSE, a complete geometrical curve such as may be described by a pencil which keeps taut a loop of thread whose ends are fastened at two points. The ellipse is of interest as being the curve made by a planet in its orbit.

ELM, one of the commonest trees in England, yields timber of great strength, toughness, and closeness of texture, which resists the action of water, and is remarkably free from any liability to split. It is therefore used in ship-building, and by the cart-wright. Coffins also are usually made of elm. Few trees yield a like amount of timber in so short a time.

ELMO'S FIRE, SAINT, the name given by sailors to the pale blue flame seen playing round the masts of ships during thundery weather. The same phenomenon is also noted in connection with spires and other lofty, pointed objects. It is due to the action of electricity.

EL OBEID, the scene of the massacre of Hicks Pasha's army by the Mahdi, 1883; the chief town of Kordofan, 200 miles south-west of Khartoum.

ELSINORE, a seaport town of 12,000 inhabitants on the island of Zealand in Denmark, with a fair harbour and excellent road-stead without. Elsinore is the scene of the events of Shakespeare's *Hamlet.*

ELSWICK, a populous district that has grown up around the engineering works established by the first Lord Armstrong, in 1847, in the neighbourhood of Newcastle-on-Tyne. The works at first were devoted to the manufacture of the owner's inventions in hydraulic machinery, but now include one of the greatest ordnance factories in the world, and a ship-building yard capable of turning out the largest battleships and the fastest cruisers. The ships already built comprise the most powerful vessels of the Japanese navy.

ELY, a city on an eminence among the Fens, 16 miles north north-east of Cambridge, with perhaps the most beautiful of English Cathedrals, whose massive western tower, and exquisite central octagon, are visible for miles around. Cromwell, who was an East Anglian, probably did much to prevent the desecration of the cathedral during the Civil War.

ELY, ISLE OF, a plain in Cambridgeshire, north of the Ouse, lies rather higher than the surrounding fen land, and so formed an island. Hereward the Wake used it as a stronghold against the Conqueror. Modern drainage has converted the fen district to good farm land.

ÉLYSÉE, the palatial Parisian residence of the French President, built in 1718, and subsequently used as a residence by Napoleon I.

ELYSIUM, in classical mythology is the abode of the blessed after death, also called the "Elysian Fields." It was variously placed, on the western confines of the earth, in the Islands of the Blest, or in the nether world.

EL'ZEVIR, the name of the remarkable family of Dutch printers who issued cheap and wonderfully beautiful editions of the classics, religious and other works between 1592–1681. These books have a remarkable value at the present day, both from their rarity and their excellence.

EMBALMING is a means of preserving dead bodies from corruption by filling and covering them with aromatic and antiseptic herbs or preparations. The practice reached its height among ancient Egyptians, who not only impregnated the body with balsams but also enveloped it in cloths similarly treated. Bodies thus treated are called "Mummies," many of which have lain in tombs and pyramids some thousands of years, the most ancient dating from 3600 B.C. This custom arose from the desire of the Egyptians to preserve the body from corruption, so that it might be ready for the soul to reinhabit on its return. As the result of embalming, the bodies of Edward I. and Canute were found entire in the 18th century; and some of the kings of ancient Egypt are still to be seen in the form of mummies in the British Museum.

EMBARGO. See *Commercial Dictionary.*

EMBER DAYS, which occur at four periods of the Church year, on the Wednesday, Friday, and Saturday after the 1st Sunday in Lent, after Whitsunday, after 14th September, and after 13th December, are days set apart to be observed as days of fasting and of prayer for those about to be ordained to the ministry.

EMBLEMENTS. See *Commercial Dictionary.*

EMBLEMS. Refer to *Index.*

EMBOSSING is the process of stamping under a press, or of beating out a relief pattern upon metal, leather, or other suitable substance. It is to be distinguished from stamping, in which the lamina is pressed by a form into a mould, whereas the under surface in embossing is a plane face of felt or other yielding material. For bold relief, the material is softened and pressed into a mould with tools. Repoussé work is the embossing of thin metal by beating upon the reverse side.

EMBRACERY. Refer to *Index.*

EMBROIDERY is the working of a needlework pattern upon a piece of fabric. It is a method of ornamentation subsequent to the process of weaving, and is thus distinguishable from tapestry where the weaving involves the creation of the pattern. It may be a kind of art-needlework done by hand, or it may be done by machinery.

EMBRYOL'OGY, that branch of science that deals with the development of embryos. Embryos are the early stages of development in an animal, before the parental form is recognisable; or the germ resulting from the action of pollen upon the ovule, in the seed of a plant.

EMERALD, a precious stone, a kind of beryl, of a rich transparent green colour. The finest jewels are found in Colombia, South America.

EMERSON, RALPH WALDO, *b.* 1803, *d.* 1882, an American poet, lecturer and essayist. He was educated at Harvard; became a Unitarian minister, but left his first cure at variance with his parishioners, and took to lecturing; met Carlyle in 1833, in Scotland, and became a regular correspondent. His first volume, *Nature,* a poetical prose work, contained the ideas of all that followed, in its idealism, its advocacy of instinct, its individualism, and its rationalistic tone.

EMIGRANTS' INFORMATION OFFICE was established in 1886 under the direction of the Colonial Office. Intending emigrants are supplied with information on the various fields for emigration. Circulars and handbooks on the colonies and certain foreign countries are published, and printed particulars are issued for exhibition in every post office and in many public libraries and other institutions. A monthly report is printed in the *Labour Gazette* in connection with the labour department of the Board of Trade. Letters for information, which need not be stamped, should be addressed to 31 Broadway, Westminster.

EMIGRATION. Refer to *Index.*

ÉMIGRÉS, LES. After the outbreak of the French Revolution in 1789, many of the aristocracy, officials and clergy left the country. Some of these gathered round the Royal refugees on the German frontier of France, and formed a nucleus for foreign interference. These exiles were known as *les émigrés.*

EMIN PASHA, Eduard Schnitzer, *b.* of Jewish parents, 1840, in Silesia, and killed by Arabs in Central Africa, 1892. A remarkable linguist and natural scientist, he proceeded from the University of Berlin to Turkey where he gained an intimate knowledge of Mohammedanism. He took office in the Soudanese provinces under the Egyptian government and acted as medical officer under Gordon at Khartoum, where he also undertook various diplomatic missions. Gordon made him Governor of the Equatorial Province, an office which he held until Stanley's expedition arrived in 1889. The work he did here, single handed, as a governor, ethnologist, surveyor and collector of botanical and entomological specimens, as well as in the recording of meteorological observations, proves him a man of remarkable character and versatility. He met his death in the service of the German government whilst leading an expedition to extend the influence of the German East African Colony.

EMMETT, ROBERT, *b.* 1778, *d.* 1803, was an enthusiastic but unfortunate member of the revolutionary society of "United Irishmen." He endeavoured to obtain the co-operation of Napoleon in a personal interview, failed in an attempt to take Dublin Castle, and was executed. There was much in his eloquence and infectious zeal to awaken Irish sympathy.

EMPIRE CITY, a name given to New York City, the chief city of the Empire State.

EMPIRE STATE, a name given to the State of New York on account of its pre-eminence in population, wealth, and industrial enterprise.

EMPIR'ICISM is a system of philosophy that recognises actual experience as the only source of knowledge. Opposed to the empirical school among the Greeks was the Idealist school of which Plato was an exponent.

EMU, a bird, native to Australia, much like the ostrich. It is about six feet in height, of a dark brownish colour, with legs and skin of slaty-blue. It is a fleet runner but weak of wing. It kicks powerfully forwards. Its flesh is prized and its eggs are edible, but it is rapidly becoming a rare bird. In size it is intermediary between the cassowary and the ostrich. Its plumage is plentiful and not a little resembles hair.

ENAMEL is a vitreous substance or glass, coloured if necessary by the admixture of earths or metallic oxides before fusion, used as a surface for porcelain or metal, for decorative or useful purposes. *Cloisonné enamel* is applied to a surface divided into a pattern of compartments by fine partitions, each compartment containing a distinct colour; *champlevé enamel* is placed upon a hollowed ground, and is largely used in jewellery; *surface enamel* forms a uniform coating like the white enamel face of a time-piece. Enamels for art work may be had in sticks. These are powdered and applied to the surface and then baked until the powder fuses and adheres. Modern enamels may be had in numerous tints, whereas ancient enamels are found in few but well contrasting colours.

ENCAUSTIC TILES are tiles of a very close texture used in the making of mosaic pavements for churches, etc. They are either plain or figured, and are square or triangular in shape. The clay, which in fineness is intermediate between that used for ordinary tiles and that used for porcelain, is coloured and placed in steel moulds, and then submitted to a pressure of many hundred tons by means of a

plunger which exactly fits the mould. The tiles are then dried, glazed, and fired.

EN CRINITES, fossil crinoids, "lily stars or sea lilies," occurring so plentifully as to form great strata of marble in Europe. They produce varied sectional figures in the strata, as may be seen in Derbyshire marble.

ENCYCLICAL, a letter, sent by the Pope to the Bishops of the Roman Church, advising them on the policy to be pursued by the Church in dealing with questions of great public importance.

ENDIVE, a common garden plant, introduced into Europe from the East Indies, the bleached leaves of which are used for salads. The long, fleshy, and milky root of another species of the same genus is cut into pieces, dried in kilns, roasted, ground, and then, under the name of chicory, mixed with coffee. The mixture is said to possess a better aroma and to be less astringent than pure coffee.

ENDOGAMY is the restriction of marriage to members of the same clan.

ENDYM'ION in mythology was the son of Jupiter; being beloved of Selene (Diana), he was wrapt in endless sleep on Mount Latmos, where she could look upon him at night. Keats took the myth as the subject of one of his earliest poems.

ENGADINE, a famous Swiss Valley of Eastern Switzerland, along the river Inn, some 60 miles in length. Its villages are now almost all holiday or health resorts, especially for consumptive patients.

ENGHIEN, DUC D'. See *D'Enghien.*

ENGINEERING, a term denoting the various fields of activity of the civil, electrical, hydraulic, military, mining, marine, and mechanical engineer. *Civil engineering* refers to the construction of roads, bridges, canals, railways, drainage works, harbour works; *electrical engineering* involves the use of electrical power, as in rail and tram service, signalling and telegraphy, &c.; *hydraulic engineering* covers the employment of hydraulic engines, which are suitable for the most part for intermittent work; *military engineering* involves fortification, temporary or permanent, surveying, road making, pontoon building, &c.; *mining engineering* includes the surveying, selecting, opening, and superintending the works of mines; *marine engineering* is concerned with the building and management of a ship's engines.

ENGLAND, together with Wales and Scotland, forms the Island of Great Britain. It looks eastward over the North Sea towards the sea board of Northern Europe, southward across the Channel to France and Spain, and westward to Ireland and the Atlantic. Its position at a converging point of radiating waterways in the centre of the land masses of the northern hemisphere has contributed to its maritime ascendency. The development of road, bridge and canal building, and of machinery in the 18th century, together with the consequent development of its coal mining, weaving and spinning industries has given it the foremost position in the world in wealth and solidarity of influence. It has an area of 50,823 square miles, and a population of 33 millions. Its centres of industry are on the coal-fields, if we except London, and these all lie north of a line from Humber to Severn. The main coal-fields are the Durham, the "Cotton and Woollen," between the Ribble and the Trent, and the "Black Country and Potteries." Its manufactures, as shown by its exports, stand in the following order of importance: cotton goods, iron and steel, coal and coal products, machinery, woollen goods, ship-building, chemicals, fisheries, manures, boots, earthenware, colours, arms and ammunition. London, the capital, and seat of government, has a population of 4½ millions, exclusive of the adjacent boroughs like West Ham, that have a separate local government; Liverpool, Manchester, and Birmingham have each over half a million inhabitants; Leeds and Sheffield, over 400,000; whilst eight cities have over 200,000, and more than twenty have over 100,000. South Lancashire is the seat of the cotton industry, the West Riding of Yorkshire of the woollen, South Staffordshire and the Durham coal fields of the iron, Sheffield of the tools and cutlery, North Staffordshire of the pottery, Leicester and Nottingham of the boots, hosiery, and lace, and the Weaver valley in Cheshire provides the country with salt. Over £200,000,000 is expended annually on the importation of food stuffs into the United Kingdom, a fact which renders necessary the maintenance of a strong navy to protect its commerce in time of war. Agriculture tends rather to the rearing of good stock than to the cultivation of all the available land, as the profits from the raising of wheat crops are extremely small. Refer to "England" in *Index.*

ENGLISH CHANNEL, separating England and France, is 21 miles across at the narrow eastern end, and increases in width westward. Plans have been made for the construction of a Channel tunnel from Dover to Calais, but the idea finds little favour in England. The Dover-Calais passage takes an hour, the passage from Folkestone to Boulogne two hours, from Newhaven to Dieppe four hours ten minutes, and from Southampton to Havre eight hours.

ENGRAVING. (1) The art of designing or cutting inscriptions on any hard substance, as stone or wood. (2) A method of reproducing or printing designs and pictures by impressions from wood or metal. Metal plates are cut, corroded or photographically treated; then for printing they are washed in ink and cleaned so that the impression is taken from the residual ink in the lines. Wood blocks are cut in relief after the manner of a die.

ENSIGN. (1) The flag flown over the stern of a vessel to distinguish her nationality. Among British ships those belonging to the Royal Navy, the Royal Yacht Squadron, and the Coast Guard Service fly the White Ensign; vessels connected with the Naval Reserve and many yacht clubs are distinguished by the Blue Ensign; while the Red Ensign marks the merchant ship. (2) A term formerly applied to sublieutenants in infantry regiments because they carried the regimental colours. In the French and some other navies the title is held by officers of lowest commissioned rank.

EN'SILAGE is the storage of green fodder under pressure. Originally carried out in silos or pits this system has recently become popular as a means of preserving forage in covered stacks. It renders the farmer independent of the weather during the gathering of his crops, and preserves the nutritive qualities of the fodder.

ENTAB'LATURE, a term denoting that horizontal part of a classic structure which is imposed upon the columns. It is of three parts: first the *Architrave,* which rests immediately upon the columns; next the *Frieze,* which is usually ornamented by triglyphs (upright flutings with three ridges) separated by an open space called a metope, which is often occupied by a design in relief; and, thirdly, the *Cornice* which overhangs the other two and forms a kind of hood by a series of projecting mouldings.

ENVIRONMENT denotes the surroundings amongst which an organism lives. For an organism to live it must be adapted to some extent to its surroundings, and the more perfectly it is so adapted, the greater is its chance of surviving and of leaving descendants. If the environment changes with the seasons of the year, the organism, as a rule, presents corresponding changes. Man is more independent of environment than other organisms; indeed, the whole of civilisation has for its object the adaptation of the environment to suit man, thus reversing the natural process; for example, by means of artificial light, fire and clothing we make the environment within doors very much what we please. We are, however, still largely at the mercy of our mental and moral environment, specially that in which we spend our youth.

EPAMINON'DAS, a Theban general who defeated the Spartans at Leuctra, B.C. 371, and founded a city (Megalopolis), in Arcadia. He died from wounds received in his last victory at Mantinea, B.C. 362.

EPAULETTES, ornaments worn on the shoulder by naval and other officers. By their pattern, material, or number they serve to distinguish the wearer's rank. Their use in the British army was abolished in 1855.

EPERNAY, a town on the Marne, in the north-east of France, the centre of the champagne industry, with extensive storage vaults cut in the chalk.

EPHEM'ERA, insects that live but a few hours. As a rule they appear in the evening of a summer day in clouds above the water from which the day's heat has brought them. Strangely enough the transition from egg to larva, and from larva to the winged stage, takes many months, and the brief summer dance ends their existence at its very height; having dropped their eggs into the water they die.

EPHESUS, one of the greatest of the ancient cities of Asia Minor, situated near the mouth of the Cayster river, which flows into the Ægean Sea. It had a magnificent temple dedicated to Diana, and it was the head-quarters of a Christian community established by St. Paul. There are now extensive ruins to bear witness to its former grandeur, including the great theatre, and the temple of Artemis (Diana), but the site is occupied by mean villages.

EPHESUS, COUNCIL OF, the third General Council of the Early Church, held under Cyril of Alexandria, A.D. 431. There were present 198 bishops, and for the first time papal delegates from Rome. It condemned the Nestorian heresy, which asserted that Christ as Son of God was one person, and as Son of Man another person.

EPHOD, a significant and important part of the ecclesiastial dress of the Jewish High Priest. It was of the nature of a vest with shoulder pieces, on each of which was an onyx stone. It was made of gold and coloured thread.

EPHRAEM SYRUS, a theological poet of the early Syrian Church, who settled at Edessa, Mesopotamia, where he died about 370 A.D.

EPIC POETRY, or heroic poetry, takes as its subject the heroic achievements of a national hero, or events of national interest in so far as they form a poetic whole. In Greek, the Iliad and Odyssey. in Teutonic literature, the Nibelungenlied, and in Anglo Saxon, the Beowulf, are examples of the national epic. The literary epic is exemplified in Virgil's Æneid and Milton's Paradise Lost.

EPICTETUS, *b.* about 60 A.D., was a famous Stoic philosopher who lived and taught at Rome until the expulsion of the philosophers by Domitian. His doctrines were of an elevating nature, and included obedience to conscience, the love of practical goodness, and trust in Providence. His discourses and maxims were collected by his disciple Arrian, and published under the title "Enchiridion."

EPICU'RUS, an Athenian philosopher (B.C. 342–270), who maintained that the highest good for man was happiness, and that man's greatest obstacle to happiness was fear. He and his followers lived simple and temperate lives as being most conducive to happiness, although in later days a misconception of his idea of pleasure led to the connection of Epicureanism with luxury and sensuality.

EPIGRAM, whether in prose or verse, implies the terse and happy expression of a single thought or subject, and in verse the point of the epigram is usually accentuated by a striking conclusion. The term was first applied to Greek inscriptions, and afterwards to a concise kind of poem often satirical in feeling.

EPILOGUE, a short speech in prose or verse addressed to the audience at the end of a play, and intended either to elucidate certain points in the piece, or to crave indulgence for any weakness in the play or among the players. Many of Shakespeare's plays are thus concluded.

EPIPH'ANY, "a manifestation," is the name of a Christian festival commemorative of the manifestation of Christ to the Gentiles, in the persons of the Magi, who visited the infant Saviour in Bethlehem, where they presented gifts of gold, frankincense, and myrrh. The festival is held on 6th January.

EPISCOPACY, the system of Church government by bishops who alone have the power to admit to Holy Orders. This form of government is common to the Anglican, Roman, and Greek Churches.

EPITHALA'MIUM, a wedding song, a poem in honour of a newly married pair. Edmund Spenser wrote his "Epithalamium" in honour of his own bride in 1595.

EPSOM, 15 miles south-west of London, a market town of Surrey, 10,000 inhabitants. It was a health resort in the early part of the 18th century, famous for its "Epsom Salts" springs. Epsom Downs has long been famous for its race-course, especially since 1780, when the "Derby" and the "Oaks" were first instituted.

EQUERRY, an officer of state under the direction of the Master of the Horse. The six equerries in ordinary are selected from among naval and military officers, and each is in attendance on the king for a month at a time. An equerry is also attached to the suite of other members of the royal family.

EQUINOX, the name given to each of those times of the year (March 21st and September 22nd) when the day and the night are of equal duration all over the world. This occurs when the sun is vertically above the earth's equator.

ERA, the period reckoned from a certain epoch, or fixed point of time; sometimes used in the same sense as "epoch." The *Jewish Era* dates from the traditional year of the creation, 3760 B.C., a date which Freemasons have retained in their ritual. The *Roman Era* dates from the year of the founding of Rome. "Anno urbis conditæ," A.U.C.), which is usually allowed to be 753 B.C. The *Christian Era*, now in almost universal use, was introduced into Italy by Dionysius Exiguus, a Roman Abbot, in the 6th century, and was gradually adopted by the other Christian countries. It is supposed to date from the birth of Christ, but it is commonly held that Dionysius was four years late in his reckoning. The *Mohammedan Era* dates from the "Hegira," or Flight of Mohammed from Mecca to Medina, which occurred 15th July, 622 A.D.

ERASMUS, *b.* at Rotterdam, 1465, *d.* at Basel, 1536; the famous Dutch classical and theological scholar of the Renaissance; educated in the monastery of Stein and at Paris University; visited England 1498–9 and 1510–14, when he formed a close friendship with Colet and More. He declined ecclesiastical preferment that he might devote his life to scholarship. As a reformer he was opposed to all violent changes. His most celebrated work was his Greek Testament, which had a great influence on the thought of leading men of his time. He is said to have "laid the egg that Luther hatched."

ERASTIANS, upholders of the tenets attributed to Thomas Erastus, a German controversialist (1524–83), who proposed to restrict the power of the Church. Erastianism now implies State control of the Church, a policy that goes beyond that favoured by Erastus.

EREBUS, in Greek mythology, was the son of Chaos and Darkness, and the father of Light, Day, and the Fates. From the circumstance that he was turned into a subterranean river the name came to be applied to the Infernal Regions.

ERICSSON, JOHN, *b.* in Sweden, 1803, *d.* 1889, a distinguished engineer whose locomotive, the *Novelty*, competed unsuccessfully with Stephenson's *Rocket* for the prize offered for the best. He afterwards devoted himself to marine engineering and naval architecture; and is sometimes credited with the invention of the screw-propeller. In 1861 he designed the *Monitor* for the United States' navy. He was also the inventor of a torpedo boat, and applied steam to the working of a fire-engine.

ERIE CANAL, the chief canal of the States, connects the Hudson River at Albany with Lake Erie at Buffalo; 350 miles long.

ERIS, in mythology, the sister of Mars and the goddess of discord. She originated the dispute for the prize of the golden apple, and was thus the first cause of the Trojan War. In revenge for not being invited to the wedding of Peleus, she threw a golden apple among the guests with the message, "To the Fairest." The shepherd Paris awarded the apple to Venus who, in return, promised him the fairest of women.

ERITREA, an Italian colony on the Red Sea, with Massowah, the natural port of Abyssinia, as capital.

ERMINE, the stoat, a member of the weasel family, a thin, short-legged carnivorous animal found in cold countries. In particular, the term is reserved for the animal in its white winter fur with a black tipped tail. The fur of the ermine, when made up, is arranged to display the black tail tips at regular intervals. As a facing used in the robes of English judges, ermine has come to represent judicial fairness.

EROS or **CUPID,** which see.

EROSION is the wearing down of the land surface of the globe by the action of running water, the waves, currents, frost, ice, etc. Rivers hollow out their beds and convey the eroded material to a lower level; glaciers have scooped out mighty valleys and formed the beds of lakes; frost is constantly disintegrating and pulverising the rocks, while the waves undermine the cliffs and produce immense falls of rock.

ERRATICS, a term applied by geologists to water-worn boulders and masses of rock that differ entirely in character from the strata with which they are in contact. Blocks of Norwegian granite are found on the plains of Denmark; huge boulders from the Grampians are seen on the low-lying lands of Fifeshire and Midlothian; and the Cumbrian Hills have contributed "erratics" to the Moors of Yorkshire. They have been transported, long ages ago, on the backs of glaciers or ice-sheets.

ERSKINE, THOMAS, *b.* at Edinburgh, 1750, *d.* 1823, was an eminent lawyer and orator. After four years spent in the navy and six in the army, he devoted himself to the law, and soon acquired a leading position, being engaged in most of the *causes célèbres* of his day, including the defence of Admiral Keppel and of Tom Paine. For many years he represented Portsmouth in Parliament, and was a determined opponent of Pitt and his policy. He became Lord High Chancellor in 1806.

ERZERUM, capital of Turkish Armenia, near the northern source of the Euphrates. It stands on a beautiful plain 6,000 feet above sea level, and is an important trading centre and fortress.

ERZGEBIRGE, a range of mountains between Saxony and Bohemia, rich in minerals and attaining a height of 4,000 feet.

ESARHADDON, (680–668 B.C.), son of Sennacherib, was king of Assyria. Under him the Assyrian kingdom reached its highest glory. He conquered and governed Egypt, rebuilt and restored Babylon, and made at Nineveh a palace of great magnificence.

ESCHATOLOGY, the branch of theology that deals with the state of man after death, including such subjects as resurrection, judgment, and the future state. The term literally means, "an account of the last things."

ESCORIAL, or **ESCURIAL,** a palace of the Spanish kings, situated 30 miles north-west of Madrid in the hills. It contains a palace, a mausoleum, and a monastery, and has an austere aspect in its wind-swept situation. It was built by Philip II. in honour of St. Lawrence, in allusion to whose martyrdom by burning on a gridiron, the ground plan was made in the form of a gridiron.

ESKIMO DOG, rather heavier than a Scotch collie, which it somewhat resembles; this long-nosed, bushy-tailed dog is the one domestic animal of the Eskimos. It is used in teams to draw sledges, and it is said that in this way 40 miles a day has been covered comfortably with ½-cwt. for each dog. They are much overworked, are ill-tempered, and prone to disease. They retain much of their native savageness, and are therefore, as beasts of burden, inferior to the reindeer of the Lapps.

ESKIMOS, the aboriginal inhabitants of Greenland, and the Arctic regions of America. As a rule they live near the sea, but, as their numbers have been computed at 40,000, and the area they inhabit is more than 15,000 square miles, it is plain that they are thinly scattered. They are very conservative in habit, and show small inclination to adopt civilized manners of speech or life. This is perhaps due to the necessity of adhering to all their customary devices in obtaining their hard won sustenance. They are a short people, akin to the American Indians, and they live by hunting and fishing. Their most remarkable invention is the kayak, a light skin canoe, 18 feet by 2 feet, with an opening in the top, in which the occupant seats himself, low down, wrapped in waterproof skins. In this canoe they are able to capture seals, which they take with harpoons to which is attached a

line with floats. Ashore they use their dogs and sledges in the chase. In summer they reside in tents near open water. Their winter huts are made of turfs and snow, and heated by oil lamps. They congregate in stations of twenty or thirty families.

ESPALIER, a frame of trelliswork on which fruit trees are trained so that they may be exposed to the sun and the air. The name is also applied to trees so trained. In England they are usually found forming the borders of the paths of a garden, but on the Continent they are often placed obliquely or even horizontally to gain the most effective exposure. In this way the mischief of wind is reduced.

ESPARTO grass abounds in North Africa and the south-east of Spain. Its use for the manufacture of paper is more particularly confined to England; but it has from ancient times been variously used in the making of string, baskets, sandals, matting, and similar things. It needs little cultivation or rain, and the crop is plucked, not cut. Careless and indiscriminate treatment has necessitated official regulations, both in Algiers and Spain, for the preservation of this natural asset. In 1902 Great Britain took £242,000 worth of grass from Spain alone. The grass is steamed and the pulp is used for paper making. France and Spain use rye, oats and other grasses, and it may be said that the use of esparto is peculiarly English.

ESPERANTO, an artificial, international language, invented by Dr. L. L. Zamenhof, of Warsaw, who first published his ideas in 1887. It is not intended to replace any natural language but to act as an auxiliary in promoting intercourse between peoples, for the interchange of ideas, and for assisting commercial transactions. A marked feature of the system is its simplicity. There are no exceptions to rules and no irregularities. The pronunciation is phonetic. It is claimed that the whole of the grammar, which is embodied in seventeen terminations and thirty prefixes and affixes, may be learnt in an hour. The vocabulary consists of a number of words which are already common to most civilised languages, and about two thousand root words, the meaning of which may be so modified by the prefixes and suffixes as to express any desired shade of thought. Esperanto was introduced into England in 1902, and societies, groups, and clubs have been formed in many towns. It is still more widely spread through France and Russia, has been welcomed in Germany, and is gaining a footing in the United States of America.

ESQUI'MALT is a British Naval Station at the south end of Vancouver Island, guarding the western terminus of the Canadian Pacific Railway, just as Halifax in Nova Scotia guards its eastern end. It is near to Victoria, the capital of British Columbia.

ESQUIRE. This name was originally applied only to the two attendants of a knight, and it frequently was used in its abbreviated form, squire. As a title, it was reserved in time for people of certain rank or standing, by birth or profession. Thus, the eldest son of a knight or the younger son of a nobleman might claim the title, as also might men in certain official positions, notably, officers of the king's household, barristers, sheriffs, and all holders of the king's commission. It is hardly necessary to point out that its usage at the present day is almost entirely indiscriminate.

ESSAY ON MAN. A didactic and philosophical poem in four Epistles, written in heroic couplets, by Alexander Pope, and published between 1732–4. It contains much of Pope's most brilliant work, although its philosophy, which perhaps Pope owed to his friend Bolingbroke, is now neglected.

ESSAYS AND REVIEWS, a volume of theological essays written for the most part by clergymen of the Church of England, and first published in 1860. The unorthodox views expressed by some of the writers gave rise to a lengthened and bitter controversy, and were condemned by Convocation. Dr. Temple, who became Archbishop of Canterbury, was one of the essayists. His election to the see of Exeter in 1869, was strongly opposed, not for the views expressed in his essay, but on account of his association with the other essayists.

ESSEN, in Rhenish Prussia, on the Dusseldorf coal field, is largely devoted to the manufacture of iron. The Krupp steel and ordnance works have their great establishment here, and there are also tobacco factories, dye works, and breweries. Essen has an old church of much antiquarian interest, dating from the 9th century.

ESSENES, a Jewish sect of the 2nd century B.C., who have been the object of much historical enquiry because of their possible influence on religious life in our Lord's time. They aimed at extreme priestly sanctity, and abstained from worldly affairs. They established communistic settlements in the deserts and encouraged celibacy. They were strict in their obedience to the Levitical Law.

ESSEX, EARL OF. See *Devereux.*

ESTATES OF THE REALM. The king, together with the three estates of the Realm, form the Parliament of Great Britain and Ireland. The three estates are the Lords temporal or Peers, the Lords spiritual or Bishops, and the Commons. It was out of the action of the third estate (tiers état), who sought equal voting power with the other two, that the French Revolution made its first steps in 1789. The term fourth estate has been humorously applied to that all-important political factor, the press.

ESTHER, from whom the Old Testament book takes its name, was the adopted daughter of one Mordecai, of the tribe of Benjamin. She was made queen by the Persian king, Ahasuerus (480–465 B.C.), in the place of the deposed queen Vashti. In this position she was able to defend her compatriots from the plots of Haman, the king's chief minister, who was hanged on the lofty gallows prepared by himself for Mordecai. In this way Esther brought about the deliverance which the Jews commemorate in the feast of Purim. It is remarkable that the book is almost devoid of religious sentiment. The name of God is not once mentioned. Perhaps it was intended to be read at the general festival of Purim. Luther disapproved of its inclusion in the canon.

ETCHING is the art of drawing on metal plates so that the drawing may afterwards be transferred to paper. In dry-point etching the drawing is scratched directly on to the plate by means of an etching-needle. More frequently the plate is thoroughly cleansed, covered uniformly with a thin coating of a resinous substance known as etching ground, and then smoked. A paper with the outline of the subject in lead pencil is damped, laid face downwards on the prepared plate, fixed in position, and the whole passed through a roller press, with the result that the outline is transferred, in reverse, to the plate. The artist now draws with a point, through the resinous ground, the lines that are necessary to represent the various forms and the shading, each line penetrating the "ground" completely, but merely scratching the metal surface. In the *biting-in* process these lines are deepened by the corrosive action of an acid solution. Depth of tone is obtained by exposing the lines to the action of the acid for a longer time than that required for the lighter shades. The finishing touches are sometimes put in by dry-point etching. The term *etching* is also applied to drawing on glass by the corrosive action of an acid.

ETESIAN WINDS, periodical northerly winds prevalent over the Mediterranean and North Africa during the summer, and due to the rarefaction of the air over the African deserts.

ETHELBERT, KING OF KENT, reigned from 560 to 616. His marriage to Bertha, a Christian princess, was followed by the mission of Augustine, 597, and the conversion of the king. Civilization and knowledge spread in his kingdom, and, about the year 600, Ethelbert promulgated the earliest written code of Saxon laws.

ETHELRED THE UNREADY, or Ethelred II., reigned 978–1015; his sobriquet denotes "lacking counsel." He made a political blunder in endeavouring to buy off the Danes by payment of Danegeld, and he ordered a general massacre of them on St. Brice's Day, 1002. Sweyn of Denmark came to avenge this atrocity, and Ethelred fled to Normandy, to return on the death of Sweyn.

ETHELWULF, an Anglo Saxon king, *d.* 858, the son of Egbert, and father of four English kings, of whom Alfred the Great was the youngest. Danish invasions troubled his reign.

ETHER. (1) The propagation of light, sound, radiant heat, and electro-magnetic stresses is explained as being of the nature of wave-movement, and this supposition, which we may assume to be established, necessitates the existence of a universal medium through which the waves are transmitted. Such is the medium that physicists name *ether.* It permeates all matter and pervades all space. It has been likened to an impalpable and all-pervading jelly through which waves of light and heat are for ever throbbing, but a jelly whose rigidity is one thousand millionth of that of steel, and whose density is infinitesimal. Illustrations of the nature of this hypothetical medium, however, are bound to leave much to the imagination. Light-undulations and electro-magnetic undulations possess properties whose identity is explicable at present only on the hypothesis of one medium, but its precise nature may be the object of new conceptions with each advance in physical research. (2) Ether is also the name of a volatile liquid obtained from alcohol and used as an anæsthetic.

ETHICS is the science of morals. It endeavours to formulate the distinctions between right and wrong, to show what are the duties of man, and why those duties should be performed.

ETHIOPIA originally implied the African territories inhabited by the uncivilised dark races of the ancient world. Subsequently, it became more definite, and denoted the land of the Upper Nile. It included part of Abyssinia and the present Soudanese provinces. The people were of Semitic origin, and most probably they came from Arabia. Their chief city was Meroë, whose ruins lie on the Nile, midway between the Atbara and Khartoum.

ETHNOLOGY, the science that investigates the physical and mental characteristics, the origin, migrations, and present distribution of the various families of the human race. Ethnologists have divided mankind into four main groups, the

Caucasic, American, Mongolic, and the Ethiopian or Negro.

ETIQUETTE. Refer to *Social Guide.*

ETNA, the highest volcano of Europe, situated near the east coast of the island of Sicily, may be ascended from the town of Catania. The mountain rises evenly, as a cone, to a height of 10,835 feet, but on the east side it has an enormous chasm or precipitous gorge, known as the Val del Bove. Its base is well cultivated and fertile. Above the cultivated belt is a zone of forest, but the last 4,000 feet is a dreary waste of volcanic debris, usually mantled in snow. Over 90 eruptions have been recorded and described, and 16 of these occurred during the 19th century. An observatory stands on the mountain, on the south side, at a height of 9,000 feet, and is the highest inhabited house in Europe.

ETON, a small town of Buckinghamshire on the left bank of the Thames, opposite to Windsor, is mainly dependent on the College, which has over 1,000 pupils. The College was founded in 1440 by Henry VI. The older parts, or College proper, are reserved for the 70 scholars or " collegers " ; the remaining pupils, known as " oppidans," live in the various masters' houses. The College is governed by a provost and ten fellows, and is intimately connected with King's College, Cambridge, its sister foundation, to which there go up annually certain of the collegers or oppidans, who have won in competition the various valuable scholarships that connect the two establishments.

ETTRICK SHEPHERD, THE. See *Hogg, James.*

ETTY, WILLIAM, R.A., *b.* 1787, *d.* 1849; an English painter of historical subjects, a great colourist, and an untiring student of the living figure. His landscapes and drapery always harmonize admirably with his figures.

EUBŒ'A, or Negropont, a long, mountainous island in the Ægean Sea, separated from the mainland of Greece by a tortuous strait, which near Chalcis narrows to forty yards. The island is 98 miles long and 30 wide, and it is rich in iron and copper. Its highest mountain is Mount Delphi (5725 feet). In the south the beautiful Cipolino marble is quarried.

EUCALYPTUS, a genus of evergreen trees of which 120 species flourish in Australia. The thick leaves are alike on both sides, and usually are suspended vertically, so that they throw but small shadow. The trees are often of an extraordinary height, and, because they exude a kind of gum, they are commonly known as gum trees. The leaves of the *Eucalyptus Globulus*, or *blue gum tree*, yield the oil well known as a remedy for colds, and called " Eucalyptus."

EUCHARIST, " Thanksgiving," a name given to the sacrament of the Lord's Supper, because it is a special act of praise and thanksgiving for " the sacrifice of the death of Christ, and of the benefits which we receive thereby."

EUCLID, a famous Greek geometrician, who lived at Alexandria about 300 B.C. His " Elements " are contained in thirteen books, I.-IV. and VI. treating of plane geometry, V. of proportion, VII.-IX. of the properties of numbers, X. of incommensurable numbers, and XI.-XIII. of solids. On the Continent and in America, Euclid has been superseded by modern methods of treating geometry, and England is now beginning to follow this example.

EUGENE, PRINCE OF SAXONY, *b.* at Paris, 1663, *d.* 1736. On the exclusion of his mother, a niece of Cardinal Mazarin, from the court of Louis XIV., and the refusal of a commission by the king, he attached himself to the Austrians, with whom, as commander-in-chief, he did brilliantly against the Turks (1696–9). He commanded the Austrians against the French in Northern Italy in the early campaigns of the War of the Spanish Succession, and defeated Villeroi at Cremona (1702). He shared with Marlborough the victory of Blenheim (1704), and the series of successes in the Netherlands (1705–10). After the peace of 1714 he returned to Vienna, and again took the field against the Turks, whom he routed at Peterwardein (1717), and against whom he carried Belgrade and received it is said, his 13th wound. He spent his remaining years in Vienna, a popular hero and an energetic politician. Energy and promptness were his characteristic traits.

EUGENE ARAM was a highly cultured, self-educated schoolmaster, *b.* 1704 in Yorkshire, executed for murder, 1759. Whilst at Knaresborough he murdered a shoemaker whom he suspected of an illicit love for his wife. Thirteen years later, an accomplice brought about his arrest by unguarded references to the skeleton in a cave. During these thirteen years Eugene Aram had continued his wide studies, and successfully conducted schools. His defence was brilliant but unavailing, and he was hanged at Tyburn. Bulwer Lytton (the first Lord Lytton) published in 1832 a novel dealing sympathetically with the unhappy scholar, and the poem by Thomas Hood, " The Dream of Eugene Aram," displays with terrible reality the deep tragedy restlessly re-enacted in the sensitive mind of the cultured usher.

EUGENICS, the study of agencies that may improve or impair the racial qualities of future generations either physically or mentally.

EUGÉNIE, EMPRESS, *b.* 1826, at Granada, in Spain, married Napoleon III., Emperor of the French, in 1853. The fall of the Emperor's government on his surrender to the King of Prussia at Sedan, 1870, brought the Empress as a fugitive to England. She settled at Chislehurst, Kent, where, at the end of the Franco-German War, she was joined by her husband, who died there in 1873. The Empress was a great personal friend of Queen Victoria, and has always been regarded in England with popular sympathy, a feeling that was accentuated when she lost her son, the Prince Imperial, in the Zulu War. She now resides at Farnborough Hill.

EUMEN'IDES (i-des) or " well wishers," a euphemistic name for the Erinyes or Furies whom the kinder title was meant to propitiate. The Furies were three, Alecto, Megæra, and Tisiphone, and they were, in Greek mythology, " the avengers of blood." It is noteworthy that Milton confuses them with the three Parcae, or Fates in his lines,

" Comes the blind Fury with the abhorrèd shears,
And slits the thin spun life." [*Lycidas.*

EUNUCH, an oriental official, who has often risen to high political influence. Being castrated, he is assigned the duty of attendant in the harem. Hence the name is applied in general to a castrated man, of whom many were formerly employed in choral work in Italy, as the retention of the boyish voice is one of the effects of this barbarous custom.

EUPHEMISM, the name of a figure of speech in which an ugly idea receives a fair name, (see *Eumenides*). Instances of euphemisms are common in every-day talk, as when a serious offence is alluded to as an indiscretion or a peccadillo, a thief as " one of the light-fingered gentry," or a retreat is described as a strategic movement.

EUPHRA'TES, a river, originating in the junction of eastern and western branches from the hills of central Armenia, breaks through the Taurus mountains, and after a course of 1,700 miles enters the Persian Gulf. One hundred miles from its mouth it receives the waters of the Tigris, the land enclosed between the two rivers being known as Mesopotamia. From the junction of these rivers to the sea the river takes the name of Shatt-el-Arab, and on it stands Basra, a town which has developed with steam navigation. The ancient civilization of the Euphrates Valley, like that of the Nile, depended upon canals and irrigation works, and upon the utilization of the annual floods. Ancient Babylon stood on its banks, Nineveh and Bagdad on its twin river the Tigris.

EUPHROS'YNE, one of the three Graces, whose name Milton freely translates, " heart easing mirth " [*L'Allegro*]. Her sisters were Aglaia and Thalia, and the three were representative of beauty and grace.

EU'PHUES (u-es). John Lyly, one of the early Elizabethan poets and Dramatists, set a fashion in literature by his work " Euphues, or the Anatomy of Wit." This romance abounds in conceits, puns, and fashionable circumlocutions, and its influence is apparent in the early works of Shakespeare, notably in the " Two Gentlemen of Verona." Euphuism became a cult, and did not altogether pass away until the Puritan Revolution.

EURASIAN, a term used in India to designate half-castes sprung from European fathers and Hindu mothers.

EURIP'IDES (i-des), *b.* 480, *d.* 406 B.C., the third of the three great Greek Tragedians, in point of time. Æschylus and Sophocles were more heroic in their conceptions, Euripides more human, and yet more moving and dramatic. He is pessimistic, and does not deal kindly with his women folk, although he is the author of *Alcestis*, the world's masterpiece of wifely dutifulness and sacrifice. Of the 80 plays he wrote, 18 are extant.

EURO'PA, daughter of King Agenor of Phœnicia, was carried off by Jove, who appeared in the form of a white bull, to the island of Crete, where she became the mother of Minos and Rhadamanthus.

EUROPE is geographically a peninsula of Asia, but it has developed its own western characteristics and has become the leading factor of the world's civilization and progress. Its most notable geographical feature is the great extent of coast line it possesses in relation to its area, and to this fact may be attributed the extraordinary use it has made of its position in the centre of the land masses of the Northern hemisphere as a means of extending its influence over-seas. Great Britain, France, Germany, Italy, Holland, Belgium, Spain, and Portugal all possess extensive colonies widely separated from the home country. The political weight of Europe is in the hands of the six great Powers—Great Britain, France, Austria, Germany, Russia, and Italy, who act together as the " Concert of Europe." Geographically, Europe is a continent of peninsulas, but it is traversed by a great plain widening as it proceeds eastward from the Netherlands across Prussia and Poland, to include the vast territory of Russia. This plain is crossed by large rivers, the Rhine, Elbe, Oder, and Vistula, which flow northward from a mountain system whose nucleus or core is round in the Alps of Switzerland. From these central highlands there flow in other directions the Loire and Rhone of France, and the great Danube of

Austria-Hungary. The Russian plain has it own magnificent river basin of vast drainage, that of the Volga, a river falling slowly to the Caspian Sea. The peoples of Europe may be roughly divided, according to language, into the Teutonic races of the north-west, the Latin races of the western Mediterranean, the Slavonic peoples of the Danube and Volga basins, the Celts of the western fringe, and the Greeks and Mohammedans of the Eastern Mediterranean. Of these, the Teutonic peoples exert a predominating influence in world politics by reason of their maritime ascendency. The population of Europe is about 400 millions.

EURYD'ICE, (i-ce), in Greek mythology, was the wife of Orpheus. She died of a snake bite, and Orpheus insinuated his way by his power of music to an audience with Pluto, who was won over to restore her. There was, however, one condition. Orpheus should be followed by his wife to the upper air if he forbore to look back upon her. In his anxiety, when on the point of emerging from the lower world, Orpheus looked back, and Eurydice was snatched back again.

EUSEBIUS OF CÆSAREA, *b.* about 264, *d.* 340, one of the most learned of the Fathers of the Christian Church, and a pioneer in Ecclesiastical History. He was present at the Council of Nicea, 325, and was distinctly moderate in his attitude towards Arianism. He wrote a *Chronicon*, or history of the world down to 328 A.D., and an ecclesiastical History recounting the chief events in the life of the Church till 324. Both works are of interest, because they refer to authorities and authors no longer available, but the Ecclesiastical History would have been more useful if it had not been silent about the dissensions and weaknesses of the early Christians.

EUTHANASIA means painless death. The name has been applied to the general question of alleviating the pains of dissolution by drugs or other means.

EU'TYCHES (ty-ches), of Constantinople, the originator of the Eutychian heresy, that Christ had only a divine nature, was condemned by a general Council at Ephesus, 451.

EUXINE, ancient name of the Black Sea, meaning "inhospitable," and so called because of its treacherous weather and sudden storms.

EVANGELICAL is a name adopted by all those reformed sects of Christians who base their authority on a personal appeal and reference to the Evangel or Gospel, rather than to the traditional authority of the Church. Nonconformists, English Low Churchmen, and Scottish Presbyterians alike emphasise the evangelical tenets, viz., the necessity of conversion from an unregenerate state, justification by faith alone, forgiveness through the Atonement, the inspiration of the Scriptures, and a final appeal to them for authority. The strong personal appeal that marks the Evangelical movement was initiated by the great revival under the Wesleys and Whitfield, during the religious apathy of the 18th century.

EVANGELICAL ALLIANCE, an association of Christian denominations from all parts of the world, the members of which are agreed on certain fundamental doctrines, and are united in their efforts to obtain and maintain religious freedom. The alliance arose out of a Conference held at Liverpool in 1845, and was organised in 1846.

EVANGELINE, a poem of sentiment written in hexameters by Longfellow, and published in 1847. It is founded on the removal of the French settlers in Acadia, (Nova Scotia), by the British in 1755.

EVAPORATION is the process by which a liquid or a solid becomes changed to a gas. The reverse process is known as condensation (of liquids), sublimation (of solids). The rapidity of evaporation depends on temperature, exposure of surface, and the state of saturation and the pressure of the enveloping air. Camphor, a solid, evaporates freely, and even snow diminishes in long continued frosts. It may be stated that there is no particular reason for using the term vapour in preference to the term gas. In the phenomena of dew and hoar frost, we have instances of the condensation and sublimation respectively of the water vapour in the atmosphere. All evaporation is accompanied by loss of temperature, and volatile liquids, like eau-de-Cologne, have consequently a cooling effect on the skin, and may be used effectually in soothing a headache.

EVELYN, JOHN, *b.* at Wotton, Surrey, 1620, *d.* 1706, a miscellaneous writer who spent much of his early life in travelling on the continent of Europe, "not in the counting of church spires," but in the study of the people and their customs. His most celebrated publications were "Sylva," or a Discourse on Forest Trees, and his "Memoirs" which include an interesting diary and correspondence.

EVEREST, MOUNT, the highest point in the Himalayas, and thus in the World, is named after Sir George Everest (*b.* 1790, *d.* 1866), the greatest of Indian surveyors, and the founder of the Indian survey. The mountain lies within the province of Nepal, and is 29,002 feet above sea level.

EVESHAM, a town within a bend of the Avon, about 25 miles due south of Birmingham. Simon de Montfort here suffered defeat at the hands of Prince Edward (afterwards Edward I.), in 1265.

EVIL EYE. It has been a very real belief among certain classes of people at all times that the glance of an evil eye was an unavoidable yet dire calamity. It is intimately connected with popular ideas of witchcraft. The Romans denoted the power of the evil eye by the word *fascinum*, whence comes our significant word fascination. The Greek myth of the petrifying glance of Medusa, the mediæval idea of the basilisk, and even St. Paul's reference in Galatians iii. 1, where the word "bewitched" refers to the idea of an evil eye, are familiar instances of this popular superstition. Among the Neapolitans there is a vivid belief in the influence of the "jettatore" even to this day.

EVOLUTION. See *Darwinism.*

EWING, JULIANA HORATIA, *b.* at Ecclesfield, Yorkshire, 1841, *d.* 1885, gained a reputation as a writer of stories for the young. Some of the most popular are:—"Land of Lost Toys," "Jackanapes," and the "Story of a Short Life."

EXARCH. (1) The name borne by the viceroys who governed the central portion of Italy as a province of the Eastern Empire from the 6th to the 8th centuries. (2) In modern Greece the *Exarch* visits the provincial bishops and churches as the deputy of the Patriarch. (3) The title of the head of the Bulgarian Church.

EXCAL'IBUR, a mysteriously effective sword wrought by the Lady of the Lake, and received from her by King Arthur, who had it returned to her before his death. The story of the returning of the sword by Sir Bedivere, and of the incident of an arm rising up to take it, is told in Tennyson's "Passing of Arthur."

EXCHANGE, THE ROYAL. An exchange or bourse is a place where merchants meet. Sir Thomas Gresham introduced the idea into England after experience of the Bourse at Antwerp, and Queen Elizabeth gave his Bourse the name of the Royal Exchange in 1571. The fire of 1666 demolished that building, and its successor suffered the same fate, 1838. Queen Victoria opened the present building in 1844. The tesselated pavement of the present building is the original one of Gresham's building. The chief business hour is from 3.30 to 4.30, and Tuesdays and Fridays are the chief days.

EXCHEQUER, anciently that department of the King's Court or Curia Regis that received the shire and other revenues, and kept the tallies. The name is held to be connected with the chequer pattern formerly upon the official table or table cloth. The chief finance minister of the Crown is known as the Chancellor of the Exchequer, and he presents to the House of Commons the annual Budget. All the judicial administration that formerly was attached to the court of Exchequer has been relegated to other courts, and the Chancellor is now a finance minister solely.

EXCHEQUER BILLS are promissory notes issued by the Government for £100, £200, £500, and £1000, bearing interest per diem from the day of issue, and paid off at par or renewable annually. See *Commercial Dictionary.*

EXCHEQUER BONDS. See *Commercial Dictionary.*

EXCHEQUER, CHANCELLOR OF THE. Refer to *Index.*

EXCISE is an inland tax on certain commodities produced and consumed within the country, and on licences to undertake certain trades and professions. Refer to "Excise" in *Index.*

EXCLUSION BILL, a bill unsuccessfully introduced into Parliament in 1679, to exclude from the succession to the English throne James, Duke of York, the Roman Catholic brother of Charles II. On a second attempt to pass the bill in 1681 Charles dissolved parliament.

EXCOMMUNICATION denotes exclusion from Church privileges, either in whole or part. The *Lesser Excommunication* debars simply from Holy Communion, the *Greater Excommunication* cuts off from the Church altogether. In mediæval times we find that the *Greater Excommunication* was sometimes accompanied by a "Papal Interdict," whereby a whole kingdom was at once excluded from all church privileges, an example of which occurred in the reign of King John. In England excommunication is now practically obsolete, and no civil penalties can follow upon ecclesiastical censure, except under the sanction of what is essentially a civil court. The most recent instance of excommunication in the Anglican Church is the sentence pronounced by Bishop Gray, of Capetown, upon Colenso, his suffragan bishop in 1863, for his destructive criticism on the Pentateuch.

EXEGESIS, a Greek word meaning the exposition or interpretation of any writing, but particularly the Scriptures. It includes textual criticism and the exposition of doctrinal and ethical conclusions based upon the text.

EXEQUATUR. A consul accredited to a foreign country receives formal recognition from that country under the form of an official note named an *exequatur.* See *Commercial Dictionary.*

EXETER, the county-town of Devon, on the banks of the Exe, a quaint old city, still retaining a part of its ancient walls. Its cathedral dates from the 12th century, and is celebrated for its magnificent west front.

EXETER HALL, the head-quarters of the Y. M. C. A. in the Strand, London, was purchased for the Society in 1880.

The great hall, which is provided with a large organ, accommodates 5,000 people and is used principally for religious and philanthropic meetings.

EXHIBITION, THE GREAT. This distinctive title is still attached to the first international exhibition held in London, 1851, although in magnitude it has been greatly surpassed by many others, notably those held in Paris, Chicago, and St. Louis (1904). If the idea of a great international exhibition did not originate with the Prince Consort, he certainly took the leading part in giving effect to it. The building, constructed of iron and glass, was planned by Mr. Joseph Paxton, and erected in Hyde Park. It was opened by Queen Victoria, May 1st, 1851, and during the 144 days it remained open was attended by upwards of six million persons. At the close of the Exhibition, the building, under the name of the "Crystal Palace," was removed to Sydenham, Kent.

EXMOOR, a wild district in the south-west of Somerset and north-east of Devon, rising in Dunkerry Beacon to the height of 1,717 feet. It is for the most part treeless, and it is remarkable chiefly for its breed of stout little ponies, for its horned sheep, and for the red deer that are still found in the wild state. It is the scene of Blackmore's "Lorna Doone," in which the lonely valleys and bleak ridges are admirably described.

EXODUS, "the departure," is the name of the second book of the Old Testament. It describes the history of the Israelites in Eygpt, their bondage, their deliverance under Moses, their heaven-aided departure, and continues their history up to the giving of the Law on Mount Sinai. Traditionally, the book was attributed to Moses, but it is believed by modern critics to be of composite character and of much later date.

EXOGAMY is the opposite of endogamy, and prohibits the marriage of a man with a woman of his own tribe. One outcome of this custom was the practice of marriage by capture.

EXORCISM is the name used for the act of bidding evil spirits, in the name of Christ, to depart from an afflicted person. In Baptism it was customary to exorcise the original spirit out of infants as well as adults. The practice was omitted in the Second Prayer Book of Edward VI. The Exorcist was in one of the minor orders, and his functions usually were exercised in Baptism, in supposed cases of personal possession by evil spirits, and in blessing the holy water and oil.

EXTRADITION is the act of delivering up to the government of a foreign country a person accused of committing crime within that country. All civilized countries have extradition treaties, and there is generally little hesitation in transferring criminals. A foreign criminal would be extradited from this country only on the request of the diplomatic agent of the power made to the Home Secretary, who would refer the matter to a magistrate. After allowing the defendant fifteen days for appeal against the magistrate's decision, the extradition would become effective. Political offences do not, in England, come within the purview of extradition treaties.

EXTREME UNCTION, a sacrament of the Roman Catholic Church which is administered when the recipient is believed to be at the point of death. The holy oil used is blessed by a bishop on Maundy Thursday and is reserved. The priest anoints with the sign of the cross the eyes, ears, nose, mouth, hands, and feet, and prays that through this unction pardon may be vouchsafed for all sins that have been committed through seeing, hearing, smelling, speaking and eating, touch, or walking.

EYCK, JAN VAN, *b.* about 1389, *d.* 1440, a Flemish painter, who, with his brother Hubert, is held to have invented the use of oils as a medium for colours, in place of the gums previously used in Italy. His pictures are wonderful for their brilliant delicacy of finish, their clear colouring, and exquisite draughtsmanship.

EYE. See *Med. Dict.*

EYLAU, a town in eastern Prussia, 22 miles from Konigsberg, was the scene of a battle between Napoleon and the allied Russians and Prussians in 1807. Both sides lost very heavily.

EYRE, EDWARD JOHN, *b.* 1815, *d.* 1901, began life as an Australian emigrant, succeeded in making the overland journey from Adelaide to Albany (1841), was made lieutenant-governor of New Zealand (1846), governor of the West Indies (1854) and of Jamaica (1862.) His stern suppression of rebellion in Jamaica, in 1865, led to his prosecution by a committee headed by J. S. Mill, whilst Carlyle aided in raising funds for his defence. The costs of his case were refunded by the Government on his acquittal.

EZEKIEL, a Hebrew prophet, was taken into captivity by Nebuchadnezzar, along with Jehoiachim, king of Judah. The book of Ezekiel deals with the overthrow of Judah, and attributes it to desertion of God, and breach of faith with Babylon. It threatens retribution on the seven surrounding nations, who were exulting over Judah's downfall, and it prophesies the restoration of Jerusalem and the coming of a great deliverer.

EZRA, a Jewish scribe, one of the exiles in Babylon, stood so high in the favour of King Artaxerxes that he was authorised to lead back a band of his fellow-countrymen to Jerusalem (458 B.C.). On arriving at Jerusalem he assembled the Jews who had returned in Cyrus's reign, separated them from their heathen connections, and began the re-establishment of their religious life. In 445 B.C. Nehemiah established the community in safety and rewalled the city, at the conclusion of which task, Ezra instituted a great religious restoration, and the people entered into a solemn covenant to abide by the Mosaic Law. He wrote the books of Ezra and Nehemiah, and is supposed to have revised and edited the earlier books of the Bible.

FABER, FREDERICK WILLIAM, *b.* 1814, *d.* 1863, theologian and hymn-writer. Educated at Shrewsbury and Oxford, where he won the Newdigate, he came under Newman's influence and joined the Church of Rome. He founded at Birmingham a Brotherhood of "Wilfridians" and with them joined the Oratory of St. Philip of Neri (Brompton Oratory). Among his many popular hymns, we may mention "Sweet Saviour, bless us," "O Paradise!" and "Pilgrims of the Night."

FABIAN SOCIETY, founded in 1883 to teach people by lectures, discussions, and tracts the aims of socialism. The society works in connection with the Independent Labour Party. The name suggests that the aim of the Society is to win its way by the slow means of education rather than by the suddenness of revolt.

FABIUS MAXIMUS, *d.* 203 B.C.; five times a Roman Consul, was elected Dictator after the great Roman defeat by Hannibal at Lake Trasimenus, 217 B.C. He saved Rome from the great Carthaginian by persistently withdrawing from a direct encounter, and by restlessly harassing the enemy from positions of vantage on the hills. For this reason he was nicknamed "Cunctator" or the "delayer." Rome grew tired of his apparent want of initiative, and appointed a colleague to share the supreme command, but Fabius had soon to save him from being entrapped. In 209 B.C. Fabius took Hannibal's stronghold of Tarentum, and his work for Rome was completed. Hannibal, within reach of Rome, had struggled for eight years with all the ingenuity of a great general, and was foiled by the "Fabian policy."

FABLE. Myths, parables, allegories and apologues or fables, all contain a secondary significance deeper than their mere narrative explicitly states. The myth is a primitive way of figuring out the mysteries of nature and life by parallels drawn from common experience. It grows up with the nation and becomes traditional. The parable draws its events from every day experience, and embodies a truth, spiritual or moral, in its intention. The allegory is literary and more continuous than the parable or myth. The fable differs from the parable in that it is not confined to the ordinary events of everyday life. Dr. Johnson well defined it thus: "A fable or apologue seems to be, in its genuine state, a narrative in which beings irrational and sometimes inanimate . . . . are for the purpose of moral instruction feigned to act and speak with human interests and passions." La Fontaine likens the fable and its morality to the body and the soul, yet the earliest animal fables are without moral significance. Hindustan is the home of the fable as we find it in Æsop. Chaucer employs it effectively in his Nun's and Priest's Tale. But La Fontaine (*le fablier*), has given to France a reputation beyond that of all other modern nations for the adequate treatment of this source of delicate satire or deep morality.

FACULTY. (1) A name signifying the powers of the mind, such as memory, imagination, &c. (2) An order granted by the Ordinary or Bishop allowing something otherwise illegal; thus any important internal alteration in the arrangement of church furniture, organ, galleries, &c., would necessitate a faculty. The Court of Faculties, an Archbishop's Court, founded by Henry VIII, now confines its attention chiefly to granting licenses of marriages without publication of banns. (3) The term also designates the body of persons constituting one of the learned professions, as the faculty of law, medicine, &c.

FAED, THOMAS, R.A., *b.* 1826; a Scottish painter, whose subject pictures of "Scott and his friends at Abbotsford," and "The Mitherless Bairn," have gained for him a great reputation.

FAERIE QUEENE, THE, an allegorical poem by Edmund Spenser, published partly in 1590 and partly in 1596. By describing the adventures of twelve knights who represent twelve virtues, and are sent out from the court of the faerie queen Gloriana, Spenser intended to build up a great allegory of chivalrous perfection. Six Cantos out of the twelve were finished and a fragment of the seventh also exists. The allegory is twofold. A moral allegory underlies the narration of the knightly adventures with the dragons of temptation in the caves and noisome places of sin, but there is also the historical, contemporary reference to Queen Elizabeth and her foes the Roman Catholics, who were endeavouring to replace her by Mary Queen of Scots. Thus whilst Una represents truth and Duessa falsehood, they also represent Queen Elizabeth and Queen Mary.

FAGGING is a custom of English Public School life. The smaller boys are

expected to fag for the older, that is, to perform certain well defined offices, such as fielding at cricket, running errands, and keeping up the fire. There is much to be said for a practice which defines the relationship of the boys when not under the direct care of the masters. It is freely accepted by the smaller boys, who on the whole are none the worse for it, and it certainly prevents bumptiousness.

FAGGOT-VOTE. Before 1884, votes known as faggot-votes were created by party politicians by subdividing property amongst nominal owners, or by such sale of property under mortgage or otherwise, as would entitle these owners to a vote. The extension of the franchise in 1884 to all rural householders destroyed the practice.

FAHRENHEIT, GABRIEL, *b.* at Dantzig 1686, *d.* 1736; first used mercury for the thermometer, thereby securing a sensitive and uniform expansion. He adopted the system of graduation associated with his name, and fixed the freezing point at 32°. His scale has been retained in England, although it does not find favour on the Continent.

FAINÉANTS ROIS. "The sluggard kings," a name applied to the eleven Merovingian kings of France, who reigned between 650 and 750 A.D. They resigned all real power into the hands of their "Mayors of the Palace," who subsequently assumed the nominal as well as the real power, and reigned as the Carolingian House.

FAIRBAIRN, SIR WILLIAM, *b.* at Kelso 1789, *d.* 1874; apprenticed at North Shields as an engine-wright, became the friend of George Stephenson, and like him raised himself to prominence by application to study and work. He went to Manchester and made his name by introducing iron in the place of wood in the structural details of the cotton mills. He paid much attention to the use of iron in ship-building, and became an authority on the use of that metal for boilers, furnaces, and bridges. He carried out the designs of Stephenson in the Menai tubular bridge, and built many similar iron bridges himself. He may be described as a pioneer in the extension of the structural uses of iron.

FAIRFAX, SIR THOMAS, *b.* 1612, *d.* 1671; succeeded the Earl of Essex as commander-in-chief of the parliamentary forces during the Civil War, with Cromwell acting as his Lieutenant-General. He declined to pursue the war in Scotland, and made way for Cromwell. He worked hard for the restoration of Charles II., co-operating with General Monk, and he was leader of the deputation commissioned to treat with Charles II. at Breda for his return.

FAIRIES are diminutive beings, the creation of the human imagination, who are supposed to influence folk kindly, malevolently, or out of a desire to teach them. They appear under various names, and with different characteristics, as elves, goblins, sylphs, gnomes, genii, and water spirits or undines. They personify the supernatural agencies to which people most often fancy themselves subjected. In the stormy, sea-faring north, fairy-lore is highly imaginative and varied, whilst in homely agricultural districts it is simple, and deals with domestic affairs. Shakespeare has introduced with wonderful grace and playfulness in his Midsummer Night's Dream, not only the fairies of the flowers and nature, Titania and Oberon, but also the homely traditional sprite Puck, or Robin Goodfellow. In Ariel (*The Tempest*) he gives us a true sylph or spirit of the air, one of those agents of storm and sunshine, who do the bidding of a higher mind. Very beautiful conceptions of fairies are found in the writings of La Motte Fouqué, whose *Undine* is a charming imaginative allegory of a water-spirit.

FAIRY RINGS are circles of greater or less luxuriance than the surrounding grass of the pastures where they are usually found. Tradition attributed them to the ring dances of the fairies, and less imaginative people have said that they were due to lightning. They are the effect of fungous growths of the agaric or mushroom kind. Where the agaric has grown, grass will not grow, and the fungus spreads to exhaust new soil. This spreading takes place in the form of a ring, which at first shows signs of the exhaustion of the soil, but subsequently bears a greener grass, nourished by the decay of the spawn.

FAITH-HEALING, as practised by the Peculiar People, Christian Scientists, Zionists and others, finds its scriptural warrant in St. James v. 14. Faith-healers claim that sickness may be treated without medical aid if the prayers of the healer are supported by the true faith of the sufferer.

FAKIR, literally means "a poor man," a Mohammedan religious mendicant or ascetic, who espouses poverty as being consonant with his sense of spiritual insignificance. The life is one of inactivity, contemplation, and penitence, and doubtless there are many fakirs of the highest type. The prosecution of the art of begging has, however, lowered the status of this class of zealot in India. They do not necessarily adopt the hermit life, but are frequently to be met in companies indulging in demonstrative religious excesses revolting to the ordinary man by reason of the abjectness and squalor at which they aim, and the frenzies they seem to cultivate.

FALCONRY. The falcon is a genus of the family *Falconidæ*, birds that prey by day. In Europe the term usually denotes the birds trained for falconry, and for this purpose the peregrine falcon is specially fitted. The peregrine female, a larger and stronger bird than the male, is pre-eminently the falcon of the chase. The male, which is about one-third smaller, is known as a tercel. The peregrine takes her quarry in a swoop from above, "towering in her pride of place," and for this reason is termed noble, as distinct from the ignoble falcons of a smaller kind that capture by direct chase. The Merlin and Hobby, other British species, prey on larks and small birds, and they too were trained for hawking. Gyr falcons, which are common in northern Europe, take their name from their circling flight or gyrations. Hawking is a sport of great antiquity, reaching back to B.C. 2000, according to Chinese records and Babylonian bas-reliefs. It was popular in mediæval England, as the references to it in the writings of Shakespeare testify. It declined in the Puritan period, and has not again recovered its old popularity although it is still practised. In the Bayeux tapestry, King Harold carries a hawk, and in the Magna Charta every freeman was allowed to have his falcons. Heron hawking was the favourite sport, because the heron tries to save itself by constantly rising, whilst the hawk in swift circles gains the upper hand and swoops. When borne to the ground it was rare to find the heron capable of inflicting serious damage with his sharp long bill. Pheasants, partridges, ducks, woodcock, and indeed almost all wild birds were flown at, as well as hares and ground game.

FALKIRK, Stirlingshire, 22 miles north-east of Glasgow, the centre of a busy coal and iron district (see *Carron*). Together with Airdrie, Hamilton, Lanark, and Linlithgow, it sends one member to parliament. Wallace was defeated here by Edward I. in 1298; population about 30,000.

FALLING STARS. See *Meteors*.

FALLOW DEER is the half-tame variety of English parks, so called because of its fallow or yellowish colour. It is smaller than the stag or red deer, stands about three feet high at the shoulders, and only the buck is antlered. It is a native of southern Europe, of Asia, and Africa, and it has been imported at some time unknown into Britain. The extinct Irish Elk is claimed as a native relative of the species. The development of the antlers takes about six years, and the stages are denoted by the names fawn, pricket, sorrel, soare, buck of the first lead, and buck complete. In winter the colour turns somewhat grayer, and the spots are less frequent. Venison, the flesh of the fallow deer, is highly esteemed.

FALMOUTH takes its name from the Fal on whose estuary it stands, 18 miles to the north of the Lizard. It possesses one of the best harbours in England, the entrance to which is overlooked by Pendennis Castle on the west and the castle of St. Mawes on the east, both of 16th century date. Though it has ceased to be a packet-station, Falmouth is still a great port of call, where home-coming vessels anchor to await orders from their owners; population about 18,000.

FAMILIAR, literally "a servant," is a spirit supposed to attend in visible form a magician or master of the black arts. The black dog of Cornelius Agrippa, and that of Mephistopheles, Aladdin's "Slave of the Lamp," and a witch's legendary black cat are instances of familiars.

FANDANGO, a Spanish dance in triple time, very popular in southern Spain, and in the Spanish Americas, performed by two persons, who mark the time by castanets, and dance to a guitar. The dance, which grows in vivacity as it proceeds, is intended to mark the development of a love passage.

FANTASIA, a musical composition incapable of classification under the orthodox forms; an outcome of the composer's fancy. Modern fantasias are often medleys of popular airs with fanciful connections.

FARADAY, MICHAEL, son of a blacksmith of London, *b.* 1791, *d.* 1867. Apprenticed to a bookbinder, he yet interested himself in the study of science, and became assistant to Sir Humphry Davy at the Royal Institution, where he happened in 1812 to be attending a course of his lectures. In 1827 he succeeded his master as Fullerian professor of chemistry, a position which he retained until 1865. His first discoveries in the domain of chemistry were connected with alloys of steel, chlorine compounds, and the composition of glass for optical purposes; but his chief discovery was that magneto-electric induction is established by the revolution of a magnet in the neighbourhood of an induction coil (see *Dynamo*). His subsequent research in electrical work has been wonderfully suggestive to his successors. He excelled in lecturing as a master of simple lucid expression. He was granted a Civil-List pension of £300 in 1835.

FARCE differs from comedy only in the broadness of its comicality, its grotesqueness and unrestrained freedom. It is the aim of both to arouse mirth, but farce goes further, and by exaggerations would provoke loud laughter. It was a secular substitute for the interludes and comic adjuncts of the religious drama of the middle ages, and true comedy grew out of it.

FARRAR, FREDERIC WILLIAM, *b.* at Bombay, 1831, *d.* 1903, graduated at Cambridge, took orders, and became a master at Harrow. He was appointed Head-master of Marlborough (1871), Canon of Westminster and Rector of St. Margaret's (1876), Archdeacon (1883), and Dean of Canterbury (1895). He was an eloquent preacher and an attractive writer. His chief literary works include "The Life of Christ," "Eternal Hope." "The Early Days of Christianity," and "Lives of the Fathers."

FARTHINGALE, the hooped petticoat familiar in Elizabethan portraits. It re-appeared in the 18th century, and again as crinoline, in the 19th.

FASCES, a bundle of rods with an axe enclosed, borne by lictors before certain Roman magistrates. The rods symbolized the power of inflicting corporal punishment; the axe, the power of life and death. As none but dictators possessed the latter power within Rome, the axe was usually omitted from the fasces.

FASCINATION is the act of bewitching by the influence of word, spell, or look. It was formerly believed that such influences were means of conveying diseases and disastrous evils, and to this day the Neapolitans and others maintain a popular credulity regarding the "evil eye." Against such sources of mischief various charms and medicines were used. Snakes and other venomous reptiles are supposed to exercise a demoralizing fascination over their victims, but it is questionable whether this is anything but the outcome of a paralysing fear.

FASHODA, a post on the Nile 470 miles south of Khartoum. In 1898, after the occupation of Khartoum by Lord Kitchener, he found a small French Company under Major Marchand in possession of Fashoda, a post within the accepted sphere of British influence. The French government withdrew Marchand and the incident was closed by a signed declaration in 1899.

FASTI, days on which business might be transacted by Romans. The priests determined the *dies nefasti*, or "holy days," and the tablets or calendars constructed by them were named *fasti*. Ovid's Fasti is a series of poetical compositions based on the Roman calendar. Compare Spenser's "Shepherd's Calendar."

FASTING. See *Med. Dict.*

FATA MORGANA, a mirage seen from the shores of the Straits of Messina, caused, it was supposed, by the fairy (*fata*) Morgana.

FATHERS, THE APOSTOLIC, were those leaders and teachers of early Christianity who during part of their lives were contemporary with the Apostles. They are in order of time, Barnabas, Clement of Rome, Hermas, Ignatius, Papias, and Polycarp. The last named died in 155 A.D.

FAURE, FRANCOIS FELIX, *b.* at Paris, 1841, *d.* 1899, made a fortune as a shipowner at Havre, and entered the National Assembly where his authoritative knowledge of commerce enabled him to take office as Colonial Minister. He was elected President in 1895, and contributed much to the formation of the Franco-Russian Alliance.

FAUST, DR. JOHANN, a German magician, astrologer, and scholar, the historical original of the Faust of Gœthe and of Marlowe, is said to have died in 1588, after a life of unscrupulous license. He was supposed to be in league with the devil, who attended him in the form of a black dog. His life was published in 1587, and appeared in an English Translation a year afterwards. In 1588 Marlowe idealised the story in his drama of Faust, and Gœthe published his masterpiece in 1808, substituting the lovable, homely Margaret for the divine but distant Helen of classical fame.

FAWCETT, HENRY, *b.* 1833, at Salisbury, *d.* 1884; was remarkable for the prominent and beneficent part he played as a politician in spite of the total blindness caused by a gun accident at the hands of his father. In 1865 he entered parliament as member for Brighton. He took a leading part in the movements for the abolition of religious tests at the universities, the advocacy of compulsory education, the preservation of commons and open spaces, and the amelioration of the condition of the natives of India. His enthusiasm for India gained for him the title of "the member for Hindustan." He likewise worked ardently for the fuller representation of women in the affairs of the country. He was created Postmaster General in Mr. Gladstone's administration of 1880, but without cabinet rank. In this position he initiated the parcel-post, sixpenny telegrams, the savings bank, and postal orders. He worked indefatigably in the interest of the employés of the post office, instituted the employment of women and a system of promotion, and devoted himself whole-heartedly to the consideration of the welfare of every servant of the postal service.

FAWCETT, MRS. MILLICENT GARRETT, Hon. LL.D., St. Andrews; widow of Rt. Hon. Henry Fawcett, sister of Dr. Garrett Anderson (p. 40), and mother of the lady who beat the Senior Wrangler; educationist, and author of Political Economy for Beginners; President of the National Union of Women's Suffrage Societies.

FAWKES, GUY, *b.* at York, 1570, of Protestant parentage; he became a zealous Catholic, and acted as an agent of the so-called Spanish party in England. He fought for the Spaniards in the Netherlands and returned to England at Catesby's invitation to assist in the Gunpowder Plot (1605). During the delays caused by the prorogations of Parliament, Fawkes again went abroad to enlist soldiers to support the conspiracy. Despite news of the warning sent to Lord Monteagle, Fawkes persisted in the scheme, and was arrested in the cellar beneath Parliament House, and hanged 1606.

FEATHERS form an important article of commerce, the value of imports into the United Kingdom exceeding one million pounds annually. Refer to *Index*.

FEDERATION is the union of several states under one government, so that they stand before the world as one united body. The Commonwealth of Australia furnishes a recent instance of federation, and it is to be noted that the several States reserve certain departments of administration for their own control. In the Australian Commonwealth everything not specifically reserved for the Federal government is under the jurisdiction of the several States; whereas in the Dominion of Canada the opposite principle prevails, and there everything is under the jurisdiction of the Federal Government unless otherwise stated.

FELLAHS or **FELLAHEEN,** a term of contempt used by the Turks of the "tillers" or peasants of Eygpt. They are a composite race representing the old Egyptian peoples. Although their lot has been wonderfully improved under British government, they are still a degraded folk. They live chiefly on millet, and thrive on it. Industrious, healthy, and of great endurance, they are yet quarrelsome, obstinate, and unreasonably opposed to taxation.

FELLOWSHIPS. Refer to *Index*

FELO DE SE. See *Suicide*.

FELUCCA, a fast sailing boat used in the merchant service in the Mediterranean. It has either two or three masts with lateen sails.

FENIANS, a modern English form of the old Irish "Fianna," the name of the members of various tribes who united to form a kind of national militia. Finn, the hero of the Ossianic legends, is the mythical head of this order, round which traditions grew like those of the Round Table. In 1857 a brotherhood of Irishmen was formed in New York to secure the independence of Ireland. The society spread rapidly among Irishmen all over the English speaking world. It not only made sundry attempts to raise insurrection in Ireland, but it also essayed an invasion of Canada. Its organization consisted of a senate which controlled local "circles," over each of which a "centre" presided. From the first the Fenians excluded the Catholic clergy. A second attempt on Canada was frustrated in 1871 by the United States government, and after 1872 the society became a secret one. In 1882 the Phœnix Park murders and, between 1883–5, the existence of a society advocating the use of dynamite showed a development of the Fenian spirit.

FENNEL, an aromatic plant, commonly cultivated in Europe and India. Its seeds are used medicinally as a stomachic remedy for flatulency, particularly in veterinary practice. The oil obtained from the seeds is used in the manufacture of cordials and stimulants. Common fennel is cultivated in English gardens for its leaves, which are used in salads and as an accompaniment to fish.

FENS, THE. A flat tract of land comprised under the name of the Bedford Level, of 60 miles by 40 in area, reaching from Peterborough to Northampton, and from Cambridge to the sea. Since the 17th century drainage has gained most of it for cultivation.

FERDINAND, surnamed "The Catholic" *b.* 1452, *d.* 1516. In 1469 he married Isabella of Castile, over which he reigned with her jointly. In 1479 he succeeded his father as King of Aragon. He made war on the Moors of Granada, and added that province to his kingdom in 1492. Navarre was conquered and annexed in 1515. He thus united under his sway the four kingdoms of which Spain had previously consisted. It was under the patronage of Ferdinand and Isabella that Columbus, in 1492, set sail from Spain on a voyage of discovery across the Atlantic.

FERGUSON, JAMES, *b.* in Banffshire 1710, *d.* 1776; a self-educated astronomer, who, as a shepherd boy, made models of mills and spinning gear, and mapped the stars with threads and beads. He supported himself and his parents by clock mending, designing and portrait painting, meanwhile continuing his sidereal studies. At the age of 38 he began to lecture on astronomy and mechanics, and soon took a recognised position among the scholars of his day. He was elected F.R.S. and was awarded a pension by George III.

FERGUSSON, SIR WILLIAM, *b.* at Prestonpans, 1808, *d.* 1877, a great surgeon, was professor of surgery at King's College (1840–70), and became President of the Royal College of Surgeons. He invented many surgical appliances now in use, and wrote a standard work, "System of Practical Surgery."

FERIÆ, the Roman sacred festivals, days on which business was unlawful, and prayers and sacrifices were offered. See *Fasti*.

FERMENTATION. See *Med. Dict.*

FERRERS, (Lawrence Shirley), **EARL,** *b.* 1720, *d.* 1760, the last peer executed

as a criminal, was convicted by the House of Lords of shooting his steward He was hanged at Tyburn with a silken rope.

FERRET, an albino variety of the polecat, bred for killing rats and rabbits. Its lithe and sinuous body enables it to enter burrows. It is white or yellowish, and has pink eyes. The ferret is put into a hole, whilst the keeper nets the possible exits, or waits over them with a gun. It frequently kills within the burrow, so that the keeper has to dig to get the quarry.

FETICHISM, a religious belief in the custom of using fetiches. A fetich is a possession in which a spirit is supposed to dwell. The custom is common in West Africa, where the negro believes that a spirit may dwell within any material object. The spirit is supposed to make his principal abode in a certain thing, and the negro possessing that object may worship it, commune with it, or even make it his slave. "Rubbishy trifles," "stones, claws, bones, a pot with red earth, and a cock's feather stuck in it . . . and so forth," such are the fetiches used. If the owner is dissatisfied, he changes his fetich for one more effectual. The name is a Portuguese one meaning "magic." The natives do not use the word, which is quite European. The most striking feature of Fetichism is the childish way in which the negro will treat his deity. "He does not hesitate to punish a refractory Fetich, and hides it away if he does not wish it to know what is going on." (Lord Avebury.)

FEU, a Scottish law term denoting the sale of land for a rent in perpetuity instead of a capital amount. The notice "Land to Feu," is as common in Scotland as "Land for Sale" in England.

FEUDALISM is a system of social organization which arose among the nations of Europe in the days of the disruption of the Roman Empire. It is primarily a system or association for purposes of safety, the weaker folk placing themselves under the care of an over-lord, and surrendering to him their lands, which they subsequently took again on feudal tenure. In return for this protection they did homage to their protector, swore fealty to him, and undertook to serve him on the field of battle. Thus they became his followers, living on land awarded to them, and looking to him for justice and safety. With the growth of nationalities, local feudal lords became a menace to the royal power. William the Conqueror obviated this danger by constituting himself the direct over-lord of every freeman in England, and by distributing widely the lands of the more powerful barons.

FEU DE JOIE, a running discharge of firearms as a mark of rejoicing. A discharge of seven guns is thrice followed by a sequence of musketry shots proceeding from end to end of the ranks.

FEUILLETON, a space reserved at the bottom of a newspaper for a serial or a light *causerie* on topics of general interest. This feature of French newspapers has been followed by some of the English papers.

FEZ. (1) The national head-dress of the Turk, a crimson skull-cap with a long tassel. (2) The chief city of Morocco, which has many beautiful mosques, and contains the tomb of the founder of the city, the sanctuary of Mulai Idris, the holy of holies amongst Moors. In 1905 a German mission visited Fez to neutralise French influence. As a result an international conference on the government of Morocco in its relations to the Powers was held at Algeciras, in Spain, 1906.

FIDEI DEFENSOR ("Defender of the Faith"), a title conferred by the Pope on Henry VIII. for his "Defence of the Seven Sacraments" against Luther. The Pope withdrew the title after Henry's dissolution of the monasteries, but parliament re-conferred it. The title appears on the "heads" of our coins in the abbreviated form FID. DEF.

FIDELITY GUARANTEE, Refer to *Index.*

FIELD, CYRUS WEST, *b.* Mass., 1819, *d.* 1892, the founder of the Atlantic Cable Company. He made his fortune as a paper maker and then devoted his talents to submarine cables. Having connected Newfoundland with America by a cable in 1856, he organized a company to connect Newfoundland with Ireland. This was finally accomplished in 1866. (See *Atlantic Cable.*)

FIELDING, HENRY, *b.* 1707, *d.* 1754; dramatist and novelist, was educated at Eton, and in Germany. His early work was for the theatre, and consisted of satires, burlesques, and comedies. He made his appearance as a novelist in 1742, with "Joseph Andrews," following it up in the next year with "Jonathan Wild," and later by "Tom Jones" and "Amelia." He died at the age of 48, at Lisbon, whither he had voyaged for health. Scott called him the "Father of the English Novel."

FIELD-MARSHAL, the highest rank in the British Army. Appointments are entirely in the hands of the king, promotions being made from the list of general-officers. The list of field-marshals (January, 1906), includes Sir F. P. Haines (1890), Viscount Wolseley (1894), Earl Roberts, V.C. (1895), the German Emperor (1901), Duke of Connaught (1902), Sir Evelyn Wood, V.C. (1903), Sir George White, V.C. (1903), Emperor of Austria (1903).

FIELD OF THE CLOTH OF GOLD, the name given to a meeting between Henry VIII. of England and Francis I. of France. The brilliance and magnificence of the display on either side led to the name. As Henry VIII. had already secretly met the Emperor of the German Empire and concluded a treaty, the meeting was absolutely useless.

FIERY CROSS, THE, a summons to arms, anciently in use in the Scottish Highlands. It consisted of a light wooden cross whose extremities had been fired and dipped in the blood of a freshly killed goat. It was then carried swiftly from place to place.

FIFTH MONARCHY MEN, a body of extreme Puritans who looked on Cromwell as representing the fifth of the monarchies foreshadowed in the book of Daniel, and as destined to found the true kingdom of Christ on the earth. Cromwell had to check their excesses and intrigues, and imprison their leaders.

FIGARO. (1) A comic character in Beaumarchais' Comedies, "Mariage de Figaro," "Barbier de Séville" and "Mère Coupable." Mozart based his opera of "Figaro" on the first of the three. (2) A French newspaper of wide circulation.

FIG, THE, a species of the genus *ficus,* which occurs in most tropical and sub-tropical countries, and includes the common fig, the banyan, and the caoutchouc or india-rubber tree. The common fig abounds along the Mediterranean shores, and is cultivated in the south of England. Two crops may be raised in a year, one from the older wood, the other from the young shoots, but the latter needs a warm climate to reach maturity. Green figs are ripe but undried, and are considered a delicate fruit, but the dried figs of the Levant are most in demand both for dessert and for general cooking.

FIJI. Refer to *Index.*

FILDES, LUKE, *b.* at Liverpool, 1844, joined the Academy Schools, and began his professional career as an illustrator. He exhibited "The Casual Ward" in 1874. "The Doctor" in 1892 (now in the Tate Gallery), and his state portrait of King Edward VII. in 1902. He was knighted in 1906.

FILIBUSTER, a buccaneer, freebooter. The term is used particularly of adventurers from the United States, who at various times have attacked parts of the Spanish Americas under the plea that annexation to the States was the best thing for them.

FILIGREE, a species of jewellery of ancient origin, and now so characteristic of Malta as to be called "Maltese work." It consists of fine gold, silver, or other wire wrought into delicate scrolls and tracery.

FILTER, A, is a medium through which a liquid containing solid particles in suspension is passed in order to clarify it. Blotting paper forms a simple filter for minor purposes. For use on a larger scale among the many materials available are sand, gravel, charcoal, sponge, asbestos, porous stone or brick, and various fabrics. These form a bed through which the liquid percolates under pressure. For drinking water, various filters are in use, many of which aim at filtering upwards under pressure so as to keep the deposit of sediment clear of the filtered water.

FINGAL'S CAVE, a remarkable cave 200 feet long, in the island of Staffa, some seven miles west of Mull in the Inner Hebrides. It has been hollowed out of the Columnar basalt by the sea. It takes its name from Fingal, the hero of the Ossianic legendary poems by Macpherson.

FINGER-PRINTS are taken by placing the tips of the fingers on an inked slab and then pressing them on a sheet of white paper. The print of an individual's fingers never alters its form, and no two people show the same "furrows." The practice comes from India where a system of classification by Mr. E. R. Henry, C.S.I., was recently adopted, based on the researches of Mr. Galton. On becoming Commissioner of the London Metropolitan Police, Mr. Henry prevailed on the Home Office to adopt his system, 1901. Prints are now taken from prisoners convicted of certain crimes only and sentenced to more than a month's imprisonment. In 1904 there were more than 5,000 identifications established. The value of the system was well shown in the case of an extensive burglary at the Conduit Street Gallery, London, early in 1904. A thumb print, left on a piece of dirty glass in a sky-light, led to the identification and subsequent arrest of the burglar. (See *Anthropometry.*)

FINIAL, an architectural term denoting the ornamental termination at the apex of a pinnacle, gable, or spire. It is essentially a Gothic ornament and it reached its highest development in the 13th and 14th centuries, when each available point was crowned with finials designed, as a rule, on the basis of natural foliage.

FINLAND, lies along the north eastern shores of the Baltic, and has an area of 145,000 square miles. It was annexed by Russia in 1809. Four-fifths of its people are peasant proprietors, the inhabitants of Abo and its capital, Helsingfors, being mostly Swedes. It is a country of lakes, waterways, and vast forests owned by the State. Snow lies from November till April, when there follows a short spring and a hot summer. The Emperor of Russia is Grand-Duke of Finland, and the government is vested in him, a senate of Finnish subjects nominated by him, and a diet.

FINSEN, NIELS RYBERG, *b.* in the Faroë Islands, 1861, *d.* at Copenhagen, 1904, discovered that intense light concentrated upon any part of the body

afflicted with lupus, destroys the tubercle bacillus which causes the disease. But to prevent the light from also destroying the skin, it is by his system deprived of its heat rays before being applied to the patient. His system of light therapeutics has probably a great future before it.

FIORD, a narrow inlet of the sea, bordered by high cliffs. Such inlets abound on the west coast of Norway. They combine grandeur of scenery with safety of anchorage, but the absence of land approaches renders them of small commercial value.

FIR is a general name for pines, larches, spruce firs, silver firs, and other cone bearers, but the name is better reserved for the spruce firs and their kindred. These trees all yield excellent timber, whilst resin, turpentine, tar, lampblack, and various products are got from the different species. The Norway spruce yields common frankincense and Burgundy pitch, the black spruce yields essence of spruce, a useful ship medicine, and from the Silver Fir is got Strasburg turpentine. Firs grow to a great height, do not branch extensively, and they flourish in all temperate climates, even as far north as the Arctic Circle.

FIRE-ARMS. See *Breech-loading Fire-arms.*

FIRECLAY is found in beds of varying thickness up to two feet, amongst coal measures. It is worked on the Northumberland, Clyde, and Staffordshire coal fields, and on the coal fields of other countries. It makes a fire-resisting brick, and is therefore in demand for fire-bricks, chimney pipes, and crucibles which have to resist continuous and extreme heat.

FIRE-DAMP is the ordinary name for the carburetted hydrogen which issues from " blowers " or fissures in coal seams. It is inflammable and, when mixed with air in certain proportions, is highly explosive. Its ignition is attended by the danger of an attendant explosion of coal dust.

FIRE-ENGINE, a machine for throwing a continuous jet of water to extinguish a fire. The principle of compressing air within a chamber containing water, by alternating pistons, is the one employed. Steam power is employed, and, in order to ensure a rapid generation of steam, a gas flame is kept in the fire box of the engine as it stands ready in the Fire Station, and special light and clean fuel is used.

FIRE-ESCAPES are devices by whose aid people may escape from the upper part of burning buildings. The London Brigade Fire Escape consists of a ladder with three supplementary sections, mounted on a light carriage. It has an underslope of netting down which one may slide with safety. Fire brigade methods of escape are various, and include the tubular sack, the jumping sheet held taut below the window, oblique ropes with suspended baskets or hanging bars on pulleys, as well as the simple but effective knotted rope.

FIRE-FLY, the popular name of certain insects that emit a luminous phosphorescent glow—some of them shining steadily, others intermittingly. The most brilliant of these insects are natives of the American tropical forests, the most remarkable example being the *Cucuyo* of Brazil. While asleep they emit a dull glow, brilliance following upon the rapid respiration of their waking hours. This phosphorescence, may be increased by an artificial supply of additional oxygen. Mexican Indians use these insects for lighting purposes, and one may read from the light given off by two or three in proximity.

FIRESHIP, an old vessel filled with explosives and combustibles, and navigated or sent adrift amongst the ships of an enemy's fleet in order to destroy or confuse them. The English employed this stratagem with effect on the ships of the Spanish Armada anchored off Calais in 1588.

FIRST AID. See *Med. Dict.*

FIRST-FRUITS. See *Annates* and *Queen Anne's Bounty.*

FIRTH, MARK, *b.* 1819, *d.* 1880, a Sheffield steel maker who founded, with his brothers, the Norfolk Ordnance works. His benefactions to Sheffield were munificent, and included a public park, Firth College, and almshouses.

FISHER, JOHN, bishop of Rochester, *b.* in 1469, at Beverley, executed on Tower Hill, 1535. One of the group of scholars of the Renaissance, a friend of More, Erasmus, and Colet, an advocate of reasonable reformation in the English Church, but an opponent of Lutheranism; he opposed the divorce of Henry VIII., and was executed for his denial of the King's ecclesiastical supremacy.

FISHERIES, BRITISH. In considering this important source of food supply, it is noteworthy that the exportation of fish from the British Islands, over and above the home consumption, is valued approximately at four millions sterling annually. The fish may be roughly divided into four principal kinds, according to the manner of the fishing. Flat fish, which live near the bed of the sea, are taken by trawlers, and include halibut, turbot, soles, plaice, and flounders. Line fishing, which is largely practised off the East coast, yields the chief supply of white fish, that is, conger, cod, ling, haddock, and skate. Mesh nets are used against the fish that go in shoals, and these are principally herrings on the east coast, mackerel on the south and south-west of England and Ireland, and pilchards off Cornwall. Crustaceans are taken in-shore, and include crabs and lobsters, which are caught in basket traps, shrimps, prawns, and cray fish, which are caught in hand-nets, and oysters, mussels, and the smaller shell fish. In addition to these four classes of fishery, there is the whale fishery of the Scottish east-coast ports, which send out their heavy whalers to the Arctic seas.

FISHER OF KILVERSTONE, LORD, G.C.B., G.C.V.O., O.M., *b.* 1841, First Sea Lord of the Admiralty and chief naval aide-de-camp to the late king. He commanded the *Inflexible* at Alexandria, became director of naval ordnance and superintendent of the Portsmouth dockyard, and was afterwards appointed controller of the navy, and proved a great naval administrator. He was one of the three who drew up the Army Reform Scheme, and in 1905 received the O.M. Peerage created 1909.

FISHES. In noting the general characteristics of these vertebrates, attention is claimed by the fins and tail, which serve, the former to raise, lower, and partly guide the fish, and the latter to propel it. The fins are found in a line with the backbone, and connected with it, and also in pairs on the side and under side as a primitive kind of limbs. The un-paired fins thus represent a once continuous upper and under fringe, and the paired fins, of which there are only two pairs, are the forerunners of the legs and arms of higher animals. The muscles are greatest in the trunk and tail, which are the chief locomotive organs. Fish do not breathe by inhalation, but by aërifying the blood through the oxygen contained in the water. The organ by which this function is performed is the gills, which are usually in the form of plates, plentifully supplied with minute blood-vessels. Water containing air is constantly taken in at the mouth and passed over the gills, where the blood is oxidised. Many fish possess a swim-bladder containing air, the forerunner of the lungs of higher types, whilst the mud-fish actually uses it as a lung when the pool dries up in which they lie. Fish perpetuate the species by a deposit of spawn or eggs. Salmon and sea-trout ascend fresh water streams and spawn amongst gravel; eels spawn in the sea. Some fish deposit their eggs on the bed of the sea, and others shed their roe at large. In most cases the eggs are fertilized by a deposit of milt from the male upon the spawn. Some attach their eggs to sea-weed (dogfish); others form nests (stickleback); by others the eggs are laid into a pouch on the under surface of the male, which swims about with them until they are hatched (pipe-fish). In some the fish are born alive (vivaparous blenny).

FISHING. *Trawling* is usually managed from a sailing vessel, but tugs are also employed. The net is a long cone-shaped bag weighted by a heavy beam on runners, which keep it from dragging the bottom. The mouth of the net is kept open by a frame, to which is attached a long cable. *Line fishing* is of equal importance with trawling. Bait, usually mussels or whelks, is very carefully selected and adjusted before departure. Lines of great length are used for the bigger fish, and are shot at some considerable distance out at sea. Haddocks are caught nearer the shore with shorter lines. *Drift nets* are used for herrings, mackerel, and pilchards, and the size of the mesh varies in the three cases. The net hangs vertically between floats and sinks. The *seine* is an estuary net used to take salmon and bull-trout. It is carried out in a curve by a boat, and brought round to meet the shore end again. It is important to notice that the waters for three miles out are held to belong exclusively to the home fisheries, and that a strict watch is kept against the infringement of this limit by foreign boats.

FISK UNIVERSITY, at Nashville, Tennessee, worthy of special notice as an institution for coloured students. From this university came the famous " Jubilee Singers," in 1871, all of whom had been slaves or their children, and who made the tour of the world collecting funds for their university.

FITZROY, ROBERT, *b.* 1805, *d.* 1865, admiral and meteorologist. He surveyed the coasts of Patagonia and Tierra del Fuego, and commanded the surveying expeditions of the *Adventure* and *Beagle*, being accompanied on the latter expedition by the celebrated naturalist, Darwin. He was governor of New Zealand (1843–5) and a staunch friend of the Maoris. The weather forecasts of the daily papers are an outcome of his system of storm warnings.

FIUME is a Hungarian sea-port at the head of the beautiful Gulf of Quarnero, and is of about the same size as Dover. To some extent it stands in competition with Trieste, the Austrian port, from which it is separated by the peninsula of Istria. It has been greatly developed and improved by the Hungarians, and is now a handsome, well-built port. It exports grain, flour, timber, live stock, salt, dried fruits, and wine, and has a large import trade, chiefly in petroleum, manufactured goods, and fabrics. Most of the trade is done in British vessels; population about 40,000.

FIVE MILE ACT, passed in 1665, forbade any clergyman to teach in schools, or come within five miles of any corporate town or borough, unless he had subscribed the Act of Uniformity, sworn to the doctrine of passive obedience, and undertaken to make no attempt to change the government of Church or State.

FLAG. The military use of the flag in England is as old as the Norman Conquest,

if we may accept as a proof the occurrence of pennons and flags in the representation of the Conqueror's troops on the Bayeux tapestry. Of mediæval flags, the *pennon*, small and tapering, was a mark of knightly rank. The *banner*, rectangular in shape, was carried by all above the rank of knight, including the king. The *standard proper* was a tapering flag richly embroidered, and slit slightly at the narrow end. It was borne by any peer or knight of importance during the later Middle Ages. *Regimental flags*, commonly called "the colours," are of silk, with gold and crimson cords and tassels. The old disused colours are placed in the parish church or minster, at the headquarters of the regiment, and the presentation of new colours is a religious ceremony of much dignity and military solemnity. *The Royal Standard* is a banner in shape, with the arms of England, Scotland, and Ireland quartered. It is hoisted as a mark of the sovereign's residence, and on certain times at various important places.

The Union Jack, our national flag, has an interesting past. In 1603 James VI. of Scotland became James I. of England, and united the crowns of the two countries. The first union flag united the devices of England and Scotland. The English flag bears a St. George's cross, a rectangular red cross on a white field; the Scottish flag bears the white diagonal cross of St. Andrew on a blue field. The union was effected by keeping the blue field and St. Andrew's cross, and representing the English white field by a narrow border or fimbriation around the St. George's cross. In 1801 Ireland joined the union, and the St. Patrick's cross was incorporated with the other two. Lest, however, it should be deemed that either of the diagonal crosses took precedence of position over the other, it will be noticed that the white and red limbs are alternately uppermost. *The ensign* is a naval flag and is of three colours, red, white, and blue, according to an obsolete three-fold division of the fleet. The red ensign is now used by merchant vessels, the white is only used by the Navy and the Royal Yacht Squadron, and the blue is carried by the naval Reserve and certain yacht clubs.

FLAGELLANTS were religious fanatics of the Middle Ages, who marched in bands, undergoing public chastisement to propitiate the Divine Being. These bands became particularly offensive and extravagant during the plague periods of the 14th century, and it was no uncommon thing to meet them, either in England or on the Continent, proceeding from town to town in wild excesses, and undergoing self-castigation.

FLAG SHIP is the ship in a fleet which carries the flag of the Admiral, and consequently the one from which orders proceed.

FLAMBOYANT is the name given in architecture to the last development of Gothic tracery. In England, decorated tracery was succeeded by perpendicular, in France by flamboyant. In this style of architecture the tracery flows upwards in long wavy divisions like flames of fire. It prevailed in France during the 15th and part of the 16th centuries.

FLAME is the result of the combustion of gaseous matter. The accompanying heat is the outcome of the chemical combination which is being effected between the gases and the oxygen of the air. If a gas flame be examined, it will be seen to contain a dark nucleus surrounding the orifice. This is the gas, unmixed with oxygen, and therefore incapable of chemical combination with it. Surrounding this nucleus is a luminous envelope which marks the union of gas and atmospheric oxygen, and beyond this again is a more luminous part where full chemical union is taking place.

FLAMENS were priests who dedicated themselves each to the service of one of the several Roman deities. The flamen of Jupiter was of importance beyond the others, and possessed many privileges and rights. Originally there were three flamens, but subsequently the number was increased to fifteen, the original three retaining a pre-eminence in rank and dignity.

FLAMINGO, a bird of a flaming red colour, from which its name is derived. It has long slender legs, a long slender neck, a beak long and curiously bent, and a small body. It is web-footed, and while resembling the stork and heron in build, it is a swimmer like the web-footed birds. It is found in Central and South America, Africa, and India, and when it is feeding in flocks there is a brilliant show of colour. The nest is a mound of mud, on which the female sits with her feet dangling behind, whilst a single egg is hatched.

FLAMSTEED, JOHN, *b.* 1646, *d.* 1719; was the first astronomer of the Greenwich Royal Observatory, in the reign of Charles II., and the first Astronomer Royal of England. He may be said to have commenced modern practical astronomy, and he is known to have assisted Newton by supplying him with data. Flamsteed took holy orders after his appointment at Greenwich.

FLANDERS, the former country of the Flemings, is now partly contained in Holland, partly in Belgium, and partly in Northern France. It was the home of the Belgae, of whom Cæsar speaks, of the Counts of Flanders of the mediæval days, and contained the woollen manufacturing cities of the Flemings of the fifteenth and sixteenth centuries. It formed the Spanish Netherlands, or Low Countries.

FLANNEL. The best flannel is made in Wales, the original home of the industry, from the wool of the mountain sheep. The process resembles the weaving of other woollens, but the yarn is more loosely twisted in order to give a softness to the fabric. The fleecy softness of "raised flannels" is got by teaseling or carding; flannel, however, that has the pile slightly raised wears better and shrinks less than if highly carded. The French excel in fine-dyed flannels; American flannels are smooth in texture, and, being made of close-twisted yarn, do not shrink.

FLASH POINT. The lowest temperature at which an illuminating oil gives off vapour in sufficient quantity to form with the air around an explosive mixture depends on the extent to which it has been freed from its more easily vaporised constituents in the refining process. The minimum temperature at which an explosive mixture is produced is called the *flash-point*. In Great Britain the minimum legal flash-point is 73° F., when the oil is submitted to "Abel's closed oil-tester."

FLAVIAN EMPERORS, THE, were three Roman Emperors of plebeian origin—Vespasian, Titus, and Domitian, who, though of one house, were very different in characteristics. Vespasian was severe and just, Titus "the delight of mankind," and Domitian, a mean tyrant. During this epoch, 69–96 A.D., Jerusalem was taken, 70 A.D., and the Coliseum and Arch of Titus were built.

FLAX is a native of Europe and Northern Africa, cultivated most largely in Russia, and extensively in America, Germany, and the North of Ireland. From the earliest known times it has furnished the raw material out of which linen is made, traces of it having been found in Swiss lake-dwellings, whilst the linen mummy-cloths bear witness to its use in ancient Egypt. The flax is plucked, root and all, for use; then the seeds are removed. The next stage, called retting, consists in leaving the flax to ferment in the dew or rain and sunlight, but the same softening influence may be attained by soaking. After drying, the flax is broken up and then combed. Its seed, under the name of *linseed*, yields oil; and the solid mass that remains after the oil is pressed out is used as food for cattle and sheep. New Zealand flax is a fibre plant of quite another kind, often appearing as an ornamental plant in English greenhouses. The leaves yield a strong, fine fibre, which the Maories use for dresses, mats, and ropes. It is now in great demand by British firms for rope, sailcloth, and tough fabrics.

FLAXMAN, JOHN, R.A., *b.* at York, 1755, *d.* 1826; a famous sculptor. As a boy he was feeble in health, but he imbibed a love of art from his home surroundings, his father being a moulder of figures. He became an Academy student, and found some scope for his genius as a designer for Wedgwood. In 1782 he began to devote himself to statuary and monumental sculpture, and thus established his fame as the greatest of English classical sculptors. His designs for the great Homeric epics are deservedly famous. He is buried in St. Giles-in-the-Fields, London.

FLEET PRISON, until 1846, existed as a debtors' prison. Its site is now occupied by a Congregational Memorial Hall, built in the Gothic style, on the east side of Farringdon Street. It took its name from the Fleet, a brook which flowed down the Holborn valley to join the Thames at Blackfriars. Originally it was the King's prison, and it was used both during the Marian persecutions and for Star Chamber victims. It was one of the prisons reported upon by Howard, the Prison Reformer, who found there over 200 debtors, with their wives and families. Within the precincts of the prison were contracted the clandestine "Fleet marriages." These were conducted by parsons of the prison, immured for debt, and they were not abolished until an Act was passed in 1753, declaring marriages illegal unless solemnised in a parish church or licensed chapel, after due announcement of banns or by licence.

FLEMINGS, the people of Flanders, a branch of the Low German stock of the Teutonic people. In Mediæval times they formed a county under the leadership of the Counts of Flanders, but, with the growth of the woollen industry, their rich cities became a prey to Spanish and French ambition.

FLEMISH, the Low German tongue spoken by the Flemings. It differs from Dutch chiefly in spelling, which in Holland has undergone reform.

FLETCHER, JOHN, *b.* at Rye, 1579, *d.* 1625; an English dramatist, the friend and partner of Beaumont, with whom he collaborated in the production of thirteen plays, in addition to his own independent work. The coarseness of much of the subject matter of these plays renders their presentation on the stage impossible. He died of the plague and was buried in the Church of St. Saviour's, Southwark.

FLEUR DE LIS, the heraldic device of the Bourbons, and thus of Monarchical France. It consisted of a conventional form representing three lilies, banded at the stalk, and arranged symmetrically.

FLIES, HOUSE, See *House Flies*.

FLINDERS, MATTHEW, an English navigator and discoverer, *b.* in East Anglia, 1774, *d.* 1814. Taking with him

a ship's surgeon named Bass, and a small crew he explored the Australian coasts south of Port Jackson, sailing through the strait named Bass Strait, and thus proving that Tasmania was an island. The Government gave him the command of an expedition in the same waters, and he mapped the Eastern Coast of Australia, with its Great Barrier Reef. His work is detailed in his "Voyage to Terra Australia," a book which he published in 1814.

FLINT, a mineral consisting chiefly of silica, found in layers embedded in chalk. Before the use of metals was established, knives, hatchets, spear and arrow heads and other implements were made of flint. The facility with which the flint-knapper flaked flints rendered them peculiarly suitable for this purpose. For the use of flint and steel as a means of ignition, see under *Tinder*.

FLODDEN, BATTLE OF, fought in 1514, between James IV. of Scotland and Henry VIII. of England, whose army was led by the Earl of Surrey. The Scots held Flodden Hill, but were skilfully cut off from retreat by the English army crossing the river Till, a tributary of the Tweed. The Scottish left was victorious, but forfeited their advantage in a too ardent pursuit. The battle ended in a concentrated attack on the Scottish centre, where the King fought stubbornly to the end. The day was a disastrous one for Scotland; the king and twelve earls were slain, and few noble families escaped without the loss of one member. Scott describes the fight in the 6th Canto of "Marmion."

FLOORCLOTH. Linoleum has now largely superseded oilcloth as a serviceable floorcloth. The latter has a tough canvas ground, which is treated with size, and successive coats of paint, whilst screwed taut on a frame. The paint is allowed to dry slowly, and is laid on with a kind of trowel. The pattern is printed from wooden blocks. Linoleum is also based on a canvas ground, the coating consisting of powdered cork mixed with oxidised linseed oil and resin. Great attention is given to the preparation of the mixture, which is finally crushed into the canvas ground under steam at a high temperature.

FLORENCE, a city of Italy, on the river Arno, of over 200,000 people, has greatly outgrown its old boundaries. Few cities are so rich in works of art, in archæological and historical records and relics. The dome of the Cathedral, by Brunelleschi, is the central object of Florence. Near it are the elegant Campanile and the octagonal Baptistery of San Giovanni, with its famous bronze gates, called by Michael Angelo "the Gates of Paradise." It is a city of famous churches; here is the Church of *Santa Croce*, with its monuments of Dante, Galileo, Machiavelli, and other great Florentines: here, also, is the church of *San Lorenzo*, built by Brunelleschi at the command of the Medici, and containing the wonderful Medicean chapel and the New Sacristy. Its splendid palaces might have claimed prior mention, such as the *Palazzo Vecchio*, the seat of the Republican Government till 1530, the *Uffizi Palace*, with its famous library and its wonderful collection of Florentine art, and the *Pitti Palace* with its great paintings and library.

FLORIDA, a large peninsula in the south-east of the United States, partly forming the eastern enclosure of the Gulf of Mexico. It is about 400 miles in length and 100 in breadth; market gardening and general agriculture are the dominant industries. The leading products are cotton, oranges, corn, and timber, and there is no lack of modern American enterprise in turning to account its resources. Florida was colonized by Spain in the 16th century, and ceded to the United States in 1819; its population exceeds half a million.

FLORIDA STRAIT, or the Strait of Bemina, separates Florida from Cuba and the Bahama Islands. Through it the Gulf stream flows, carrying its warm current to meet the ice floes of the Arctic Ocean off Newfoundland. The distance across the strait to Cuba is about 100 miles, and to the Bahamas, about 50.

FLOTSAM. See *Commercial Dictionary*.

FLOWERS are the reproductive organs of the higher plants. A typical flower has a *pistil*, which contains immature seeds, and *stamens*, which produce pollen. The pollen must reach the pistil, if the flower is to grow into a fruit, and that the pollen can do by means of the wind, or by insects coming from another flower of the same species.

There has been a marked increase in the cultivation of flowers for the market during the past twenty-five years, especially in the London area, the narcissus or daffodil being notably foremost. Roses and daffodils prevail in the Thames valley, and lavender, chrysanthemums, asters, poppies, calceolarias, and geraniums about Wimbledon and Mitcham, and in Kent. The early spring flowers come largely from the Scilly Islands, where the winter is mild and short, and the spring early and warm. Over 500 tons of flowers are sent annually from these islands. The district round the Wash is now increasingly devoted to bulb and flower cultivation. From abroad, and particularly from France, we import annually £250,000 worth of flowers, but the supply of British grown flowers is increasing more rapidly than that of the imported.

FLUOR SPAR is a compound of fluoric acid and lime with certain organic matter present; it occurs in various colours and shades, as a crystalline or non-crystalline mineral, usually of much beauty. It occurs plentifully in Derbyshire, where, under the name of "Blue John," it is occasionally made into ornamental vessels and small articles, and sold to tourists. Fluor-spar is used as a flux in the smelting of metals.

FLUSHING is a fortified port on Walcheren Island, in the Netherlands, on a branch of the Rhine delta, called the Scheldt. It is connected by a regular service of boats with Queenborough, in Kent.

FLUX is the name applied to any substance which is used in the smelting furnace to gather up the foreign matter in the ore, and to form it into a kind of scum, which can be easily removed, leaving the pure metal behind. Thus, in smelting iron, sand and limestone are mixed with the ore for the purpose of forming a flux.

FLYING DUTCHMAN, THE. A myth of the sea which provided Wagner with the subject for one of his operas. The original Dutchman is said to have been a captain named Van Straatin, who restlessly expiates his sins in a ship off the stormy waters of South Africa without being able to reach harbour. The idea of a spectral ship is common among sea-going Teutonic peoples, and Coleridge used the idea in his "Ancient Mariner."

FLYING FISH are found mostly in the warm southern seas. Their paired pectoral fins are elongated and developed so that they can maintain a flight of several hundred yards, but without any flapping motion. They keep an undeviating course, parabolic in curve, and they fly most in choppy or rough seas, in shoals. They are often carried on to the deck of a ship, and they are netted in flight by South-sea natives.

FLYING MACHINE. See *Aeronautics*.

FLY WHEEL is a heavy wheel working in direct conjunction with the propelling force of an engine, in order to produce smoothness of action, or to reduce the inequalities arising from the jerk of the piston. The principle involved is as follows: a heavy mass in rotatory motion resists any sudden alteration in its momentum or direction, whether due to increase or decrease of velocity.

FOG, mist, or rain occurs when the water-vapour, with which the atmosphere is always charged, becomes condensed. Condensation cannot occur without existing nuclei, about which the water particles may form, and as dust particles coexist with water-vapour as an atmospheric element, they form the required nuclei. Changes of temperature produce changes in the capacity of the air to hold vapour in solution. Thus the coolness of the evening air leads to condensation, and so brings about the mists that overspread low lying, moist grounds. Equally, the genial heat of the morning sun raises the capacity of the air to hold vapour in solution, and disperses the evening mist. Large cities are more susceptible to fogs than other places, because of the smoke-particles and dust with which the air is heavily laden. London has an evil reputation for its fogs, which occur sometimes with frequency, sometimes at long intervals, between November and February. Generally speaking, these fogs are worst along the river, and in the low-lying districts, and less dense in the hills to the north, but no part is free from their invasion.

FÖHN, a wind of the Alpine valleys, causing great discomfort, by reason of its unusual dryness and warmth.

FOIL is metal extremely finely rolled or beaten into sheets. It is thin enough, in the case of tin-foil, to form the inner wrapping for packing tobacco or sweets. Still finer than foil is the gold leaf of the gilder; but a more durable foil is used by jewellers, and for theatrical display, under the name of tinsel. Foil is used by jewellers under the setting of precious stones, to add a lustre to them.

FOLEY, JOHN HENRY, R.A., *b.* at Dublin, 1818, *d.* 1874; a sculptor who received his education in art at the Royal Academy, and attracted attention by his classical works. He subsequently took a foremost place as a sculptor of public statues, among which may be mentioned his statue of Prince Albert for the Albert Memorial, his figures of Selden and Hampden in the Houses of Parliament, and his Dublin statues of Goldsmith, Burke, and O'Connell.

FOLKESTONE, about seven miles west of Dover, on the coast, is a fashionable and charming sea-side resort, and a busy packet-station, with a daily service of steamers, running in connection with the South Eastern Railway to Boulogne. The harbour at the east end of the town is in a gap in the cliffs, and the holiday quarters lie on the lofty grass-fronted Leas at the west end. The front is beautifully laid out in lawns, cliff gardens, and terraces. There is a fine old parish church on the edge of the cliff, and it has been most beautifully decorated with mural paintings. A statue of Harvey, a native of Folkestone, memorializes his discovery of the circulation of the blood; population over 30,000.

FOLKLORE, the comparative study of the survivals of archaic beliefs, customs and traditions. The subject was first handled by Aubrey (1626–97), who collected materials for a work on ancient and modern superstitions. Ballads were collected by Percy and Scott in the 18th

century. The Brothers Grimm were the pioneers of German Folklore, and they first instituted the collection of folk tales on a scientific plan. Hartland, Frazer, and Andrew Lang are among the leading authorities of recent times. The Folklore Society (1878) has done much to render the study of the subject methodical, and its publication, "Folklore," extends to fifty volumes.

FONTAINEBLEAU is a French town on the Seine, about 40 miles south-east of Paris. It is famous for its magnificent castle, and its equally magnificent forest, which covers an area of 60 square miles. The forest is the home of colonies of French artists, and the forest village of Barbazon is famous for its connection with Millet and his school of art. The castle was a country residence of the French kings. It was begun in the 10th century, and bears the marks of every period of French history. Louis XIV., "the Grand Monarch," made it his chief resort, and Napoleon occasionally resided there. It has been the home of royal refugees, royal favourites, and state prisoners, and it was the scene of such momentous acts as the signature of the revocation of the Edict of Nantes (1685), and of the abdication of the throne by Napoleon (1814).

FONTENOY, a Belgian village, near Tournay and the French frontier, where, in 1745, the French gained a doubtful victory over the allied forces of England, Holland, and Austria, during the War of the Austrian Succession. The Duke of Cumberland, the victor of Culloden, led the Allies.

FOOT AND MOUTH DISEASE is an eruptive fever, marked by blisters in the mouth and sores in the feet, which attacks cattle and pigs, making it difficult for them to walk or eat. It is highly contagious, and spreads, if not prevented, near and far. The disease is scheduled under the Diseases of Animals Act, which is administered by the Board of Agriculture. Any case occurring within the United Kingdom must be reported at once to the police by the owner, when measures are immediately taken to isolate the infected farm or district; and danger from foreign importation is obviated in the case of this or any other contagious disease, by the slaughter of all imported cattle at the port of entry. The latter rule does not apply to importations from Ireland.

FOOT GUARDS, include the four infantry regiments of the British Army—the Grenadiers, the Coldstreams, the Scots Guards, and the Irish Guards. They form the garrison of the Metropolis and of Windsor, and are considered the finest infantry regiments of the army.

FORAMINIF'ERA are found in the deep sea, where they deposit their shells, and so form the chalk of future ages. They represent a most elementary form of life, and reproduction takes place by a process of division, the parent form cleaving and falling away in divisions, each of which becomes an independent living organism. In time each new organism is enclosed in its shell, which may vary in size from microscopic dimensions to a diameter of half an inch.

FOREIGN ENLISTMENT ACT. Refer to *Index*.

FORESTERS, ANCIENT ORDER OF, a friendly society established in Leeds in 1790. It has over 900,000 members, and an annual income of over £1,000,000, of which about three-quarters is annually paid in cases of necessity, sickness and death. Refer to "Friendly Societies" in *Index*.

FORLORN HOPE, a body of troops told off to do a desperate work, such as storming a breach, leading a charge at a critical moment, or, in general, undergoing a great but apparently necessary danger. The word is derived from the Dutch *verloren hoop*, "a lost troop or band."

FORMOSA, a large island off the east coast of China, 400 miles east of Hong Kong, ceded by China to Japan, 1895. It is very mountainous (Mount Morrison, 12,850 feet), and its mountains are densely forest clad. Vegetation is wonderfully luxuriant, and there are many birds unknown elsewhere. The Japanese are developing the great resources of the island, but internal communication and harbourage are defective. The exports include coal, tea, sugar, camphor, and timber, and its chief imports are opium and cotton fabrics.

FORSTER, WILLIAM EDWARD, *b.* 1819, *d.* 1886; entered Parliament as a member for Bradford in 1861, and became a prominent member of Mr. Gladstone's cabinets from 1870 onwards. He was a member of the Society of Friends, and highly esteemed for his integrity, strong common sense, and sturdy bearing. He introduced and carried through the Education Bill of 1870, by which "School Boards" were established. In 1880 he became Chief Secretary for Ireland, a post of great difficulty and no little danger, as the assassination of his successor soon showed. He endeavoured to meet the needs of the Irish peasants, but was compelled to take a strong line of action against the "Land League." He was an ardent Imperialist, and opposed to the separation of English and Irish parliaments.

FORTESCUE, SIR JOHN, an English judge of the 15th century, and an ardent supporter of the Lancastrian party. He accompanied the luckless Queen Margaret in her exile, and there wrote his "De laudibus Legum Angliae," a famous work on English Law, for the use of his pupil, Queen Margaret's son, Edward. He became reconciled to the Yorkist king, Edward IV., and died in England at an advanced age.

FORTH BRIDGE. This wonderful bridge—the largest yet built—on the east coast route of the North British Railway, was erected (1882–9) across the Firth of Forth to obviate the *détour* around the head of the Firth. It crosses the Firth at Queensferry, where the channel is comparatively narrow, and where the islet of Inchgarvie stands in mid-channel, and supports the central pier. This is built of granite in four separate columns, as also are the piers that stand on either shore. The two main spans are each 1710 feet long, and are formed of two cantilevers, each 680 feet long, united by a girder 350 feet in span. The steel towers supporting the cantilevers are 361 feet high, and the road for the trains is 152 feet above high water. The total length exceeds 8000 feet. The engineers were Sir John Fowler and Sir Benjamin Baker.

FORTH, FIRTH OF, the estuary of the river Forth, gradually widens from Alloa, and loses itself in the North Sea, 52 miles further east. It is a quarter of a mile wide at Alloa, and attains a maximum width of 19 miles. At Queensferry, a peninsula on the north side reduces the width to one mile, and it is here that the Forth Bridge crosses the Firth. Near the bridge is the roadstead of St. Margaret's Hope, immediately west of North Queensferry. This roadstead has been reserved by the Government for a future naval station, to be known as *Rosyth*, the name of a neighbouring castle.

FORTUNATE ISLANDS, THE. An ancient name for the Canary Islands.

FORTUNATUS, a popular character in mediæval stories, who received from Fortune an inexhaustible purse and stole from a Sultan a cap that could transport its wearer wherever he would go. The Elizabethan dramatist Dekker has used the story in his "Old Fortunatus."

FORUM, THE, literally the marketplace, was the official centre of the corporate life of Rome or of any Roman city. Here were collected the temples and statues and the most notable monuments. Here justice was administered, and crowds gathered to hear their favourite orators declaim. Remains of the forum at Rome and of its buildings are still considerable, and every effort has recently been made to preserve its ancient aspect.

FOSSILS are bodies or traces of the existence of bodies, whether animal or vegetable, which have been buried in the earth by natural causes. Owing to the wearing effects of rivers, seas, and rain, the surface of the earth is constantly undergoing changes, and the present condition of the earth's crust is the result of ages of such changes. By examining fossil remains, geologists are able to describe the alterations that have taken place. Thus they know that chalk and limestone were formed on the bed of the sea, that sand-stone and sand were once at the shore of the ocean, and that coal-measures represent the forests and vegetation of bygone days. Shells, corals, and remains of fishes are the commonest fossils, and it is interesting to note that marine shells are found at the top of Snowdon, thus showing that this mountain was once at the bottom of an ocean.

FOTHERINGAY CASTLE is in Northamptonshire, on the river Nen, nine miles south-west of Peterborough. The castle, of great antiquity, was the birth-place of Richard III., and the scene of the execution and last years of Mary Queen of Scots. It was allowed to fall into ruin by her son, James I. of England.

FOUNDING, or moulding, is a method of casting metals by preparing a mould in green or dry sand or in loam. A pattern, usually of wood, is used, the sand is firmly beaten about it and damped, the pattern is withdrawn, and the molten metal run in. In order to withdraw the pattern it is necessary that the mould should be made in two parts, which fit upon one another.

FOUNDLING HOSPITAL. There do not exist in England any foundling hospitals in the true sense of the term, such, for instance, as the *Hospice des enfants trouvés* in Paris. The Foundling Hospital in Holborn, London, was founded in 1739 by Captain Coram for the reception of "deserted children" who were placed in a basket outside the entrance. It is now a home for illegitimate children whose mothers are known. There are over 500 boys and girls, their uniform is a quaint one, and they are well trained in music, a feature begun under the influence of Handel.

FOUNTAINS ABBEY, a beautifully situated ruin of a Cistercian Monastery, four miles from Ripon, in Yorkshire. Nothing could exceed the beauty of the approach to this most charming of English ruins, through the wonderful garden grounds of Studley Royal. The monastic buildings are built over several great water conduits, through which the stream of the valley passes. Founded in the 13th century, it represents every period of church architecture down to the dissolution of the monasteries, when its great tower was hardly completed. Fountains possesses in common with Durham the remarkable feature of an eastern transept known as "the chape with nine altars."

FOURTH ESTATE, a term applied by Edmund Burke to the English Press. (See *Estates of the Realm*.)

FOWLER, SIR JOHN, *b.* 1817, *d.* 1898, civil engineer. He built the Manchester, Sheffield and Lincoln, and the Metropolitan Railways, and co-operated with Sir Benjamin Baker in the construction of the Forth Bridge.

FOX, THE, is akin to the dog and the wolf, and occurs in different varieties throughout the northern hemisphere. It is carnivorous, and preys on farm-yard fowls, lambs, and other small animals, and is under public protection in Great Britain from the sport it affords in the chase. For this last purpose the animal makes excellent quarry, because of the strong characteristic scent proceeding from its anal glands, the cunning devices it adopts for escape, its fleetness and its endurance.

FOX, CHARLES JAMES, *b.* 1749, *d.* 1806, son of the first Lord Holland, was educated at Eton and Oxford. He travelled and moved when a young man in the gayest continental society, showing a strong propensity to gambling. On returning to England he took a prominent part in Parliament, and distinguished himself as a debater and orator of the first rank. In the dispute with the American Colonies (1765–83), he sided with the colonists, and endeavoured to prevent their estrangement. He was strongly disliked by George III. for his independence, and more than once dismissed from office, as a minister, owing to the royal displeasure. For twenty-two years (1784–1806) this great parliamentary leader was kept out of office. For the greater part of this period he was the rival and opponent of Pitt, the Prime Minister. On the death of Pitt, in 1806, Fox became Secretary of State for Foreign Affairs, but he died a few months afterwards, and was buried in Westminster Abbey, near his great rival.

FOX, GEORGE, *b.* 1624 at Fenny Drayton, in Leicestershire, *d.* 1691; the founder of the Society of Friends, commonly known as Quakers. He was the son of Christopher Fox, a Puritan weaver, who apprenticed him to a shoemaker. He felt a divine call in 1643, after an evening during which he had resisted the invitation of his fellows to "drink healths." For nine months he remained away from home in solitariness, and for the next four years he wandered about shunning any religious profession. In 1647 he began to preach, and to show marks of a mystical insight that impressed his hearers. His followers became known as "Truth's Friends," or simply "Friends;" but their nickname, "Quakers," they got in Derby in 1650, after Fox had bidden the town magistrates "tremble at the name of the Lord." The enthusiasm and excesses of his early following subsided before his calmness and "discipline of silence." His wife, Margaret Fell, was of the greatest assistance to him in the organization of his new society. His labours were extraordinary. He travelled in Scotland, Ireland, the West Indies, America, and Holland, and everywhere impressed his hearers by his sturdy moral fibre and his "awful, living, reverent, frame in prayer."

FOXE, JOHN, *b.* 1516, *d.* 1587; was a fellow of Magdalen, tutor of the children of the Earl of Surrey, a student of theology, and keenly interested in the Reformation movement. He met the leading reformers in Germany while in exile during Mary's reign. On his return, under Queen Elizabeth, he held various positions in the Church, without obtaining any notable preferment. He wrote many treatises and sermons of a controversial nature, but his name is indissolubly connected with his famous "Book of Martyrs," which lacks nothing to give it a morbid interest, but is nevertheless a notable example of good English prose. He was buried in St. Giles's, Cripplegate, London.

FOYERS, FALLS OF, two well known waterfalls on the short river Foyer, $1\frac{1}{2}$ miles above its entrance into Loch Ness. The British Aluminium Company generates electrical power from the falls.

FRAM, THE, a specially constructed vessel in which the Norwegian Arctic explorer, Nansen, sailed in June, 1893, with the intention of drifting from the Siberian coast across the north pole. He reached the high latitude of 86° 13′ 6″.

FRANCE has an area of 207,000 square miles; it was shorn of 5,600 square miles in 1871, as a result of the Franco-German War. The country is divided into 87 departments, of which Corsica is one, and the government is a Republic presided over by a President, who is elected septennially. The four great rivers of France—the Seine, the Loire, the Garonne, and the Rhone—provide the country with excellent waterways, and as the mountains lie back from the sea, the water-courses are not impeded by falls. The eastern frontier is entirely mountainous, most rugged towards the south, and ending in the gentle slopes of the well-wooded Ardennes in the north-east.

Fruit trees are everywhere cultivated; apples, pears, and plums in Normandy and northern France; olives, almonds, citrons, figs in the south; whilst the vine yields nearly 900 million gallons of wine annually. Wheat, barley, rye, maize, oats, potatoes, beet root (for sugar), and hops are the principal agricultural products. The mineral wealth is not great; coal is found in the north, and in the St. Etienne district, between the Loire and Rhone, and iron is worked in the latter coal field. The chief manufactures are of metals, watches, jewellery, cabinet-work, pottery, glass, dyeing, woollens, carpets, linen, silk, and lace. French fisheries are of importance, the Normandy and Breton fisher-folk being a hardy race of seamen. The population, about 39 millions, increases slowly. Of French goods imported into Britain, the principal are silks, woollens, and millinery; then at a distance come wines, butter, dressed skins, and leather goods. Coal is the chief import from Britain. The national debt of France is enormous (1169 million sterling); but the people of France are thrifty, happy and industrious, and their love for "la belle France" is proverbial.

FRANCIS JOSEPH, EMPEROR OF AUSTRIA, *b.* 1830, succeeded to the throne of the Austrian Empire in 1848, when his country was engaged in war with Italy, and in civil strife with its Hungarian subjects. His reign has been one of great national reverses, but the universal respect in which he is held has enabled him to maintain the integrity of the Empire. Cavour, the Italian statesman, succeeded in winning Lombardy from Austria in 1866. In the same year the fatal battle of Sadowa crowned with success the plans of Bismarck, for the supersession of the Hapsburgs of Austria by the Hohenzollerns of Prussia, and the latter became the leading German power. These losses were taken by the Hungarians as an opportunity for pressing for equal rights with the German speaking Austrians, and in 1867 they won an independent capital at Buda-Pest, and the emperor was crowned king of Hungary. A long reign marked by disaster was clouded still more towards its close by family losses. His son and heir took his own life in 1889, and his devoted and beloved queen was assassinated in Italy in 1898.

FRANCIS OF ASSISI, ST., *b.* at Assisi, 1182, *d.* 1226, the founder of the famous order of friars known as the Grey Friars, or Minorites, was a truly remarkable man. Of humble origin, he displayed much gaiety and reckless generosity as a youth, and became a daring soldier. Sickness turned his thoughts to religion, and he arose from his bed of illness to devote himself to a life of poverty, almsgiving, and self-renunciation. His enthusiasm soon found imitation, and in 1210, a brown-robed brotherhood left Rome, approved by Pope Innocent III. Although the subsequent extension of the orders of Friars may have led to a grave lapse from the pure aims of the founder, yet the followers of St. Francis were a powerful instrument for good in the social life of the Middle Ages.

FRANCISCANS is the name usually applied to the order of Friars founded in 1208 by St. Francis of Assisi. Friars were a distinct class of the community in the Middle Ages. See *Friars*.

FRANCIS OF SALES, SAINT, *b.* 1567, *d.* 1622, a French bishop who worked among the Protestants of Geneva, winning many over to the Roman Catholic Church. He tried to establish a basis for a reunion of the Protestants and Romanists, but failed to convince the leaders of the former party. His devotional works, "Introduction à la Vie Dévote" and "Traité de l'Amour de Dieu" are widely read.

FRANCO-GERMAN WAR, July, 1870–May, 1871. War was declared by Napoleon III. partly to avoid internal embarrassments, but the Prussians were prepared for war at every point. Within a month of the declaration of war they had mobilized over 500,000 troops with 1,600 guns, whilst the French had an ill-equipped force of 300,000 with 900 guns, inferior in range to those of the Prussians. The Emperor of the French took the initiative, in the neighbourhood of Metz, in Lorraine, with Marshal Macmahon on his right in a strong position on the Vosges mountains. The Germans drove Macmahon in disorder out of the Vosges, and a reverse at Spicheren led the Emperor to retreat on Metz, and delegate the command to Marshal Bazaine. Meanwhile the Germans had a second army on the road for Paris, in the Moselle valley. When this became known to Bazaine, a retreat from Metz began, but the Germans cut the retreat and forced a battle at Gravelotte, which resulted in the return of the French to Metz, and, within two months, the entire surrender of the fortress and army. Troops had been concentrated at Chalons to oppose the advance of the Germans, and these had set off by a northerly route to join hands with Bazaine. The Germans, however, intercepted them, and drove them in upon Sedan, where, after a brief and hopeless struggle, an army of over 80,000 surrendered with the Emperor (2nd September). A Republic was proclaimed in Paris, the Empress fled to England, and after the fall of Strasburg the French capital was completely invested. Paris succumbed to famine after a four months' siege, and opened its gates to the enemy. The German troops occupied Paris for only a few hours. In the terms of peace, signed at Frankfort, May, 1871, France ceded Alsace and part of Lorraine, and gave a war indemnity of over £200,000,000. The Emperor spent the rest of his days in England, and died at Chiselhurst, in Kent, 1873.

FRANCS-TIREURS, sharp-shooters in the French service forming a body of irregulars, peasants for the most part, who harassed the Germans in the war of 1870–1, cutting off stragglers, and menacing the lines of communication.

FRANKENSTEIN, a romance by Mary Godwin, the second wife of Percy Bysshe Shelley. The hero Frankenstein contrives to make and animate by his intimate knowledge of the mysteries of nature, a monster in human form, who becomes the constant torment of its maker's existence. Hence in general the name implies the unhappy reaction upon himself of an author's creation.

FRANKFORT ON THE MAIN stands on the right bank of the river, 20 miles above its confluence with the Rhine. It is the home of the Rothschilds, whose house still stands to mark the old Jewish quarter. It is one of the leading money markets of the world, and many of its bankers are Jews. It has a large industry in machinery, chemicals, soap, and perfumes, and does a good trade in leather, skins, wine, and beer. Seven railways meet here in one of the finest of European stations. Historically, Frankfort possesses many features of interest. In the Kaisersaal of the Roemer, or town hall, the emperors were elected, to be crowned subsequently by the Elector of Mainz in St. Paul's Church. Here also used to meet the North German Diet or Senate. Frankfort became a free city in the Middle Ages and famous for its fairs. It is now rich in all those institutions of amusement and enlightenment that mark the growth of modern cities; population over 300,000.

FRANKING OF LETTERS, a system of free delivery of letters that are "franked" or initialled by privileged persons. In England, until the establishment of the penny post, members of the Houses of Parliament could send ten and receive fifteen franked letters a day.

FRANKLIN, a mediæval landowner, independent of the patronage of any nobleman and usually untrained in arms or letters. Chaucer's Franklin was a county magistrate, a sheriff, a hearty and hospitable entertainer, a man "of rude speech," and a "knight of the shire," or member of parliament. It was from this class of freeholder that the House of Commons took its spirit of patriotic independence.

FRANKLIN, BENJAMIN, *b.* 1706, *d.* 1790, was one of a large family in poor circumstances. He commenced work as a printer with his brother, educating himself at the same time. In 1732 he began to publish "Poor Richard's Almanac," which soon achieved a popularity that the judgment of time has justified. He became an official in the state service, and, in 1746, began to turn his versatile mind to scientific research, a domain in which he established his name by giving the world his theory of positive and negative electricity, his suggestion of the use of lightning conductors, his discovery of the passage of storms over great areas, and his theories of the nature and course of the Gulf Stream. After the age of 50, however, he was engaged principally as a statesman and diplomatic representative. He represented the American colonists in England with success, until the outbreak of the American War of Independence, 1775, when he returned to America, and took a prominent part in public affairs. In 1776 he was sent as ambassador to Paris, where he secured French assistance for the Americans. The last years of his life were spent in office at Philadelphia, where he died, leaving behind him a name equally great in literature, science, and diplomatic history.

FRANKLIN, SIR JOHN, *b.* 1786, *d.* 1847, a British admiral and a famous Arctic explorer. He fought at the battle of Copenhagen, joined the Flinders expedition to investigate the Australian shores, and, on his return, fought at Trafalgar. In 1818 he made his first voyage in Arctic discovery, and again in 1819 and 1825 made further expeditions to find the north-west Passage. From 1834 to 1843 he was Governor of Van Diemen's Land, (Tasmania). In 1845 he made his last and fatal voyage in the Arctic seas. Many expeditions went in search of the gallant navigator, and Lady Franklin bore a noble part in the efforts that were made. In 1857 she fitted out the *Fox*, under Captain M'Clintock, who found relics of the discoverers among the Eskimos, and, along the shores of Boothia, fragments of the ships and some skeletons. A cairn was found containing a record of the expedition up to 1848, and showing that the explorer's two vessels, the *Erebus* and *Terror*, were abandoned in 1846, and that Franklin had died 11th June, 1847.

FRANKS, THE, a Germanic people who settled to the north of the western Goths, in the north of France during the early part of the 5th century A.D. Clovis the first king of the Franks, drove the Goths out of France in 481, the country taking its name (France) from the conquerors just as Southern Britain (England) took its name from the invading Angles. Clovis became a Christian and was baptized at Rheims in 496, and buried with his wife, Clotilda, in the Church of St. Geneviève that she had built at Paris.

FRAUNHOFER, JOSEPH VON, *b.* 1787, *d.* 1826, a German optician, noted for his improvements of the telescope and other optical instruments, and especially for his elucidation of the lines in the spectrum called after him, "Fraunhofer's lines." (See *Spectrum Analysis.*)

FREDERICK II. OF PRUSSIA, known as "Frederick the Great," king of Prussia 1740–86. He spent his youth in submission to his father's rigid restraints, developing meanwhile a taste for French philosophy and literature. On ascending the throne he showed himself inordinately ambitious, working for Prussian aggrandisement with unswerving zeal and untiring energy. He ruled Prussia single-handed, made of it a training ground of armies, and, in the intervals of war, legislated for it in an arbitrary but keen-sighted way. He annexed Silesia at the expense of Austria, took by diplomacy what is now Prussian Poland, in eastern Germany, and acquired by arms the Franconian duchies. The central aim of his policy was to put Prussia in the place of Austria at the head of a confederation of German States, and, if the worth of policy be best estimated by its results, this prince of the Hohenzollerns should be credited with having laid the foundations of the present greatness of Germany.

FREDERICK III. OF PRUSSIA, *b.* at Potsdam, 1831, *d.* 1888, was the son of the Emperor William I., and married the Princess Royal of England, eldest daughter of Queen Victoria. He fought through the Danish, Austrian, and French Wars with undoubted distinction. His handsome figure and noble bearing evoked great admiration in England in the great Jubilee procession of 1887. In 1888 he succeeded to the throne of the German Empire, but succumbed in the same year to a malignant growth in the throat. A knightly soldier, of a modest, unassuming nature, but powerful influence, he merited the title of "Frederick the Noble," no less than the homely name, "Our Fritz," by which his troops spoke of him.

FREE CHURCH FEDERATION, THE, founded 1892, is an association of the leading nonconformist churches in the British Isles, formed to promote the common objects of the nonconformist bodies and to promote intercourse and mutual action.

FREE-LANCES were bands of mercenary troops of the Crusading days, ready for employment by any one willing to pay for their services. In Italy they were known as Condottieri.

FREEMAN, EDWARD AUGUSTUS, *b.* 1823, *d.* of small pox at Alicante, 1892. He was Regius Professor of History at Oxford, the author of the "History of the Norman Conquest," and a voluminous writer on Architecture, Teutonic customs, and local Antiquarianism, particularly of South-western England. Freeman was extraordinarily learned, and was full of an enthusiasm which, his critics assert, led him to exaggerate the importance of his own views.

FREEMAN, MRS., a name assumed by Sarah Jennings, Duchess of Marlborough, the favourite of Queen Anne, who consented to be called Mrs. Morley, so that the two ladies might correspond and converse without the restraints imposed by their unequal positions.

FREEMASONRY, as at present existing, is of English origin, and arose in the 18th century on the foundation of the corporations of architects and builders that had existed in various parts of Europe from the 7th century. Its traditional history is carried back to the building of King Solomon's Temple at Jerusalem. The order includes three degrees, those of the apprentice, the craftsman, and the master-mason, and a special ceremony attaches to the admission of a candidate to each degree. The members are known to one another by signs and passwords. One great principle inculcated by the craft is that of the relief of the necessitous, and large sums are annually subscribed by the brethren to the various masonic charities.

FREEMEN. The conditions of freedom of a borough differ with different municipalities, but, in general, a man may be eligible for it (*a*) by birth, (*b*) by apprenticeship to a freeman, (*c*) by marriage. Except in the last case a freeman may register for a parliamentary vote on a six months' residence within seven miles of the borough. A borough may elect to an honorary freedom any person who has rendered great service to the borough, but the honour carries with it no right of voting or sharing in the local privileges of freemen.

FREE PORT, A, one which may be used by the vessels of any nationality without the payment of any customs duty or protective charge, except the ordinary harbour dues. Originally intended to draw trade, free ports have almost ceased to exist under the modern systems of high protective duties, and of bonded warehouses. Hong Kong, Singapore, and Zanzibar are free ports under British control.

FREE TRADE. See *Commercial Dictionary.*

FREISCHÜTZ, DER, literally, "the free-shot," was the name of a hunter of German legend who bartered his soul to the devil for seven bullets, six of which should hit what the hunter aimed at, and the seventh go as the devil directed.

FREMANTLE, on the Swan River, in Western Australia, is the port of Perth, the capital, from which it is 12 miles distant; population 23,000.

FREMONT, JOHN CHARLES, *b.* 1813, *d.* 1890; a noted American explorer, surnamed "the Pathfinder," who by his explorations in the Rocky mountains first opened up a practical route for roads and railways to California and the Pacific.

FRENCH REVOLUTION, THE. Refer to *Index.*

FRERE, SIR HENRY BARTLE, *b.* 1815, *d.* 1884, an eminent Indian and Colonial statesman. He was chief commissioner of Sind when the Indian Mutiny broke out, and he succeeded in preventing the spread of the rising to his province. As governor of Bombay he reformed the revenue system. In 1872 he treated successfully with the Sultan of Zanzibar for the abolition of slavery within his dominions. He was governor of the Cape, 1877–80, and was the first high commissioner of South Africa. The Zulu war (1878–9) and the obstructive tactics of the Boers ruined his plans for the confederation of South Africa, and Africa, the grave of the white man's reputation, claimed another victim. Subsequent events, however, have re-instated him in the estimation of his fellow-countrymen.

FRESCO, the art of painting upon plaster walls, with such colours as resist the decomposing effect of lime. True fresco is worked upon fresh laid damp plaster, on which the figure of the cartoon is traced and coloured. At the close of the day's work the fringes and edges of unused plaster are cut away and a fresh coat is laid next day before proceeding. The existence of such joints either in the shadows or along the outlines of the figures is evidence of the use of true fresco. The colours combine with the lime and are permanent. The artist must work unerringly and rapidly, as errors may be removed only with the plaster, and as his colours are few, and his outlines decided, he must be bold in conception and dignified in design. Dry fresco, a modern substitute for true fresco, consists in painting in the same restricted colours on plaster that has dried and been moistened.

FRET-WORK, is the cutting of scroll ornament on specially prepared sheets of wood. The "buhl" or fret saw, resembles the letter D in shape. The work is commenced by passing the blade through a small hole in the wood and then screwing it into the "ben" or frame. The quickest and most effective fret-work is done with a treadle-worked saw arranged on the plan of a sewing machine.

FRIARS were members of the mendicant, or "begging" orders of itinerant clerics in the Middle Ages, as distinguished from the "cloistered" monks and parish clergy. The friars had head quarters, from which they were sent out to preach in the streets, and lanes and bye-ways, trusting for a living to the alms of the people. They lodged in the lowest slums, and regarded those afflicted with leprosy, plague, or fever, as the objects of their special care. The Franciscans, Dominicans, Augustinians, and Carmelites were the four orders of the Middle Ages, in the latter part of which they degenerated, too often, into a set of lazy mendicants.

FRIDAY takes its name from a Saxon divinity, Frigga, the mythical wife of Odin. The classical name was *Dies Veneris* or "Day of Venus." The Christian Church has always kept Friday as a weekly fast in commemoration of the Crucifixion, which is specially solemnized on Good Friday. Friday is considered an ill-starred day on which to start on a venture. Sailors have a universal dislike for it, as bringing ill luck to the ship that sets out on that day.

FRIENDLY SOCIETIES. Refer to *Index.*

FRIENDS, SOCIETY OF. Refer to *Index.*

FRIGATE, originally a long, swift Mediterranean craft, rigged with sails and carrying oars. The name was afterwards applied to a fast-sailing man-of-war carrying all its guns on a single deck, and employed for scouting.

FRISIANS, a Teutonic people akin to the Angles and Saxons, dwelling on the low lands now occupied by the Zuyder Zee. They joined in the Anglo-Saxon invasions of Britain, and peopled the district between the Humber and Thames, known as Mercia. Their dialect became the standard of "King's English," and is thus the parent of modern English. An old couplet exemplifies this relationship well:—

Good butter and good cheese
Is good English and good Freese.

FRITH, WILLIAM POWELL, R.A., *b.* at Studley, 1819, *d.* 1909; was an English painter of portraits and subject pictures, which have achieved popularity through their striking dramatic qualities. "The Derby Day," "The Road to Ruin," "The Railway Station," and "Margate Sands" are among his best known works.

FROBISHER, SIR MARTIN, *b.* 1535 in Yorkshire, *d.* 1594, discovered Labrador in attempting to reach China (Cathay) by the North West Passage. He assisted Drake in the West Indies, and was knighted for his prowess in fighting against the Armada.

FRÖBEL, FRIEDRICH, *b.* 1782, *d.* 1852, a German educational reformer, who held strongly to the idea that educational development should be sought in the full and combined activity of all the faculties, bodily and mental. He opened a "Kindergarten" school in 1836, and spent the rest of his life in advocating his system, and in training teachers in his principles.

FROG belongs to the class *Amphibia,* which is a group of vertebrates that breathe by gills in the early part of their life history, and by lungs in their adult condition. The eggs are laid in ponds in March and consist of black yolks embedded in a gelatinous mass of white of egg. A fortnight later the tadpole hatches and attaches itself to a water weed. At an early stage it is practically a fish, breathing with gills and using its tail for swimming. It gradually undergoes changes. As its hind-limbs develop its tail dwindles, and as its lungs develop the gills shrink and disappear. In the course of three months, the tadpole has become a frog. In winter it hibernates at the bottom of a pond.

FROGMORE, a palace in Windsor Park, purchased by Queen Charlotte in 1800. It was the home of the Duchess of Kent, Queen Victoria's mother, who died in the same year (1861) as the Prince Consort. The queen had a magnificent mausoleum built in its grounds to contain the two tombs, and thirty years later she was laid to rest beside her husband. Monuments to other members of the royal family are also contained within it. King George V., used the house when Prince of Wales.

FROISSART, JEAN, *b.* 1337, *d.* 1410; a famous French chronicler of the wars of France, England, and Scotland, that took place in his own lifetime. In 1360 he was welcomed to England by Queen Philippa as a fellow-countryman. He was a great traveller and was known at most of the Courts of Europe, where he gathered his information from the knights and courtiers whom he met.

FRONDE, THE, a faction in Paris, 1648–1654, which was opposed to the Court, and particularly to the exactions of the Prime Minister, Cardinal Mazarin, who, despite a temporary exile, returned to assert the royal power as vigorously as ever.

FROST is the condition of the air or of the earth when the temperature has fallen to 32° F., which constitutes the freezing point of water. *Hoar Frost* is a deposit of rime upon exposed objects when they have cooled by radiation below the dew-point. Exposure to excessive cold produces a deadness in the affected part of the body that is known as "frost-bite." Restoration of the circulation of the blood is best effected by a process of rubbing with snow.

FROUDE, JAMES ANTHONY, *b.* at Dartington, Devon, 1818, *d.* 1894, an English historian. He was educated at Oxford, where he came under Newman's influence and took deacon's orders. His faith suffered a revulsion, and he resigned his orders, stating his views with clearness and pathos in his "Nemesis of Faith," a work that cost him his fellowship. He published his "History of England from the fall of Wolsey to the defeat of the Spanish Armada" between 1856 and 1869. His narrative is vivid and picturesque in style, but marred by prejudice and inaccuracy. Of his other works the principal are "Short Studies on Great Subjects," "The Life and Letters of Erasmus," "The English Seamen of the 16th century," and his "Life of Carlyle."

FRY, C. B., *b.* 1872, a triple Blue of Oxford—cricket, football, athletics—held for some years world's record long jump. Notwithstanding gained 1st Class in Honour School.

FRY, ELIZABETH, *b.* 1780, near Norwich, *d.* 1845, was one of the Gurneys of Norwich, a well known, wealthy Quaker family. She managed a school for poor children when she was eighteen, and at twenty married and came to London. In 1813 a visit to Newgate prison disclosed to her the awful condition of the women and children in jail. Prison reform became the object of her life, and it is not too much to say that her work, her visits to prisons in England and abroad, and her enthusiastic power of enlisting supporters revolutionized prison life in England. She had eleven children, and was a preacher among the Society of Friends.

FUGLEMAN, a leader in military drill who stands in front, at the end of a file, to serve as a model to the others in their exercises; hence any one who sets an example for others to follow.

FULAHS, a Mohammedan people of the Soudan, who became a conquering people in the beginning of the 19th century. They founded great kingdoms in Nigeria, which are still well-organised states under British suzerainty. The Fulah Empire is also known as the Sokoto Empire.

FULLER, THOMAS, *b.* 1608, *d.* 1661; a writer of much charm both in divinity and history, a man of quaint wit, a divine of rare influence, and free from prejudice in an intolerant age. His best known work is his unfinished "British Worthies," a wonderful compilation of local history and anecdote. His own suggestion, "Here lies Fuller's earth," was not used as his epitaph.

FULLER'S EARTH is a clay containing a sufficient admixture of flinty matter to cause it to crumble instead of clogging when moistened. It has the property of absorbing grease or oil, and was formerly in great demand for "fulling," that is, cleansing and thickening woollen stuff. A useful source of supply is worked at Nutfield, near Redhill, in Surrey.

FULTON, ROBERT, b. 1765, *d.* 1815; an American engineer, was the first man to use steam in navigation with success. His first boats were employed in river navigation in America.

FUNDY, BAY OF, runs northwards between the peninsula of Nova Scotia and the mainland of New Brunswick. Its length and narrowness render it liable to violent tides, which attain a height of over 60 feet.

FUNGI differ from ordinary plants in one marked characteristic. The latter

assimilate carbonic acid gas and reject oxygen, whilst fungi are incapable of absorbing carbonic acid gas. They live on organic substances, that is, they draw their nourishment from other plants and animals. All bacteria are fungi, and so too are many surface growths, like mildew. The yeast fungi, and the organisms that cause fermentation, have been enlisted into the service of men, whilst dry-rot, plant-rust, and potato disease, on the other hand, are a mischief to be fought against. Mushrooms and other edible fungi of the family called *agarics* are used for the table. Ringworm may be mentioned as an instance of a fungous growth on the human skin. (For poisonous fungi refer to "Poisonous Plants" in *Med. Dict.*)

FUNNY BONE. A blow upon the inner and under side of the elbow may give rise to a tingling sensation that seems to reach the little finger. It is the ulnar or elbow nerve that has been struck, and the curious sensation has led to this common misnomer.

FUR is an incrustation deposited upon the inside of boilers and of kettles, when hard water is used. Hard water often contains carbonate of lime in solution. The act of boiling liberates the acid that holds the lime in solution, and an incrustation of carbonate of lime is deposited upon the sides of the vessel. The use of sal-ammoniac in small quantities has been tried with success as a preventive to furring, but it injures the iron of the boiler.

FURCA, an Alpine Pass about 8,000 feet above sea level, leading over the watershed between the Reuss and the Rhone.

FURIES. See *Eumenides.*

FURLOUGH, holiday from service of non-commissioned officers and men in the British army. Discretion rests entirely with the commanding officer, and unless a man has a duly signed pass he is liable to be treated as a deserter. The name is also applied to the home-leaves of officers in the Indian army.

FURNESS is a peninsula between Morecambe Bay and the Irish Sea. The ruins of Furness Abbey rank with those of Fountains Abbey as among the best English examples of a Cistercian monastery. The iron and steel works of Barrow-in-Furness have developed greatly in recent years.

FURNITURE. The modern age of furniture began in England with the Restoration when veneering, marquetry, gilding, the use of mirrors, rococo work and lacquering were introduced. The celebrated furniture makers—Chippendale, Lock, Sheraton, Hepplewhite, and the brothers, James and Robert Adams—belong to the latter part of the 18th century.

FURNIVALL. FREDERICK JAMES, *b.* 1825, an enthusiastic and untiring student of the English Language and Literature. He is the founder of "The Early English Text Society," "The Chaucer Society," "The Ballad Society," "The New Shakespeare Society," "The Browning Society," and "The Shelley Society." His introduction to the "Leopold Shakespeare" is probably better known than any other, and deservedly so. He is a great "river man," and is the inventor of several improvements in rowing craft. He has further made himself known in London as an ardent worker in the clubs of working men and women.

FURS. The most valuable furs, as those of the bear, beaver, sable, seal, &c., come from the Arctic borders of America or Russia. The costliest of all furs is the Russian sable, and the darker the fur the more valuable it is. In London, Leipsic, and Nijni-Novgorod annual sales are held, when the undressed skins of the great fur-trading companies are bought by the manufacturers to be dressed for the market. There is a large trade done in furs from Australia and Africa, in opossum skins and black monkey respectively. Furs are steeped before dressing commences, then scraped to remove fat, and dried. They are then trodden under foot in a mixture of sawdust and butter to give them suppleness, then trodden in dry sawdust and finished off.

FUSEL OIL, or potato spirit, is an impure product of fermentation occurring in the distillation of whisky from potatoes, barley, &c. It has a peculiar and offensive smell, and is a violent intoxicant. It is said that its presence in spirit may be detected by the milky appearance of the liquid when mixed with water.

FUSILIER (Fr. *fusil*, a musket), a foot soldier formerly armed with a light musket. The term has now lost its original significance, but is retained as a title by certain regiments of foot.

FUZE, a train or connection by which an explosive mixture is fired. For blasting, and for such military purposes as occur in roadmaking or demolitions, a special fuze is made, consisting of charged tapes enclosed in gutta percha. For shells and projectiles, either a time fuze or a percussion fuze is used. The former acts at a certain interval of time after the moment of projection, the latter acts upon impact.

GABBATHA, "the Pavement," where Pilate delivered judgment on our Lord. It was a tesselated pavement outside the judgment hall, with a tribunal. See John xix, 13.

GABELLE, a French word denoting a tax on salt, first levied in France in 1286, and removed by the first parliament of the French Revolution in 1789. This tax was most unpopular, and its collection often caused local riots.

GABERLUNZIE, a Scottish beggar licensed to solicit alms within a certain area. Hence the term came to be applied to any mendicant. Edie Ochiltree is described by Scott in his preface to the "Antiquary" as a true specimen of the once respected class of wayfaring gaberlunzie.

GABIONS are cylindrical baskets without bottoms, used in fortification, to hold earth, as a protection against rifle fire. They are arranged in rows, and filled with the earth that has been thrown out of the trench. In this way an embankment of earth can be built up without any liability to slipping away or breaking under fire.

GABRIEL, "hero of God," one of the archangels, twice mentioned by name in the Bible, Daniel viii. 16, and St. Luke i. 19. In the latter passage is described the Annunciation of the birth of Jesus to the Virgin.

GADFLY is also known as the botfly or warble fly. There are several species, three of which are important. The *horse gadfly* lays its eggs on the horse; the horse licks them off and swallows them; the maggots develop in the intestine and finally are discharged from the body, when they burrow in the earth and change into a chrysalis. The *ox gadfly* is a more serious pest; it lays its eggs in the skin of the ox and the maggots burrow into the flesh producing troublesome sores; finally it leaves the ox, burrows in the earth, and changes into a chrysalis. Oxen when attacked by gadflies usually stampede and often die from exhaustion in consequence. The *sheep gadfly* enters the nostrils of sheep and lays its eggs in the nasal cavity. The maggots burrow into the nasal and jaw bones causing much irritation; when full fed they make their way to the surface and falling to the ground burrow in the earth to change into a chrysalis.

GADSHILL, three miles from Rochester, is the scene of Falstaff's encounter with the men in buckram, so humorously described by himself in one of the scenes of Shakespeare's Henry IV. Dickens, the novelist, lived here, at Gadshill Place, for the last ten years of his life.

GAEL, to be strictly correct, implies either the primitive Irish, the Scots of the Highlands or the Manx of the Isle of Man. These peoples originally came from Ireland, where they were known to the Romans under the name of Scotti. The name Gael means, however, in popular usage, the Highlander of Scotland.

GAELIC, the language spoken by the Gaels. There is an essential similarity between Erse Gaelic, the Gaelic of Scotland, and that of the Isle of Man. We may look upon them as dialects, differing from one another only in details. There is an extensive literature of Scottish Gaelic, dating as far back as the Danish invasions, when many Gaelic monks fled to quieter quarters for safety, and so saved their books. John Knox's Liturgy was the first book to be printed in Gaelic. The late Professor Blackie's collection of Gaelic poetry contained specimens of the work of a bard of Islay, William Livingstone, who died in 1870.

GAINSBOROUGH, THOMAS, *b.* 1727, *d.* 1788; one of the greatest portrait painters or landscape artists that England has produced. He was born at Sudbury, in Suffolk, studied art under an engraver in London, and removed thence to Bath, where he became famous as a portrait painter. The National Gallery contains his great portraits of Mrs. Siddons, and also his famous landscapes, "The Market Cart" and "The Watering Place."

GALATIA, an inland country of Asia Minor, is chiefly remarkable as the home of a Christian colony to whom St. Paul addressed the "Epistle to the Galatians." The aim of the epistle was to counteract the influence of the Judaisers, who had appeared in Galatia, seeking to enforce on Gentile Christians the duty of observing the Jewish Law.

GALAXY, or "Milky Way," is a luminous band that appears among the stars on a clear night, reaching overhead from horizon to horizon. In reality it consists of innumerable stars that are immensely distant from the earth, and so appear as a band of light across the heavens. The name galaxy is also gallantly used of a concourse of the fair sex.

GALEN, *b.* 131 A.D., a Greek physician, who long remained the supreme authority in medicine. In his travels he came to Rome, where he was appointed physician to the Emperor Marcus Aurelius. He wrote many books on medicine, and is looked upon as a really great anatomist. His theoretical work was injured by his reliance upon the idea of Hippocrates, of the four elements, and the four humours of the body that corresponded to them.

GALICIA, (1) a territory lying to the north of the Carpathians, bordered by Silesia, Poland, and Russia, and forming part of Austria. The inhabitants, numbering about six millions, are mostly of the Slavonic race; chief towns, Cracow and Lemberg. (2) A province in Spain, in a backward condition; the inhabitants are poor and in summer go forth from their homes to gather the vintage in other parts of Spain and in northern Portugal.

GALILEE, the most northerly of the three provinces into which Palestine, west of the Jordan, was divided in the time of our Lord. It was occupied by

a mixed race, who were regarded with contempt by the people of Judea. Its chief town was Tiberias, on the shores of the Lake of Tiberias, otherwise called the Sea of Galilee, or the Lake of Gennesaret. The margin of the lake, formerly studded with towns on its western shore, is now almost deserted.

GALILEO, *b.* at Pisa, 1564, *d.* 1642; takes a foremost place among scientific discoverers. Observing a sanctuary lamp swinging in Pisa cathedral, he compared its time of oscillation with the beat of his pulse, and found that the time of swinging was constant. This led him to experiment with the pendulum, and afterwards to embody his discoveries in the first astronomical clock. He held positions as Professor of Mathematics at Pisa, and later at Padua Universities. At the former place he expounded the then novel truth that falling bodies descend in vacuo at the same rate of velocity whatever their weight. He was the first to construct an astronomical telescope, and by its aid he convinced himself of the truth of the theory of Copernicus, that the sun, and not the earth, was the centre of our system of planets. He discovered the satellites of Jupiter, and was the first to notice the rotation of the sun by the movement of sun-spots. His publications were regarded as heretical by the authorities of the Roman Church, and he was forced by the Inquisition to deny his theories. He outlived this attack, and continued his researches in retreat, near Florence, to the end of his days.

GALL, FRANZ JOSEPH, *b.* 1758, *d.* 1828; a German physician and the founder of phrenology. Having convinced himself that men's powers and dispositions may be accurately inferred from the external formation of the skull, he began a course of lectures on the subject at Vienna. These attracted general attention and met with increasing success until, in 1802, they were interdicted by the Government as dangerous to religion. He then carried on the work at Paris with great *éclat*, until he was disabled by an apoplectic seizure.

GALLEON, a Spanish vessel of the 16th and 17th centuries, used for conveying to Spain the cargoes of gold and silver from the Spanish colonies in the Americas. They were three-decked, and built high and heavily fore and aft.

GALLEY, a sea-going boat that uses sails and is propelled by oars. The Greeks and Romans used vessels of this class both for merchant and war service. The rowing was done by mercenaries or slaves, who stood chained to their oars under the deck. Larger galleys, or galleasses, were used by the French until 1748, and convicts were used to man the oars. From this practice we get the phrase "galley-slave."

GALL and **GALL-FLY.** The Gall-fly belongs to a family of insects allied to the bees and wasps. These insects lay their eggs in various plants and so irritate the plant tissues, that a morbid growth of the plant occurs resulting in a gall. Within this gall the larva feeds and changes into a chrysalis. Galls are sometimes very complex in structure and in certain cases contain starch and other food materials deposited there by the plant apparently to feed the parasitic larva. This phenomenon is remarkable and very exceptional, as the host as a rule develops poisons to destroy the parasite instead of food to nourish it. The oak-apple and the red mossy growth on the rose are the two most familiar galls.

GALLIO was Roman proconsul in Greece at the time St. Paul visited Corinth. He refused to intermeddle in the dissensions among the Jews at the preaching of the apostle; for, as a Roman magistrate, he had no concern with religious questions. "Gallio," we read (Acts xviii. 17), "cared for none of these things," and so he is regarded as typical of men who about religious matters are indifferent.

GALLOWAY, the south-western corner of Scotland, includes the county of Wigtown and a part of Kirkcudbright. It is a pastoral district, and has famous breeds of ponies and of black hornless cattle. Its climate is exceeding mild. Stranraer, at the head of Loch Ryan, is a busy port with a considerable Irish trade.

GALLY, MERRITT, *b.* 1838, an American inventor who has specialised in type-founding, in telephonic instruments, and in systems of pneumatic action in piano-playing instruments such as the pianola and the æolian.

GALTON, SIR FRANCIS, *b.* 1822, a famous statistician, anthropologist, and traveller. He has distinguished himself by the remarkable work he has done in anthropometry or measurements of the human body. (See *Anthropometry.*) For some years he conducted a system of anthropometrical records at South Kensington Museum, compiled from measurements taken from visitors to the museum. He has founded at University College, London, the new study of Eugenics (p. 133)

GALVANI, LUIGI, *b.* at Bologna, 1737, *d.* 1798; became professor of anatomy at Bologna University. His name is connected with his discoveries in animal electricity, and it may be said that the scientific treatment of electrical currents dates from his time; hence we find his memory preserved in the names *Galvanic* cell, battery, and current.

GALVANISED IRON is not in any way electrically treated, as the name might seem to imply. It is simply iron dipped in molten zinc. The zinc forms with the iron an alloy which resists rust.

GALVANISM, a term, now going out of use, denoting a branch of the science of electricity. The name of the founder of modern discoveries in current electricity, Luigi Galvani (1737–1798), is preserved in this term, as well as in the better known "galvanic battery."

GAMA, VASCO DA, *b.* 1469, *d.* 1525; was the foremost of Portuguese navigators. In 1497 he set out from Lisbon with three ships to attempt to round the Cape of Good Hope. He succeeded in reaching India, and in two years was back again in Lisbon. The Portuguese made a settlement at Calicut in India, and Da Gama was sent out, on two occasions, with a fleet to support the governors, who were subjected to much annoyance from the native princes.

GAMALIEL, the grandson of Hillel, a reformer of the Pharisees, was himself a famous and liberal-minded Pharisee, and "teacher of the law." Amongst his pupils was St. Paul who, we are told, "sat at the feet of Gamaliel" (Acts xxii. 3).

GAMBETTA, LEON, *b.* at Cahors, 1838, *d.* 1882; a French statesman and patriot. On the surrender of Napoleon III. at Sedan, 1870, he took a leading part in proclaiming a Republic. He escaped from Paris in a balloon during its siege by the Germans, and with wonderful energy raised one army after another to oppose the enemy. To him, in no small measure, France is indebted for the establishment of a Republican government on a sound, popular basis. Though Gambetta did not actually become President, he was looked upon as the foremost man in France, when he met his death through a pistol wound in the hand.

GAMBIA. Refer to *Index.*

GAMBLING, or **GAMING.** Refer to *Index.*

GAMBOGE is imported into Britain chiefly from Burma and Siam. It is a gum resin obtained from the bark of the gamboge-tree, and is used both as a colouring matter and in medicine.

GANDA or **BARGANDA**, a people of some importance who occupy the country to the north-west of Lake Victoria. See *Uganda.*

GANGES, THE, is the sacred river of the Hindoos and the great waterway of northern India. It rises, at a height of 13,800 feet, in the Himalayas, emerging from an ice cave. At Allahabad it receives its sister stream, the Jumna, and the tongue of land at their junction is regarded as a sacred place. It passes the sacred city Benares, and at a point 200 miles from the sea branches out and forms a delta. The great Brahmaputra joins the main channel of the delta, the two streams forming a broad estuary. The Hugli, however, or western channel, is the chief course for navigation, and on it stands Calcutta. The total length of the Ganges exceeds 1,500 miles. Thousands of devotees visit the sacred cities on its banks each year; for to bathe in its waters is in their belief to be cleansed from sin, and to die on its banks is the desire of the devout Hindoo.

GANNET, a web-footed sea-fowl, of the same family as the pelican and cormorant. It is well known to visitors to the Bass Rock in the Firth of Forth as the Solan Goose. It chooses as its breeding place the ledges of some sea-beaten rock. It feeds on fish and goes out to sea for considerable distances in search of food. Pilchard fishers off Cornwall are said to be able to locate the shoals by the presence of the birds. The Gannet makes a nest of sea-weed and grasses, and lays one egg, on which it sits very closely. The bird has often to be removed from the egg by the rope-climbers who go in quest of eggs and young birds.

GANYMEDE, a beautiful Trojan boy, who, according to Greek fable, was carried by Jove's messenger, the eagle, to the top of Olympus, where he became cup-bearer to the king of the gods.

GAP OF DUNLOE, a pass in Kerry, near Killarney, noted for its romantic beauty.

GAPON, FATHER, a Russian priest and demagogue, who won great influence over the Russian people. He took a prominent part in the St. Petersburg strikes at the close of the Russo-Japanese War (1905), and became a refugee in Switzerland, where he wrote the story of his life. (See *Strand Magazine* 1905–6).

GARCIA, MANUEL, *b.* 1805, *d.* 1906, a great teacher of singing, son of a famous Spanish operatic tenor, was fêted in London in 1905 on attaining his hundredth birthday, and presented with his portrait, painted by Sargeant. He taught in the Conservatoire at Paris until 1850, and then removed to London. He has trained many of the foremost singers of his time, has written on voice production, and was the first to use the laryngoscope in voice-training.

GARDEN CITIES. The Garden City Association was founded in 1899, and four years later a company, "Garden City, Ltd.," purchased a site near Hitchin, and commenced the construction of roads, sewerage works, waterworks, &c. Accommodation and facilities are offered both for large works and small holders, every residence is to have its garden, open spaces are to be preserved, and the town is to be surrounded by an agricultural belt. The Company has a capital of

£300,000, and it is expected that the ground rents based upon a scale depending on the progress of the city, will obviate the need of rates. To a certain extent the movement owes its origin to the model villages of Cadbury's and Lever's at Bournville, near Birmingham, and at Port Sunlight, near Birkenhead.

GARDINER, SAMUEL RAWSON, *b.* 1829, *d.* 1902, a reliable English historian. He devoted himself particularly to the period of the early Stuarts and the Commonwealth, and his extensive works on this difficult period show a remarkable power of painstaking research allied with a gift of unfailing lucidity in style. His great work consists of seventeen volumes.

GARDINER, STEPHEN, *b.* about 1485, *d.* 1555; became secretary to Cardinal Wolsey, and was intrusted by Henry VIII. with the task of furthering at Rome his designs for the divorce from Catharine of Aragon. In 1531 he became bishop of Winchester, and supported the royal supremacy, in Church as well as State. On account of his opposition to Cranmer's reforming measures, in the reign of Edward VI., he was deposed and imprisoned. Queen Mary restored him to his see, and he is said to have been responsible for much of the persecution which the Protestants suffered in Mary's reign.

GARFIELD, JAMES ABRAM, President of the United States, *b.* 1831, assassinated 1881. He was one of four children of a widowed mother who succeeded without assistance in bringing them up in the loneliness of a cabin in the woods of Ohio. By great exertion and pluck the boy James educated himself, and assisted in maintaining the home. In 1856 he took his degree at a College in Massachusetts. On the outbreak of Civil War he commanded the Ohio volunteers, and was made Major-General for service and bravery. He became a senator of the United States in 1880, and was elected President in 1881. A disappointed office seeker shot him shortly after his inauguration, and he died after lingering for two months.

GARGANTUA, a giant of immense size, well known in the legends of southern France. If he drank at a river, he would swallow oxen and drovers who were crossing the ford. Rabelais used this character, and embellished the traditions that were abroad, in his great burlesque, "The Chronicles of the Grand and Enormous Giant Gargantua," published 1532.

GARGOYLES, projecting spouts that carry off the water from the roofs of Gothic buildings. They form a noticeable feature of mediæval churches, particularly because of the extraordinary devices and ingenuity displayed in rendering them grotesque. Griffins, open-mouthed animals and curious-looking human figures, were carved in stone to serve as gargoyles.

GARIBALDI, GIUSEPPE, *b.* at Nice, 1807, *d.* 1882; a leader of irregular troops, an Italian patriot, and a central figure in the achievement of Italian independence and the union of Italy. His early life was one of adventure, during which he became famous as a leader, on land and sea, in South America. He returned to Italy, and led a troop of "red shirts" in the struggle of the revolutionary Italians. In 1854 he was given a command under Victor Emmanuel, king of Sardinia, and he succeeded in liberating Sicily and Naples. On the coronation of Victor Emmanuel as king of Italy he declined reward, and retired to his farm on the island of Caprera. The generosity of English friends enabled him to become owner of the island, whither he had always returned in the intervals of war, and there he died. The figure of the red-shirted peasant patriot is cherished in the memory of all lovers of liberty.

GARNETS are crystals found usually in metamorphic rocks, or in loose sand that has been worn away from the rocks. The precious stone, the garnet of the jeweller, is found in sand and old river beds in India, Ceylon, Brazil, and Scotland. The best are red and transparent. The carbuncle is a blood-red garnet cut in a particular way.

GARONNE, the chief river of South-western France, rises in Maladetta, the highest peak of the Pyrenees. It passes Toulouse, where it is connected by the Canal du Midi with the Mediterranean, and near its mouth stands Bordeaux, a port that can be reached by ocean steamers. Twenty miles below Bordeaux it receives the waters of the Dordogne, and then it widens into an estuary, 50 miles long.

GARRICK, DAVID, *b.* at Hereford, 1717, *d.* 1779; a celebrated actor, who was for a time a pupil of Dr. Samuel Johnson, with whom he set off to London to study law. In 1741 he took to the stage, and made a great impression by his Richard III. In six years he became joint manager of Drury Lane Theatre. He infused an air of reality into all his acting, and aimed at making the stage the counterpart of nature. His versatility enabled him to make a name in farce, comedy, and tragedy.

GARROTTE, a method of execution formerly practised in Spain. A cord, fastened about a post, was passed round the neck of a man seated on a chair, and then twisted tight by means of a stick, until strangulation ensued. In 1862–3, a method of assault adopted by robbers received the name of garrotting. Approached from behind, the victim was half strangled until the robbery was effected. Flogging was effective in stamping out this offence.

GARTER, ORDER OF THE. Refer to *Index*.

GAS, COAL is obtained by the distillation of coal in large chambers or retorts. The distillation proceeds for about four hours under a great heat, and the products are broadly, coke, gas, and coal-tar. The gas is then cooled, washed with water, and treated with slaked lime to remove impurities. The large cylindrical vessels so prominent in all gas-works are the *gas holders*, from which the supply issues to the consumers. These holders rise and sink in a tank of water by their own weight and the upward pressure of the gas inside. It will be observed that this movement is made on pulleys placed upon the uprights that support the gas holder. The gas is conveyed from the holder by *mains*, and from the mains to the consumer by *service pipes*. At the lowest point in the level of the main a trap hole takes off any deposit of water that may form in the pipes. Meters are used by the consumer to measure the gas supplied, and they include the varieties known as the dry meters, wet meters, and, recently, penny-in-the-slot meters. It is important for the consumer to regulate the supply of gas to the burner, and this can always be done by a second tap or governor. For heating purposes, coal gas is used mixed with air. It produces a smokeless blue flame of high temperature, but cooking stoves ought to be provided with chimneys to carry off fumes. The idea of burning gas probably arose from the inflammable streams of gas emitted from coal beds in the mining districts. The Royal Society published a letter from Dr. Clayton, Dean of Kildare, describing experiments with coal-gas carried out about 1690. In 1792 a house and office were lit by gas at Redruth, Cornwall, and the owner, William Murdoch, lit up Boulton and Watt's factory at Birmingham in 1798. The Chartered Gas Company was established in 1810, and from that date gas gradually made way as the chief means of lighting streets, shops, and houses.

GASCOIGNE, SIR WILLIAM, *b.* 1350, *d.* 1419; a fearless judge, who refused to obey an order from the king (Henry IV.) to sentence Archbishop Scrope and Earl Mowbray for their connection with a rebellion in the north of England in 1405. There is no historical foundation for the stories of his strict dealing with the riotous Prince Hal, and certainly Gascoigne did not retain the office of chief-justice after the prince's accession as Henry V.

GASCONS. The people of Gascony, the land lying between the Garonne, the Pyrenees, and the Bay of Biscay. The Gascons were a brave, spirited people, but so addicted to boasting that excessive bragging and bravado goes by the name of *gasconade*.

GAS-ENGINES, take their motive power from the explosion within the motor-cylinder of a compressed mixture of coal gas and air. This form of engine, invented in 1860 by Lenoir, was improved by Otto in 1866 and again in 1876, and became a serious rival of the boiler engine for driving light machinery. In 1889, Mond invented a process by which a cheap gas might be produced from slack and refuse coal. This "producer-gas" has made the employment of powerful gas-engines possible from the point of view of economy.

GASKELL, MRS., *b.* at Chelsea, 1810, *d.* 1865, a novelist who has graphically described the life and trials of "the factory hands" of Lancashire. Among her best works are "Mary Barton," "Ruth," and "Cranford."

GATESHEAD, a flourishing town of Durham, situated on the south bank of the Tyne and joined to Newcastle by three bridges, the hydraulic swing bridge taking the place of an old Roman bridge. The N.E.R. Company has a locomotive depôt and workshops here. Besides locomotives, Gateshead manufactures anchors and chain cables, and has large chemical and glass works. (For population, etc., see p. 902.)

GATLING, RICHARD JORDAN, *b* 1818, in North Carolina, is famous for mechanical inventions. Among these are agricultural machines for sowing and ploughing; but his name is better known perhaps, in connection with his "Gatling gun," with its ten barrels capable of firing 1,200 shots a minute.

GAUCHOS, the herdsmen of the plains of South America. They are skilled in the use of the lasso and the bola. With the lasso they can capture any animal they please in a herd of horses or oxen. With the bola, which consists of two lead balls connected by a leather thong, they can generally bring to the ground any bird or beast they wish to secure.

GAUL or **GALLIA** was the Roman Province that included the territory now called France. The adjective Gallic is still applied to the French people, and carries with it a suggestion of nation quickness of wit and liveliness of disposition.

GAULT is a form of clay occurring the lowest stratum of the upper cretaceous rocks. It is blue in colour marine in origin.

GAUTAMA, a name by which Buddha the founder of the great Buddhist religion, is sometimes known.

GAUTIER, THÉOPHILE, *b.* 1811, *d.* 1872, a French prose writer of great charm and influence. He was an admirer of Victor Hugo, and his voluminous writings include romances, biographies, literary criticism, archæological studies, works on the history of movements in art, and even a *Paradis des Chats*, for he was devoted to cats.

GAUZE, a light woven fabric of silk used for veils. Wire gauze is used for confining flames, as in the safety lamp, and the mantles of incandescent burners are made of specially treated gauze.

GAVELKIND, a usage universal in England before the Conquest, by which if a man died intestate his lands passed equally to all his sons, or failing issue to all his brothers. The custom survives in Kent where, unless property has been "disgavelled" by special Act of Parliament, the law assumes that gavelkind obtains.

GAY, JOHN, *b.* at Barnstaple, 1685, *d.* 1732; a popular poet, best known for his fables. His greatest literary success was "The Beggar's Opera," and "Black-eyed Susan" was his most popular ballad.

GAZELLE, a species of antelope of light and graceful form. The horns of the male are ringed, and curve slightly. Herds of these animals are found in the borders of the northern Sahara. Dogs are useless in pursuit of them, because of their great swiftness: they are often trapped, however, near their drinking places. Tame gazelles are kept as pets in Eastern harems, and their gentleness is a general subject of reference in Persian poetry.

GAZETTE, LONDON, an official organ of the Government, founded in 1665, and published twice a week. It is the medium of legal and official announcements, and of intimations of a private character necessary by law, particularly of matters concerning the interests of creditors. To be put in the gazette is a method of expressing bankruptcy.

GEDDES, JENNY, who kept a vegetable stall in High Street, Edinburgh, started the riot in St. Giles' Church, Edinburgh, in 1637, by flinging a stool at the head of the Dean, who was beginning to read the collect. Archbishop Laud had attempted to introduce a new service book in Scottish churches, and the action of Jenny Geddes represents the spirit in which the Scots received this attempt to interfere with their religion.

GEHENNA, or the valley of Hinnom, is a gorge to the south-west of Jerusalem, where the kings of Judah set up the idolatrous worship of Moloch. The shameful practice of sacrificing children was included in the rites of this idolatry. On the restoration of the old faith under Josiah, the valley was made an abomination, and became the cesspool of Jerusalem. In the New Testament it is referred to as a type of hell.

GELATIN. See *Med. Dict.*

GELLERT, the faithful hound of Prince Llewellyn, that (according to Welsh tradition) was left in charge of an infant, slew a wolf in its defence, but was himself slain by his master under the mistaken belief that he had killed the child.

GEMARA, the exposition of the Mishna in the Talmud (which see).

GEMINI, "Twins," the name of the constellation of Castor and Pollux, which forms the third of the signs of the Zodiac.

GEMMI PASS, a pass in the Bernese Alps leading from Leuk in the Rhone Valley to the Bernese Oberland; height 7,641 feet.

GEMS, precious stones cut and polished to be used as jewels and ornaments. Strictly the term denotes only hard stones that have been engraved as seals or cameos, the former being sunk as dies, the latter cut in relief. The more precious stones, however, such as the diamond, ruby, emerald, and sapphire are cut in facets to display their brilliance. Paste gems are made without much difficulty, now-a-days, by taking an impression of a stone in "paste," and melting into the mould a piece of glass of the required colour and size.

GENERAL ASSEMBLY. The Established Church of Scotland, the United Free Church of Scotland, and the Free Church of Scotland each hold in May a general assembly extending over a fortnight. Delegates from each presbytery, and in the case of the Established Church, from the universities and royal boroughs, are summoned. The assemblies form a court of appeal and an advisory court to the presbyteries, they also legislate for their several churches. New legislative measures must, however, be submitted to the local presbyteries and receive a majority of assents before the Assembly can proceed to pass them.

GENESIS, a Greek word meaning "origin," is the title of the first book of the Pentateuch. It deals (1) with the Creation and God's covenant with Adam, (2) with the Flood and God's covenant with Noah, (3) with the separation of the chosen people and God's covenant with Abraham. The Sabbath, the Rainbow, and the rite of Circumcision were the signs of the three covenants. The history of the chosen race is related as far as the death of the patriarch Joseph.

GENEVA, capital of the Swiss canton of the same name, became the head of an independent republic in 1527, and afterwards adopted the principles of the Reformation. Under Calvin it became a centre of the Protestant movement. The Rhone passes through the town, clear as glass, after leaving its sediment behind in the Lake of Geneva. Geneva is famous for the making of clocks, watches and chronometers, jewels, and scientific instruments; population 75,000.

GENEVA CONVENTION, THE, (1864), is an international agreement regarding the treatment of the wounded in war, and the amelioration of the evils of warfare. It secures immunity from attack for all engaged in tending the sick and suffering.

GENEVIÉVE, SAINT, *b.* near Paris, 424, the patron saint of that city. She took the veil at the age of 15, and became famed for her devoted labours on behalf of the poor. By her prayers she was thought to have saved Paris from attack by Attila and his Huns. She raised a church over the tomb of St. Denis, and was herself buried there.

GENGHIS KHAN. See *Jenghiz Khan.*

GENII, a Latin word originally signifying the spirits that existed within every created thing; trees, and places, as well as human beings and states, possessing their own genii. The genii of the "Arabian Nights" are eastern demons, whose name Jinn was translated into mediæval Latin by the word genii.

GENOA, an Italian city and seaport, which stands at the head of the Bay of Genoa in Northern Italy. It possesses a fine commercial harbour and naval station, and the view of the town from the sea is wonderfully impressive, terrace rising above terrace amid groves of orange trees and olives. The town itself is inconvenient, the streets are narrow and gloomy, and the thoroughfares are steep. A great shipping business is carried on in the exportation of wine, oil, silks, macaroni and marble, and goods to the value of £20,000,000 pass through the port annually. It is a great port of emigration for South America. In the Middle Ages Genoa, like many of the Italian cities, was a Republic. It was the birth-place of Columbus.

GENRE-PAINTING. Refer to *Index.*

GENSERIC, became king of the Vandal kingdom in Spain, 419, but in that year the Vandals were driven out by the Visi-Goths and crossed into Africa. Genseric took possession of all the Roman provinces in Northern Africa, capturing Carthage in 439, and in 455 dared to sail up the Tiber and pillage Rome. (See *Vandals.*)

GENTLEMEN-AT-ARMS, the king's body-guard, founded by Henry VIII., attends at drawing-rooms, levées, courts, coronations, &c. Appointments to the body-guard are made by the sovereign, on the recommendation of the commander-in-chief. The captain receives £1,200 a year.

GEOFFREY OF ANJOU, son of Count Fulk of Anjou, married the daughter of Henry I. of England, and founded the Angevin House of England, his son Henry II. being the first Angevin or Plantagenet king.

GEOFFREY OF MONMOUTH, a famous English chronicler, who lived during the first half of the 12th century. His great "Chronicle of the Britons" is the quarry from which the Arthurian legends, the story of Cymbeline and of King Lear and the prophecies of Merlin, were taken. So far from being a history, however, the Chronicle is a highly imaginative romance, which traces the descent of the Britons to Brut, the son of Æneas, and so connects them with the Greek heroes.

GEOGRAPHY is a science dealing with the description of the earth. If the earth itself, without reference to man and his works, be the subject of investigation, we have the branch known as *Physical Geography*, a branch which also investigates the causes of the phenomena of night and day, of the varying seasons, of tides, of eclipses, of the phases of the moon and the motions of the planets. On the other hand, *Political Geography* deals with the distribution of peoples and races over the earth; it treats of their methods of government, their corporate life in cities, their sources of wealth, and their commerce. The phrase *Descriptive Geography* may be applied either to Physical or Political geography, and merely implies the statement of geographical facts.

GEOLOGY is the science that investigates the nature and formation of the earth's crust. It aims at explaining the changes that have taken place while the earth has been gradually assuming its present surface, and it treats of the changes that are now in course of operation.

GEOMETRY is a branch of mathematics dealing with the properties of space. So long as geometry deals with lines and figures on surfaces, whether flat or spherical, it is called geometry of two dimensions. Thus the figure of a square has length and breadth, but no third dimension or thickness. Geometry of three dimensions introduces the idea of solidity, or of more surfaces than one; thus a pyramid has height as well as length and breadth. The general truths of geometry were collected and arranged (about 300 B.C.), by Euclid, a Greek mathematician, and his *Elements of Geometry* is still a text book on this subject.

GEORGE, HENRY, *b.* 1839, at Philadelphia, a prominent land reformer, came to England in 1881, was arrested in Ireland under Mr. Forster's Coercion Act, but acquitted. His chief work, "Progress and Poverty," published in America, 1879, had an enormous sale. Other works were

on the Irish Land Question, and Protection and Free Trade.

GEORGE I., *b.* in Hanover, 1660, king of England, 1714–1727; succeeded Queen Anne in accordance with the terms of the Act of Settlement; married Princess Dorothea of Zell, from whom he was divorced; favoured the Whig party, who were opposed to the restoration of the Stuart dynasty; saw the failure of the rebellion of 1715 in favour of the "Old Pretender," and in the latter half of his reign entrusted sole power to Sir Robert Walpole.

GEORGE II., *b.* in Hanover, 1683, king of England, 1728–1760; married Caroline of Anspach, a woman of sterling character: his chief ministers were Walpole and the elder Pitt; he fought with courage at Dettingen, 1743; his son, the Duke of Cumberland, defeated the "Young Pretender" at Culloden, 1746; and in the closing years of his reign Clive won his great victory at Plassy (1757), in India, and Wolfe took Quebec (1759), thus founding the British empire in India and Canada.

GEORGE III, *b.* in London, 1738, king of England, 1760–1820, was received with acclamation, and won respect by his honesty, straight-forwardness, and affability; married Charlotte of Mecklenburg Strelitz; took Lord North as his Prime Minister (1770-1782), and during this period lost the American Colonies, which won their independence and became the United States of America. Meanwhile, John Wilkes had won the right of the press to report and comment upon the conduct of the government and of Parliamentary business. The younger Pitt was in power, 1783-1801; the French Revolution broke out in 1789, Trafalgar was won in 1805, and Waterloo in 1815; the last years of the king's life were clouded by mental trouble, his eldest son, George, acting as Regent.

GEORGE IV., *b.* in London, 1762, *d.* 1830; Prince Regent from 1810, and king of England, 1820-1830. The chief event of his reign was the emancipation of the Catholics, 1829.

GEORGE V., by the Grace of God of the United Kingdom of Great Britain and Ireland, and of the British Dominions beyond the Seas, King, Defender of the Faith, Emperor of India, *b.* 1865, second son of King Edward VII., became heir-apparent to the English throne on the death of his brother, the Duke of Clarence, in 1892, and succeeded to the throne upon the death of King Edward VII., May 8th, 1910. He entered the navy as a cadet in June, 1877, and with his brother the late Duke of Clarence, spent two years on the training ship *Britannia*. Later the brothers went for a three years' voyage round the world on the *Bacchante*, Prince George was made midshipman on the *Canada* in 1883, lieutenant in 1885, and Commander of the gunboat *Thrush* in 1890. He married in 1893, his second cousin, Princess Mary ("May") of Teck. With the princess he visited the British Colonies, in 1901, and made a long tour in India, in 1905-6. The announcement that the king will carry on King Edward's racing and breeding studs and patronise racing on the same scale as the late king has been received with the liveliest satisfaction in sporting circles.

GEORGE, SAINT, the hero of a legendary adventure with a dragon, whereby he rescued a captive lady, was in mediæval times the patron saint of chivalry in Europe. He was, in particular, the national saint of England, of Aragon, and of Portugal.

GEORGIA. (1) One of the southern states of the United States of America, on the Atlantic sea-board. It is one of the cotton-growing states, and its chief port is Savannah. It was founded as a colony in 1733 by a company of benevolent gentlemen, as a refuge for the destitute, and named after George II. (2) A province of Russian Trans-Caucasia, lying in the mountainous district between the Black Sea and the Caspian. The people belong to the fair or Caucasian race, and are remarkable for their beauty. Long subjection under Mohammedan rule has depressed the spirit of the people, but they have maintained their Christianity. Since 1829 Georgia has been a Russian province, and has greatly improved under the more generous treatment of its new rulers.

GERMAN OCEAN. See *North Sea.*

GERMS. See *Bacteria* in *Med. Dict.*

GERMANS are a people of the Teutonic stock of the Aryan family of nations. The Germans of the low lying lands about the river mouths are known as Low Germans, and those of the hill country to the south are known as High Germans. The Angles and Saxons who invaded and peopled Great Britain in the 6th century were of the Low German stock. The present German Empire represents the High German branch, and since Luther's time, High German, the language of his translation of the Bible, has been the national language of the country. The Germans have taken a foremost place in every department of art, philosophy, and political activity. Goethe ranks amongst the greatest of poets; Kant and Hegel have done more than any other philosopher since Plato and Aristotle to systematize human thought and knowledge; Pestalozzi, Fröbel, and Herbart have been the great pioneers in modern education and child-study. In history and Biblical criticism, German scholars have shown infinite pains, and have had the courage to subject sacred history to the same keen scrutiny that they apply to secular history. Humboldt instituted scientific observation in travel, Grimm made a science of the comparative study of languages, and we find German authorities prominent in all branches of research in medicine, archæology, chemistry, physics, and classical learning. In music, Germany stands foremost with the great composers Bach, Handel, Mozart, Beethoven, Schubert, Mendelssohn, and Wagner. This success in the domain of mental activity is accompanied by achievements equally great in the political and commercial world. Their success is chiefly due to thoroughness and a capacity for taking infinite pains under the guidance of strong common sense and far-sightedness.

GERMAN SILVER, an alloy of copper, nickel, and zinc, is largely used in the manufacture of spoons and forks, teapots, salvers, and similar articles. It is readily attacked by vinegar and acids, and for that reason forks and spoons made of it are usually plated with silver.

GERMANY. The German Empire was formed in 1871, after the Franco-German War, by the confederation of 26 States, many of which had already been united as the North German Confederation. The government is vested in the Emperor, a Federal Council, or Bundesrath, and a representative parliament called the Reichstag. Prussia comprises the greater part of the Empire, and the king of Prussia is the Emperor. Of the other states, Bavaria, Saxony, and Wurtemburg are kingdoms; six are Grand Duchies; five are Duchies; seven are principalities; Lübeck, Bremen, and Hamburg are free towns; and Alsace-Lorraine is an imperial province. Germany is becoming more and more a manufacturing country. The mineral produce is over £65,000,000 annually, as against £122,000,000 produced in England. Nine-tenths of the population are supported by German produce. Exports to Great Britain stand in the following order: sugar, woollens, timber, iron goods, glass, cottons, and corn. Germany now ranks second to our own country in shipping, her advance being chiefly noteworthy in the excellent services of fast mail steamers that run to America and the East. Education is more highly developed and better organised there than in any other country except Switzerland.

GERONTIUS, DREAM OF, a poem by Cardinal Newman, descriptive of the passage of the soul after death to Paradise. The poem has been set to music by Sir Edward Elgar in a work which occupies perhaps the highest place amongst the works of living English composers.

GERRYMANDERING, a word compounded of the name of "Gerry," a governor of Massachusetts (1810), who so arranged the electoral district of that State, as to promote the interests of his party, and "Salamander" which the electoral Map of Massachusetts resembled. To *gerrymander* is to manipulate electoral divisions, as Gerry did, for party purposes.

GESTATION, or pregnancy, is the act of carrying the young in the womb previous to giving birth. The period varies with different animals from 18 days to 600. In the case of man it is on an average 280 days.

GESSLER, HERMANN, a steward of the Emperor of the Germans, persecuted the peasants of the canton of Uri, in Switzerland. He was shot by the patriot William Tell, who is said to have subsequently secured the independence of Switzerland.

GETHSEMANE, a garden on the western slope of the Mount of Olives, about half a mile from Jerusalem, where our Saviour used to resort with his disciples. He passed there the night of His Agony, before the day of His Crucifixion.

GETTYSBURG, a small town in Pennsylvania, where General Meade defeated General Lee, in 1863, after a fierce struggle, in the American Civil War. The fight lasted three days, and there were about 80,000 men engaged on each side.

GEYSERS are to be met with in Iceland, in the Yellowstone region of North America, and in New Zealand, where they formed the once famous pink terraces. They are intermittent fountains of steam and hot water. The Yellowstone geysers are wonderful and numerous, some reaching a height of 200 feet. The geysers of Iceland are near Mount Hecla. The two chief ones are known as the "Great Geyser" and the "Churn." In each case the orifice is built around by a deposit or coating of siliceous matter, and a discharge may be aroused by throwing in turf to choke the opening. Geysers occur near the seat of volcanic action. The cause of the phenomena is believed to be the sudden generation of steam in the lower part of the cavities with which the tube of the geyser is connected.

GHATS, or GHAUTS, are two ranges of mountains, running parallel to the east and west coasts of India, and meeting in the south. They are known as the Eastern and Western Ghats, the latter being the loftier and more continuous. The plateau between the two ranges is named the Deccan. The rivers crossing the Deccan run, in general, from the western Ghats through the gaps of the eastern into the Bay of Bengal. The name "Ghats" is also applied to the steps leading to the Ganges for the bathers who come to bathe in the sacred river.

GHEE, or **GHI,** butter prepared from cow's or buffalo's milk clarified by boiling, and so converted into a thick oil. It is much used in the East Indies by the natives in cooking and for sweetmeats.

GHETTO, or Jews' Quarter, an enclosure in Rome formerly set apart for the Jews, who were forbidden to appear outside unless the men wore a yellow hat and the women a yellow veil. They were crowded together and subjected to oppressive regulations and great persecutions. The limits and restrictions have now been abolished. The name is also applied to the Jews' quarter in other cities.

GHURKAS, or GOORKAS, a race of thick-set, sturdy people who live in the kingdom of Nepal, on the slopes of the Himalayas. They supply a most useful part of the Anglo-Indian Army, ten regiments being recruited from their mountain villages. The Ghurka troops have often proved their prowess and loyalty in our service.

GIANT'S CAUSEWAY, near Fair Head and Portrush, in County Antrim, Ireland, is one of a number of local basaltic rock formations. The rocks are grouped in hexagonal columns. A similar formation exists in Fingal's cave in Scotland. In both cases the name is connected with the Celtic legends of the giant Finn.

GIBBET, a gallows on which notorious criminals were hanged, and on which their bodies remained as a warning to evil doers. The last instance of the practice was in 1839.

GIBBON is the smallest and most monkey-like of the man-like apes. It is noteworthy, however, as being the only ape which habitually walks and runs in the erect position, The arms are so long that the fingers touch the ground when the ape is standing upright. It lives mainly amongst the tree tops and is found in Eastern Asia and the Malay Archipelago.

GIBBON, EDWARD, *b.* at Putney, 1737, *d.* 1794; a celebrated English historian, author of the "Decline and Fall of the Roman Empire." He was sent to Lausanne at the age of seventeen, to read under a Calvinistic minister, and to be reclaimed from the influence of Roman Catholicism. He read deeply the bulk of French Literature and the Latin Classics, but in losing his faith as a Roman Catholic became more of a sceptic than a Protestant. Between 1758 and 1783 he lived in England, and had a seat in the House of Commons.

GIBBONS, GRINLING, *b.* 1648, *d.* 1721; a great carver in wood, was born in Rotterdam, and was employed in the work of decorating the choir of the chapel at Windsor. He executed much of the wood carving in the choir of St. Paul's Cathedral, and some of his best work is found at Chatsworth and Petworth. Gibbons was discovered to the world by Evelyn, the diarist, who found him at work in a London workshop upon a copy of the Crucifixion.

GIBBONS, ORLANDO, *b.* 1583, *d.* 1625; a great English master of Church music. He was organist of the Chapel Royal, and a composer of anthems, madrigals, and instrumental music of rare quality. The Civil War and the reign of Puritanism made an end of the old English church music, and Gibbons stands as the last and best of its representatives.

GIBRALTAR, a British fortress on the Spanish mainland, at the entrance to the Mediterranean. "The Rock," as it is called, is three miles in length, ¾ mile broad and 1,439 feet high, and it is connected by a low isthmus with the Spanish territory. It was taken by Sir George Rooke in 1704, and has withstood many attempts at recapture by the Spaniards and French. The siege of 1779–1783 lasted over three years. The mean distance across the straits is 14 miles. Refer to *Gibraltar*, p. 878.

GIBSON, JOHN, R.A., sculptor, *b.* 1790, *d.* 1866. He began his career as a cabinet maker in Liverpool, found patrons, and, in 1817, went to Rome, where he entered the school of Canova. He seldom afterwards left Rome, where he developed a classic purity of style. His most successful statues are those of Peel, George Stephenson, and Queen Victoria.

GIFFORD LECTURES, THE. Lord Gifford, a Scottish Judge, left by his will in 1887 the sum of £80,000 among the universities of Scotland to establish lectureships in natural theology. He directed that the lecturers should not be subjected to any dogmatic test.

GILBERT, ALFRED, R.A., *b.* 1854, a celebrated English sculptor and no mean artist in gold and silver. His principal works include the Shaftesbury Memorial in London, Duke of Clarence Memorial at Windsor, and the Queen Victoria Memorial at Winchester.

GILBERT, SIR HUMPHREY, *b.* at Dartmouth, 1539, *d.* at sea, 1583; an English navigator, educated at Eton and Oxford. He attempted the north-west passage in 1578–9 in company with his nephew, Sir Walter Raleigh. The voyage ended in failure, but a second attempt was made in 1583. The *Squirrel*, with Gilbert on board, went down on the homeward voyage from Newfoundland. The last words of the great sailor heard by his comrades on *The Hind* were, "We are as near to heaven by sea as by land."

GILBERT, SIR WILLIAM S., *b.* 1836, dramatist, humorous poet, and librettist; author of the famous "Bab Ballads," and originator of the many whimsical ideas musically expressed in the Savoy Comic Operas by Sir Arthur Sullivan.

GILBEY, SIR WALTER, *b.* 1831, established the wine and spirit business that bears his name. He is a great agriculturist and a famous breeder of horses. He originated the Cart Horse Parade in Regents Park, London.

GILCHRIST SCHOLARSHIPS, founded in 1841, by John B. Gilchrist, a Scottish orientalist, "for the benefit, advancement and propagation of learning." They are awarded by competitive examination.

GILDAS, surnamed "the wise," *b.* in Wales, 511, *d.* 570; the most ancient British historian, was a monk of Bangor. The only work of his which is extant is a treatise. "De Calamitate, Excidio, et Conquestu Britanniæ," which describes the miseries of the Britons and their ruin by the Saxons. In it is the letter sent to Rome, headed, "The Groans of the Britons."

GILLS are the organs by which breathing is carried on by fishes and many other aquatic animals, under water. The water, which holds oxygen in solution, passes through the gills, and is brought into close contact with the thin skin of the under sides of the gills. In this way the blood is oxygenized through the skin by the air in the water, and at the same time from the body of the fish carbonic acid passes out. The gills may be described as overlapping plates, usually arranged in pairs on each side of the head, and opening and closing to admit and reject the water.

GIMBALS, two brass hoops, each moving perpendicularly to its plane about two axes at right angles to each other, used to suspend a ship's compass, so that by its free action in two directions at right angles to each other it remains horizontal, whatever the ship's motion.

GIN. See *Med. Dict.*

GINGER is a plant whose root yields the well-known article of domestic use. It is cultivated in India and China and in the West Indies, and grows with little attention. The root is taken after the stalks have withered, and then scalded and dried. It may be exported dry in the root form, ground, preserved in syrup, or candied.

GIOTTO, *b.* 1266, *d.* 1337, a famous early Italian painter and architect. It is said that the painter Cimabue discovered him drawing a lamb, whilst tending sheep on the hills near Florence, and that he took him as a pupil. His works are chiefly frescoes. He designed the wonderful Campanile at Florence, but did not live to see it finished. The skill with which he drew a circle before a Papal deputation is perpetuated in the adage, "As round as the O of Giotto."

GIPSIES are a nomadic people found in every nation of Europe, in Asia, Africa, and America. Their language shows little variation, whatever their country, and they are expert linguists. They have not an alphabet of their own, nor do they seem to have a religion. They have existed in Europe from unknown antiquity. They were subjected to oppression in the Middle Ages, and to this cause may be attributed their mingled gloom and vivacity, deceit and frankness.

GIRAFFE, the tallest of four-footed animals, is a native of Africa, and is found in herds of 10 to 40 in the country to the south of the Sahara. In spite of its long neck there are only seven joints in it as in that of man.

GIRONDISTS, or GIRONDINS, a party in the French Revolution who favoured moderate and well reasoned reforms. Their leaders represented the province of Gironde, which gave them their name. The invasion of France by the Austrians and Prussians threw the chief power into the hands of the extremists, the Jacobins, and in the Convention formed for the government of the nation no Girondist was a member. They fell victims to the fanaticism of the Committee of Public Safety, and over forty of their leaders were guillotined.

GIRTON COLLEGE. Refer to *Index.*

GLACIERS are rivers of compressed snow and ice, that move very slowly (a few feet in a day), down some valley in the mountains. The accumulation of snow in the higher altitudes causes both the compression and the movement. The friction of the moving ice with the sides of the valley, and the falling of detached rocks on either side through the action of frost, leads to a collection of stones and other debris—called a *moraine*—on the sides of the glacier. If two glaciers converge and join, a central moraine is formed. At the end of a glacier the melted ice gives rise to a river, and the rock debris is deposited as a terminal moraine. In the Arctic regions the formation of icebergs is directly due to the snapping off of large portions of glaciers that have reached the sea.

GLADIATORS were professional combatants, who fought with men or beasts in the arena of a Roman theatre. The practice began in 264 B.C. at Rome, and spread throughout the Roman Empire, until no town of any size from Britain to Syria was without its gladiatorial combats. Gladiators were commonly obtained either from prisoners of war, or slaves, or criminals condemned to death. When a gladiator was so wounded as to be unable to fight any longer, his antagonist stood over him with uplifted sword, ready to slay him if the spectators willed his death, and this they indicated by turning their thumbs upwards. Constantine issued a decree against the barbarous

practice, in 325, but it did not cease entirely until the time of the Emperor Theodoric, about 500 A.D.

GLADSTONE, WILLIAM EWART, *b.* in Liverpool, 1809, *d.* 1898; was educated at Eton and Christ Church, Oxford, where he was a prominent debater at the Union at the time of the Reform Bill (1832). His strong churchmanship made him look to the Tory Party for safety from revolutionary measures. In 1839 he was described by Lord Macaulay as "the rising hope of the stern, unbending Tories." Peel was his Parliamentary leader and friend, and he acted as a colleague of the Conservative minister until 1845. The great Corn Law movement and Cobden's struggle for free trade engaged Gladstone's attention, and he was henceforth found amongst the Liberal Reformers. His first great speech was delivered in 1852, in reply to a scathing attack by Disraeli and a wonderful parliamentary duel between these masters of debate was kept up for the next twenty-four years. He became Chancellor of the Exchequer in 1853, and made the first of his remarkable Budget speeches. The narrative of Mr. Gladstone's services in Parliament as Chancellor of the Exchequer, Leader of the House of Commons, and Prime Minister—an office which he held four times—is almost tantamount to the history of Parliament during the next forty years. The veteran statesman having failed to carry his Irish Home Rule Bill, resigned in 1894, after sitting, with the exception of a year and a half, as a member of the House of Commons from 1832. After four years of literary leisure, Gladstone died, and was publicly honoured by a state funeral in Westminster Abbey. One of the greatest of Parliamentary debaters, Gladstone had a wonderful gift of eloquence, and an exquisitely beautiful voice. He has left behind him a great record of reforms and of wise domestic measures, but his foreign policy suffered from the overpowering impulse of his sympathies with all nationalities struggling to be free and independent.

GLAMORGANSHIRE, the great coal county of South Wales, comprises one of the richest coal-fields in Great Britain. At Merthyr-Tydvil are large iron-works, and copper smelting is carried on at Swansea and Neath. Cardiff, the chief port, does a great carrying trade both in coal and Spanish ores.

GLANDERS, a contagious and fatal disease to which stablemen as well as horses and asses are liable. It shows itself in inflamed ulcers, which break out on the nose and in various parts of the body. Unhealthy or ill-ventilated stables render an animal liable to the disease. The Board of Agriculture compels the immediate slaughter of every glandered horse.

GLASGOW, the industrial metropolis of Scotland, has increased tenfold in population during the past century, and is now the second largest city in the United Kingdom. It stands on the Clyde, in the county of Lanark, and owes its commercial importance to its river, the neighbouring coal-fields and iron-works, and the enterprise of its citizens. Steel ship-building is the most important industry in the district, whilst the making of engines, chemicals, pottery, and textile fabrics of all kinds occupies a large industrial population. It boasts a university, founded in 1450, and a cathedral that has escaped the destructive zeal of the early reformers; population 798,000.

GLASS is produced by the combination of silica or flint with an alkali, such as lime, or one of the salts of sodium. The raw materials are melted in furnaces, and the fluid glass is passed from one compartment to another until all impurities have been removed. It is then used for bottle making, window glass, or crown glass. A process of slow cooling in ovens, known as annealing, takes away the excessive brittleness that the glass otherwise possesses.

GLASS PAINTING or **STAINING** is an art of Northern Europe, which arose in the 12th century, and reached its turning point in the time of the Tudors. The development of mosaics and frescoes on the walls of Italian churches rendered it an unnecessary art in that country. The best work is now done, as it was in the Middle Ages, by the method known as "mosaic glass." It may be distinguished by the characteristic way in which the leads do not follow the outlines of the figures, but boldly intersect them, enclosing rich and variegated plots of colour. An inferior method called "enamelled glass" proceeds by painting entirely on white glass, and fusing the pigments to fix them. The leads in this case follow the contours of the design, and are concealed; but transparency is lost, and the effect is a blurred one.

GLASTONBURY, in Somerset, near Wells, is a small township of 3,000 inhabitants, and possesses the ruins of a monastery and many quaint domestic buildings. Hither, tradition had it, Joseph of Arimathea carried the Holy Grail, and here he planted his staff, which took root and grew into a thorn tree that blossomed every Christmas Eve.

GLENCOE, a valley in the north of Argyllshire, forming a gloomy pass. Here, in 1692, occurred the massacre of Glencoe, when thirty-eight of the Macdonald clan were butchered. The head of the clan, MacIan, was late in submitting to William III., and in order to make an example of him, the royal troops, whilst entertained as friends, treacherously attacked his assembled kinsfolk.

GLENDOWER, a Welsh chief who opposed Henry IV. He carried on a harassing border warfare until 1403, when he joined Earl Percy (Hotspur), who was in rebellion against the king. Hotspur was slain at the Battle of Shrewsbury, but Glendower died without submitting to English rule.

GLENMORE, a long narrow valley extending from the Moray Firth on the north-east to Lock Linnhe on the south-west, a length of 100 miles, contains three lochs—Ness, Oich, and Lochie. The Caledonian Canal connects these lochs, thus forming a complete communication between the east and west coasts of Scotland.

GLOBIGERINA is a unicellular animalcule, enclosed in a shell perforated by innumerable pores through which the animal thrusts out processes to obtain food. It lives in the ocean, and in some regions, e.g., the Atlantic, it occurs in such myriads, that the empty shells accumulating on the ocean floor form a mud known as globigerina ooze. This ooze is chalk in the process of manufacture. The great chalk cliffs of England have been formed in this way, layer by layer, at the bottom of some prehistoric ocean in the course of a vast period of time and then gradually raised above sea level by subterranean forces.

GLOUCESTER, the county town of Gloucestershire, situated on the river Severn, where it begins to be tidal. It is an ancient city as witness its many Roman remains. The siege and defence of Gloucester in 1643 are famous. Robert Raikes here founded the first Sunday School in 1780. The cathedral dates back to the 11th century, and many parts are extremely beautiful; population 50,000.

GLOW WORM, the English name of a species of beetle, which emits a green phosphorescence from the end of the abdomen. The female alone is a glow-worm proper; it is a wingless, grub-like insect. The male is a winged beetle, and is attracted to the female by the pale green light it displays.

GLUE, an impure gelatine made from the hides and hoofs of cattle and horses, and the refuse and clippings of tanneries. These are treated in tanks with quicklime, and afterwards steamed and boiled. The resulting jelly is then drawn off and dried. Scottish glue, which is considered the best in the market, is largely used by piano and cabinet-makers.

GLUTEN. If wheat flour be kneaded in a stream of water, so that the soluble matter, starch, be carried away, there remains a sticky substance called gluten. It is this gluten that enables the dough to undergo the process of baking, without crumbling to dust. In a moist state, the gluten rapidly putrefies, but it does not readily decompose after being baked. It contains the chief flesh-forming constituents of the grain.

GLYCERINE, called by its discoverer, in 1779, "the sweet principle of oils," is obtained by the separation of fats into their constituent parts, glycerine and acids. It is largely produced in the manufacture of soaps. It is much used as a medicine. See *Med. Dict.*

GNOMES, imaginary dwarf beings supposed to exist in the inner parts of the earth and to be guardians of mines, minerals and quarries.

GNOSTICS. During the 1st century, A.D., an effort was made by a body of philosophers, who assumed this name, to fathom the true, inward meaning of the various mythologies and religious systems existing among the numerous races included in the Roman Empire, and to arrive at a comprehensible solution of the riddle of the universe. Greek and Roman mythology, Persian and Chaldean beliefs, the tenets of various schools of Greek philosophy, the Jewish religion, and even the doctrines of Christianity appear to have been analysed to build up the religion of the Gnostics. According to their earliest teachings, the Supreme Being is eternal, the source of all good, and dwells in the abyss at an infinite distance from the earth. Matter, from which all things are made, is also eternal, but the source of all evil. From the Supreme Being and Matter were generated the *æons*, spirits gifted with the power of creating matter from the visible universe. The most celebrated names among the Gnostics are Cerinthus, Basilides, Carpocrates, and Saturninus.

GNU or **WILDEBEEST,** as the Boers call it, is an animal found in South Africa, combining the characteristics of the antelope, horse, and buffalo. Its size is that of a small horse; its flesh is nutritious; and its horns, which are common to both sexes, resemble those of the buffalo. It feeds in herds, which are continually becoming smaller through the hunter's deadly rifle, and soon this animal will be rarely seen south of the Limpopo and Orange Rivers.

GOA, a Portuguese city and the surrounding district, situated on the west coast of India. Hemp, cowries, betelnut, &c., are exported. Area about 1,400 square miles; population 475,000.

GOAT, an animal found in practically all parts of the world outside the Arctic and Antarctic regions. It is remarkably surefooted and agile, and is especially adapted to mountainous districts. Its milk

is recommended for consumptives, and its skin is used for making morocco leather. The *Cashmere goat* of North India has long, silky hair, which is used in the manufacture of shawls. The *Angora* goat of Asia Minor has been introduced successfully into Cape Colony, Australia, France and the United States. From its hair the finest variety of camlet is made.

GOAT ISLAND, situated in the Niagara River, divides the Niagara Falls into two parts, known as the American and Horse-Shoe Falls. It is connected by a bridge with the United States mainland.

GOBELINS, the name given to tapestries produced at a manufactory in Paris. Early in the 16th century a family of dyers named Gobelin settled in Paris, and there set up tapestry works, which in 1662 were bought by Colbert, the minister of Louis XIV., with a view to providing the upholstery of the royal palaces. The most celebrated painters supplied the designs for the tapestries. The richness of the colouring and the fidelity with which they follow the designs make "gobelins" incomparable among tapestries. The works are still carried on.

GOBI, DESERT OF, an immense stretch of desert occupying about 300,000 square miles of the central depression of the great plateau of Asia, north of the Himalayas. It is covered with shifting sands or pebbles, and is almost bare of vegetation. A sparse population inhabits the borders. It is thought that a large inland sea once occupied the centre of this region, and the evidence of sand-covered cities shows that at one time it possessed a large population, whose exodus was probably the origin of the waves of invasion that led to the fall of the Roman Empire.

GODFREY OF BOUILLON, *b.* about 1061, *d.* 1100, was the leader of one of the armies of the First Crusade. In 1096 he conducted his army from Germany along the Danube valley to Constantinople, then a Christian city. In 1097 he captured Antioch with some difficulty, and in 1099 took Jerusalem. Refusing the title of king, he styled himself "Defender and Guardian of the Holy Sepulchre." A great victory on the Plain of Ascalon over an immense Moslem army, under the Sultan of Egypt, made him supreme in Palestine, but he died while organising his new state. He was equally conspicuous for his bravery and magnanimity.

GODIVA, the wife of Leofric, earl of Mercia and lord of Coventry. It is related that when (about 1040), entreating her husband to mitigate certain grievous taxes from which his subjects suffered, Leofric demanded as the price of his acquiescence that she should ride naked on horseback through the streets of Coventry. Having first acquainted the people of the degradation she intended to suffer for their sake, she ordered them to keep within their houses at the time appointed, and to refrain from looking at her. According to the story, only one man, a tailor, afterwards known as "Peeping Tom of Coventry," failed to follow the request, and he was struck blind.

GOD'S TRUCE. Towards the end of the 10th century the Church made a strong effort to decrease the havoc caused in continental states by turbulent nobles in their private wars with one another. By threatening heavy penalties, the Church obtained from the nobles an agreement by which they promised to abstain from fighting from each Wednesday evening to the following Monday morning, and also during certain fast days and holy festivals, and to refrain from molesting women, priests and people who followed peaceful callings. *God's Truce,* as this agreement was called, was first instituted in France, and soon became general in western Europe. In the 13th century, the centralisation of power in the person of sovereigns of large monarchies removed the necessity for this compact.

GODWIN, Earl of Wessex, received his earldom from the Danish king, Canute, for services rendered in helping the latter to gain the Crown of England. In 1042 he was instrumental in putting Edward the Confessor on the throne, and his daughter Edith became queen-consort. He headed a popular rising in 1051 for the expulsion of Edward's numerous French favourites. The movement failed, and Godwin and his sons went into exile. Returning in 1052, the people in a body joined his standard and he recovered his old power almost without a blow. He died in 1053, leaving a family of able sons, of whom Harold became king of England.

GOETHE, JOHANN WOLFGANG VON, *b.* at Frankfort-on-the-Main, 1749, *d.* 1832 the greatest of the poets of Germany. During his three years at the university of Leipzig he began seriously that acute analysis of his own feelings and motives which later became habitual, and served as the basis of his great poems. During his long life he studied enthusiastically a great variety of subjects, art, chemistry, optics, botany, law, etc., on most of which he produced prose works displaying much original thought. At the age of twenty-five he attracted the notice of the Duke of Saxe-Weimar, who ennobled him, made him president of his council, and remained his friend for life. "Faust" stands first among Goethe's works; "Iphigenia," "Count Egmont," "Tasso" and "Wilhelm Meister" are probably the best of the remainder.

GOG AND MAGOG. It is thought that the biblical characters bearing these names are symbolical for unknown nations dwelling north of the Caucasus, and inimical to the Jews. The Gog and Magog in the Guildhall, London, are two gigantic figures, each 14 feet high, copies of those burnt in the Great Fire. They are supposed to be images of two giants, who, according to Caxton, were the last survivors of a race of giants that once inhabited Britain. Up to 1837 wicker-work images of the two giants figured in the Lord Mayor's Show.

GOLCONDA, a fortress whose walls enclose a very extensive area in the native State of Haiderabad, India. Near it are the ruins of the capital of the ancient kingdom of Golconda, which lasted till 1687, and was famous for its diamonds. Diamonds are still cut and polished within the fortress, which contains the Nizam's treasury.

GOLD, a valuable yellow metal, used principally for coinage, ornaments, and decorative purposes. It resists oxidisation, and the only acid which dissolves it is aqua-regia, a mixture of nitric and hydrochloric acids. The largest proportion of the world's gold supply comes from gold-bearing rocks in which the metal appears in thin streaks or veins; occasionally the presence of gold in such rocks can only be detected by assaying. Quartz is the most common gold-bearing rock, but there is scarcely a mineral with which gold has not been found associated. The gold-ore is extracted by ordinary mining methods and then crushed by machinery. Various methods are adopted to separate the gold from the crushed ore. The latter is sometimes placed in sloping troughs and water allowed to flow gently over it. The gold, being heavy, sinks, and is prevented from escaping with the waste, by strips of wood fixed at the bottom of the trough. Mercury is more commonly used to separate the gold, since it readily forms an amalgam with the precious metal, and can afterwards be distilled by heating. In the Rand mines the gold is usually extracted by cyanide processes. In the case of gold found free in river beds and in alluvial soils, it may be assumed that water has already performed the work of disintegration, which, in the case of gold-bearing rocks, must be done by crushing machinery.

GOLD-BEATER'S SKIN is the thin, tough, outer coat of the caecum, a part of the large intestine—of the ox. After this coat has been stripped off it is carefully cleansed and stretched, coated first with fish-glue and then with albumen. It is used in the manufacture of gold-leaf, and when placed upon slight flesh-wounds prevents bleeding.

GOLD-BEATING, the process of producing extremely thin leaves of gold. An ingot of gold is taken, rolled into a thin strip about 1½ inches wide and, after annealing, is cut into squares. These squares are placed in piles of seventy-five, each square being placed between pieces of tough paper, about four inches square, a square of vellum replacing the paper at intervals. The whole is then placed in a bag of vellum and beaten with a heavy hammer till the squares of gold have the same area as the squares of paper. Each square of gold is then divided into four equal parts, and the beating is repeated, the paper and vellum being replaced by gold-beater's skin. The dividing and beating is again repeated, until the gold leaves have a thickness of about the 282,000th part of an inch. Pure gold-leaf is best for out-door decoration, but the gold is often alloyed with silver or copper, sometimes both, to produce different shades.

GOLD COAST, THE. Refer to *Index.*

GOLDEN BULL, an edict issued by the Emperor Charles IV., in 1356, to regulate the proceedings at an imperial election. It remained in force until the close of the "Holy Roman Empire" in 1806.

GOLDEN FLEECE, THE, in Greek mythology, was the fleece of the winged ram on which Phryxus and his sister Helle, the children of king Athamas of Thebes, escaped from the wrath of their step-mother, Ino. Helle fell off into the sea and was drowned on the journey, but Phryxus reached Colchis, the kingdom of his relative, Aetes. Phryxus, on his arrival, sacrificed the ram to Jupiter, and was shortly afterwards murdered by Aetes for the sake of the fleece. The recovery of this fleece was the object of the famous voyage of the Argonauts under Jason, who was connected by blood with Phryxus. The story is prettily told in Kingsley's "Heroes."

GOLDEN GATE, THE. (1) A strait, 2 miles in width, connecting San Francisco Bay with the Pacific Ocean. (2) A gate in the wall of Theodosius, Constantinople, now walled up because of a Turkish tradition that the conqueror of the city shall enter through it.

GOLDEN HORN, THE, a narrow, crescent-shaped inlet of the Bosphorus, about 6 miles in length, that forms the harbour of Constantinople and separates it from its suburbs, Galata and Pera. It is usually crowded with shipping and boats.

GOLDEN LEGEND, THE. A collection of the lives of the principal saints compiled in Latin by Jacobus de Voragine in the 13th century, translated into the languages of Western Europe, and during the Middle Ages read with religious fervour. It is also the name of a dramatic poem by Longfellow, set to music in a cantata by Sir Arthur Sullivan.

GOLDEN ROSE, an ornament of wrought gold, solemnly blessed by the Pope, and sent annually to some prince

or community whom he wishes especially to honour, on account of their loyal services to the Church.

GOLDIE, SIR GEORGE TAULMAN, *b.* 1846, explored region of the Niger and formed a company for developing its resources. He has become the founder of Nigeria, which in 1900 was constituted a British Protectorate.

GOLD LEAF. See *Gold-beating.*

GOLDSMITH, OLIVER, *b.* at Pallas, Ireland, 1728, *d.* in London, 1774, was the son of a Protestant clergyman. After disappointing his relatives by wasted courses of study at Trinity College, Dublin, and at Edinburgh, he made the "grand tour" of Europe on foot, supporting himself chiefly by his flute, on which he was a moderate player. The experiences gathered during this tour served him in good stead when he began his literary career. Returning to London in 1756, he produced numerous works in prose and verse, which, but for his simple good-nature and lack of prudence in money affairs, would have brought him ease and affluence. His poems, "The Deserted Village" and "The Traveller," his plays, "She Stoops to Conquer" and "The Good-natured Man," his novel, "The Vicar of Wakefield," and his many charming essays are full of kindly humour and human sympathy, placing him in literature.

GOLDSMITHS' COMPANY formed in London, 1130, for the protection of the trade. The assaying of gold and silver was the chief of the Company's powers, which continue to this day. Even the metal coined at the Mint is tested by them. The company is very rich and spends about £40,000 a year on education, charities, &c. In 1645 goldsmiths began to act as bankers. Goldsmiths' Hall is in Foster Lane, Cheapside. (See *Hall Marks.*)

GOLD STICK, a court official in England who attends the sovereign in state ceremonies, carrying as the insignia of his office a gilt stick or wand. The office is held in turn by the colonels of the three regiments of household cavalry.

GOLF is a game played with small balls and clubs of various shapes, on uneven ground, more or less waste. Each player has a separate ball. The course has at intervals of 150 to 500 yards a number of smooth greens, each with a hole in it, and the object of each player is to get his ball into each of these holes in turn and so round the course with the least number of strokes. The one who wins at the greater number of holes wins the round. Sometimes two players on each side strike the same ball alternately; the match is then called a "foursome." Golf has been played in Scotland for some centuries. It was introduced into England in 1864, and has since become very popular.

GOLGOTHA. See *Calvary.*

GON'DOLA, a long, narrow boat with curved ends rising high out of the water, chiefly used on the canals of Venice. The boats average 30 feet in length by 4 in breadth. There is usually in the centre a sort of curtained cabin for the passengers. The gondolier, standing in the stern, propels and guides the boat by means of a broad-bladed oar, in the proper handling of which great skill is necessary. The increase of small steamboats seems likely to drive these picturesque vessels from Venetian canals.

GOODALL, FREDERICK, *b.* 1822, *d.* 1904, showed an early talent for art; when only seventeen exhibited a picture in the Royal Academy, and in 1863 became R.A. His early pictures were chiefly English social and historical subjects. After visiting Egypt and Italy he painted Eastern pictures.

GOOD HOPE, CAPE OF, a promontory near the southern extremity of Africa. It was discovered by Bartholomew Diaz in 1486, and called by him the *Cape of Storms,* but his sovereign, John II. of Portugal, gave it the name it now bears. It was first doubled, in 1497, by another Portuguese mariner, Vasco da Gama.

GOOD PARLIAMENT, THE. In 1376 the court of Edward III. had become so corrupt, mainly owing to the evil influence exerted by a courtesan, Alice Perrers, over the King, that Parliament, backed by Edward the Black Prince, impeached Perrers and the most guilty of the courtiers, punished the offenders, and received promises of redress of grievances. The death of the Black Prince the same year, and the subsequent assumption of power by John of Gaunt, undid the good work accomplished by this parliament.

GOOD TEMPLARS, a temperance society of strict total abstinence principles, founded in the United States, 1852. It has ceremonies, badges and passwords similar to those of the Freemasons. It was introduced into England in 1868. Its headquarters are in Birmingham.

GOODWIN SANDS, THE, are dangerous sandbanks stretching for about 10 miles in a direction parallel to the coast of Kent, from which they are separated by a roadstead, about 5 miles in width, called the Downs. At low water large patches of the sand are left firm and dry. Four lightships, of which three are provided with gongs and one with a syren for use in foggy weather, numerous buoys, and the ever increasing proportion of vessels driven by steam, have rendered these sands practically harmless. Tradition says that the sands once formed part of the mainland, that they were included in the estates of Earl Godwin, and that the sea, in 1097, broke down the protecting dykes and overwhelmed the district.

GOODWOOD, the country seat of the Duke of Richmond, stands near the summit of the South Downs among charming scenery, about 3½ miles from Chichester. Its picturesque racecourse is the scene of one of the best-attended and most fashionable race meetings of the year. "Goodwood Week" follows the close of the London season.

GOODYEAR, CHARLES, *b.* 1800, *d.* 1860, an American iron manufacturer, who made valuable improvements in the preparation of rubber and discovered the method of vulcanising it; thus enabling it to be used in a great variety of ways.

GOORKAS. See *Ghurkas.*

GOOSE, a well-known web-footed bird which is much esteemed for its flesh; its quills and soft feathers are also in constant demand. Though proximity to water is necessary for their proper rearing, they seldom swim and never dive. Geese are reared in all parts of England, particularly in Lincolnshire and East Anglia. Before the draining of the Fen District, the wild goose, from which the common domesticated variety is descended, bred there in thousands. Holland and Germany supply the London markets with enormous quantities of geese. The liver of the goose was considered, even in Roman times, a great delicacy, artificial means being employed to enlarge the liver in the living bird. The *paté de foie gras* of Strassburg, is obtained from geese confined in an apartment kept at a high temperature, to produce morbid enlargement of the liver. In their flight, wild geese take up a V formation, with a single gander leading at the angular point.

GORDIAN KNOT, THE. Phrygian delegates consulting the oracle at Delphi, on the choice of a king, were told to elect the first man they met riding on an ox-chariot towards the temple of Zeus. According to the legend, the choice fell on a peasant, Gordius, who afterwards dedicated his chariot to Zeus. He is said to have fastened the pole of the chariot to the yoke with such an intricate knot that, in time, a report spread that the man who could untie it would conquer Asia. Alexander of Macedon made short work of the difficult task by cutting through the knot with his sword. "To cut the Gordian knot" now denotes a rough and ready manner of solving a difficulty.

GORDON, ADAM LINDSAY, *b.* in the Azores, 1833, *d.* 1870, the greatest of Australian poets, emigrated to Australia in 1853 to seek his fortune. After trying sheep-farming, cattle-driving and other vocations with ill-success, he committed suicide at Melbourne in a fit of despair. His "Sea-spray and Smoke-drift" and "Ashtaroth," contain, among inferior work, some beautiful lyrics; but his reputation rests on "Bush Ballads and Galloping Rhymes," which contains the popular ballad "How we beat the Favourite."

GORDON-BENNETT CUP, a trophy offered by Mr. Gordon-Bennett, proprietor of the *New York Herald,* for international competition. The first competition was held in 1900. In the first six competitions, France has won the cup four times, England once, and Germany once. The last-named with a Mercedes machine attained a speed of 49½ miles per hour.

GORDON, CHARLES GEORGE, *b.* at Woolwich, 1833, *d.* at Khartoum, 1885, was the son of an officer in the Royal Artillery. He received a commission in the Royal Engineers in 1852, and served in the Crimean War. In the China War of 1860 he took part in the capture of Pekin by the British. Two years later he commanded a Chinese force which put down the formidable Taeping Rebellion, and was raised by the Emperor of China to the highest rank for his services. In 1873 he entered the service of the Khedive of Egypt, and for nearly seven years (the last three as governor of the Soudan) laboured indefatigably to suppress the slave trade, and establish law and order in the basin of the Upper Nile. In 1884, at the request of the British Government, he once more proceeded to the Soudan, which was now, with the exception of a few isolated garrisons, in the hands of the Mahdi and his fanatical hordes of revolted Soudanese. A month after his arrival at Khartoum he was besieged by the Mahdi. After holding out for a year, the fortress fell, and with it its brave defender. The relief expedition sent out under General Wolseley arrived within sight of the walls of Khartoum, just two days too late to save one of the most noble, humane, pious and courageous heroes of English history.

GORDON RIOTS. In 1778 the passing of a Catholic Relief Bill through Parliament roused great opposition amongst large numbers of the Protestants of London. For nearly two years the excitement increased, and finally broke out into frightful riots, when Lord George Gordon, a half-crazy fanatic, marched at the head of 50,000 persons to present a petition for repeal to the House of Commons. For five days the mob took possession of London, pillaging and burning Catholic and Protestant property alike. The riots were finally suppressed by regular troops, but not before nearly 500 of the rioters had been killed and wounded. Dickens has an account of these riots in his novel "Barnaby Rudge."

GORE, CHARLES, BISHOP, *b.* 1853, was first principal of the Pusey Memorial Library, 1884, vicar of Radley, near Oxford, 1893; Canon of Westminster,

1894–1902. He was made Bishop of Worcester in 1902 and translated to the new see of Birmingham, 1904. He is the author of many thoughtful and original essays, sermons, and other religious works, and in 1890 he edited "Lux Mundi," contributing to that work a paper on "The Holy Spirit and Inspiration."

GORGONS, THE, in Greek mythology, were three winged sisters, Stheno, Euryale and Medusa, who were represented with hair entwined with serpents, brazen hands and teeth, impenetrable scales on their bodies and eyes that turned to stone all beholders. Medusa, who alone of the three was mortal, was slain by Perseus with the aid of magic weapons given him by Hermes and Athene. Perseus presented the head of Medusa to Athena, who fixed it in her shield and employed it to overcome her enemies. This story is well told in Kingsley's "Heroes."

GORILLA, THE, the largest of the anthropoid apes, inhabits the densest parts of the Equatorial forests of West Africa. When full grown it is between 4 and 5 feet in height, and has enormous strength. It seldom seeks an encounter, but when at bay it is a dangerous enemy. Fruit forms its principal food. Among apes, it bears the closest resemblance to man in its general structure, but its intelligence is of a lower order than that of the chimpanzee. Hitherto it has proved untameable.

GORKY, MAXIM, the pen name of a popular Russian novelist, *b.* 1868. In his early days he was in turn an ikon painter, pedlar, scullery boy, gardener, watchman, and baker's apprentice. His best works have been translated into English:—"Three of Them," "The Outcasts." "The Orloff Couple," a play called "The Lower Depths," &c. Gorky is a Russian revolutionary leader.

GOSHEN, a district of ancient Egypt presented by Pharaoh to the father and brethren of Joseph. It is supposed to have lain between the eastern branch of the Nile delta and the Isthmus of Suez, and to have stretched south to the latitude of the modern Ismailia, but its exact limits are still doubtful.

GOTHENBURG SYSTEM, originated in Gothenburg, 1865, a licensing system in which all public-houses are kept by a company licensed by the authorities under a paid manager, all profits above 5 per cent. on the company's capital going to the town treasury.

GOTHIC ARCHITECTURE prevailed in the Middle Ages until the revival of the classic styles of Greece and Rome in the 16th century. The builders of the *Renaissance* (as this revival was called), first adopted the term *Gothic* to express their contempt for what, to them, was a *barbarous* style. Careful study of the principles of Gothic architecture has long since replaced contempt by admiration, and during the 19th century many fine buildings, especially churches, were built in this style. Many of the finest mediæval churches in Europe are Gothic, the most distinguishing features being the pointed arches of the doors and windows, and the groining of the roofs. Clustered pillars, spires, pinnacles and towers all add to the imposing effect of Gothic churches. In England this style began to supersede the Norman style, with its rounded arches in the middle of the 12th century, and reached its highest development in the 13th, during which century many of our noblest cathedrals and churches were built.

GOTHS, a Teutonic race whose earliest known home was the southern shores and islands of the Baltic. They gradually migrated southward through Central Europe, and early in the 3rd century, A.D., settled in districts bordering on the north of the Black Sea and the Danube. By the middle of the 4th century the Goths had become the dominant race of the non-Roman part of Europe, and their kingdom extended in a broad band from the Black Sea to the Baltic. Constant attacks on the Roman frontiers had led the Roman Emperor, Aurelian, to concede Dacia, a country north of the Danube, to a large section of the Goths, on condition that they supplied men to the Roman army. These Goths and their descendants were afterwards spoken of as *Visigoths*, i.e., Western Goths, to distinguish them from the remainder, the *Ostrogoths*, or Eastern Goths. The Hunnish invasion about 375 drove the Visigoths over the Danube, where, after severe fighting, they settled, with special privileges, under Roman rule. Under their leader, Alaric, they rose in rebellion, over-ran Greece, and entering Italy took Rome by storm in 410. On Alaric's death soon after, they left Italy for Gaul, and there helped to crush the Huns under Attila. Driven by the Franks over the Pyrenees, they formed a kingdom in Spain, but in the 8th century Moorish invasions led to closer union with the Spanish peoples, and as a distinct nation the Visigoths disappeared.

GOUGH, VISCOUNT, *b.* 1779, *d.* 1869, a distinguished British general, who, in 1842, brought the First Chinese War to a successful conclusion. In 1843 he defeated the Mahrattas at Maharajpur, and in 1845 defeated the Sikhs at Sobraon As a reward for his services he was now raised to the peerage. In 1849 he again defeated the Sikhs at Chillianwallah—a dear-bought victory; and by a final defeat of the Sikhs at Gujerat, added the Punjab to the British Empire.

GOULD, JAY, *b.* 1836, *d.* 1892, an American financier. At the age of twenty-one he had amassed sufficient capital to begin speculating in railway shares, and, setting up as a stock-broker in New York in 1859, he gradually acquired large interests in most of the United States railways. He left about £12,000,000 at his death.

GOULD, JOHN, *b.* at Lyme, Dorset, 1804, *d.* 1881; a most enthusiastic and patient ornithologist. He was appointed curator of the Zoological Society's Museum in 1837, and soon after visited Australia, where he spent some years investigating the fauna. His chief productions are, "Birds of Australia," "Mammals of Australia," "Family of Kangaroos," and unfinished works on the birds of Great Britain, Asia, and New Guinea. His magnificent collection of humming birds is now in the Natural History Museum, South Kensington.

GOUNOD, CHARLES FRANCOIS, *b.* at Paris, 1818, *d.* 1893; a great French musical composer. He resided in England from 1870 to 1875, but the greater part of his life was spent in France. As a composer of songs and short pieces he is much admired. His longer works, which display a wonderful mastery of orchestration, include the oratorio of "The Redemption" and the opera of "Faust."

GOWER, JOHN, *b.* about 1328, *d.* 1408; one of the earliest of English poets. He contributed liberally to the funds of St. Saviour's, Southwark, in which his tomb can still be seen. His works are very sober and moral in tone, and include "Speculum Meditantis," "Vox Clamantis" (an account of the Peasants' Revolt in 1381), and "Confessio Amantis." Chaucer, his friend and probably his one-time pupil, speaks of him as the "Moral Gower."

GOWRIE, CARSE OF, a tract of lowland in Perthshire, lying between the Tay and the Sidlaw Hills. It has a rich, clayey soil, and is one of the most fertile districts in the British Isles. Wheat and beans are the chief crops.

GRACES, THE THREE, Aglaia, Thalia, and Euphrosyne were called by the Greeks, *charites*, and were represented as the daughters of Zeus. They personified grace, beauty, and mirth—three qualities which, in the older mythology, were united in one goddess, Aphrodite.

GRACE, WILLIAM GILBERT, *b.* 1848, a doctor by profession, for some forty years considered as England's "champion" cricketer, and familiarly known as "W. G." As a batsman and all round cricketer he has never been equalled.

GRADUAL PSALMS, or "Songs of Degrees," are Psalms 120–134 inclusive, and said to have been so named because one of them was sung on each of the fifteen steps between the courts of the Jewish temple.

GRAFTING, in horticulture, is the process of inserting a branch, twig, bud, or even a root of one plant into another plant of the same species, with a view to their vital union. Grafting is employed for various purposes: to preserve rare specimens which could not be reproduced with certainty from the seed, to increase the finer qualities of fruit trees, or to produce dwarf varieties of great fruitfulness. Union does not take place unless the *alburnum* (the soft white wood next the inner bark) of each plant is brought into contact. The graft always retains its own peculiar leaves, flowers, and fruit.

GRAIL or **GRAAL.** The Holy Grail, or Sangrail, was a miraculous vessel which formed the subject of many mediæval romances. There are many versions of the mediæval legend, but in most of them the grail is a cup sent from heaven and used by Christ at the Last Supper. Joseph of Arimathea got possession of it, but after his death the grail, owing to the sinfulness of its guardians, was snatched back to heaven, there to be retained until a saintly hero worthy of the charge should appear on earth. Naturally, the Holy Grail entered into the legends of King Arthur and his knights, three of whom, Galahad, Percival, and Bors set out in quest of it. The Grail in these legends symbolises chastity.

GRAMME, the unit of mass or weight in the Metric System. Refer to "Metric System" in *Index*.

GRAMPIANS, THE, a name applied to the system of mountains in Scotland, stretching north-east from the west coast of Argyle. The exact limits of the system are not clearly defined. Ben Nevis is its highest peak (4,400 ft.). The name is derived from *Mons Grampius*, a mountain whose exact locality is much disputed, which Tacitus gives as the scene of Agricola's victory over Galgacus in 86 A.D.

GRAMPUS, a cetacean animal found in nearly all parts of the ocean outside the Arctic and Antarctic regions. It is occasionally seen in British seas. It belongs to the dolphin family, and when full grown often attains a length of from 20 to 25 ft. It feeds on salmon, small dolphins, and porpoises; and troops of them have been known to attack whales. The name is a sailor's corruption of *gran pez*, the Spanish for "big fish."

GRANADA, formerly the capital of the Moorish kingdom in the south of Spain. It was captured by the Spaniards in 1492. It is famous for its old Moorish palace, the *Alhambra*, and for its cathedral, in which is the splendid tomb of Ferdinand and Isabella; population 76,000.

GRAND PRIX, LE, the "big prize" race of France, corresponding in importance to the English "Derby," is an international race for three-year-olds, run at Longchamps, situated in the Bois de

Boulogne, Paris. It was established by Napoleon III. in 1863, and is run on the Sunday of Ascot week.

GRANITE, a crystalline rock composed of quartz, felspar, and mica. It is one of the oldest of the igneous rocks. The granite of which so many mountains and cliffs consist has been brought to the surface by earth-movements and by denudation in past ages. It is extensively used for building purposes and for roads. The ancient Egyptians were very expert in manipulating this rock, their working and polishing of it being of a very high order. The grey granite of Aberdeen and the pink-tinted granite of Peterhead are used largely in England for ornamental purposes.

GRANT, SIR JAMES HOPE, *b.* 1808, *d.* 1875, fought in the Chinese War, 1841–2, in the two Sikh wars, 1845–6, and 1848–9, and played a conspicuous part in the suppression of the Indian Mutiny, 1857–8. He was in command in the Chinese War, 1859, when Pekin was captured. For his conduct in this most successful war he received the thanks of Parliament and was gazetted G.C.B.

GRANT, ULYSSES, *b.* at Point Pleasant, Ohio, 1822, *d.* 1885; a distinguished American general and president of the United States. On the outbreak of the American Civil War, Grant joined the Federal army as colonel, and soon rose to the rank of brigadier-general of volunteers. A series of victories in Louisiana over the Confederates led to his appointment to the command of the entire Federal forces. His plan of dividing the Federals into several armies and keeping up a constant attack to prevent the Confederates from resting or concentrating, met with entire success. Grant was elected president of the United States in 1868 and again in 1872. The failure of a bank in which all his money was invested led him to publish his memoirs to support his family. Although suffering agony from cancer, the work was completed four days before his death.

GRANVILLE, GEORGE LEVESON-GOWER, second earl, *b.* 1815, *d.* 1891, a statesman who played a most useful part in many Liberal ministries by his tact, courtesy, and conciliatory manners. He held the post of Foreign Secretary in Lord John Russell's government, 1851, and from that time held office in every Liberal Government, either as Colonial or Foreign Secretary. He was remarkable for his perfect command of French and was considered the best after-dinner speaker of his day.

GRAPESHOT, originally a number of small balls enclosed in a canvas bag, to be fired from cannon. In a later form the balls were joined in three tiers by circular iron plates connected by a central pin. When discharged they spread and were very effective. The latest form is *case* or *canister-shot*, the balls being enclosed in a sheet-iron cylinder.

GRATTAN, HENRY, *b.* at Dublin, 1746, *d.* 1820; a famous Irish orator and statesman. After studying law in London he was called to the Irish bar, and three years later, in 1775, entered the Irish Parliament. Here he warmly advocated the removal of the authority exercised by the English Parliament over the Irish Parliament. His attitude led to the enrolment of 80,000 Irish volunteers, ostensibly for the defence of Ireland. England, hampered by wars with France, Spain, and the American colonists, was compelled to yield to the Irish demands, and Ireland found itself the possessor of "Home Rule." Parliamentary corruption, and the Irish Rebellion of 1798, led to the Union of Great Britain and Ireland in 1801, with one Parliament meeting in London. In 1805 Grattan sat in the United Parliament, and till his death worked incessantly for Catholic emancipation. As a statesman he was broad-minded, disinterested, and patriotic.

GRAVELOTTE, a village in Alsace-Lorraine, where was fought, in 1870, the most sanguinary battle of the Franco-German War. Both sides claim the victory, but the fact that Marshal Bazaine withdrew under the protection of the walls of Metz, relinquishing his road of retreat, justifies the German claim.

GRAVITATION, an attractive force which *all* bodies exert mutually upon one another. Newton, who was the first to suggest the existence of this force, stated, after exhaustive experiments, his famous Law of Gravitation:—"Every particle of matter in the universe attracts every other particle of matter with a force exerted along the straight line joining the particles, the force being directly proportional to the product of the respective masses of the particles, and inversely proportional to the square of the distance between their centres of gravity."

GRAY, THOMAS, *b.* in London, 1716, *d.* 1771, one of the most scholarly and most polished of English lyrical poets. After three years at Cambridge University he made the "grand tour of Europe." In 1768 he was appointed Professor of Modern History at Cambridge. His "Elegy in a Country Churchyard" is considered one of the finest productions in the English language, and alone will ever give him a high place among poets. His odes on "A Distant Prospect of Eton College," "The Progress of Poesy," and "The Bard" are excellent, but do not reach the high level of the "Elegy."

GREAT BRITAIN. The name was first used officially for this island by James I. on his accession to the English throne in 1603, but its legal use dates from the Union of the English and Scottish Parliaments in 1707. Previous to 1603 the name had been employed by writers to distinguish our island from Brittany, sometimes called Lesser Britain. Geographically speaking, Great Britain consists of England, Wales, and Scotland, but the widespread acceptance of the term "Greater Britain" suggests that Ireland is now deemed an integral part of Great Britain. Refer to "United Kingdom" in *Index*.

GREAT EASTERN, THE, for many years the largest ship afloat. Its length was 691 ft., greatest breadth 83 ft., and tonnage 22,500. Both paddles and screw supplied the propelling power. It was built at Milwall and launched in 1858. The vessel proved a financial failure from the very outset. From 1865 onwards she was employed in laying cables across the Atlantic and in the Mediterranean and Red Seas. She was sold at Liverpool in 1888 for £58,000 (one thirteenth of her original cost) and broken up.

GREBE, a genus of aquatic birds of which five distinct species are found in the British Islands. The skin, especially that of the Great Crested Grebe, is used for muffs and trimmings.

GREECE, a small country in south-east Europe, about the size of Scotland, with half as many people. *Morea*, its southern half, is a peninsula, joined to the continental portion by the Isthmus of Corinth, now pierced by a ship-canal. Its islands form a large portion of the kingdom, and comprise the Ionian Islands, the Cyclades, and the Sporades, including the large island of Negropont (Eubœa). Currants, olive oil, oranges, citrons, tobacco, wine, marble, and sponges form the chief exports. Athens, the capital, abounds in splendid ruins. Its port is Pirœus. Patras has a great trade in currants. Corinth is now a decayed port. No race in the world's history has influenced the secular thought of succeeding generations to such an extent as the Greeks. Homer, Hesiod, Herodotus, Euripides, Æschylus, Sophocles, Plato, Aristotle, and Demosthenes are among its most famous writers and orators. For sculpture and statuary Ancient Greece was equally remarkable, Phidias (*b.* 490 B.C.) being its greatest artist, and the temple of Athena, called the *Parthenon*, his greatest work. In the days of its greatness Greece comprised a number of small independent states. In 338 B.C. it was conquered by Philip II. of Macedon. In 146 B.C. it became a Roman province, and in the middle of the 15th century fell into the hands of the Turks. A long struggle, which began in 1820, ended in the Greeks shaking off the Turkish yoke, and in electing their own ruler, 1832.

GREEK CHURCH, THE. Refer to *Index*.

GREENAWAY, KATE. *b.* in London, 1846, *d.* 1901, a painter in water-colours, chiefly noted for her charming drawings of children. Her illustrations of children's books and Christmas cards are very delightful. In these she wrote much of the verse and prose which she illustrated.

GREENBACKS, notes issued by the United States Government, during the Civil War in 1862–5, to the amount of 450,000,000 dollars. Some of these were withdrawn at the end of the war, but the enormous issue had so inflated prices that further withdrawal was opposed and a political party was formed to keep up prices. Greenbacks were so called from the colour in which the back was printed. On 1st January, 1879, they were declared convertible into coin, specie payments being then completely resumed.

GREEN CLOTH, BOARD OF, a committee presided over by the Lord Steward, sitting originally at a table covered with green cloth, to control the royal household generally and to examine and pass all its accounts.

GREEN, JOHN RICHARD, *b.* at Oxford, 1837, *d.* 1883, a noted English historian. His most famous work was his "Short History of the English people." This was followed by "A History of the English People," "The Making of England" and "The Conquest of England," all showing a clear conception of the real bearings of English History.

GREENLAND, an extensive territory lying entirely within the Arctic regions. It is probably an island, the estimated area being 500,000 square miles, about 50,000 of which are under Danish control. The interior is covered with an immense ice-sheet, but on the east and west coasts are Danish and Eskimo settlements. The exports are skins, oil, and cryolite, a mineral from which soda and alum are obtained. In the less exposed parts a few stunted birches and alders grow, and edible berries are plentiful in summer; population 12,000, chiefly Eskimos.

GREENOCK, a flourishing ship-building town and seaport on the Clyde. It has spacious docks and harbours, and the trade with America is considerable. Ship-building yards, marine engine works, iron and steel foundries, and roperies employ the greater part of the male population. James Watt was born here in 1736; population 70,000.

GREEN ROOM, so called from green having been originally the prevailing colour of its decoration and upholstery, is a room near the stage of a theatre, in which the actors await the cue to appear and take up their parts.

GREENWELL, DORA, *b.* 1821, *d.* 1882, wrote several volumes of poems marked by deeply religious feeling, with generally a strain of melancholy. Her chief poems

are "Carmina Crucis," "Songs of Salvation," and "Camera Obscura." She also wrote prose essays and biographies.

GREENWICH, a metropolitan borough in Kent, famous for its observatory. From the meridian passing through Greenwich the longitude of all other places is reckoned by the people of English-speaking countries. Greenwich contains the "Royal Naval College," in which young naval officers receive their final training before entering the service. The college was originally a royal residence, and was presented by Queen Mary in 1691 to the nation, as a home for pensioned seamen, which purpose it served, under the name of Greenwich Hospital, till 1869. The town contains engineering, boiler, boat-building works, &c.

GREGORY I., surnamed the Great, *b.* at Rome about 540, *d.* 604, was the son of noble parents, who, at death, left him great wealth, which he devoted chiefly to the Church. He became a monk in one of the monasteries endowed by himself. Elected to the Papal Chair in 590, he became distinguished by his missionary zeal, and sent Augustine with forty monks to attempt the Christianization of England. His struggle for supremacy with the patriarch, John of Constantinople, tended to widen the breach between the Eastern and Western Churches. His "Pastoral Care" was one of the works translated into Anglo-Saxon at the command of Alfred the Great.

GREGORY VII. (Hildebrand), *b.* about 1020, *d.* 1085; the pope who did most to establish the ecclesiastical supremacy of the papacy, and who laid the foundations of its temporal power. Before his election to the Papal Chair, in 1073, he had directed the policy of the four preceding popes, and had managed to place their election entirely in the hands of the cardinals. He enforced the celibacy of the clergy, introduced many drastic reforms, and came into conflict with kings and rulers. With Henry IV., Emperor of Germany, in particular, he took a high-handed course. On being excommunicated, the Emperor found it necessary, in order to avoid deposition, to do penance before the Pope at Canossa, in Italy, 1077. The dispute was afterwards renewed, and a rival pope set up.

GRENADE, the earliest form of the modern explosive shell, was a ball of metal or strong glass filled with gunpowder and exploded by a fuse. It was used in storming trenches, and was generally thrown by hand.

GRENADIER, originally the name applied to the soldiers of a company attached to each regiment, who led the assault on trenches and fortresses and hurled hand grenades among the enemy. The grenadiers were always picked men. The name is now only applied to a foot regiment of the Household Brigade of Guards.

GRENVILLE, SIR RICHARD, one of Queen Elizabeth's sea-captains, and a cousin of Sir Walter Raleigh, whom he assisted in his attempts to colonize Virginia. He is famous for a heroic fight against a fleet of Spanish war-ships, off Flores, in the Azores, in 1591. With his single ship he maintained the unequal contest for 14 hours. He died soon after surrendering to the enemy. This extraordinary battle is described in spirited verse in Tennyson's ballad, "The Revenge."

GRESHAM, SIR THOMAS, *b.* 1519, *d.* 1579; a wealthy London merchant, who helped to consolidate and improve English trade by founding the Royal Exchange. He devoted much of his wealth to educational and charitable purposes.

GRETNA GREEN, a border village of Dumfriesshire, Scotland, about 9 miles north of Carlisle. In Scotland, for a couple to declare themselves man and wife before witnesses is tantamount to a lawful marriage; hence Gretna for nearly a century was the scene of many clandestine marriages, the parties to which found it impossible, from the opposition of parents or guardians, to become united in England. In deference to the bride's feelings the English marriage-service was usually read by the toll-keeper, the ferry-man, or the village blacksmith. An act of Parliament, in 1856, making such marriages illegal, unless one of the parties had resided in Scotland for at least three weeks previously, put a stop to the scandal.

GREUZE, JEAN BAPTISTE, *b.* 1725, *d.* 1805; a French artist, best known as a painter of domestic scenes, girls, and portraits. His work displays great delicacy and charm. "The Broken Pitcher" in the Louvre, "Girl with Doves" in the Wallace Collection, and "Girl with Dead Canary" in the Scotch National Gallery, are his best works.

GREVILLE, CHARLES, *b.* 1794, *d.* 1865, was clerk of the Council in Ordinary, 1821–1860, a post which gave him many opportunities for studying Court life, political leaders, and all the social, literary and other celebrities of the time. His "Memoirs," published in three volumes, are brilliantly written and throw much light on the history of the first half of the 19th century.

GREY, LADY JANE, *b.* 1537, *d.* 1554; was the grand-daughter of Mary, sister of Henry VIII. She early showed great mental ability, and acquired a wide knowledge of both classical and modern languages. She became the victim of the unscrupulous Duke of Northumberland, who, for the aggrandisement of himself and his family, married her to his son, Lord Guildford Dudley, and persuaded Edward VI. on his death-bed to appoint her his successor. For nine days she was nominally queen of England; but on the accession of Mary, the rightful heiress to the crown, she was sent to the Tower and there beheaded.

GREY FRIARS or **FRANCISCANS,** an order of Friars founded by St. Francis of Assisi, in the 13th century. (See *Friars.*)

GREY, SIR GEORGE, K.C.B., *b.* at Lisbon, 1812, *d.* 1898; a distinguished English soldier and administrator. In 1837 and 1838 he led two exploring expeditions in North-West and Western Australia. In 1846 he was made Governor of New Zealand, where his wise and conciliatory rule made him extremely popular with the Maoris. From 1854 to 1861, as Governor of the Cape of Good Hope, he did splendid work in smoothing out the difficulties resulting from the Kaffir War. In 1861, with a view to ending the Maori War, he was again appointed Governor of New Zealand, but the war went on in spite of his efforts till 1870. From 1877 to 1884, as Premier of New Zealand, he did much to develop the colony. The comparative high state of civilisation among the Maoris, and their friendly relations with the whites, are in great measure the results of his labours.

GRIEG, EDWARD, *b.* at Bergen, 1843; a musical composer of Scottish descent, spent his early life in the study and teaching of music. A pension being conferred upon him by the Norwegian Parliament, he devoted himself to composition. He is a brilliant pianist and most of his compositions are for the piano, including sonatas and concertos; but he has also written a number of delightful songs and a variety of pieces for the violin and 'cello.

GRIFFIN, a mythical monster, who was said to guard gold and treasures hidden in the ground. It is generally represented as having the body and hind legs of a lion and the wings and beak of an eagle. Eagles' claws also took the place of fore feet. The griffin frequently occurs in heraldry, and is found in ancient Persian carvings.

GRIMALDI, JOSEPH, *b.* 1779, *d.* 1837, the most renowned of English clowns in the days of the old-fashioned pantomime, first appeared in Drury Lane when under two years old. From the age of three he regularly appeared in Sadler's Wells pantomimes. For some months each year he took "turns" at two theatres each evening. Worn out by over work he retired in 1828.

GRIMALKIN, an old cat, generally a female. The word is an abbreviation of "grey" and "moll-kin," a diminutive of "Moll," which is itself a diminutive of "Mary." One of the witches in Shakespeare's "Macbeth" addresses her attendant cat as "Graymalkin."

GRIMSBY, a fishing town and seaport on the Humber, Lincolnshire. Its trade was considerable in the Middle Ages, but the silting up of the harbour caused its decline. The development of English railways led to a revival of its importance, and dredging and dock construction has, since 1860, made it the leading centre of the English cod and herring fishery and the chief source of the fish supply of the Northern Midlands. Its trade with the Baltic and Western European ports is considerable. (For population, etc., see p. 902.)

GRIMTHORPE, (Edmund Beckett), **BARON,** *b.* 1816, *d.* 1905, a great authority in clocks and bells, and a writer on horology and architecture. He assisted Professor Airy in designing the celebrated clock of the Houses of Parliament, and restored at his own expense St. Alban's Abbey. He was raised to the peerage, 1886.

GROG, the general name for spirituous liquors, but applied especially to a mixture of rum and water. The name is derived from "grogram," and from the fact that Admiral Vernon, familiarly called "old Grog," from the grogram breeches he generally wore, ordered, in 1745, the rum served out to his men to be diluted with water.

GROOME, FRANCIS HINDES, *b.* 1851, *d.* 1902, a man of many literary attainments who contributed to various cyclopædias and dictionaries. He was editor or joint editor of many such works. His special study was the language, lore, habits and character of the gypsies, about whom he wrote "In Gypsy Tents" and "Gypsy Folk Tales," &c.

GROTE, GEORGE, *b.* 1794, *d.* 1871, a celebrated historian. In 1823 he began the systematic study of Greek history, and the result of his labours was his famous history of Greece, twelve volumes, published 1846–56. He took a democratic view of politics, and therefore was well fitted to interpret Athenian history and culture.

GROTTA DEL CANE, (Dog's Grotto), is a cave near Naples composed of limestone from which large quantities of carbonic acid gas are evolved. The gas, being heavier than air, settles near the floor and asphyxiates small dogs that are introduced into the cave.

GROUCHY, MARSHAL, *b.* 1766, *d.* 1847, a distinguished French general. He supported the French Revolution and rose rapidly in the Republican army. At Novi, Hohenlinden, Wagram and in the Russian campaign of 1812, he distinguished himself greatly. In the retreat from Moscow he commanded the "Sacred Battalion," which consisted entirely of officers, and formed Napoleon's body-guard. On Napoleon's escape from Elba, Grouchy was one of the first to join him. After Napoleon's defeat of Blucher at

Ligny, Grouchy was left with a division to harass the German retreat, but being outmanœuvred, was unable to prevent the junction of the Allies which ended in the crushing defeat of the French at Waterloo. He led the shattered remnants of the French army back to Paris, but, on the Emperor's abdication, he went to the United States. Returning in 1819 he was re-appointed marshal in 1831.

GROUSE, the name of a family of birds which includes the capercailzie, the blackcock, the ptarmigan, and the red grouse. The red grouse is the species that attracts so many sportsmen to the Scotch and Yorkshire moors from the 12th of August each year to the 10th of December following.

GRUB STREET, now Milton Street, near Moorfields, was, in the reign of George III., the home of writers of small histories and dictionaries, and of those engaged in literary hack-work generally.

GRUNDY, MRS., a lady in Morton's play "Speed the Plough" (1800), who does not appear, but whose opinion is much feared by her neighbour, a farmer's wife. The latter's constant reiteration of "What will Mrs. Grundy think? What will Mrs. Grundy say?" has since made that lady personify the opinion of aggressively moral gossips on matters of decorum.

GUANO, an extremely fertilising manure consisting chiefly of the excrement of seabirds that feed on fish. The best variety is found on the islands and coasts of countries with a dry, hot climate. Deposits to the depth of 60 feet have been found off the coast of Peru, Bolivia, and Chile. The supply from these sources has been gradually decreasing, a rich deposit has been recently found at Cape Cross in Namaqualand, on the west coast of South Africa, but a good substitute has been found in fish guano, obtained chiefly by artificially drying and grinding to powder the heads and back-bones of cod-fish and herrings.

GUARDS, THE, a military term applied to the regiments of picked men that serve officially as the body-guard of the Sovereign. In the English army the regiments forming the Household Brigade of Guards are the 1st and 2nd Life Guards, the Royal Horse Guards, and four regiments of foot—the Grenadier, Coldstream, Scots, and Irish Guards. During times of peace they garrison the metropolis, and from them are chosen guards for the Royal Palaces and escorts for the sovereign on state occasions.

GUELFS AND GHIBELLINES, the name, assumed by two great parties whose antagonism kept Germany and Italy, especially the latter, in a disturbed state from the middle of the 11th century to the middle of the 14th. The principles fought for varied as time went on, but, speaking generally, the Ghibellines formed the imperial and aristocratic party in Italy, and the Guelfs the papal or popular party.

GUIANA, an extensive region in South America between the Orinoco and the Amazon. It is divided into five parts, three of which are colonies possessed by England, Holland, and France respectively. The whole territory consists of a low, fertile, and rather unhealthy coast plain of alluvial soil, varying in width from 10 to 40 miles, backed by uplands covered with luxuriant forests of tropical trees. (1) *British Guiana*, obtained from the Dutch by treaty in 1814, has an area of 104,000 square miles and a population of 280,000, of which 17,000 are Europeans. Its capital is Georgetown. Sugar, rum, timber, gold, and various gums are exported. (2) *Dutch Guiana* is in a very backward condition; its chief town is Paramaribo. (3) *French Guiana*, capital Cayenne, exports pepper, cloves, nutmegs and other spices. It is used as a penal settlement.

GUIDO. See *Reni, Guido.*

GUILDS are associations formed for the protection and development either of commerce or of some particular trade. During the Middle Ages their influence was very great, especially in freeing industrial cities and ports from the power of feudal lords. The industrial revolution in England in the latter half of the 18th century proved their death-blow in this country.

GUILLOTINE, a machine used in France and parts of Germany for decapitating persons sentenced to death. Its chief feature is a heavy iron blade with a sharp, oblique lower edge, which can be made to fall by its own weight between two upright posts grooved for that purpose, on to the neck of the victim fastened below. Its use, under other names, dates back to very ancient times. A similar instrument, called the "Maiden," was used in Scotland during the 16th and 17th centuries. The modern name is derived from that of Dr. Joseph Guillotin, who suggested its adoption during the French Revolution.

GUINEA, the collective name for a long stretch of coast territories on the west coast of Africa, lying between the mouth of the Senegal river and Cape Negro, a distance of 4,000 miles. *Upper Guinea* comprises Senegal, Gambia, Sierra Leone Liberia, the Ivory, Gold, and Slave Coasts, the Niger Protectorate and the Cameroons. *Lower Guinea* includes Corisco Bay, the Gaboon Colony, the Congo Free State, Angola, and Benguela. English traders first visited this coast during the middle of the 16th century. Guinea, a gold coin used in England from 1663 to 1817, received its name from the fact that the gold employed in minting the first set of these coins came from Guinea.

GUINNESS FAMILY, a family of brewers of stout in Dublin. The fame and prosperity of the firm were chiefly owing to the great organizing power of Sir Benjamin Lee Guinness, *b.* 1798, *d.* 1868, who established the fame of Dublin stout and became immensely rich. At his own expense he restored St. Patrick's Cathedral, Dublin. He was created baronet in 1867, his eldest son, Sir Arthur Guinness was created Baron Ardilaun in 1880, and his youngest, Edward Cecil, was created Baron Iveagh in 1891, two years after placing £250,000 in the hands of trustees for providing workmen's dwellings at a low rent, four-fifths to be laid out in London and the rest in Dublin.

GULF STREAM, THE, an ocean current which sweeps round the Gulf of Mexico, passes through the Straits of Florida at an average rate of 6 miles an hour, and after flowing some distance along the east coast of the United States strikes north-east across the Atlantic, widening and losing its velocity as it proceeds. By the time it reaches the latitude of the British Islands it does little more than drift about 4 miles a day. The water of the Gulf Stream is a little higher in temperature than the surrounding water, and this fact tends to make the average annual temperature of the maritime countries of North-West Europe higher than it would be otherwise.

GULLIVER'S TRAVELS, the best-known work of the great satirist Swift, was produced in 1726. The marvellous yet plausible adventures of Gulliver among pigmies and giants make this work very entertaining as a story-book; moreover, the reader who knows thoroughly the political life of the reigns of Anne and George I., sees in it a clever satire on the public men and movements of the day.

GULL, SIR WILLIAM, *b.* 1816, *d.* 1890, a great physician, was created a baronet, 1872 for his skill in treating the Prince of Wales in a dangerous illness. He was professor of physiology at the Royal Institution, 1847–9, physician and lecturer at Guy's Hospital, 1847–67; also author of many valuable medical works.

GUN-COTTON, a powerful explosive, about four times as effective as gunpowder, is produced by the action of nitric and sulphuric acids upon cotton wool. It ignites at a temperature of 300° F., a detonator of fulminate of mercury being usually employed. Gun-cotton, being unaffected by immersion in water, is always stored wet, in air-tight cases, to ensure safety. After ignition, gun-cotton gives off gases too rapidly to make it of any use for guns and firearms, but for charging torpedoes and marine mines, and for destructive purposes generally, it is of the highest value. In its manufacture the purest cotton-wool is taken and dipped in nitric and sulphuric acids mixed in the proportion of 1 to 3. After being freed from waste acid and dried, it is compressed to one-third of its former bulk, divided, and finally stored as indicated above.

GUNNERY SCHOOLS. There are two of these for the navy, one at Whale Island, near Portsmouth, and the other on board the *Cambridge* at Devonport. Naval officers are required also to spend about six months in the gun factory and laboratory at Woolwich. The military gunnery school is at Shoebury Ness, near the mouth of the Thames.

GUNNING, MARIA, *b*, 1733, *d.* 1760; was the elder of two Irish sisters famed for their beauty. Coming to London, in 1751, they attracted much notice in society on account of their unusual beauty. Crowds followed them wherever they went, and on one occasion, George III. allowed Maria, who was on friendly terms with the king, the escort of a small guard of soldiers to permit her to walk unhampered. In 1752 the elder sister married George William, Earl of Coventry, and the younger, Elizabeth, married the Duke of Hamilton.

GUNPOWDER, an explosive mixture consisting of 75 per cent. by weight of saltpetre, 15 of carbon, and 10 of sulphur. The proportions, however, vary in different countries. The constituents are ground into powder, thoroughly mixed by hand, and enough water added to make the resultant mixture into a wet cake. This cake is then crushed into a kind of meal, compressed to increase its density, broken up into grains, dried by steam heat, passed through a granulating machine to sort out grains into different sizes, and finally the grains are glazed by friction in a revolving drum. Powder used for heavy guns and shells is not granular, but consists either of cubes (the largest with a 1½ inch edge) or of hexagonal prisms about 1 inch high and 1½ inches across. The propelling power of gunpowder is due to the rapid generation of large quantities of gas in a confined space. An explosive such as dynamite or gun-cotton is found to generate gas too quickly, the result being that the projectile is driven along the bore with such rapidity that the rifling becomes damaged.

GUNPOWDER PLOT, a conspiracy of certain Roman Catholics in 1605, in the reign of James I., on account of his refusal to redress their grievances, to blow up with gunpowder the Houses of Parliament when the king and his ministers were there. Barrels of gunpowder were secretly lodged in the cellars of the House, and a Spanish soldier, named Guy Fawkes, was hired to fire the gunpowder at the right moment. But the plot was discovered in time. Guy Fawkes and many of the conspirators were executed.

GUNROOM, the living room or mess room of the junior officers of a man of war, under the care of the gunner, in the aft lower deck. The watchman, who had to keep the gunroom clean, used to be called "the lady of the gunroom"

GURNEY, JOSEPH JOHN, *b.* 1788, *d.* 1847; a warm-hearted philanthropist, who, with his sister, Mrs. Fry, worked earnestly and unselfishly for prison reform. He was a leading member of the Society of Friends (Quakers). His writings include "Prison Discipline" and "Religious Peculiarities of the Society of Friends."

GURNEY, SIR GOLDSWORTHY, *b.* 1793, *d.* 1875; an English chemist and inventor. To him we owe the Bude, oil-gas, lime and magnesium lights, and he claimed to have invented the oxy-hydrogen blow-pipe. Investigations made by him of the poisonous and explosive gases that collect in mines and sewers resulted in the invention of the High-pressure Steam Jet.

GUTENBERG, JOHANNES, is credited by the Germans with the invention of printing by movable blocks. Nothing is known with certainty of his early experiments in printing, but in 1450 he entered into partnership with a goldsmith of Mainz named Fust, and set up a printing press in that town.

GUTTA PERCHA, a substance which must not be confounded with caout-chouc, is prepared from the juice of certain trees found in the Malay peninsula and the adjacent islands. The trees, sometimes 70 ft. high, are tapped in order to extract the juice. It oxidises and decomposes more rapidly than india-rubber, which is now often used as a substitute in the coating of submarine cables. Soles of shoes, water pipes, goloshes, golf balls, are examples of the many uses to which it is put on account of its elasticity and impermeability to water. It can be readily boiled down, and is invaluable for taking casts in which a sharp outline is needed. It is used for examining the bores of guns, the smallest defects being clearly shown on the casts.

GUY, THOMAS, *b.* in London, 1644, *d.* 1724; best known as the founder of Guy's Hospital, was the son of a lighterman and coal-dealer. In 1668 he set up as a bookseller, dealing chiefly in Bibles. Successful speculations in South Sea Stock enabled him to amass a fortune of nearly half-a-million sterling. In his business dealings he showed a certain amount of parsimony, but at his death he left nearly £300,000 to be devoted to the building and endowment of the hospital that bears his name. Many public charities benefited considerably by his wealth.

GY'GES, king of Lydia, 668–626 B.C. According to the legend in Plato, he was a herdsman who discovered a magic ring by which he could render himself invisible. With its aid he assassinated the king of Lydia and seized the sceptre.

GYPSUM, or calcium sulphate, is a widely distributed rock mineral which exists under various names according to the forms and arrangement taken by its crystals. Selenite and satinspar are both transparent, and consist of well-defined crystals. Alabaster, used so much in decorative building, is translucent and very easily worked. Ordinary gypsum, when ground to powder, makes a good manure for grass lands. Gypsum, on being heated to a high temperature, becomes Plaster of Paris, which derives its name from the gypsum deposits of Montmartre, Paris.

HAARLEM, a town in North Holland. Dutch bulbs are extensively cultivated in the surrounding district, and it is celebrated for its bleaching fields. It surrendered to the Spaniards in 1573, after a siege of seven months, and 2,000 citizens were put to death. Between this town and Amsterdam was formerly a lake 26 miles in length, named the *Haarlem Meer*. It was drained in 1840–53, and is now a fertile plain.

HABEAS CORPUS. Refer to *Index*.

HADDOCK, a fish that frequents in shoals the European and North American coasts of the Atlantic Ocean. They are caught principally with trawl nets, but also by small lines. The British catch is worth about two million pounds annually. Whilst much is consumed fresh, much also is smoked.

HADDON HALL, an ancient residence of the Manners family, situated in Derbyshire. It is of great antiquarian interest.

HADES (ha-des), was, among the ancient Greeks and Romans, the god of the lower regions, and then the name of the world below, in which dwelt the shades of the dead. In the New Testament it is the place of all departed spirits, in which they await the judgment day.

HADJ, or **HAJJ,** a pilgrimage. As a rule it means *the* great pilgrimage of Moslems, which is of course, to Mecca, and must be performed at least once by every believer possessed of the needful means and strength. Thereafter, the pilgrim is entitled to style himself "Hadji." The name Hadji is also given to any Eastern Christian who makes the pilgrimage to Jerusalem.

HAECKEL, ERNST, *b.* 1831, a German scientist, whose works on religion and philosophy (especially "The Riddle of the Universe") are widely read. Formerly, professor of Zoology at Jena University.

HÆMATITE. See *Iron*.

HADRIAN. See *Adrian*.

HAGADA. See *Talmud*.

HAGGARD, HENRY RIDER, *b.* in Norfolk, 1856; a popular novelist. Among his numerous works are "Allan Quatermain," "Jess," "She," and "King Solomon's Mines." He is a great agriculturist, and has written a standard work on the subject.

HAGGIS, a favourite Scotch dish. The heart, lights, and liver of a sheep are chopped fine and mixed with oatmeal, suet, and spices. The whole is placed in a sheep's stomach and boiled for three or more hours.

HAGIOGRAPHA, a division of the Jewish Scriptures. These are divided into the Law, the Prophets, and the Holy Writings or Hagiographa. The last named consists of the Psalms, Proverbs, Song of Solomon, Ecclesiastes, Job, Ruth, Lamentations, Esther, Daniel, Ezra, Nehemiah, and the Chronicles. In earlier times this title was applied only to the first four named.

HAGUE, THE, the seat of government of Holland. It is a well-built city with a population of above 200,000. Numerous Dutch pictures are preserved in the Palace of the Prince of Orange and in the Museum. Charles II. set sail for England in 1660, from Scheveningen, now a beautiful seaside resort about four miles distant. At Ryswick, about two miles south-east, a treaty was signed in 1697 between William III. and Louis XIV. The International Peace Conference of 1899 met here and arranged for the constitution of an Arbitration Court. This tribunal has already amicably settled two disputes; the one, between the United States and Mexico; and the other, certain questions concerning the Venezuelan difficulty.

HAHNEMANN, CHRISTIAN FRIEDRICH, *b.* in Saxony, 1755, *d.* 1843; a German physician, who founded the system of medicine named homœopathy. His great work, "The Organon of Rational Medicine," was published in 1810.

HAIL, small, rounded pellets of ice. No satisfactory explanation of its origin has been given, but it may be caused by the sudden cooling of the moisture in the air to below the freezing point, by the passage of an electric current through the atmosphere. It falls chiefly in summer, usually during a thunderstorm, and is most destructive in warm and dry countries.

HAIR, MANUFACTURES OF. Chairs are stuffed with short horse-hair, and cloth is woven from long horse-hair and the hair of the Angora and other goats. Felt, for roofing and packing for pipes, is manufactured from cow-hair. Brushes for painting are made from the hair of the camel and sable, and clothes and other brushes from hog bristles.

HAKLUYT, RICHARD, *b.* 1553, *d.* 1616; the first historian of English voyages. He, an intimate friend of Sir Walter Raleigh, gave by his writings a great impetus to colonisation. He wrote "Divers Voyages touching the Discovery of America," and "Principal Navigations, Voyages, and Discoveries of the English Nation made by sea or over land . . . . within the compass of these 1,500 years."

HALACHA. See *Talmud*.

HALBERT, an axe, with a pointed head and often much ornamented, fixed upon a handle five or six feet long. It was much used in the 16th century by the foot soldiers of Western Europe.

HALCYON DAYS, calm, peaceful times. Halcyon is the ancient Greek name for the kingfisher. This bird was reputed to build its nest upon the sea, lay and hatch its eggs during fourteen days, about December 21st. The sea was said to be calm during this period.

HALE, SIR MATTHEW, *b.* in Gloucestershire, 1609, *d.* 1676; a famous judge and chief justice. He was a great student in all branches of knowledge, and wrote numerous works, especially upon Law and History. Many of his manuscripts are still preserved in the library of Lincoln's Inn.

HALF-PAY, an allowance granted to naval and military commissioned officers who are not actually serving. In the army it is called retired pay, but the nature of the payment is the same, being a kind of retaining fee in case the holder's services are again required. Thus a reserve of officers is built up.

HALIBURTON, THOMAS CHANDLER, *b.* in Nova Scotia, 1796, *d.* 1865, at Isleworth. He was a judge in Nova Scotia, but spent much of his life in England. He was the first author who used the American dialect. His principal works are, "The Clockmaker," or Sayings and Doings of Sam Slick of Slickville, "The Letter Bag of the Great Western," and "Sam Slick's Wise Saws and Modern Instances."

HALIDON HILL, near Berwick, where Edward III. defeated the Scots in 1333 and captured Berwick.

HALIFAX. (1) A Yorkshire town, whose principal industry, aided by plentiful coal and abundant water power, is the manufacture of woollen goods. It enjoys excellent means of communication with the ports of Liverpool and Hull. (For population, etc., see p. 902.) (2) The winter port of Canada, in Nova Scotia, with a population of above 40,000. In its magnificent harbour all the fleets of the world could anchor at once. It is a station of the British North Atlantic fleet, and lines of steamships sail from its port to Europe and many parts of America. It has railway communication with the United States, Quebec, and Ontario. Its manufactures are important, and include machinery and cotton and woollen goods.

HALL, CHARLES FRANCIS. See under "Explorers" in *Index*.

HALLAM, HENRY, *b.* at Windsor, 1777, *d.* 1859; one of England's greatest historians. He wrote three works, which are still considered authorities upon the subject: "View of the State of Europe during the Middle Ages," in 1818; "The Constitutional History of England from the Accession of Henry VII. to the Death of George II.," in 1827; and "Introduction to the Literature of Europe in the 15th, 16th, and 17th centuries," in 1838.

HALLAM, ARTHUR HENRY, *b.* 1811, *d.* suddenly at Vienna, 1833; a son of Henry Hallam, and a young man of great promise. Alfred Tennyson, of whom he was an intimate friend, and to whose sister he was engaged, wrote "In Memoriam" in his honour.

HALLEY, EDMUND, *b.* in London, 1656, *d.* 1742; a great astronomer and an intimate friend of Isaac Newton. He discovered that the comet of 1682, since called Halley's, was probably the same that had appeared in 1607 and in 1531. He calculated that it should return about 1758. It did so in 1759, and was last seen in 1910. He showed that many comets belonged to the Solar System and travelled in elliptical orbits, and this removed many superstitions connected with them. He used the transit of Venus to measure the distance of the earth from the sun, and mapped out 350 of the southern stars. (See *Comet*.)

HALL-MARKS. See *Commercial Dictionary*.

HALLOWEEN (October 31st), the eve of All Hallows, or All Saints' Day. In Scotland it used to be a general time of merrymaking as shown in Burns's "Halloween."

HALLUCINATION. See *Illusion*.

HALO. (1) A circle of light surrounding the sun or moon. It is probably due to refraction of the light by tiny ice crystals present in the intervening air. Rainbows, fog-bows, and "mountain spectres" are due to a similar cause. (2) In religious art the "nimbus," or circle of golden light surrounding the head of the person represented.

HAMAN, a favourite of King Ahasuerus of Persia. He planned the destruction of all the Jews that he might slay Mordecai. Queen Esther defeated his object, and he was hanged upon the fifty feet gallows prepared for Mordecai.

HAMBURG, an imperial city and the chief port of Germany, situated on the Elbe, 60 miles from its mouth. Steamships communicate with almost all parts, and the Hamburg-American Line possesses the largest mercantile fleet in the world. Its internal trade by means of the river, canals and railways is enormous. The value of its commerce is exceeded only by that of London, New York, and Liverpool. Its manufactures, with a population exceeding 750,000, are very varied and important.

HAMELIN, PIPER OF, the subject of a 13th century story used by Browning in his well-known poem. He charmed and destroyed the rats of Hamelin, in Hanover. He was refused his fee, and, in revenge, led, by means of his pipe, the town children to a neighbouring hill, which opened, and the children followed him through it.

HAMILTON, LADY, *b.* 1762, *d.* 1815; the humbly born and beautiful wife of Sir William Hamilton, ambassador to Naples. She is principally remembered on account of her intimate friendship with Nelson. She died at Calais, after a life of many vicissitudes, in great poverty through extravagance, leaving one daughter, named Horatia.

HAMILTON, PATRICK, *b.* 1504, *d.* 1528; a Scottish reformer and martyr. He visited Germany, where he spent some time with Martin Luther. On his return he was burned at the stake as a heretic at St. Andrews.

HAMLET, one of Shakespeare's tragedies, named after the principal character in the play. The scene is laid at Elsinore, in Denmark, and the story is based upon an ancient Danish legend.

HAMOAZE, the channel from the mouth of the Plym, in Devonshire, to the mouth of the Tamar. Devonport stands upon its eastern shore.

HAMPDEN, JOHN, *b.* 1594, *d.* 1643; a Buckinghamshire gentleman who refused to pay ship-money in 1635. He was an energetic and determined opponent of Charles I., and a member of the Long Parliament. On the outbreak of the Civil War he entered the field, and was mortally wounded at Chalgrove Field, near Oxford.

HAMPSHIRE, a county in the south of England, principally remarkable for its marine and rural beauty, with an area of above 1,600 square miles. The Solent and Spithead separate the Isle of Wight from the mainland, and Portsmouth Harbour and Southampton Water are the chief inlets. The principal rivers are the Itchen and Avon. The North Downs traverse the north of the county, and the New Forest is situated in the south-west. The county town is Winchester, with a fine cathedral and an ancient public school. The other important towns are Southampton, a prominent port; Portsmouth, the first naval station of the Empire; and Bournemouth, a pleasant watering place.

HAMPTON COURT, a royal palace, situated near Bushey Park, and 15 miles from London, built by Cardinal Wolsey, and appropriated by Henry VIII. It was a favourite royal home until the reign of George IV., and Edward VI. was born there. In 1604 an unsuccessful conference was held there between the Bishops and the Puritans, but the Authorised Version of the Bible was then projected. Private apartments in it are now granted by the sovereign to certain selected persons. The finest rooms are the great Hall and adjoining chambers. Its important art treasures include Lely's portraits, Kneller's portraits, and examples by Holbein and West.

HANDEL, GEORGE FREDERICK, *b.* in Saxony, 1685, *d.* in London, 1759; a world-renowned musician, buried in the Poets' Corner of Westminster Abbey. He, quite early, showed exceptional musical ability, and devoted himself to his favourite study at Halle, Hamburg, and the musical centres of Italy until 1710. He then became Chapel-master to George, Elector of Hanover, and followed his royal master to England, 1714, where he spent the rest of his life. Handel wrote many operas, now forgotten, and made a gallant but most unsuccessful attempt to establish Italian Opera in London. His title to fame rests mainly upon his oratorios, of which he produced nineteen between 1736 and 1751; among them being the Messiah, Israel in Egypt, Samson, Judas Maccabæus, and Saul.

HANDFASTING, a form of marriage once common in Scotland, in which a man and woman bound themselves to each other by word of mouth. The union lasted for a year and a day, after which the parties were free to separate or be formally married. Betrothal was called "handfasting" in former centuries.

HANDICAPPING, the putting of competitors in a game or contest upon an equality, by imposing penalties upon the more powerful or skilful. Time allowances, based upon tonnage and sail area, are granted in a yacht race, and in a motor car contest upon weight and horse-power. See *Horse Racing*.

HANG-CHAU, a port of China, situated south of Shanghai, and connected with Tientsin by the Grand Canal. Its commerce is very considerable, and a large proportion of its 700,000 inhabitants are engaged in silk manufacture.

HANKOW, a treaty port of China, situated on the Yang-tse-kiang, above 600 miles from the sea. It, with a population approaching a million, is the centre of the tea growing districts, and one of the greatest trading towns in the world.

HANNIBAL, one of the greatest generals in history. In 218 B.C., when twenty-nine years of age, he marched with 100,000 men from Carthagena, in Spain, crossed the Pyrenees, followed the Rhone, and led his troops over the Alps into Italy. He arrived in Italy, after a journey of five months, with 26,000 men, yet he maintained a war in Italy against Rome for fifteen years, often completely defeating its armies, and shaking its power to the very foundations. He was at last compelled to withdraw to Carthage, and was finally defeated by Scipio, at the battle of Zama, 202 B.C.

HANNINGTON, JAMES, *b.* at Hurstpierpoint, in 1847, *d.* in Uganda, 1885: the first bishop of Equatorial East Africa. In 1882 he went as a missionary to East Africa, but ill-health compelled him to come to England. In 1885 he returned as Bishop, and while trying to discover a new route from Mombasa to Lake Victoria Nyanza he was taken prisoner by Mwanga, king of Uganda, and put to death.

HANOVER, a province of Prussia. The rivers Ems, Weser, and Elbe drain it, and the Harz Mountains occupy its southern district. The inhabitants are chiefly engaged in agriculture and mining. Hanover, the capital and the birthplace of Sir William Herschel, has a population of above 230,000. It is interesting from its connection with England. The Elector, George Lewis, became George I. of England in 1714. He was the son of Sophia, daughter of the Elector Palatine, and grand-daughter of James I. The sovereigns of England were rulers of Hanover, which became a kingdom in 1814, until 1837. Victoria being excluded from the succession by the Salic Law, Ernest, Duke of Cumberland, being the nearest male heir, became its king. In the Prusso-Austrian war of 1866 Hanover supported Austria, and in consequence the king was deposed and the kingdom annexed by Prussia.

HANSARD, LUKE, *b.* at Norwich, 1752, *d.* 1828, founder of a great printing business, and printer of the Journals of the House of Commons from 1774 to 1828. The official records of that House are still referred to as "Hansard."

HANSEATIC LEAGUE, a confederation of German towns, formed in the 13th century for mutual protection and for the promotion of commercial privileges. The most important members, which at one time numbered ninety free cities, were Hamburg, Lübeck, and Bremen. It exerted great influence throughout Europe for more than two centuries.

HANSOM, JOSEPH, *b.* at York, 1803, *d.* 1882; an architect and the inventor of the Patent Safety Cab which bears his name.

HANWAY, JONAS, *b.* at Portsmouth, 1712, *d.* 1786; a traveller, merchant, and philanthropist. In 1753 he published an account of his travels in Russia and Persia. From that time he settled in London, and was unceasingly engaged in philanthropic work, chiefly for the

children of the poor, for whom he founded Sunday Schools. He was the first man, amid much derision, to use an umbrella in the streets of London.

HAPSBURG, HOUSE OF, the imperial family of Austria, whose ancestors held the castle of Hapsburg, in the valley of the Aar. From the time of Count Albert, in 1153, the family increased its possessions and power, so that in 1273 Count Rudolph was elected Emperor of Germany. From him were descended, through Maria Theresa, the Austrian royal house, and also the family which ruled Spain from 1516 to 1700.

HARA-KIRI, or "happy dispatch," the Japanese method of committing enforced suicide. This was done by a self-inflicted but superficial cut across the belly, followed either by a deadly cut across the throat by the victim's own hand, or by the stroke of a sword dealt by a friend's hand, severing the head from the body. The custom is now obsolete.

HARCOURT, SIR WILLIAM VERNON, *b.* 1827. *d.* 1904, one of the most distinguished of Mr. Gladstone's lieutenants and disciples, gained high honours at Cambridge University. became a Q.C. in twelve years after being called to the Bar, and gained celebrity by his writings signed "Historicus." He became Solicitor-General in 1873, and thereafter took a leading part in all Liberal governments till his death. Many thought he should have been Prime Minister on Mr. Gladstone's retirement.

HARDINGE, HENRY, VISCOUNT, *b.* Wrotham, 1785, *d.* 1856; Governor-General of India from 1844 to 1848. He served with distinction through the Peninsular War, and was a member of the Prussian Staff during the Waterloo Campaign. When Governor-General of India he served under Sir Hugh Gough in the Sikh War, and for his services was created Viscount Hardinge of Lahore, with a pension of £3,000 per annum for three lives. He was Commander-in-Chief when the Crimean War broke out, and was appointed a Field Marshal.

HARDWAR, a small town situated upon the upper Ganges. The largest fair in Hindustan is held here towards the end of March, at the time of a religious festival attended by about 250,000 people.

HARDY, THOMAS, *b.* near Dorchester, 1840: a popular novelist. Many of his numerous novels have been translated into foreign languages. His best known works are, "Far from the Madding Crowd," and "Tess of the D'Urbervilles."

HARE, a fleet and timid animal, ever watchful against dangers which threaten it from birds and beasts, while hiding in its "form." It is found in many parts of Europe and the West of Asia, at The Cape, and in Arctic Regions. It pairs in February or March, when it exhibits great pugnacity, and four or five litters, each of three or four young, called leverets, are born by the end of August. The sport of catching the hare with greyhounds is called coursing. When so chased it shows not a little ingenuity in choosing a course to thwart and baffle its pursuers.

HAREM, the portion of a Mohammedan's dwelling set apart for his wives and forbidden to strangers; also the term applied to the wives and their attendants. These wives, limited by the Koran to four, live a dull, monotonous life of sewing and spinning, only enlivened by such simple amusements as singing and dancing.

HARGRAVES, EDMUND HAMMOND, the discoverer of gold in the Blue Mountains of Australia, in 1851. He was led to suspect its presence from the evident similarity in geological character to California, from which he had just come.

HARGREAVES, JAMES, *d.* 1778; the inventor, about 1763, of the spinning jenny, by which eight threads could be spun at once. The Blackburn spinners destroyed his jenny and his house, so he removed to Nottingham.

HARLECH, a town with the ruins of an ancient castle, in Merionethshire. The Yorkists captured it during the Wars of the Roses, and in consequence the Welsh National Air, "The March of the Men of Harlech," was composed.

HARLEIAN MANUSCRIPTS. Robert Harley, first earl of Oxford, after his disgrace under George I., devoted himself to increasing the collection of books and manuscripts he had already begun. His son, Edward, added to it, and after his death his widow sold the collection to the nation for the nominal sum of £10,000. It contains about 22,000 volumes and documents, and is housed at the British Museum.

HARLEQUIN, a mute actor in a pantomime. He is clothed in tight-fitting parti-coloured garments, and is supposed to be invisible to all eyes but those of his faithful wife, Columbine. With a magic wand he plays tricks, and defends Columbine from the pantaloon and the clown.

HARLEY, ROBERT, *b.* in London, 1661. *d.* 1724; a minister of Queen Anne, a patron of literature, and a cousin of Mrs. Masham, Queen Anne's favourite. He held many high offices, and was created Earl of Oxford. In 1715 he, through his uncertain action on the accession of George I., was impeached of high treason and imprisoned in the Tower until 1717. After a public trial by the House of Lords he was acquitted, and lived in private until his death. See *Harleian Manuscripts.*

HARMATTAN, a hot, dry wind which blows from the Sahara to the Gulf of Guinea, from January to March. It seriously affects the eyes, nose, and mouth, but causes fevers to abate.

HARMONICS, or OVERTONES, See *Glossary of Musical Terms.*

HAROLD, *b.* about 1021, *d.* 1066; the last Saxon king of England. After the death of his father, Earl Godwin, in 1053, he and his brothers gradually brought all England, except Mercia, under their sway. In 1066, on the death of Edward the Confessor, he was chosen king. He was immediately called upon to resist two invasions: the one by his brother, Tostig, and Hardrada, king of Norway, both of whom he defeated and slew at Stamford Bridge, Yorkshire; the other by William, Duke of Normandy, who defeated and slew him in the battle of Hastings.

HARP, an ancient stringed musical instrument, played with the fingers. It is mentioned frequently in the Bible, and the harps of Scotland, Wales, and Ireland were famous in early times. The double action pedal harp has seven pedals, which are operated by the foot, and forty-three strings by the fingers.

HARPOON, a kind of barbed javelin or spear used for piercing whales and preventing their escape. It consists of a shank about 2 feet long with a barbed head, into which fitted a wooden shaft when harpoons were thrown by hand. Now they are discharged from guns and the shaft has a slot in which works an iron ring attached to the rope which checks the whale's progress.

HARPY, (1) a fabulous, filthy, winged creature, mentioned in Homer and Virgil and described as a ravenous bird with sharp claws, and with the head of a woman whose face is pale with hunger. (2) A fabulous creature appearing in heraldry as a vulture with the head and breast of a woman. (3) The largest of the eagle tribe, found in the tropical parts of South America. (4) Any rapacious or ravenous creature.

HARQUEBUS. See *Arquebus.*

HARRISON, JOHN, *b.* at Foulby, in Yorkshire, 1693, *d.* 1776, a mechanician who invented the chronometer and the "gridiron" pendulum.

HARROGATE, an inland watering place, with a population of above 28,000, situated about 24 miles west of York. Its fine baths are supplied from sulphur, chalybeate, and magnesia springs, and these waters are recommended for rheumatism, for certain skin diseases, and for digestion troubles.

HARROWS, agricultural implements. The brake harrow has a square iron or wooden frame, set with rows of iron teeth pointing downwards, and is used to break up and smooth ploughed land. The chain harrow consists of iron rings, and is used to destroy weeds or to cover seeds.

HARROW SCHOOL, one of the four greatest public schools of England, founded, in 1571, by John Lyon, a yeoman. When Dr. Wordsworth resigned the Head-mastership in 1844 there were only 69 pupils. The school took a new start under his successor (Dr. Vaughan), and the number on the roll now exceeds 500.

HARTE, FRANCIS BRET, *b.* in New York State, 1839, *d.* 1902; a popular American writer and humorist. In 1869 he published his widely read, humorous poem, "The Heathen Chinee:" and among his numerous works are "The Luck of Roaring Camp," "Outcasts of Poker Flat," "Miggles," and "Stories in Light and Shade."

HARUN-AL-RASHID, "Aaron the Just," Caliph of Bagdad, 786–809, the most renowned of the Eastern Caliphs. His authority was acknowledged, more or less, from the Indus to the Nile, and even across North Africa to Mount Atlas. The prosperity of his caliphate was greatly due to the able rule of his vizier, Barmecides. The Caliph figures prominently in many stories of the "Arabian Nights."

HARVARD UNIVERSITY, the oldest, wealthiest, and most important of American Universities, situated at Cambridge, near Boston, Massachusetts. The Rev. John Harvard founded it in 1638.

HARVEY, WILLIAM, *b.* at Folkestone, 1578, *d.* 1657; a celebrated English doctor who discovered the circulation of the blood, which was suggested to him by observing the valves in the veins.

HARZ MOUNTAINS, situated in the north-west of Germany, the loftiest peak of which, the Brocken, is nearly 4,000 feet high. They are very rich in minerals, including lead, iron, silver, copper, zinc, sulphur, and a little coal. The Brocken, in ancient legend, as adopted by Goethe in "Faust," was the annual meeting place of all German demons and witches. The *Spectre of the Brocken* is a celebrated optical illusion.

HASHISH, a drug prepared from the gum obtained from Indian hemp. It is a narcotic smoked extensively by the Arabs, and its effects are similar to those produced by opium. In India an intoxicating drink called *bhang* is made from it.

HASTINGS, a fashionable Sussex watering place, which with St Leonards has a sea front of over two miles. It has important fisheries. The scene of the fight in 1066 between Harold and William the Conqueror, at Senlac, is about 8 miles distant. (For population, etc., see p. 902.)

HASTINGS, WARREN, *b.* at Churchill, Oxfordshire, 1732, *d.* Daylesford, 1818; became the first Governor-General of India, in 1773. He did much to extend British rule in India, but on his return to England, 1785, he was impeached by order of the House of Commons for extortion and cruelty. The trial that ensued was prolonged over seven years, and is famous for the oratorical speeches delivered by Burke, Sheridan, and Fox. It resulted in an acquittal, 1795.

HASTINGS, WILLIAM, LORD, *b.* probably 1430, *d.* in the Tower, 1483; a firm supporter of Edward IV., by whom he was made a peer and endowed with great estates. He was beheaded on a charge of treason, without trial, by Richard, Duke of Gloucester, afterwards Richard III.

HATCHMENT, or **ACHIEVEMENT,** is a lozenge-shaped panel placed on the exterior of a house after the death of a member of a family entitled to armorial bearings. On it is painted the coat of arms, so as to indicate the rank, sex, and status of the deceased.

HATFIELD, a small town in Hertfordshire, about 17 miles from London. Elizabeth was living at Hatfield when Mary died. The estate was granted by James I. to Sir Robert Cecil, who was created Earl of Salisbury, and built the fine mansion known as Hatfield House, the residence of the Marquis of Salisbury.

HATTO, an Archbishop of Mayence, who is alleged to have been eaten by rats at Bingen on the Rhine, about 970, as a punishment for his cruelty in oppressing the poor. Southey's poem has made the story familiar. "The Mouse Tower," the scene of the supposed tragedy, still stands on a small island in the Rhine.

HAUSAS, an interesting African race living in West Africa, chiefly between Lake Tchad and the River Niger. They are most successful traders, with trade routes to the Mediterranean and Red Seas and the Gulf of Guinea, and their language is spoken by upwards of 15,000,000 people.

HAVANA, the strongly fortified capital of Cuba, founded by Velasquez in 1515. It is situated upon a splendid harbour, and with a population of above 270,000, is commercially the most important town of the West Indies. Sugar, tobacco, and cigars are its principal exports. It was captured by the United States in the Spanish-American War of 1898.

HAVELOCK, SIR HENRY, *b.* at Bishop-Wearmouth, 1795, *d.* 1857; a hero of the Indian Mutiny. He served in the Peninsular War and went to India in 1822. He took part in the Afghan War of 1838 and in the Sikh War of 1845. When the Mutiny broke out in 1857 he was ordered to Allahabad. He relieved Cawnpore, after fighting four battles in eight days, and then marched to Lucknow, where he was joined by Sir James Outram. They carried relief to the British garrison, but were themselves besieged until the arrival of Sir Colin Campbell. After the Mutiny he was created a Baronet and granted a pension of £1,000, but he died of dysentery while preparing to leave for England.

HAVERGAL, FRANCES RIDLEY, *b.* 1836, *d.* 1879, a religious writer and Christian worker, was the daughter of Rev. William Henry Havergal, who had no small share of poetical and musical talent, which he devoted to sacred uses. Her religious writings in poetry and prose are marked by deep devotion to Christ and His service. The "Ministry of Song" has been repeatedly republished. Among her hymns are:—"Thou art coming, O my Saviour." "Lord, speak to me," and "I gave My life for thee."

HAVRE, the second commercial port of France, situated at the mouth of the Seine. It is strongly fortified and has an extensive trade. Its important manufactures include cotton and linen goods, machinery, glass, and tobacco; population above 130,000.

HAWAIIAN or **SANDWICH ISLANDS,** twelve in number, are situated in the North Pacific Ocean. In the largest island, Hawaii, are several active volcanoes. European domestic animals thrive well, and excellent sugar, wheat, cotton, and coffee are produced. Honolulu, the capital, and a station of the United States Pacific Cable, has considerable trade. The islands were discovered by Captain Cook in 1778, and annexed by the United States in 1898. It was at Hawaii that Captain Cook was killed.

HAWKE, EDWARD (Admiral Lord Hawke), *b.* 1705, *d.* 1781, was the son of a lawyer. Entering the navy at an early age, he found himself a commander at the age of twenty-nine. In 1747, off Belleisle, and in 1759, in Quiberon Bay, he inflicted ruinous defeats on the French fleets. His services were rewarded with a pension of £2,000 a year and a peerage.

HAWKINS, ANTHONY HOPE. See *Hope, Anthony.*

HAWKINS, SIR HENRY, *b.* 1817, a celebrated lawyer and judge, was educated at Bedford School. Called to the Bar in 1843, he became Q.C. in 1858, and took part in the leading cases of the succeeding years, including the "Tichborne" case, in which he greatly distinguished himself. Made a judge in 1876, he held that position till 1899, when he resigned and was made a peer under the title of Lord Brampton.

HAWKINS, SIR JOHN, seaman and navigator, one of Queen Elizabeth's sea-dogs, was born at Plymouth about 1520. He holds the unfortunate distinction of being the first Englishman to engage in the slave trade, taking negroes from Africa to sell in the West Indies. He acted as vice-admiral against the Spanish Armada in 1588, and was knighted for his services. The non-success of an expedition against the Spanish in the West Indies proved a great blow to him, and he died of fatigue and disappointment on board his ship off Porto Rico in 1595.

HAWKING. See *Falconry.*

HAWTHORNE, NATHANIEL, *b.* at Salem, Massachusetts, 1804, *d.* 1864, a famous American author, who, after graduating at Bowdoin College, lived for some years at his old home, studying and writing. In 1837 his "Twice-told Tales" showed the world that a new genius had arisen, but not till much later did popularity attend him. "Mosses from an Old Manse," "The Scarlet Letter," and the "House of the Seven Gables" are among his most characteristic works.

HAYDN, JOSEPH, *b.* 1732, *d.* 1809, was the son of a poor Austrian peasant. His fine voice gained him admission as chorister in St. Stephen's Cathedral, Vienna. For thirty years Haydn was director of music to Prince Esterhazy, on whose death he came to London. To this visit we may be said to owe his beautiful oratorio of "The Creation." Haydn's musical works are numerous, and his influence on the art of music is generally recognised.

HAYDON, BENJAMIN ROBERT, *b.* at Plymouth, 1786, *d.* 1846, an historical painter. He studied at the Royal Academy, and in 1807 his first picture, "Joseph and Mary in Egypt," was exhibited. From this time his success as a painter was assured, but bickerings with the Academy, and inability to keep free from debt, made his life a burden, and at last he shot himself. His best picture is the "Judgment of Solomon."

HAYTI or **HAITI,** the second largest of the West Indian Islands, divided into two republics—Hayti and San Domingo. In the former, the negroes are in a vast preponderance, and all branches of government are in the crudest condition. In San Domingo, the whites and half-breeds form the majority of the population, and the government is fairly stable and the country prosperous.

HAZLITT, WILLIAM, *b.* 1778, *d.* 1830, critic and essayist, was educated for a Unitarian minister, but early took to literature. He contributed much to newspapers. His poetical and dramatic criticisms are highly valued, the chief being "Characters of Shakespeare's Plays," "Lectures on the English Poets," and "Dramatic Literature of the Age of Elizabeth."

HEART OF MIDLOTHIAN, a name given to the old tolbooth or jail of Edinburgh, and adopted by Scott as the title of one of his novels.

HEARTS OF OAK, a friendly society instituted 1842. It has nearly 300,000 members, and an income (1905) of £670,000 with a reserve fund of over three millions. Refer to "Friendly Societies" in *Index.*

HEAT. There is now no doubt that heat is a *state* of matter. The sensations to which we give the names of heat and cold are due to the greater or less rapidity with which the molecules of the body in question are in motion. Heat passes from a warm body to a cold one near it by *radiation,* just as it passes from the sun to the earth. From a warm body to a cold one in contact with it it passes by *conduction.* When hot water from the kitchen boiler passes up to the hot-water cistern, it *conveys* its heat to the water in that cistern, and so that water is said to be heated by *convection.* Some bodies transmit heat more quickly than others; metals, e.g., are good conductors; wood, flannel, and silk are bad conductors. Heat, as a rule, causes bodies to expand; hence the rails on a railway have spaces between their ends to allow of their expansion in summer. All bodies with which we are acquainted possess more or less heat, but it is believed that there is a point at which heat, that is molecular motion, ceases; this point is 273 degrees below Zero of the Centigrade scale.

HEATHFIELD, BARON. See *Eliott, George.*

HEBE, (He-be) in classical mythology, the goddess of youth, and for a time the cup-bearer to the gods. She had the power to make aged persons young again. She is always represented as a young girl, adorned with flowers, and holding a cup containing nectar, the drink of the gods.

HEBER, REGINALD, *b.* 1783, *d.* 1826, the author of some of our best known hymns, was a native of Cheshire. He gained distinction as a writer of verse at Oxford, where he took his degree. After serving as vicar of his native village of Malpas, and lecturer at Oxford, he was, in 1823, made Bishop of Calcutta, but did not live long after his appointment. Among his hymns are "From Greenland's Icy Mountains," "Brightest and best of the sons of the morning," "Lo, He comes," "Holy, holy, holy," and "Jesus Christ is risen to-day."

HEBREW. The origin and meaning of the word "Hebrew" are obscure. Whether it means "one from the other side," as applied to Abraham by the Canaanites, or "descendant of Eber," the great-grandson of Shem, it soon became the distinguishing name for his descendants among the surrounding nations. The Hebrew language is one of a family of

languages once almost universally spoken in the south-west of Asia, and called the Semitic group of languages. The Phœnician language was closely allied to it.

HEBREWS, THE EPISTLE TO THE. The author of this Epistle is unknown. It has one prevailing note, and that is the continuity of Christianity with the Jewish religion, showing clearly that the Founder of the Christian religion came "not to destroy the law (Jewish), but to fulfil it," and that the Gospel is the substance of which the law was the shadow.

HEBRIDES, (i-des), a general name for the islands off the west coast of Scotland. They are divided into the Outer Hebrides and the Inner Hebrides by a channel called the Minch, which has only a breadth of 12 miles in its narrowest part. Lewis, Harris, North and South Uist, are the principal islands in the Outer Hebrides; Skye, Mull, Islay and Jura in the Inner.

HECATE (a-te), in classical mythology, a goddess to whom belonged especially the power of giving or withholding prosperity; hence she was especially invoked by magicians and witches. She had also the power of sending ghosts, and warding them off, particularly in the case of murdered persons.

HECATOMB. The sacrifice of 100 bulls was, among the Greeks, a favourite way of showing great rejoicing; hence any large sacrifice was called a hecatomb, and now we use the word to denote a great slaughter.

HECLA, a volcano in Iceland, near the south-west coast, about 5,000 feet high, which has been almost constantly in a state of eruption since the 9th century.

HECTOR, son of Priam, king of Troy, the great hero on the Trojans' side in the Trojan War. While he lived, he was the great bulwark of Troy against the Greeks, but he was at last slain by Achilles, who inhumanly dragged his body round the city in triumph.

HEDIN, SVEN ANDERS, *b.* at Stockholm, 1865, a famous traveller in Central Asia. In 1908 he concluded a two years' journey, full of valuable discoveries as to Tibet. He has greatly added to our knowledge of the region round the sources of the Indus, Sutlej, and Brahmaputra. His book on the subject is entitled "Central Asia and Tibet."

HEGEL, GEORG WILHELM, *b.* 1770, *d.* 1831, a great German philosopher, whose writings have had great effect upon modern thought both in Germany and England. He was the great upholder of the idealistic school, but his method of exposition was so obscure and involved that even his most devoted followers hesitated to say they fully understood him. His system was anticipated by Deschamps, a French philosopher of the 18th century.

HEIDELBERG, an ancient city of Germany, on the left bank of the Neckar, about 14 miles above its confluence with the Rhine. It was the capital of the Palatinate of the Rhine from the 13th century to the beginning of the 18th. It is in the midst of a most picturesque district, and the ruins of its castle are, perhaps, the finest in Europe. In a cellar under the castle is the celebrated Heidelberg Tun, holding, when full, 50,000 gallons of wine. Heidelberg University is very famous, many foreigners, especially Americans, resorting to it; population about 40,000.

HEINE, HEINRICH, *b.* 1799, *d.* 1856, a famous German poet, was born of Jewish parents at Dusseldorf. In 1825 he became, in name at least, a Christian; and in 1831 he left Germany for Paris, never to return. His fame rests chiefly on his songs, which for plaintiveness and sweetness, even in English translation, can hardly be excelled.

HEJ'IRA, or **HEGIRA,** means "flight." The Mohammedan era is reckoned from the flight of Mohammed from Mecca to Medina, September 13th, 622 A.D.

HELEN, in Greek legend, the wife of the Spartan king Menelaus, was carried off by Paris, son of Priam, king of Troy. This act caused the Trojan War; for Menelaus, having gathered all the Greek princes to aid him, sailed against Troy, which was taken after a ten years' siege.

HEL'ENA, EMPRESS (Saint Helena), was the wife of the Roman Emperor Constantius and mother of Constantine the Great. She became a Christian in later years, and made a pilgrimage to Jerusalem, where she is said to have built the Church of the Holy Sepulchre and that of the Nativity. She died 328, A.D.

HELIGOLAND, a small island in the North Sea, near the mouth of the Elbe. From 1807 to 1890 it belonged to Britain, but was then ceded to Germany in return for certain concessions in Africa. The inhabitants, about 2,000 in number, subsist by fishing and by entertaining summer visitors.

HELIOGRAPHY, signalling to a distance by means of the sun's rays reflected from a mirror or mirrors. The point one wishes to signal to having been found, it is obvious that by means of short and long flashes, on the principle of the Morse telegraphic alphabet, messages can be transmitted to any extent while the sun shines.

HELIOPOLIS, the ancient name of *Baalbec* (which see).

HELIOS, the Greek name for the sun, which was often worshipped as a god. Temples to Helios were common in Greece in very early times. Later Helios was almost identified with Apollo or Phoebus, and the light-giving god is almost always addressed as Phoebus, although the latter is never represented as riding in the chariot of day until Virgil's time.

HELIOTYPE, a method of printing from a gelatine surface chemically treated so as to be more or less absorbent of water according to its exposure to light. The action of a photographic negative on this surface produces just this condition, and the gealtine surface can then be printed from in the same way as a lithographic block.

HELIUM, a gas present in the air in very minute quantities. It is about twice as dense as hydrogen, and resembles argon and nitrogen in its "inertness," i.e., its slowness to combine with other elements. It is present in most mineral springs.

HELL. In ordinary language the word "hell" without doubt signifies "place of punishment after death for the wicked." It is so used in places in our Bible and Prayer Book; but it is equally used in them to signify "place of departed spirits," or "place of waiting," and this is what is meant in the sentence "He descended into Hell." In Hebrew the latter meaning is given by the word "Sheol," and the former by "Gehenna."

HELLENES, (le-nes), the people of Hellas, as the natives of Greece call their own country. The name Hellas had a slightly different signification in ancient times, for any place where there was a community of Greeks was looked upon as a part of Hellas, but the name Hellene was always, and is now, reserved for one of Greek descent.

HELLESPONT, in ancient geography the name of the Dardanelles (which see).

HELL-GATE, a narrow passage of East River, between New York City and Long Island. To make the passage less dangerous, an island of 9 acres in extent was blasted away in 1885, over a thousand tons of explosive being used—the greatest blasting operation yet accomplished.

HÉLOÏSE, daughter of Fulbert, a canon of Notre Dame, in Paris. Abelard, a monk celebrated for his learning and eloquence early in the 12th century, came to Paris and fell in love with Héloise. The lovers were united after much difficulty, but Héloise, not to impede her lover's ecclesiastical ambition, always denied the marriage, and Fulbert revenged himself by causing Abelard to be cruelly mutilated. From this time the lovers saw little of each other, but remained faithful, and in death their bodies were placed side by side. Their monument is one of the most interesting in the cemetery of Père la Chaise, in Paris.

HELOTS, the lowest class of the population of ancient Sparta. The name is probably derived from a word meaning "to take prisoner," and they are supposed to have been the descendants of the aboriginal people conquered by the Spartans about 1000 B.C. They had no political rights, and were bound to the soil, being obliged to work for their master, or for the State, without reward, except food and shelter.

HELPS, SIR ARTHUR, *b.* at Streatham, 1813, *d.* 1875. educated at Eton and Cambridge. He was made Clerk to the Privy Council in 1860. He edited for the Queen "Leaves from a Journal of our Life in the Highlands." His own writings were numerous. "Friends in Council" is perhaps best known, but his works on Columbus and other Spanish adventurers are of great merit.

HELSINGFORS, the capital of Finland, stands on a peninsula in the Gulf of Finland. It has an excellent harbour, one of the best in the Baltic Sea. The greater part of the trade of Finland passes through it; population about 75,000.

HELVELLYN, the second highest peak in the Cumbrian mountains, lies on the borders of Cumberland and Westmoreland. Its ascent is easy, and it gives a grand panorama of the Lake District; height about 3,200 feet.

HEMP, the fibre obtained from the stalk of a plant growing readily in temperate regions; Russia and Poland are the chief hemp-producing countries of Europe. The plant grows generally to a height of 5 or 6 feet, but may attain even 20 feet. When fully grown the stalks are tied into bundles and steeped in water for some days, after which they are spread abroad on the grass to bleach. The subsequent operations of cleaning, heckling, and spinning fit it for being made into twine, canvas, sacking, towelling, etc. Hempseed is valuable for many purposes, cage-birds being very fond of it, and it also produces a useful oil.

HENGIST and **HORSA,** the two Jute chiefs who are said to have been the first to lead their war bands into Britain after the departure of the Romans. The brothers were invited, 449 A.D. by Vortigern, king of Kent, to aid him against the Picts and Scots. They came, and finding the Britons so unwarlike, resolved to stay. Soon their arms were turned against Vortigern, and after some fighting Hengist made himself king of Kent.

HENLEY-ON-THAMES is a small market town of Oxfordshire, 35 miles from London, standing in a beautiful situation at the foot of the Chiltern Hills. Not only from all parts of England, but from the Continent, Canada, and America come oarsmen early in July to contend for the prizes that will confer on their recipients a life-long honour in the rowing world.

HENRIETTA MARIA, wife of Charles I. of England, was the daughter of Henry IV. of France. To her influence probably many of Charles's mistaken actions were

due. She exerted herself vigorously to raise money for the war. In 1644 she parted from Charles, never to see him again, and fled to France. She made two short visits to England after the Restoration, and died in France in 1669.

HENRY I., surnamed *Beauclerc*, who reigned 1100-1135, was the youngest of William the Conqueror's three sons. On the death of William II. he made haste to seize the royal treasure at Winchester in the absence of Robert, and got himself crowned king. By conciliating the English he was able to defeat the attempts Robert made to gain the crown on his return from Palestine, and his impartial rule did much to reconcile Normans and English to one another.

HENRY II., 1154-1189, son of Matilda, and grandson of Henry I., was readily acknowledged king of England after Stephen's death. He found much to do in repressing the barons, who had got out of hand under Stephen. His quarrels with Archbishop Becket, his conquest of Ireland, his constitutional reforms, and latterly his struggles with his own sons, make up the history of a reign beneficial in many ways to England.

HENRY III., 1216-1272, son of John, was only nine years of age at his accession. To the evils of a minority succeeded those attaching to the rule of a weak king. Henry's fondness for favourites caused endless troubles with his advisers, and ended in the barons rising in arms under Simon de Montfort. Montfort's death in the battle of Evesham, in 1265, left the way open for Henry, with his son Edward's aid, to resume the government.

HENRY IV., 1399-1413, who caused the deposition of Richard II., can only be said to be entitled to the crown by the election of Parliament. He was son of John of Gaunt, the third son of Edward III., and there were alive at his accession descendants of Lionel, the second son. He had much ado to keep the crown he had won, but his victory at Shrewsbury, in 1403, put an end to the most dangerous rebellion in his reign.

HENRY V., 1413-1422, the brilliant son of Henry IV., had only time in his short reign to show his capacity as a ruler and general. His victory at Agincourt (1415) is one of the most famous in our history, and his marriage with the Princess Catherine of France seemed destined to unite the two kingdoms.

HENRY VI., 1422–1461, was only nine months old when his father, Henry V., was carried off by disease. The French gladly seized the opportunity of ridding their country of the hated English, and all the efforts of Henry's guardians could not prevent them. When Henry came of age, he proved too feeble to hold the reins of government, and the Wars of the Roses led to his imprisonment and death, while the crown passed to the head of the house of York.

HENRY VII., 1485–1509, founder of the Tudor line, had little claim to the crown, in right of descent; but his claim was allowed by Parliament and strengthened by marriage with Elizabeth, daughter of Edward IV. His reign was one long and successful endeavour to sap the power of the nobles. In his reign arose the spirit of enterprise and discovery, a new world being opened up by Columbus, and a new way to India and Cathay (China), by Vasco da Gama.

HENRY VIII., 1509–1547, second son of Henry VII., had had the way prepared for a successful and prosperous reign by a series of movements all tending to make the monarchy more independent than it had been for years. He took full advantage of his opportunity, and in both his public and private relations he acted without restraint. For his unfortunate marriage with Catharine of Aragon he can hardly be held responsible, but his despotic character showed itself in his treatment of his five subsequent wives. In the early part of his reign he received from Pope Leo X. the title of "Defender of the Faith," on account of a book he wrote against Luther, but he was destined to withdraw England from Papal jurisdiction, and to initiate the Reformation.

HENRY, surnamed **"THE NAVIGATOR,"** *b.* 1394, *d.* 1460, a Portuguese prince, who took great interest in navigation and discovery. For years he sent expeditions along the west coast of Africa at his own expense, and at last had the satisfaction of seeing his countrymen join in the enterprise. The Madeira Islands and the Azores were among his discoveries.

HENRY IV. OF FRANCE, *b.* 1553, *d.* 1610, as Henry of Navarre gained a great name as leader of the Huguenot or Protestant party in France, although Admiral Coligny was its guiding spirit. On becoming king of France, he found it expedient to become a Roman Catholic, although his sympathies remained entirely with the Protestants, and to him was due the *Edict of Nantes*, which gave them toleration. His assassination by a fanatic named Ravaillac removed a strong and wise ruler from a distracted country.

HENRY, PATRICK, *b.* 1736, *d.* 1799, one of the chief movers in the American War of Independence, was a Virginian by birth and a Scotsman by descent. The Stamp Act first evoked his eloquence, and from that time he took a leading part in opposition to England. By many he is looked upon as the best orator America has produced.

HEPTARCHY, a name given to the seven kingdoms founded by the Jutes, Saxons, and Angles in England. As a matter of fact, they were hardly ever co-existent, but there were certainly at some time or other before England was united under one sovereign, kings of Kent, Sussex, Wessex, Essex, East Anglia, Northumbria, and Mercia.

HERA. See *Juno*.

HERALD, originally an officer whose business it was to convey messages from the commander of a force to his opponent. From this his function was extended to making proclamations of all kinds having a military significance, and then to superintending public processions and ceremonies. About the 14th century colleges of heralds were established in most European countries to record and blazon the arms of the nobility and gentry, and to regulate the proper use of these insignia.

HERALDRY. Refer to *Index*.

HERAT, the third most important city of Afghanistan, is situated in its south-western corner, near the Persian frontier. Commanding as it does the chief entrance into Afghanistan from that side, it is jealously watched by the English Government. As a station on one of the main routes from India to Europe, Herat has been a busy town for ages, but of late years its importance has diminished; population about 30,000.

HERBERT, GEORGE, *b.* 1593, *d.* 1633, one of the most gifted of our minor poets, gained great distinction as a scholar at Cambridge, and would probably have made a mark in the world had not his religious vocation proved too strong for his ambition. The "Country Parson" is the most popular of his works.

HERCULANEUM, an ancient city of Italy, near Naples. In 79 A.D. a stream of lava and a shower of ashes buried it so completely that it was lost sight of for centuries. Since about 1700, however, excavations have been more or less constantly going on, and now a good part of the city is open to view, including the theatre and two small temples. Many beautiful paintings and statues have been brought to light.

HERCULES, or **HERACLES,** in Greek mythology, son of Zeus (Jupiter), and a Theban princess. Hera (Juno), the wife of Zeus was Hercules' inveterate enemy, and caused to be imposed on him certain superhuman feats of strength, known as the "Twelve Labours" of Hercules. By accomplishing these he became the type of strength and endurance, while the manner of his death, through a poisoned shirt, poetically expressed the ancient belief that strength avails little against cunning.

HERCULES, PILLARS OF, the rocks of Gibraltar on one side, and Ceuta on the other, of the Strait of Gibraltar. The ancients used to ascribe to Hercules the cleaving of the rocks asunder to admit the Atlantic Ocean.

HEREFORD, county town of Herefordshire, is pleasantly situated on the river Wye, in about the centre of the county. The cathedral, begun in the 11th century, was restored by Sir Gilbert Scott. The musical festival held here triennially deserves mention. Hereford is a market for the agricultural produce of a considerable district; population about 22,000.

HERESY, the rejection of some belief held as fundamental by Christians in general, or the acceptance of some doctrine subversive of that generally regarded as true and orthodox.

HEREWARD, generally known as Hereward the Wake, was the last English leader who held out against William the Conqueror. Secure in his retreat among the almost impassable morasses of the Isle of Ely, he bade defiance to the Normans until some monks led an overwhelming force to his lair. He afterwards became a faithful adherent to William.

HERIOT, in English law is a kind of fine due on the death of a person holding land of a manor. It consists of the best piece of personal property the deceased possessed, whether beast, jewel, or chattel. The custom exists chiefly in respect to copyhold tenure.

HERIOT, GEORGE, *b.* 1563, *d.* 1624, was a goldsmith of Edinburgh, who, on the accession of James to the English throne in 1603, followed his king to London and set up in business there. Dying there without issue, he left his fortune to be expended on educational purposes in Edinburgh, which still derives considerable benefit from his bequest.

HERKOMER, HUBERT VON, *b.* 1849, in Bavaria, but brought up in England. He studied at South Kensington and Munich, then settled in London as painter and designer. The "Last Muster," exhibited in 1875, is his best-known picture. In 1883 he founded the Herkomer School of Art at Bushey, and for many years was its principal director. "Found," "The Charterhouse Chapel," and "The Guards' Cheer" are some of his well-known pictures.

HERMAPHRODITISM, the presence of the essential male and female organs and structures in one individual is practically unknown among human beings and the higher animals. It is, however, not uncommon among frogs, fishes, etc.; it is common with invertebrates, as the snail, etc.; and still more common with plants. But even where hermaphroditism is the rule, nature has provided against self-fertilisation by causing the male and female elements to mature at different times, so that the co-operation of two

individuals of the species is necessary in order for reproduction to take place.

HERMES, in classical mythology, the son of Jupiter and Maia, the herald and messenger of the gods, the guardian of travellers, the giver of good-luck, and the god of eloquence. The Romans, in later times, transferred all the attributes of the Greek Hermes to their own Mercurius, whose functions only extended originally to commerce and gain.

HERMES (TRISMEGISTUS), an altogether fabulous personage, to whose authorship were ascribed, in the early centuries of the Christian era, many books on philosophy, astrology, and learning generally. The name is really that by which the Greeks denoted the Egyptian god Thoth, who was looked on as the originator of learning and culture. Hence these treatises, of which we have only fragments, were called Hermetic Books.

HERMETIC BOOKS. See *Hermes Trismegistus.*

HERMIT, one who lives apart from other men. In the early centuries of the Christian era it was no uncommon thing for a man to retire to some solitary place the better to commune with God. Paul, the first Christian hermit, and St. Anthony, both of whom lived in the 3rd century, are among the most famous hermits. These of course soon found imitators, whose great aim was to gain notoriety. Among them was Simeon Stylites, who lived on the top of a pillar, and whose example was followed by numerous fanatics, known as *stylites* or pillar-saints.

HERMIT-CRAB, a kind of crab which, having no shell to protect its abdomen, seeks refuge in the shells of whelks and other spiral-shelled fish. As it grows, it has from time to time to find a larger abode, and as it does not always wait to find an empty shell, the process of taking possession is sometimes attended with scenes of violence. See *Commensalism.*

HERMON, MOUNT, the highest summit of Anti-Lebanon, a range of mountains in the south of Syria. It is frequently mentioned as a landmark in Holy Scripture, standing, as it does, on the extreme northern border of Palestine. Its height is 9,200 feet, and it is now called *Jebel-es-Sheikh.*

HERO, in Greek legend, a priestess of Aphrodite (Venus) at Sestos, beloved by Leander, a youth of Abydos, on the other shore of the Hellespont. Leander swam across the strait every night to visit his mistress, guided by a light which she put in a tower. But one stormy night the light was extinguished, Leander lost his way, and his dead body was cast up at the foot of the tower next morning. When Hero saw it, she cast herself into the sea and perished.

HEROD, surnamed "The Great," was an Idumæan by descent, but a Jew by religion. His father, Antipater, gained the favour of Julius Cæsar, who made him ruler of Judæa, and Antipater soon associated Herod with him in his government. On the fall of Anthony, Augustus made Herod king of Judæa, 31 B.C. Herod rebuilt the Temple at Jerusalem with great magnificence. The birth of Christ, and the massacre of the Innocents, took place in the last year of his reign.

HEROD, AGRIPPA. See *Agrippa, Herod.*

HEROD ANTIPAS was the son of Herod the Great. On his father's death he was made tetrarch of Galilee, and it was he who caused John the Baptist to be executed. On going to Rome in the hope of receiving the title of king, he was accused of treason, deprived of his tetrarchy, and sent into exile.

HERODOTUS, *b.* about 490, *d.* about 420, B.C., is regarded as "the father of history." His youth was co-temporary with the great uprising of the Greeks against the Persians. He travelled much, and was thus able to give living pictures of the various peoples mentioned in his history. The latter is not merely a history, it is rather a prose epic on the glorious victory of the Greeks over the Persians. It is also an epitome of the life and thought of the time, and despite some marvels, we cannot but feel as we read that the author thoroughly believes every word that he writes, and has done all he could, in an uncritical age, to verify the statements he makes.

HERRICK, ROBERT, *b.* 1591, *d.* 1674, a lyric poet, was born in London, and educated at Cambridge University. For some years after his university course Herrick lived in London, and enjoyed the friendship of Ben Jonson and kindred spirits. He then migrated to a Devonshire vicarage, where he spent the rest of his life, except for an enforced absence during the Commonwealth. Though marred by occasional coarseness, his short poems are delightful.

HERRING. This fish is one of the most important items of our food supply, being fairly common on one part or other of our coasts from May or June to about the end of February. The intervening time is probably spent in the deeper water. A shoal of herrings is sometimes 5 or 6 miles in length by 2 or 3 in breadth, the dimensions being marked by the seabirds which attend to seize their opportunity. The method adopted in the herring fishery is that known as drifting. A series of nets, each 30 or 40 yards long and 9 or 10 deep are joined together to make one continuous wall of net in the water, the upper edge being buoyed with corks and the lower edge weighted with sinkers. The fishes, finding themselves enclosed, try to get through the meshes, and cannot get their heads out again. Then, when the net seems full it is hauled in, the fishes seized, and the whole process repeated. The cleaning and salting of the fish is performed on land, mostly by women, who become very expert in the work. Yarmouth is the chief seat of the herring fishery.

HERRING, JOHN FREDERICK, *b.* 1795, *d.* 1865, a great animal painter, was in early life a painter of signboards. He then became a stage-coach driver, and finally settled down to paint animals, chiefly horses. Queen Victoria employed him several times to paint her favourites. His "Horse Fair" shows his skill in the delineation of the various types of horses.

HERSCHEL, SIR WILLIAM, *b.* 1738, *d.* 1822, was the son of a German musician, and came to England as a teacher of music and organist. At Bath he turned his attention to astronomy, and began constructing telescopes, in which he soon excelled. The planet called Uranus was discovered by him in 1781, and this discovery gained him a pension from George III., which enabled him to settle down at Slough and devote himself to his favourite pursuit. Here, with the assistance of his sister Caroline, he made many important discoveries, which gained him the honour of knighthood.

HERSCHEL, SIR JOHN FREDERICK, mathematician and astromoner, was a worthy successor to his father, Sir William. He had the advantage of being educated at Eton and Cambridge, and gained the highest honours the university could bestow. He devoted his attention more particularly to mathematics until his father's death, after which he continued the work his father had so well begun. In this he soon distinguished himself, and gained honours not only from his own but also from foreign countries. He spent four years in South Africa, making a catalogue of the stars visible in the Southern Hemisphere, and he added largely to our knowledge of the *Milky Way* and its composition. His writings on astronomy and kindred subjects are numerous.

HERTZ, HEINRICH RUDOLF, *b.* 1857, *d.* 1894, a keen and distinguished German scientist, made electricity his special study and carried some of its branches further than any one before him. He made the connection between light and electricity much clearer. He made researches into the discharge of electricity through rarefied gases, and thus came very close to the discovery of the "Röntgen Rays."

HESIOD, one of the earliest Greek poets, was rather a moralist and teacher in verse than a poet. His date is uncertain, probably he was contemporary with Homer, or a little later. His extant works are the "Theogony," an account of the gods, the "Shield of Hercules," and the "Works and Days." The latter gives an interesting picture of an ancient Greek rustic's everyday life and belief.

HESPER'IDES (i-des), in Greek mythology, the sisters who had charge of the garden in which grew the golden apples. The situation of this garden is variously given, but all accounts agree in locating it in the extreme west. One of the labours of Hercules was to obtain the golden apples. He slew the dragon which guarded them, and the sisters fled, leaving him free to fulfil his mission.

HESPERUS, the Greek name for Venus as the evening star. Hence, by Greek poets, Italy was often called the Hesperian land, lying as it did to the west of Greece; and for a similar reason Latin poets gave the name Hesperia to Spain.

HEXAMETER, a line of poetry containing six feet, arranged in a particular way. In this kind of verse, the Greek and Latin epics, "The Iliad," "The Odyssey," and "The Æneid" are written, but it is ill suited to the English language. Longfellow's "Evangeline" is the best example of its use in English.

HEXAPLA, "the six-fold," an edition of the Old Testament by Origen, a writer who flourished in the early part of the 3rd century. It gave in parallel columns the Hebrew text, first in Hebrew characters and then in Greek characters, a Greek version of the same, and three other versions, together with explanatory notes.

HEXATEUCH, the name applied to the first six books of the Bible, that is, to the five books spoken of collectively as the Pentateuch, together with the Book of Joshua; the latter, dealing as it does with the conquest of Canaan, logically belongs to the same section as the other five.

HEZEKIAH, a famous king of Judah, who came to the throne about 727 B.C., and reigned 29 years. He derived great assistance from the prophet Isaiah, and is mentioned as one of the greatest of the kings of Judah (See 2 Kings xviii.-xx.).

HIAWATHA, a hero of the Iroquois Indians who, according to their traditions, was of miraculous birth and was sent to teach them the arts of peace. The myth is common to several of the tribes of North America, though the name of the individual differs among the various tribes. Hiawatha is the subject of a poem written by Longfellow.

HIBBERT LECTURES, a series of lectures instituted in 1878, the object of which is to clear up disputed points in theology. Lectures have at various times been delivered by some of the greatest living theological critics. The cost is defrayed

from money left in 1849 by John Hibbert, a West Indian merchant.

HIBERNATION, the name given to the dormant state into which certain animals fall during the winter months. Hibernation seems to differ from ordinary sleep, since it is a matter of great difficulty to arouse an animal whilst in this state. It is caused by cold and sometimes by lack of food, though members of the same species are not always affected in the same way. In some cases the animal goes to sleep and does not wake again until the advent of the warmer weather, whilst in other cases it wakes up on several occasions, and after feeding retires again to its hiding place, which is usually a cave or a hollow in a tree. The animals whose hibernation is of the latter variety store up food during the summer months. Among the animals which hibernate may be mentioned the squirrel, dormouse, bat, hedgehog, frog, and some species of bears.

HIBERNIA, an old name of Ireland, first applied to that country by Julius Cæsar.

HICKS-BEACH, SIR MICHAEL, *b.* 1837, created Viscount St. Aldwyn, 1905. He entered Parliament in 1864, and soon gained office and distinction. He has shown great ability as Irish Secretary, President of the Board of Trade, and Chancellor of the Exchequer. He is a resolute economist and Free Trader. In the latter capacity he insisted on repeal of the Corn Duty at the earliest possible moment, and in the former on the expense of the Boer War being largely paid out of revenue.

HICKS PASHA, *b.* 1831, *d.* 1883; a British officer who served in the Egyptian army. He led an army of 16,000 men against the Mahdi, 1883, and was defeated and slain at El Obeid, his army being almost annihilated.

HIERARCHY means literally government in sacred things, and applies to the government of the Church, which is carried out by dividing its officers into various grades or ranks, each individual being responsible to a superior, and all being placed under one supreme head. The term also applies to the body of clergy thus organised.

HIEROGLYPHICS, the name given to the figures of men, animals, etc., which were sculptured upon monuments by the early Egyptians, and designed to express ideas, words, or sounds. They represent a stage in the history of writing which preceded the use of an alphabet of conventional symbols. Hieroglyphics are not confined to monuments, but have been found on documents, and they have also been discovered outside Egypt, notably upon the monuments erected by the Aztecs. The first translation of Egyptian hieroglyphics was made at the end of the 18th century, when a stone, since known as the Rosetta stone, was found, which contained an inscription in hieroglyphics, and in addition translations in two other styles, one of them written in Greek characters.

HIEROSOLYMA, Latin for Jerusalem (which see).

HIGHER CRITICISM, THE. Its function is to investigate the authorship and date of the writings under consideration, the characteristic style and tendency of the writer, the spirit of the age in which he lived, his environment at the time of writing, the purpose he had in view, and all other circumstances which would tend to ensure or impair the accuracy of his work. The term has often been restricted to those Biblical critics who have applied their principles to the composition and character of the Holy Scriptures.

HIGHFLYER, a famous racehorse, who during the closing years of the 18th century won large sums of money for its owner, Richard Tattersall. With his winnings the latter founded the business now known as "Tattersalls," out of which he subsequently made a fortune.

HIGHLANDS, THE, the name applied in a general sense to the mountainous district in the north and west of Scotland, including the islands situated on the west coast. The highlands are noted for their grand and rugged scenery, and contain the highest mountains in the British Isles. The inhabitants are a branch of the Celtic family, and were distinguished by their persistent support of the claims of the Stuart kings to the English throne during the 18th century.

HILDA, SAINT, *b.* about 614, A.D., *d.* 680; a descendant of Edward, King of Northumbria. She became first abbess of Whitby about 660 A.D.

HILDEBRAND. See *Gregory VII.*

HILL, SIR ROWLAND, *b.* at Kidderminster 1795, *d.* 1879; the originator of "penny postage," 1840. Previous to this date the charge for the carriage of letters was regulated by distance, and so high as to be prohibitive to poor people. Hill induced the Government to undertake the carriage of letters, irrespective of distance, within the United Kingdom, at a charge of one penny for a maximum weight of a quarter of an ounce.

HIMALAYAS, the mountain system which lies to the north of Hindustan and separates that country from Tibet. The Himalayas have a length of about 1,500 miles, and consist of two, and in the north-west three ranges more or less parallel. The highest mountains in the world are found in the system, Mount Everest, 29,000 feet, Mount Godwin-Austen, and Mount Kunchinjinga, each over 28,000 feet. There are very few passes, and those that do exist are very difficult to traverse. The rivers Indus, Ganges, and Brahmaputra all rise in the Himalayas.

HINDUISM. Refer to *Index.*

HINDU KUSH, a range of mountains extending from the plateau of Pamir, in Central Asia, in a south-westerly direction through Afghanistan. It has a length of about 360 miles, and its highest peaks are about 20,000 feet in height. It has few passes of any use, and none less than 12,000 feet in altitude.

HINDUSTAN. See *India.*

HINDUSTANI, the language which now forms the general medium of communication between the various nations and tribes of India. It is a debased form of Hindi, the language spoken in parts of the basin of the Ganges, and contains many Arabic and Persian words. It arose probably during the 11th century, at the time when the Mohammedans were engaged in the conquest of India, and was first used in the military camps.

HIPPARCHUS, the founder of the science of astronomy, lived about the years 160–120 B.C. He discovered the precession of the equinoxes, determined the length of the year, and the distances of the sun and moon from the earth, and compiled a catalogue of 1,080 stars.

HIPPOC'RATES (a-tes), *b.* 460 B.C., a famous Greek physician and the founder of the science of medicine; he is sometimes spoken of as "The Father of Medicine." Nothing definite is known of his life, though a large number of writings attributed to him are still extant.

HIPPOGRIFF, a fabulous animal with the head of a griffin and a winged body resembling that of a horse.

HIPPOLYTE (i-te), in Greek mythology, the queen of the Amazons. She possessed a belt which Eurystheus commanded Hercules to obtain for him. To secure possession, the latter was obliged to kill Hippolyte.

HIPPOL'YTUS, in classical mythology, son of Theseus, king of Athens. Phædra, his step-mother, became enamoured of him, but he rejected her advances. In revenge she accused him to his father, who prayed Neptune to destroy him, which Neptune did by sending a bull from the sea to frighten his horses as he rode along the shore. The chariot was upset, and Hippolytus dragged along till he was dead.

HIPPOPH'AGY, the name given to the practice of eating horse-flesh. The word is derived from "hippophagi," literally "horse-eaters," which was the name applied by the Greeks to certain tribes living to the north of the Caspian Sea.

HIRAM, a king of Tyre who lived about 1,000 B.C. He maintained friendly relations with both David and Solomon, and provided, from the mountains of Lebanon, the timber required in the construction of the temple at Jerusalem. Under his rule Tyre became a great state. The remains of what is said to be his sepulchre can still be seen about 3 miles from Tyre.

HIRE-PURCHASE. See *Commercial Dictionary.*

HIRSCH, BARON, *b.* at Munich, 1831, *d.* 1896; a famous Jewish financier and philanthropist. He was the son of a banker, and inherited great wealth, which was increased by successful speculation in connection with the railways of south-eastern Europe. He spent enormous sums of money in charity, especially in settling the oppressed Russian Jews in farm colonies in Canada, Asia Minor and South America. Baron Hirsch was well known in England, and was for some years a well-known owner of racehorses. His winnings on the Turf were given to the London Hospitals.

HISTOLOGY, a branch of anatomy which treats of the structure of the various tissues of a plant or an animal. It is sometimes called "Microscopic Anatomy."

HOAR-FROST. See *Frost.*

HOBART, the capital and principal seaport of Tasmania, is situated at the mouth of the river Derwent. It was founded in 1804, and previous to 1881 was known as Hobart Town. Hobart exports an enormous quantity of apples and pears; population about 35,000.

HOBBES, JOHN OLIVER, the pen name of Mrs. Craigie (née Pearl Mary Teresa Richards), *b.* at Boston, U.S.A., 1867, novelist and dramatist, and highly successful in both capacities. She had a terse style all her own, and her choice of words and expressions was remarkably apt. "Some Emotions and a Moral" (1891), was her first novel; "The Ambassador" her most successful play. She died in 1906.

HOBBES, THOMAS, *b.* at Malmesbury, 1588, *d.* 1679; a famous philosopher and writer. His greatest work is entitled "Leviathan," in which he sets forth his views on morals and politics. The book caused a great sensation, and the opinions expressed in it aroused angry discussion.

HOBSON, RICHARD PEARSON, a young naval constructor in the United States navy, who undertook to "bottle up" the Spanish Fleet in the harbour of Santiago, by sinking the collier Merrimac in the harbour mouth, June, 1898. With a crew of seven men, Hobson navigated the vessel into the harbour, but owing to the tide, did not succeed in sinking the vessel at the desired spot. He and his companions fell into the hands of the Spaniards and were treated most courteously by them.

HOBSON, THOMAS, a carrier and keeper of a livery stable at Cambridge during the 13th century. He adopted

a rough and ready method of treating a customer who was hiring a horse, compelling him to take the one nearest the door; hence the phrase "Hobson's Choice."

HODGE, the husband of Gammer Gurton in an old comedy—a name that is now commonly applied to a typical rustic labourer.

HODSON, MAJOR, *b.* 1821, *d.* 1858; a distinguished British soldier who saw considerable service in India. At the outbreak of the Mutiny he was given permission to raise a regiment of irregular horse, known as Hodson's Horse. He distinguished himself greatly during the war, and at the fall of Delhi took the old Emperor prisoner and slew his sons. He met his death during an attack upon Lucknow.

HOFER, ANDREAS, *b.* 1767, *d.* 1810, a Tyrolese innkeeper who roused his countrymen to make a stand against the French in 1809. Again and again he swept Tyrol clear of them, but the peace with Austria in October enabled them to attack the Tyrolese with success. Hofer was forced to flee, was betrayed to the French, and to their eternal disgrace, was executed by them.

HOGARTH, WILLIAM, *b.* in London, 1697, *d.* 1764; a famous English painter and engraver. His pictures deal with vices and foibles of his age, and are remarkable for their satirical humour. His greatest works are the three series known respectively as "Marriage à la Mode," a series of six pictures now in the National Gallery, "The Rake's Progress," and "The Harlot's Progress."

HOGG, JAMES, *b.* at Ettrick, 1770, *d.* 1835; a celebrated Scottish poet, who was originally a shepherd, and is in consequence frequently spoken of as the "Ettrick Shepherd." Hogg was encouraged by Scott, and became one of the leading writers of his time. His best work is entitled "The Queen's Wake"; many of his poems were first published in Blackwood's Magazine.

HOGG, QUINTIN, *b.* 1845. *d.* 1903, the pioneer of the Polytechnic as we understand it, was brother of the late Lord Magheramorne. He early took an interest in boys, living among the working boys about Drury Lane, and doing all in his power to brighten their lives. In 1882 he bought the old Polytechnic in Regent Street, and turned it to its present use. On this place he spent £200.000, and all his energies, and there he met with his lamentable death, being accidentally asphyxiated in his bedroom there.

HOGMANAY, the name given in Scotland to New Year's Eve. It is one of the national holidays of that country, and is made the occasion of noisy enjoyment, which, among certain sections of the people, used to degenerate into a drunken orgie. There are several quaint customs in connection with these New Year's festivities; the children, where the old custom still holds, parade the streets and demand cakes from the householders, using in their demand the single word "Hogmanay," which has thus come to be used as the name of the cake.

HOGUE, LA, a cape situated on the north coast of France, a few miles west of Cherbourg. In the immediate neighbourhood of the Cape the English fleet inflicted a crushing defeat upon the French fleet that had been prepared to assist in the invasion of England, 1692.

HOHENLINDEN, a small village situated in Bavaria, about 20 miles east of Munich, the scene of a great battle, in which the French inflicted a crushing defeat upon the Austrians in 1800. The losses of the latter were estimated at nearly 8,000 killed and 12,000 prisoners. The battle is the subject of a well-known poem from the pen of the poet Campbell.

HOHENZOLLERN, HOUSE OF, an ancient German family, which takes its name from the castle of Zollern, in southern Germany. The family first came into prominence in 1415, when one of its members became Elector of Brandenburg. The family continually grew in importance, and in 1701 a Hohenzollern, Frederick III., Elector of Brandenburg, became the first King of Prussia. The dynasty has endured until the present time, the present German Emperor being the head of the family.

HOLBEIN, HANS, *b.* about 1497, *d.* 1543; a celebrated artist and engraver, who for some time occupied the post of court painter in England during the reign of Henry VIII. He excelled in the painting of portraits, and a large number of his works, which include portraits of nearly all the English celebrities of his age, are to be seen at Windsor Castle and in many old mansions.

HOLBERG, LUDVIG VON, *b.* at Bergen, 1684, *d.* 1754; the founder of modern Danish literature. He is not only the greatest dramatist that Denmark has produced, but also its greatest historian.

HOLDEN, SIR ISAAC, *b.* near Glasgow, 1807, *d.* 1897; the inventor of the lucifer match. Holden was originally a teacher, and was compelled to rise early in the morning to pursue his own studies. He invented the lucifer match to avoid the trouble of using flint and steel, but took out no patent, and so derived no financial benefit from the invention. Later he turned his attention to the improvement of wool-combing machinery, and in 1859 became a member of the firm of Holden and Lister, which afterwards possessed the largest wool-combing plant in the world.

HOLINSHED, RAPHAEL, a celebrated historian who lived in the 16th century and died about 1580. He wrote "The Chronicles of England, Scotland and Ireland," published in six volumes, 1578. Shakespeare derived practically the whole of the information necessary for his historical dramas from these Chronicles.

HOLMBY HOUSE, an historical mansion which formerly stood about 7 miles from Northampton. It was built during the reign of Queen Elizabeth, and was one of the places in which Charles I. was imprisoned, 1647; it was demolished a few years afterwards.

HOLLAND. See *Netherlands.*

HOLLANDS. See "Gin" in *Med. Dict.*

HOLMES, OLIVER WENDELL, *b.* at Cambridge, Massachusetts, 1809, *d.* 1894; a famous American essayist and novelist. By profession he was a physician, and for some years held the post of Professor of Anatomy at Harvard University. In 1858 he gave up his profession and devoted the whole of his time to literature. His works include the well-known "Breakfast Table Series," the "Autocrat," "Professor," and "Poet," originally published in the Atlantic Monthly, and his best known novel is entitled "Elsie Venner." His essays are written in an unconventional and chatty style, and abound in humorous passages.

HOLOGRAPH, a deed, will or other document which is written throughout by the person from whom it proceeds. In Scotland a holograph will requires no witnesses, though no such distinction exists in English law.

HOLY ALLIANCE, an alliance formed, 1815, by Russia, Prussia and Austria, and subsequently joined by all the European states, excepting Great Britain and Rome. Its avowed object was to introduce into the management of both the internal and external affairs of the various states a spirit of Christian kindness and forbearance, but its real object was to guard against revolutions of the people, and thus to ensure the continued existence of the dynasties as they then were. The utter hypocrisy of its promoters was quite obvious, and this country curtly refused to have anything to do with it. The Alliance came to an end in 1830, on the occasion of the revolution in France.

HOLYHEAD, a seaport and packet station, situated on a small island of the same name off the coast of Anglesey. It is the chief port in connection with the cross sea traffic to Dublin, from which it is distant about 60 miles; population about 10,000.

HOLYOAKE, GEORGE JACOB, *b.* at Birmingham, 1817, *d.* 1906: a well-known journalist and author. He was one of the pioneers of the Co-operative movement in England, and many of his writings deal with that subject. Holyoake introduced the use of the term "secularism" to describe his views on religious and social matters.

HOLY ROMAN EMPIRE, founded by Charlemagne, king of the Franks, 800 A.D. The emperors claimed to be the successors to the emperors of ancient Rome, and exercised a purely nominal authority over some of the states of central and western Europe. From 1438 until the beginning of the 19th century the title of Emperor was borne by various members of the powerful House of Hapsburg, the last to bear the title being the Emperor Francis I. of Austria. The Emperors were elected, the elective body being composed of the Archbishops of Cologne, Mainz, and Treves and certain German princes.

HOLYROOD, a royal palace of Scotland, situated at Edinburgh. The palace dates from the reign of James IV. of Scotland, though most of the present structure is more modern. It was occupied by several of the Scottish sovereigns, and was the scene of the murder of Rizzio during the reign of Mary Stuart. From 1600 until the end of the 18th century it was not used by royalty, but George IV., Queen Victoria, and King Edward VII. have made short stays there. Previous to the construction of the palace, there existed on the same site an abbey, which was dedicated to the Holy Rood, that is Holy Cross. The rooms of Queen Mary are preserved and are open to public inspection.

HOLY WEEK, the name given to the week preceding Easter Sunday. It is sometimes called "Passion Week," from the fact that it marks the occurrence of the Passion or Sufferings of Christ. The special days which fall in this week are Palm Sunday, Maundy Thursday, and Good Friday.

HOMAGE, originally a term used in connection with the Feudal system. It was the name given to the formal acknowledgment made by a tenant on entering into possession of property, that he was his lord's vassal and liable to be called upon to serve as a soldier for a period not exceeding forty days a year. The ceremony consisted in the vassal, bare-headed and kneeling, placing his hands between those of his lord, and taking an oath of fealty.

HOME COUNTIES, the name applied to the counties situated in the immediate neighbourhood of the Metropolis; they are Middlesex, Hertfordshire, Essex, Kent and Surrey.

HOME OFFICE. Refer to *Index.*

HOME RULE, the name popularly given to the proposed establishment of a separate parliament for Ireland. After many years of agitation, the Irish party in the House of Commons induced Mr. Gladstone, in

1886, to introduce a bill to establish such a parliament, but it was defeated in that House on its second reading. A second bill, introduced in 1893, was passed by the Commons, but thrown out by the Lords by an enormous majority. Mr. Gladstone's proposals in 1886 caused a split in the Liberal party, the seceding section who opposed it being afterwards known as Liberal Unionists.

HOMER, the greatest of epic poets. Nothing definite is known concerning Homer; he was probably born near Smyrna, in Asia Minor, though at least seven towns are given as his birth-place, and the date of his birth, as given by various authorities, varies from 1100 B.C. to 700 B.C. Homer was probably a wandering minstrel, and his great works are the "Iliad" and "Odyssey," though both these works probably contain portions written by other poets.

HOMILDON HILL, situated in Northumberland, was the scene of a battle, 1402, in which a Scottish army, 10,000 strong, led by the Earl of Douglas, met with a crushing defeat at the hands of an English force, commanded by the Earl of Northumberland with the assistance of his famous son, Harry Hotspur.

HOMILY, a discourse which was originally a simple explanation of some passage in the Bible, the explanation following the order of the narrative. It is often used in the same sense as the word "sermon," though the sermon is of a more rhetorical character. The homilies of the Church of England are two collections of sermons, published respectively in 1547 and 1562, which were written with the object of securing uniformity of teaching.

HOMŒOPATHY, See *Med. Dict.*

HOMOOUSIAN AND HOMOIOUSIAN. These two words, so slightly different in appearance, contain the germ of one of the greatest contests that have ever rent the Christian Church. The Homoousians, who may be said to include all branches of the Christian Church except Unitarians, maintain that Jesus Christ is of "*one* substance with the Father"; the Homoiousians that He is "of *like* substance with the Father." Arius (260–336) was the author of the Homoi-ousian doctrine, and the Nicene Creed is the Church's authoritative denial.

HONDU'RAS, BRITISH. Refer to *Index.*

HONEY, a sweet liquid which is collected by bees and other insects from the nectaries of flowers. The bee stores the honey in its honey sac until it reaches its hive, where it is placed in combs composed of hexagonal cells. The honey seems to undergo some chemical change whilst in the sac of the bee. The colour of honey depends upon the flowers from which it is collected, but is usually white or brown. Its production of late years has become quite a scientific industry. The honey is extracted from the combs by means of a centrifugal extractor, the comb being placed upon a wheel and rapidly rotated, with the result that the honey is shot out and collected in a vessel placed in a suitable position.

HONG-KONG. Refer to *Index.*

HONOLULU, the capital of the Hawaiian or Sandwich Islands, which are situated in the North Pacific Ocean. Honolulu stands upon a good harbour, and has regular steamship connection with San Francisco, Japan, and Australasia; population about 46,000. Since 1898 the United States has exercised a protectorate over the Sandwich Islands, and Honolulu has in consequence become an important naval station.

HOOD, ADMIRAL, *b.* in Devonshire, 1724, *d.* 1816; a famous British naval commander. After seeing considerable service in American waters, he was appointed, 1793, to the command of the Mediterranean fleet, and got possession for a few months of Toulon, the principal naval station of France in the Mediterranean, and in the following year took Bastia (Corsica).

HOOD, ROBIN. See *Robin Hood.*

HOOD, THOMAS, *b.* in London, 1798, *d.* 1845: a celebrated poet and humorist. Much of his work appeared in two papers edited by himself, and known respectively as "The Comic Annual" and "Hood's Own." His humorous work bristles with puns, and in addition to this class of work he is the author of several well-known and exceedingly pathetic poems. Among his best productions are "The Song of the Shirt," "The Bridge of Sighs," "The Dream of Eugene Aram," and "Miss Kilmansegg."

HOOK, THEODORE, *b.* in London, 1788, *d.* 1841, an author of comic operas, would-be funny books, and practical jokes, was worthy of the times he lived in and the society he frequented, which included the Prince Regent. He died in poverty after having enjoyed an annual income of thousands. "Jack Bragg" is his least objectionable production.

HOOKAH, a large tobacco pipe much used in Turkey, Persia, and other eastern countries. It consists of two bowls, one placed over the other. The upper bowl contains the tobacco, and is connected by a tube with the lower, which is partially filled with water; the connecting tube passes down into the water. The stem, which is usually a long flexible tube, is connected with the air space above the water, and thus the smoke must pass through the water before reaching the smoker; in passing through it is cooled and deprived of most of its harmful constituents.

HOOKER, RICHARD, *b.* near Exeter, 1553, *d.* 1600; a famous theological writer, whose sound learning and well-balanced judgment earned for him the descriptive title of "The judicious Hooker." His great work: "Of the Laws of Ecclesiastical Polity," was published in eight volumes, and is a learned defence of the doctrine and ritual of the Church of England. It is still regarded as a standard work, and its literary style alone would have secured it a permanent place in English literature.

HOOPER, JOHN, *b.* in Somerset, 1495, a bishop and Protestant martyr. In the reign of Edward VI. he was appointed to the See of Gloucester. On the outbreak of the persecution in Mary's reign he was one of the first to be charged with heresy, and as he refused to recant he was burned at the stake at Gloucester, 1555.

HOPE, ANTHONY, the pen-name of Anthony Hope Hawkins, *b.* 1863. Educated at Marlboro' and Oxford, he studied for the law, and practised as a lawyer until the brilliant success of his "Prisoner of Zenda" turned him wholly to literature. "A Man of Mark," "Mr. Witt's Widow," "The Chronicles of Count Antonio," and "Phroso" are some of his other works.

HOPS the produce of a climbing plant used in the manufacture of beer, to which it gives its characteristic bitter taste, and which it helps to prevent from turning sour. In England, hops are grown in Kent, Sussex, Hampshire and Worcestershire. The plants are trained on poles about 12 feet in length, and the hops are picked in late August and September. They are then carefully dried—for, if at all damp, they soon turn musty—and they are afterwards packed tightly in sacks. Hops are usually sold by the "pocket," which is equivalent to half a sack and has a weight of about 168 pounds.

HORACE (QUINTUS HORATIUS FLACCUS), *b.* 65, *d.* 8, B.C., a celebrated Latin elegiac poet. Horace was educated at Rome and Athens, and fought during the civil war in the army of Brutus against Cæsar. He was present at the battle of Philippi, 42 B.C., and on his return to Rome shortly afterwards found that his property had been confiscated. He was patronised and assisted by Mæcenas, and subsequently became a personal friend of the Emperor Augustus. His writings include odes, epodes, satires and epistles.

HORÆ, in classical mythology, the goddesses who presided over the changes of the seasons and the weather, and in later times were worshipped as the goddesses of order and justice.

HORATII, THE THREE, were three Roman brothers, who during the reign of Tullus Hostilius, king of Rome, met in battle three brothers of the Alban nation, called the Curiatii, to decide a dispute between the two nations. The fight took place in the presence of both armies, and two of the Horatii were quickly killed, but the third, having separated his three opponents, who were wounded, by simulating flight, turned and slew them, one by one. He returned in triumph to Rome, and was upbraided by his sister, who mourned her lover in one of the dead Albans; he stabbed her, and barely escaped execution.

HORN BOOK, the primer by means of which the alphabet was formerly taught to children. It was in use until the end of the 18th century, and consisted of a single sheet, upon which were printed the alphabet in capital and small letters, the Lord's Prayer, the Roman numerals, and usually a few monosyllabic words. The front of the sheet was covered by a thin plate of transparent horn, designed to keep it clean, hence its name.

HORN, CAPE, a cape situated on a small island at the extreme south of South America. Its name is derived from "Hoorn," the name of a small town in Holland, and it was so called by the Dutch navigators, Lemaire and Schouten, who rounded the Cape, 1616.

HORNET, a species of wasp, the largest of its kind found in England. When fully grown it is about an inch in length, and its body is brown in colour with some patches of yellow. Hornets usually live in colonies of about 200, and make their nests in hollow trees. They feed upon the sap of various plants, though occasionally they eat flesh. The female hornet is provided with a particularly powerful sting.

HORSE GUARDS, a large building in Whitehall, erected in 1753. The archway forming the entrance is guarded by two mounted troopers in the day time. Here until 1872, the Commander-in-Chief and the principal administrative officers of the army had their offices, and hence we often say the "Horse Guards" when we mean the governing body of the army.

HORSE LATITUDES, a region of the Atlantic between about 30° and 35° North Latitude. Here calms are frequently encountered, and ships taking horses to the West Indies and America often had to cast them overboard for want of food. Hence the name.

HORSE, MASTER OF THE, a Court Officer who has charge of the Royal stables and horses, and everything pertaining thereto, of which he is allowed the use for himself. The appointment is one much sought after, but it terminates when the holder's political party quits office.

HORSE-POWER, a term used in engineering to denote the rate of doing work. An engine of one horse-power is capable (theoretically) of doing 33,000 foot pounds of

work in one minute, that is, it could raise a weight of 33,000 pounds vertically through one foot in one minute. An engine of ten horse-power could do ten times as much work in the same time. The term was introduced by Watt, and the unit was considered to represent the rate of working of a normal horse, though the estimate is too high.

HORSE-RACING. Though this sport dates from the earliest times, it attracted but little attention in England until the time of James I. That king patronised the sport with the idea of encouraging the scientific breeding of horses, and since that time it has gradually attracted more and more notice. Its present popularity is no doubt largely due to the opportunities it affords for gambling, though the improvement in the horse must not be ignored. The head-quarters of the racing world are situated at Newmarket, where there is a fine course and many famous training establishments. The races may be divided into flat races, hurdle races, and steeplechases. Racing on the flat is under the control of the Jockey Club, a body composed of the principal owners of race-horses. This body makes the laws which govern the sport, and appoints stewards to every race meeting to see that these laws are carried out. The principal flat races of the year are the Derby, Oaks, Two Thousand Guineas, One Thousand Guineas and the St. Leger. These are termed "classic" races, though the prizes attached to them are not the most valuable. In the case of certain races, such as the Derby, all the horses are of the same age and all carry the same weight. Handicaps are of two kinds. In weight for age handicaps, horses of different ages run together and carry weights according to their age, the older the horse the heavier the weight. The age of the horse is always reckoned from January 1st of the year in which it is foaled. In other handicaps, the weights to be carried are decided by the previous performances of the horses; it is in handicaps of this kind that fraud most easily arises. Hurdle racing and steeple-chasing are under the control of a body known as the National Hunt Committee; this class of racing arouses considerably less interest than flat racing.

HORSE, THOROUGHBRED, a horse or mare whose pedigree is registered in the *Stud-Book* kept by the official agents of the Jockey Club. The founders of the lineage of the thoroughbred race-horse are said to be three Eastern horses: Byerly Turk, Darley Arabian, and the Godolphin Arabian or Barb. To one or the other of these three all the horses now registered in the Stud-Book trace their ancestry.

HOSPICE, a house of shelter for pilgrims and travellers, usually founded and maintained by some religious order. Hospices are frequently met with in the mountainous districts of Switzerland, those of the St. Gothard and St. Bernard passes in particular being famous.

HOSPITALLERS, originally members of a religious order whose work was of a purely charitable nature. They tended the sick and aged, and ministered to the wants of pilgrims. The original order of hospitallers was founded about 1050 at Jerusalem, with the name of the Hospitallers of St. John of Jerusalem; and the special work of its members was to attend to the pilgrims who visited the Holy Sepulchre. It eventually became a powerful military organisation, and after the taking of Jerusalem by the Turks, had its headquarters at Cyprus, then at Rhodes, and finally at Malta, which was the property of the order from 1530 until its suppression 1799.

HOSPITALS, originally refuges for pilgrims maintained by hospitallers. The name was afterwards given to institutions which in some respects resembled the modern almshouse; the naval and military hospitals at Greenwich and Chelsea respectively are of this type. It was also applied to schools supported by voluntary contributions, Christ's Hospital being an example. In its purely modern sense it is restricted to institutions intended for the reception of the sick and injured. Most of these hospitals are supported by subscriptions, though some of the older institutions are endowed. Admittance may be obtained by the production of a letter of introduction obtained from a subscriber, except in cases demanding prompt treatment, when no such letter is required. Some hospitals reserve certain wards for the reception of patients who pay for their accommodation, etc.

HOST, in the service of the Roman Catholic Church, the consecrated wafer, which during the celebration of mass is regarded in some sense as the body of Christ, and offered as a sacrifice.

HOTEL DES INVALIDES, a hospital for infirm soldiers, situated in Paris, and corresponding to the military Hospital at Chelsea. It was founded in 1670, and in addition to accommodating a number of invalid soldiers is used as a military museum and storehouse. The magnificent tomb of Napoleon is situated in this building.

HOTEL DE VILLE, a French term corresponding to some extent to the English word "town-hall." An Hôtel de Ville usually contains a barracks, prison, the offices of the various local bodies, the residence of the local chief magistrate, and the court house. The most famous is that of Paris, which contains many valuable works of art. It was burnt to the ground during the Commune riots in 1871, but has since been rebuilt.

HOTTENTOTS, one of the native races of South Africa. In character cunning, lazy, and dishonest, and, in appearance, distinguished by their prominent cheek bones and very pointed chins. Their language is remarkable from the fact that it contains a number of queer "clicks," which are produced by pressing the tongue against the teeth or palate. One of these clicks is prefixed to most of their words, and their presence makes it a difficult language for Europeans. The Hottentots number about 180,000.

HOUDIN, JEAN EUGENE, *b.* 1805, *d.* 1871, a celebrated French conjurer and juggler. In 1855 he was granted a gold medal for the invention of an electric clock, and in the following year was sent by the French government to Algeria to expose the tricks practised by the priests of that country upon the inhabitants, a task in which he was quite successful.

HOUGOMONT, a chateau situated on the field of Waterloo. It was situated on the extreme right of the English position, and was the most important position on the right wing. The battle raged around Hougomont for the whole day, but the English troops defended it gallantly, and the French were finally compelled to abandon their attempts to take it.

HOURI, the name given in the Koran to a nymph of the Mohammedan paradise. A houri is represented as a beautiful and voluptuous woman, and to each of the "Faithful" entering paradise a number of them are assigned.

HOUSE-FLY. The common house-fly is found in practically every portion of the globe. They deposit their eggs upon some putrefying matter, and the larvæ are hatched under favourable circumstances within twenty-four hours, and become full-grown in about four weeks. The house-fly feeds upon almost anything, but prefers putrefying animal and vegetable matter, and it thus forms a most dangerous agent in the spread of disease.

HOUSEHOLD, ROYAL. Refer to *Index.*

HOUSEHOLD TROOPS, the members of those regiments which are engaged in personal attendance upon the members of the royal family, either as escorts or guards for the palaces. They are usually stationed either in London or at Windsor, and include the cavalry regiments known as the Life Guards and "the Blues" in addition to the foot guards, composed of the Grenadiers, the Coldstreams, the Scots Guards and the Irish Guards.

HOUSE OF COMMONS. See *Parliament* and refer to *Index.*

HOUSE OF LORDS. See *Parliament* and refer to *Index.*

HOUYHNHNMS, the name given by Jonathan Swift in "Gulliver's Travels" to a breed of horses, endowed with remarkable intelligence, who ruled over a degraded race of men known as Yahoos. The word is possibly intended to represent the neigh of a horse.

HOVAS, the ruling tribe of Madagascar. Till early in the 19th century the numerous tribes of Madagascar were independent, but then the Hovas, who occupied the central regions, under their far-seeing king, Radama, extended their sway over the whole island, and undoubted progress was being made on all sides, when in 1895 the French annexed the island.

HOWARD OF EFFINGHAM, LORD, *b.* 1536, *d.* 1624, a famous English sailor, who became Lord High Admiral of the Fleet, 1554. He was in command of the fleet which defeated the Spanish Armada, 1588, and in 1596 assisted in the capture of Cadiz.

HOWARD, HOUSE OF. See *Norfolk: Ducal House of.*

HOWARD, JOHN, *b.* in London, 1726, *d.* 1790, a famous philanthropist, who devoted his life to securing reforms in the management of prisons and prisoners. He visited the prisons of many European countries, and his descriptions of the sanitary and moral conditions under which the prisoners lived, led to a great improvement, not only in the general treatment of the prisoners, but also in the conditions under which they spent their time. Howard died at Kherson, Russia, of a complaint probably contracted whilst visiting the military prisons of that country.

HOWE, ELIAS, *b.* in Massachusetts, 1819, *d.* 1867, inventor of the sewing-machine, or rather the first man who made it commercially workable. He secured the patent both in England and America, but sold the former. Soon competitors arose on all sides, with much litigation, but Howe triumphed at last, and all makers had to pay him royalty or percentage. He made about £500,000 out of his invention.

HOWE, RICHARD, EARL, *b.* in London, 1726, *d.* 1799, a famous British admiral. He saw considerable service during the war of the American revolution, and on June 1, 1794, defeated the French in a great battle fought off Cape Ushant. The day of this victory was long known as "The glorious First of June." For his services he was raised to the peerage with the title of Earl Howe.

HOWITT, MARY, *b.* 1799, *d.* 1888, née Botham, married William Howitt in 1821, with whom she at once entered upon a joint literary career. Her tales for children, her translations of Hans Andersen and Frederika Bremer, and her writings on Natural History, as "Birds and Flowers and other Country Things" show keen

observation and good descriptive power. Her poetry has much quiet charm.

HOWITZER, a short, light gun used in mountain warfare. It possesses a smooth bore, and is used to discharge a small shell at a short range. Its principal advantage is its portability.

HUBER, FRANCOIS, *b.* at Geneva, 1750, *d.* 1831, often called the blind naturalist. He lost his sight early, but with the aid of his devoted wife and an intelligent domestic, he made many important observations on the habits of bees and ants and corrected many previous false notions.

HUBERT, FRANCOIS, *b.* about 656, *d.* 727, a son of a Duke of Guienne, the patron saint of huntsmen, who after spending some portion of his life in dissipation, retired to a monastery and subsequently became Bishop of Liège; he has since been canonised. Saint Hubert is usually represented as a hunter, and according to tradition forsook his evil ways as a result of meeting, whilst hunting, on one Good Friday, a stag which carried between its antlers a glittering cross.

HUDDERSFIELD, a town situated in the West Riding of Yorkshire, and engaged in the manufacture of woollen goods. (For population, etc., see p. 902.)

HUDIBRAS, a title of a humorous poem written by Samuel Butler, and published 1663. In Hudibras the poet caricatures the Puritans.

HUDSON. A river of North America, which rises in the Adirondack Mountains and flows into New York harbour, having, at its mouth, New York on the left bank and Jersey City on the right. It was explored by Henry Hudson, from whom it derives its name, 1609; its length is about 350 miles.

HUDSON, GEORGE, *b.* 1800, *d.* 1871, the "Railway King" of the early 19th century. He was the leading spirit of the railway speculations of the "forties," but some of his latter transactions were very questionable. He died a comparatively poor man.

HUDSON, HENRY. A famous navigator. In 1607 he attempted to discover a north-east passage to the Pacific, and two years later explored the Hudson River. He then sailed to the Arctic Ocean, hoping to find a north-west passage. He discovered and named Hudson Strait and Hudson Bay. His crew then mutinied, and with eight others he was cast adrift, 1611, and never afterwards heard of.

HUDSON, SIR GEOFFREY, *b.* at Oakham, 1619, *d.* 1682, a famous dwarf, who until he was about thirty years of age was less than 20 inches in height. His first public appearance was made before the Duke of Buckingham, to whom he was served up in a pie. He subsequently became page to Charles I. Sir Geoffrey Hudson is introduced by Sir Walter Scott into "Peveril of the Peak."

HUDSON BAY, an enclosed sea situated to the north of Ontario and Quebec, and connected with the adjoining ocean by Hudson Strait. It was discovered and named by Henry Hudson. Hudson Bay has a length of about 1,600 miles, and at its widest part a width of about 600. The Hudson Bay Territory was the name originally given to the land adjacent to the coasts of the Bay, but the name was afterwards applied loosely to all Canada situated to the west of the Bay. This territory was granted to the Hudson Bay Company, 1670, and with it the sole right of collecting furs from the district. The Company is still in existence, but the territory was ceded to the Dominion of Canada on the payment of £300,000.

HUGGINS, SIR WILLIAM, *b.* in London, 1824, *d.* 1910, an English astronomer. Educated at the City of London School, he early took to science, and for some years made microscopical studies in physiology. In 1885 he built his famous observatory on "Tulse Hill," London, in which he investigated, with his wife as fellow-worker, the physical constitution of the sun and other heavenly bodies by means of spectrum analysis. Received the O.M.

HUGHES, DAVID EDWARD, *b.* in London, 1831, *d.* 1900, the inventor of the printing system of telegraphy, now in use on all important lines. He began his career in Kentucky as a musician, but was attracted to telegraphy in 1854, and moved to New York to develop his system. He soon got his system adopted in France, but England refused to accept it for some years. In 1878 he invented the microphone, a useful adjunct to the telephone. He was the author of many improvements in telegraphy, and as such received honours from all civilised countries.

HUGH or HUGO, SAINT, *b.* at Avalon, France, 1135, *d.* 1200, was appointed to the see of Lincoln, 1186. He was renowned for his holiness and toleration, and exerted considerable influence over King Henry II.

HUGHENDEN, a village situated in Buckinghamshire, near High Wycombe. Hughenden Manor is famous as the former residence of Lord Beaconsfield, who, together with his wife, is buried in Hughenden Churchyard.

HUGHES, THOMAS, *b.* 1823, *d.* 1896, the author of "Tom Brown's School Days," "Tom Brown at Oxford," and other works, was educated at Rugby, under the celebrated Dr. Arnold. After leaving Oxford he interested himself in social reform, became a Christian Socialist, and assisted Denison Maurice at the Working Men's College, Great Ormond Street, London, W.C. On the death of the latter, he became the Principal of the institution.

HUGH OF LINCOLN. a boy said to have been decoyed into a Jew's house in Lincoln, crucified in mockery of Christ's death and flung into a well, where his body was miraculously discovered. This tale, with variations and additions, seems to have overrun England in the 13th century, and has been revived in Continental cities at intervals whenever a pretext for persecution was needed.

HUGLI or HOOGHLY, the most westerly of the branches by which the Ganges enters the Indian Ocean. It has a length of 150 miles and a width at its mouth of about 15. The Hugli is very difficult to navigate owing to the presence of a swift current, shifting sand-banks formed by the mud brought down, and a tidal bore which at spring tides attains a height of nearly 7 feet. Calcutta is situated on the left bank of the Hugli, about 80 miles from the sea.

HUGO, VICTOR, *b.* at Besançon, 1802, *d.* 1885, a poet, dramatist and novelist, one of the most distinguished of the French writers of the 19th century. His best known works in England are his novels; amongst them may be mentioned "Notre Dame," "Les Misérables," 'Les Travailleurs de la Mer," and "Hans d' Islande." Of his plays, "Hernani" and "Ruy Blas" are the most famous.

HUGUENOTS, the name given to the French Protestants, during the 16th and 17th centuries, who banded themselves together to secure personal liberty and religious freedom. The origin of the word is unknown, but it was probably a nickname. A long and bitter struggle commenced in 1562, and culminated in the awful massacre of the Huguenots on St. Bartholomew's Day, 1572. In 1598 the French king, Henry IV., granted them their rights by the Edict of Nantes, but in 1685 this Edict was revoked, and large numbers of the Huguenots emigrated to England, America, South Africa, and other countries. The name is sometimes applied at the present day to the Calvinists of France.

HULL, or Kingston-on-Hull, one of the most important seaports in the British Isles, is situated upon the northern bank of the Humber, in the county of Yorkshire. Much of its trade is with the Baltic and North Sea Ports. Its imports include wool, timber, flax, iron, and foodstuffs, and its exports, manufactured goods and coal. It has an important fishing industry. (For population, etc., see p. 902.)

HULLAH, JOHN, *b.* 1812, *d.* 1884, a teacher of music who took a leading part in spreading a taste and knowledge of music among the people of England. His singing-classes in Exeter Hall taught on his system were famed all over the kingdom. He also acted as Inspector of Music for the Education Department. He was strongly opposed to the "Tonic Sol-Fa" methods.

HULSEAN LECTURES, four lectures delivered annually before the University of Cambridge on some subject connected with the evidences of the Christian religion. The lecturer is appointed annually, and paid out of a bequest made for the purpose, in 1789, by the Rev. John Hulse.

HUMANE SOCIETY, ROYAL. The original object of the Society, which was established in 1774, was to teach the correct methods of resuscitating the apparently drowned. It now grants medals for gallant attempts, both successful and unsuccessful, to save persons from drowning, encourages the teaching of swimming by granting prizes, and supplies at its own expense boats and boatmen to watch swimmers at many of the public bathing stations. It is supported largely by subscriptions.

HUMANIST, a student of human affairs or human nature. In this sense Shakespeare is called the great humanist. But it more generally means a student of "the humanities," as Scotsmen call them, i.e., of the Latin and Greek languages, literature, and antiquities.

HUMBER, the estuary of the rivers Trent and Yorkshire Ouse. It is 40 miles long and its greatest width is about 7 miles. The Humber divides Yorkshire from Lincolnshire. The principal ports on its banks are Hull, Grimsby and Goole.

HUMBERT, KING, *b.* at Turin, 1844, *d.* 1900, son of Victor Emmanuel II., ascended the throne of Italy 1878. In his foreign policy he was a firm supporter of the Triple Alliance (Germany, Austria and Italy), though exceedingly friendly towards Great Britain. He also advocated the somewhat disastrous attempts at colonisation on the Red Sea littoral. His home policy was marked by wisdom and humanity, and he was very popular with the nation. He was assassinated by an anarchist named Bresci, August, 1900. His son, Victor Emmanuel III., succeeded him.

HUMBOLDT, FRIEDRICH, BARON VON, *b.* 1769, *d.* 1859, naturalist, scientist, traveller, and author, began his travels in 1799, exploring a good part of South America in that and the next four years. The results of his explorations were published in Paris, between 1805 and 1827. In 1829 he accepted the direction of an Asiatic exploring expedition, and thoroughly examined the country between the Urals and the central plateau. His great work is the "Cosmos," a bold attempt to classify and co-ordinate the whole range of scientific facts. His "Travels in America" and "Central Asia" are full of interest.

HUME, DAVID, *b.* at Edinburgh, 1711, *d.* 1776, a distinguished philosopher and historian. His philosophical works were widely read both in England and on the Continent, and caused a very heated discussion on account of the sceptical nature of his arguments. They include "Treatise of Human Nature," "Essays, Moral and Political," and his principal historical work, a "History of England."

HUMMING BIRD, a small and exceedingly beautiful bird, a native of America and the West Indies. The bird is so called because of the humming sound which is produced by the rapid vibration of its wings. About 400 species have been recognised, the largest being about 9 inches long and the smallest about 2½. The humming bird feeds upon insects which it collects from the cups of flowers by means of its long, slender bill. From the fact that the bird usually goes to flowers when seeking food, it was formerly believed that it lived wholly upon honey.

HUMPHREY, GOOD DUKE, *b.* 1391, *d.* 1447, Duke of Gloucester, the youngest son of Henry IV., was educated at Balliol College, Oxford, and was an ardent collector of books. He built the Divinity School with the library above it known now as the Bodleian. On the death of Henry V. he and the Duke of Bedford became regents, and whilst the latter was directing the war in France, Humphrey managed the home affairs, with but moderate success.

HUNDRED DAYS, THE, the name given to the period which elapsed between the departure of Napoleon from Elba, March, 1815, and his defeat at Waterloo, June 18th of the same year.

HUNDRED YEARS WAR, properly the series of wars waged between France and England between the years 1338 and 1453. The principal campaigns occurred during the reigns of Edward III., Henry V., and Henry VI. Success attended the English down to about 1428, and a large portion of France was conquered by them; but after that date the French gradually won back their territory, and at the conclusion of the war Calais alone remained in the possession of the English. The most important battles were fought at Crecy, 1346, Poitiers, 1356, and Agincourt, 1415.

HUNGARY, one of the two independent states forming the empire of Austria-Hungary. It occupies the eastern portion of the basin of the Danube and, including Croatia-Dalmatia, has an area of about 127,000 square miles and a mixed population of Magyars, Slavs, Germans, and Jews numbering 19½ millions. Minerals are abundant in the Carpathians, but the bulk of the inhabitants are engaged in agriculture and cattle rearing. The principal exports are wheat and flour, maize, wine, and cattle. The only port is Fiume, situated on the Adriatic Sea, the only place where Hungary touches the sea; many of the exports find their way down the Danube to the Black Sea. Hungary was acquired by the Magyars, a Mongolian race, during the 9th century. In the 16th century the Magyars were conquered by the Turks, who a century later gave place to the Austrians. Various attempts were made by the Magyars to recover their liberty, the most notable being that led by the patriot Kossuth, 1848-9. In 1867 the Austrians granted Hungary its independence, and since that date the two countries have managed their own affairs, but have been under the same ruler and have possessed a combined parliament which settles such matters as affect the common interests of the two states.

HUNS, a Mongolian race who invaded Europe during the 4th century of the Christian Era. They waged war with the Goths, then inhabiting Central Europe, and drove them south into Spain, Italy, and the Balkan Peninsula, thus indirectly causing the destruction of the Roman Empire. The Huns reached as far west as Gaul, but all trace of them in Europe has been lost.

HUNT, HOLMAN, *b.* in London, 1827; a celebrated artist, one of the leaders of the Pre-Raphaelite School. Among his many works the most celebrated is "The Light of the World." O.M. in 1905.

HUNT, LEIGH, *b.* 1784, *d.* 1859, poet and essayist, a voluminous writer of the early 19th century. "Rimini" is his longest poem; "The Old Court Suburb" perhaps his best prose work.

HUNTER, JOHN. *b.* in Lanarkshire, 1728, *d.* 1793; a famous surgeon, who was for some years chief surgeon at St. George's Hospital, London. He was a brilliant and skilful operator, and introduced many improvements in the practice of surgery. His private museum bequeathed to the nation formed the nucleus of the Museum of the Royal College of Surgeons.

HUNTINGDON, SELINA, COUNTESS OF, *b.* 1717, *d.* 1790, became a widow just about the time that Wesley and Whitfield were becoming known through the kingdom. Adopting the Calvinistic doctrines of the latter, she devoted her time and fortune to aiding him, founding chapels, and establishing a college for the training of ministers, which still exists at Cheshunt.

HUSSARS, light horsemen, clothed in tunic and busby, and carrying carbine and sword. The name is derived from an old Hungarian and Servian word signifying freebooter, robber. There are thirteen Hussar regiments in the British army.

HUSS, JOHN, *b.* in Bohemia, 1370, *d.* 1415; a famous reformer and martyr. His preaching brought him into opposition with the Church of Rome, and he was summoned to a council held at Constance, 1414. Here he fearlessly defended his views and refused to recant. He was burned at the stake the following year.

HUXLEY, THOMAS HENRY, *b.* at Ealing, 1825, *d.* 1895; a famous biologist. After serving as assistant-surgeon on board H.M.S. *Rattlesnake* for a short time, during which he studied zoology, collecting specimens and dissecting from morning to night, he took a post as lecturer at the Royal School of Mines. Huxley advocated the systematic study of biology in medical schools, and interested himself in educational matters, especially in the teaching of Natural Science.

HUYGENS, CHRISTIAN, *b.* at the Hague, 1629, *d.* 1695; a celebrated astronomer who discovered Saturn's ring and one of its satellites. He improved the telescope and invented a pendulum clock.

HWANG-HO, the second longest river of China. It rises in Central Asia, and after a course of 2,400 miles flows into the Gulf of Pechili. It is a rapid stream, practically useless for navigation, and brings down with it a large quantity of yellow mud, from which fact it is often called the *Yellow River*. The mud is deposited on its bed when the waters reach the plain, causing the bed to rise higher than the surrounding country, and necessitating the construction of artificial banks. Through these, however, the river sometimes breaks, causing immense damage. In 1851 the river not only broke through the banks, but completely changed its course; previous to that date it emptied its waters into the Pacific Ocean, south of the Shantung peninsula.

HYDE, EDWARD, *b.* 1608, *d.* 1674; first Earl of Clarendon, a prominent statesman in the reign of Charles II. He was in exile with Charles during the Protectorate, and at the Restoration was appointed Lord High Chancellor. Hyde was impeached, 1667, and banished, largely as the result of jealousy. His daughter Anne contracted a marriage with the Duke of York, afterwards James II. Hyde was a historian of importance. His works include a "History of the Rebellion," and one of his own life.

HYDER ALI, a famous soldier, a native of India, who rose from an obscure position and became Maharajah of Mysore. He entered into an alliance with the French, who at that time were contending with the British for the possession of India, and took Arcot, 1769. In 1781 he was defeated in several engagements by Sir Eyre Coote, and died shortly afterwards.

HYDRA, (1) in classical mythology a fabulous animal which dwelt in the swamps of Lerna, situated in the south of Greece. It was a dragon with nine heads, or, according to some writers, a hundred heads, one of which was invulnerable. When one of its heads was cut off, two others grew in its place, unless the wound was cauterised. The destruction of the Hydra was one of the "Labours" of Hercules. (2) A freshwater anemone which possesses a remarkable power of repairing any portion of its body that has been removed.

HYDROGEN, a colourless, tasteless gas which burns in air with a pale blue flame. It is the lightest of all the elements; if equal volumes of hydrogen and air be taken under the same conditions as regards temperature and pressure, the latter will be found to weigh 14½ times as much as the former. The chemical combination of hydrogen with oxygen produces water. If a test tube be held over a hydrogen flame, drops of water will be formed on the inside of the tube; and by exploding, by means of an electric spark, a mixture composed of two volumes of hydrogen and one of oxygen, a small quantity of water is produced. It is possible to separate water into its two elements by means of an electric current.

HYDROPATHY. See *Med. Dict.*

HYDROPHOBIA, a morbid, unnatural dread of water, a symptom of the disease known as rabies, though frequently used as the name of the disease itself. Rabies is a disease especially common amongst dogs, and is communicated to other animals through the saliva; it, therefore, will be communicated by a bite from a dog suffering from it. Rabies usually terminates fatally, and though Dr. Pasteur claimed in 1885 to have discovered a cure, expert opinion differs on the value of his treatment. In England the disease has been stamped out, at any rate for a time, by the enforcement of the Muzzling Act during the years 1897-1901. The word *Hydrophobia* means "fear of water," and is applied to the disease because one of its symptoms is a contraction of the throat which occurs when drink is offered to a person suffering from it.

HYGIEIA, in classical mythology, the goddess of health. She was worshipped in various parts of Greece, and was represented as a maiden bearing a snake—the emblem of health—in her hand.

HYGIENE, that branch of medical science which treats of the preservation of health. It is really sanitary science. It deals with the proper treatment of the body from the point of view of cleanliness, and with the general external conditions which affect the health of the individual. Thus it deals with sanitation, ventilation, construction and situation of houses.

HYMEN, in classical mythology, the god of marriage; the original meaning of the word was "bridal song." Hymen is represented as a winged youth, bearing in one hand a nuptial veil and in the other a torch.

HYNDMAN, HENRY MAYERS, *b.* in London, 1842, journalist, socialist, and economist. He was war correspondent for the *Pall Mall Gazette* in Italy during the troubles of 1866–67; has travelled in Australasia and America, and is the founder of the "Social Democratic Federation." His writings on social and economic questions are numerous.

HYPATIA, the daughter of Theon, an astronomer of Alexandria. Hypatia lived during the 4th and 5th centuries, A.D., and was a scholar of the Platonic school; she was remarkable alike for her beauty and her intelligence. She gave great offence by her teaching to the so-called Christians of the city. In the course of a fight between her partisans and the Christian party she was dragged from her carriage and torn to pieces. "Hypatia" is the subject of a novel by Charles Kingsley.

HYPERBOREANS, a people believed to live beyond the region from which the north wind came. They, in consequence, were supposed to enjoy perpetual summer and were immortal. As the geographical knowledge of the ancients increased, the name was applied to the tribes of Northern Europe.

HYPNOTISM, a kind of sleep which is induced by artificial means, usually by holding a bright object a short distance in front of the eyes of the person operated upon. The optic nerve after a short time grows tired, and the person falls into a state resembling unconsciousness. The hypnotist usually makes a few passes with his hands—largely for the benefit of the onlookers. Not every person can be hypnotised, and it is generally admitted that the state is produced, not by any extraordinary power of the hypnotist, but as the result of some particular mental condition of the person operated upon. It is possible to suggest dreams to a hypnotised person, and if music be played, it is occasionally possible to induce the patient to dance; the power of walking is not lost whilst in this state. Hypnotism has been practised for a long time, but by many people is still regarded as a kind of fraud. It seems, however, to have been used with some success, by physicians, in the treatment of mental diseases. It can be induced in animals as well as in man.

HYPOSTASIS, that which underlies, or forms the foundation of something, hence the substance, or essential part of anything. By early Christian writers the term is used as equivalent of "person," when we say there are three "persons" in the Godhead.

HYPOTHEC, the right a landlord and certain other persons have in Scotch law over the effects of a debtor. Thus a landlord has a hypothec over the furniture of his tenant, the sailor over the cargo and vessel he has worked in, etc. The English word is *lien.*

HYPOTHESIS, literally "a placing under," the laying down of some supposition in order that some conclusion may be, as it were, built on it. The term is also used in science to denote some theory which, while it has not been demonstrated, is consistent with, and helps to explain, observed facts. Thus the universality of the law of gravity is an hypothesis.

HYTHE, cinque port, 5 miles from Folkestone, in Kent. See *Musketry, School of.*

IBIS, THE SACRED, is one of the wading birds. It was worshipped by the ancient Egyptians and is still venerated by the Arabs. Ibises were kept in the Temples, and were unmolested in the cities. After death they were mummified, and in this state are found in great numbers in the tombs at Thebes and Memphis.

IBO, a district of West Africa in the delta of the Niger.

IBRAHIM PASHA, the adopted son of Mohammed Ali, the Viceroy of Egypt, was born in 1789. Between the years 1822 and 1831 he twice invaded Syria, and on the second occasion made himself master of that country. In 1833 peace was concluded between Syria and Egypt, and Ibraham returned to his own country. In 1848 he went to Constantinople, and was appointed Viceroy of Egypt. He died in November of the same year.

IBSEN, HENRIK, *b.* at Skein, Norway, 1828, *d.* 1906, a poet and dramatist, commenced writing poetry in his 19th year. In 1850 he worked as a journalist while studying at the university of Christiania. In 1851 he was appointed director of the theatre at Bergen, where he wrote and brought out several dramas. Afterward, at Christiania, in connection with the National Theatre he produced the "Warriors in Helgeland" and other plays. He then travelled in Germany and Italy, and wrote lyric dramas, the chief being "Braund" and "Peer Gynt." Later he wrote several plays dealing with the problems of social life. Several of his works have been translated into English.

IC'ARUS, the son of Dædalus, soared too high on wings his father made him. The sun melted the wax that cemented the wings, and Icarus was drowned in the sea.

ICE is water in a solid form, and as it is lighter than water it floats. As the temperature falls water becomes denser and heavier until it reaches 39·2°, F. It is then at its greatest density, and from that point it expands until it reaches its freezing point at 32°, F. It is this expansion that causes water-pipes to burst during winter, although the mischief does not show itself until a thaw liberates the water in the pipes. For the same reason, the lower waters of the Arctic seas are less cold than the upper waters, and remain unfrozen. If it were not for this remarkable property all the rivers and lakes in the Polar regions would long ago have been solid masses of ice.

Ice is formed artificially by means of rapid evaporation, and large quantities are produced in this way. There is at the present day a large trade in ice. In the year 1902 more than 300,000 tons were imported into this country, chiefly from Norway, the declared value of which exceeded £200,000.

ICEBERGS are masses of ice which are found floating in the north and south Polar Seas. They are detached from the glaciers that are formed on land in those icy regions. These bergs stand sometimes more than 200 feet above the surface of the sea, but for every cubic foot above the surface there are eight cubic feet below. Their uncertain movements make them dangerous to vessels sailing across the Atlantic. When icebergs from the Arctic seas approach the coast of Newfoundland, they meet the warm waters of the Gulf Stream and are dissolved. The *débris* thus deposited has formed the banks so famous as a fishing ground.

ICE-BREAKERS are vessels used for the purpose of breaking up the ice in ice-bound waters, so as to make navigation sooner possible at the end of the winter. They are very strongly built, and armoured at the bow. They are used by the Russian Government in the Baltic, and by the Canadian Government in the St. Lawrence.

ICELAND is an island belonging to Denmark, on the borders of the Arctic Ocean. Its coast is almost unbroken, and the interior is mountainous. It has an active volcano, named Hecla, and many geysers, or boiling springs. Most of the country is covered with glaciers, barren heaths, and bogs. It has important fisheries of seal, herring, and salmon. It exports wool, oil, fish, feathers, sulphur, and Iceland moss. Capital, Reikjavik; population of the whole island, about 75,000.

ICELAND MOSS, a lichen, is found in the northern parts of the world. In Iceland it grows in abundance, and is collected both for food and for exportation. When boiled in milk it forms a nourishing diet for persons suffering from a severe cough.

ICELAND SPAR, or **CALCITE,** a transparent calcareous spar found largely in Iceland, filling up the clefts in basalt rocks. Its crystals are rhomboidal. It exists in hundreds of secondary forms, one of the commonest being known as Dog-tooth Spar. It is used for optical purposes, but is becoming rare.

ICE'NI, a tribe of ancient Britons inhabiting the country that is now Norfolk and Suffolk. One of their sovereigns was the famous Boadicea.

I'CHABOD, "The glory is departed," the name given by his mother to the son of Phinehas, born after his father was killed in battle with the Philistines. 1 Samuel iv. 21.

ICH DIEN, a German phrase, literally "I serve," the motto of the Prince of Wales. It was originally the motto of John, the blind king of Bohemia, who was slain at the battle of Crecy, 1346, and it was appropriated by the victor, Edward the Black Prince.

ICHNEUMON, a small carnivorous quadruped, which in shape and habits closely resembles the weasel. About twenty species are recognised, of which the Egyptian ichneumon and the Indian mongoos are the best known. The former is usually from two to three feet in length and possesses a long slender body and a pointed snout. It feeds upon rats and mice and hunts for crocodiles' eggs as a special delicacy. Probably for this reason it was regarded as sacred by the ancient Egyptians. [See *Mongoos.*]

ICHNEUMON FLY, one of the membranous winged insects. It is distinguished by its habit of laying its eggs in either the bodies of other insects or their larvæ. When the eggs are hatched the young feed upon the living tissues of the creatures in which they have been deposited, and so destroy them. In some cases the ichneumon fly lays its eggs in those of another insect, as in wasps' eggs. When this is the case, instead of wasps emerging, an immense number of Ichneumon flies appear.

ICHOR, a thin watery humour discharged from wounds, ulcers, &c.; originally the ethereal fluid which took the place of blood in the Greek gods.

ICHTHYORNIS is a fossil bird found in the cretaceous rocks of Kansas. Its name, literally "fish-bird," is due to the fact that this bird possesses teeth, though in other respects it is a typical bird. This species is thought to throw light on the descent of birds from lower vertebrates. [Refer to *Birds* and *Archeopteryx.*]

ICHTHYOSAURUS, one of the extinct reptilian animals whose remains are found in the lias and oolitic systems. It was a gigantic and voracious marine animal resembling in some points of structure a fish, and in others a crocodile.

ICON'OCLAST, literally one who breaks or destroys images; figuratively, one who attacks cherished beliefs. In Church history, the Iconoclasts were those who supported Pope Leo III. in his contest against image worship, and who, when they had the power, destroyed all images in churches.

ICTI'NUS, a Greek architect who designed a celebrated temple of Apollo,

the sculptures of which are among the treasures of the British Museum, and the still more celebrated temple of Athene, called the Parthenon, built at Athens, 433 B.C.

IDA, a mountain range in Asia Minor, at the base of which the city of Troy was built; also a mountain in Crete.

IDDESLEIGH, (Stafford Northcote), FIRST EARL OF, *b.* 1818, *d.* 1887; a Conservative statesman, who, as Chancellor of the Exchequer in Mr. Disraeli's Ministry, 1874, introduced the Sinking Fund for the reduction of the National Debt. In 1885 he was raised to the peerage and appointed First Lord of the Treasury. In 1886 he became Foreign Minister in Lord Salisbury's administration, but resigned before the end of the year, and died soon afterwards.

IDEAS, ASSOCIATION OF, is one of the intellectual processes of the human mind. When two objects of thought have been *repeatedly* presented to the mind together, the connection is retained, and if one of these associated objects of thought is brought back to the mind there is a tendency to bring back the other without any voluntary effort. The primary factors which regulate the action of this faculty are resemblance, contrast, cause and effect, and accidental contiguity.

IDES, according to the Roman calendar, were the 15th of March, May, July, and October, and the 13th day of the other months. These days were sacred to Jupiter and other deities.

IDIOSYNCRASY. See *Med. Dict.*

IDO'MENEUS, in Greek legend a king of Crete, and one of the bravest heroes of the Trojan War. He vowed to sacrifice to Poseidon (Neptune), whatever he should first meet on landing, if the god would grant him a safe return. This was his own son, whom he accordingly sacrificed, but as Crete was shortly afterwards afflicted by a plague, his people banished him. (c.f. *Jephthah*).

IDRIA, a town in Carniola, Austria, noted for its quicksilver mines.

IDRIS, a giant of Welsh mythology whose chair hewn in the rock may be seen on the summit of Cader Idris.

IDUME'A lies to the south of Palestine. In early Bible times it was called Edom, and now forms part of Arabia.

IDYLLS OF THE KING, THE, a series of poems by Lord Tennyson, founded on the legends of King Arthur and his knights. The poems are based on Malory's *Morte d'Arthur*, from which episodes are selected and adapted to illustrate the origin, rise and fall of a noble institution.

IGNATIEFF, a Russian diplomatist, who was successful in concluding treaties with China, Khiva, and Bokhara advantageous to his country. He was Russian Ambassador at Constantinople before the Russo-Turkish War in 1878, and took a leading part in negotiating the treaty of San Stefano. He afterwards became minister of the Interior, when he tried to put down Nihilism.

IGNATIUS, SAINT, Bishop of Antioch, in the latter part of the 1st century. He is said to have been a disciple of the Apostle John. He remained at his post during the persecution of the Christians under Domitian, and afterwards was summoned before the Emperor Trajan, who tried to persuade him to renounce his faith. This he refused to do, whereupon Trajan condemned him "to be led a prisoner to Rome, there to be made the food of wild beasts for the amusement of the people." His martyrdom took place in or about 107 A.D. Twelve epistles attributed to Ignatius are in existence.

IGNEOUS ROCKS, the name given in geology to rocks formed by the action of heat. The igneous rocks are:—(1) Granitic, comprising granite, syenite, and porphyry. (2) Trappean, comprising basalt, greenstone, clinkstones, amygdaloids, and pitchstone, the source of the newly discovered radium. (3) Volcanic, comprising obsidian, pumice, lavas, trachyte, scoriæ, &c.

IGNIS FATUUS, meaning foolish fire, a flame-like appearance floating in the atmosphere a few feet above the ground, in marshy and other places where there is decaying animal matter. When approached it seems to recede. It is supposed to be due to the escape of phosphuretted hydrogen gas. The word, when used figuratively, means something foolish, illusory.

IGUANA is a lizard of South America and the West Indies. It attains a length of three to five feet, lives amongst the trees, feeding on insects and plants. Its flesh and eggs are prized by the natives.

IGUAN'ODON, a gigantic animal of the lizard kind which formerly lived in the southern part of England. Its remains have been found near Maidstone.

ILEX, THE, or evergreen oak, is a native of the south of Europe and north of Africa. It grows well in Britain, especially near the sea, but is seen at its best in Italy. Ilex is also the botanical name of holly.

ILFRACOMBE, a watering place and seaport on the north coast of Devon, noted for its picturesque scenery.

ILIAD, a celebrated Greek poem ascribed to Homer, consisting of twenty-four books. The subject of the poem is the Trojan War during the siege of Troy.

ILIUM. (1) Another name for Troy. (2) The hip bone.

ILKLEY, a village in the West Riding of Yorkshire, on the banks of the Wharfe, is noted for the beauty of its surrounding scenery, and for its hydropathic establishments.

ILLINOIS. They formed a confederacy of North American Indians, formerly occupying Illinois and the adjacent country. In the wars between the French and the British they sided with the former.

ILLUMINATION OF MSS., the adorning of manuscripts by drawings and coloured letters or figures. This art is of great antiquity, the Egyptian papyri being the oldest known illuminated manuscripts. The Greek and Latin MSS. show various styles of decoration, and some fine specimens of English work are to be seen in the British Museum.

ILLUSION, a false mental image or impression of a real object or action due to the misinterpretation of what is seen, heard, or felt; good instances of which are the illusions produced by the conjurer and juggler, and the phenomena produced, as in mirage, by the reflection and refraction of light under unusual conditions; whereas an hallucination is a mental image without any corresponding object or external cause, such as the supposed appearance of rats in delirium tremens. [Refer to "Hallucination" in *Med. Dict.*]

ILLYRIA, the ancient name given to the country lying on the eastern shore of the Adriatic Sea. From the earliest times the inhabitants were known as a warlike and barbarous people, who were at last subdued by the Romans. By degrees the name was dropped until it was revived by Napoleon. The kingdom was dissolved in 1849, and the name has again disappeared.

IMAGES, or representations, sculptured or painted, of any person or thing, seem not to have been used in worship in the earliest ages of the Christian Church. In the 4th century they came into use, and their use rapidly extended in the next three centuries, although condemned by many bishops. The second Council of Nice sanctioned the use of images as aids to devotion, but directed that no kind of worship should be paid to the images themselves, but only through them to the persons represented, and this is what the Roman Catholic Church and the Lutherans still allow. The English reformers rejected the use of images as idolatrous; Luther allowed them as aids to devotion. The ikons, or images, used in the Greek Church are pictures, not what is popularly understood by images.

IMAGINATION is that faculty of the mind by which it forms new combinations out of its previous conceptions. It is a creative faculty; but its creations are limited by the number of mental images formed by observation. It has been aptly described as constructive memory. The exercise of this faculty affords great pleasure to the mind. It also gives a kind of ubiquity, enabling an individual to enjoy the scenes of other lands, and the events of the past. It is the possession and exercise of this faculty that makes a poet, a musician, a sculptor, a painter, or a writer of fiction.

IMITATION OF CHRIST, THE, is the title of a devotional treatise written by Thomas à Kempis, a monk of Utrecht, who lived in the 15th century. This work has been translated into many languages, and reprinted more often than any other book except the Scriptures.

IMMACULATE CONCEPTION, THE, of the Blessed Virgin, a festival of the Roman and Greek Churches in honour of the doctrine that the virgin was born without original sin.

IMMANUEL, meaning "God with us," the name applied to a child born of a virgin, prophesied by Isaiah, ch. vii. 14, and fulfilled at the birth of Christ, Matt. i. 22.

IMMORTALITY is the doctrine of the unending existence of the human soul. This was held by the Egyptians before the time of the sacred Scriptures.

IMMUNITY. See *Med. Dict.*

IMPEACHMENT is an indictment presented by the House of Commons to the House of Lords, accusing some person, generally a peer, of some high crime. A deputation of Commoners presents the charge at the Bar of the House of Lords; the peers are the judges, and the accused may employ counsel. If the charge is high treason, a lord high steward is appointed to preside. The last impeachment was that of Lord Melville in 1806 on the charge of appropriating public money, but he was acquitted.

IMPENETRABILITY. That property of matter by which two bodies cannot occupy the same space at the same time. For example, if a cup be filled with water and a spoon be placed in it, some of the water will flow over, making room for the spoon, which cannot be said to have penetrated the water.

IMPERIAL FEDERATION. The first step was taken in 1884 by the founding of the Imperial Federation League. The Jubilee celebrations of 1887 and 1897 in honour of Queen Victoria did much to forward the movement. In 1887 was held the first conference of representatives of the self-governing colonies. In 1892 a committee of the league, appointed to draw up a definite scheme of imperial federation, recommended that as a first step the colonies should be invited to take a share in the cost of defending the Empire, but the invitation evoked a poor response. The Boer War, however, did much to knit the different parts of the Empire together, and in 1902, when the Colonial premiers attended the coronation of King Edward,

a conference was held between them and the British Government, resulting in the offer of pecuniary help towards the maintenance of the navy from all the great Colonies except Canada. Canada, however, has since 1905 taken over the duty of defending Halifax and Esquimalt, so that now no imperial troops are stationed in any part of the Dominion. It has, also, aided the mother-country by means of a preferential tariff. As regards the other colonies, Australia contributes £200,000 per annum ; Cape Colony £50,000; New Zealand £40,000 ; Natal £35,000 ; and Newfoundland £3000.

IMPRESSMENT, the seizing and compelling persons to enter the navy. This practice was resorted to from the 14th century to the reign of George III., laws being passed to regulate the system. Although these have not been repealed, the practice has died out.

INCANDESCENT LIGHT is that produced by some substance being made and kept at a white heat. (1) The *electric* incandescent lamp consists of a bulb of glass containing a loop of extremely thin carbon. When the loop has been fastened in the bulb the air within is withdrawn and the bulb sealed to prevent the admission of air. The loop of carbon is connected with two terminals outside, and to these the conductors from the battery or a dynamo are fastened. When the electric current is allowed to pass to the terminals the carbon becomes incandescent and remains in that state as long as the current continues to flow. (2) Incandescent light is also produced by means of *gas*. In this case the intensely white light is obtained by causing the flame from a modified form of a Bunsen burner—which gives great heat—to play upon a mantle placed over it. The mantle is cone-like in shape and made of rare earths which are incombustible. The advantage of the mantle is an increased amount of light with a decreased consumption of gas.

INCAS were the kings of Peru from about the year 1020 till its conquest by the Spaniards, 1531–32. The first Inca was Manco Capac, who with his wife Mama Ocollo founded the Peruvian royal family. They claimed to be children of the sun, sent from heaven to instruct the natives. Manco built the city of Cuzco and ruled over the surrounding country about 80 by 90 miles in extent. His descendants gradually increased their dominions until they reached from Chile to Quito, and from the Pacific to Paraguay. The government of the Incas was a mild form of despotism. The Inca made all the laws and imposed taxes. He was also the chief priest and presided at all religious festivals. All the male descendants of the Inca formed the nobility and were the governors of the subdivisions of the country. The whole territory was divided into three portions, the produce of which supported the Inca, the priests and the national worship, and the people, respectively. All classes were compelled to work for a stipulated time for the common weal.

INCENSE is the aroma given off by the burning of certain woods, resins, dried flowers, and seeds. It has been used in the religious rites of most nations from the earliest times. The monuments of ancient Egypt show the worshippers offering incense to their gods.

INCHCAPE ROCK, THE, or Bell Rock, a small islet 14 miles east of the Firth of Tay. Formerly this was a cause of many shipwrecks, to prevent which the Abbot of Aberbrothwick placed a bell upon it to warn sailors. Upon this tradition Southey founded his ballad of the Inchcape Rock. A lighthouse now stands upon it.

INCOME TAX is a tax levied by the State upon a person's income, whether derived from houses, land, shares in mines, railways, &c., trades, professions, or salaries. It was first levied in 1799, abolished in 1806, reimposed in 1842, and continues to the present day. The amount has varied considerably, the lowest being 2d. in the £ in 1874, the highest 1/4 in 1885–6. Refer to "Income Tax" in *Index*.

INCREMENT, UNEARNED, is the increase in the value of land consequent upon the extension of towns or the growth of industrial occupations.

INCUBATION, ARTIFICIAL, or the hatching of eggs by artificial means, has been practised by the Egyptians for thousands of years, and a rude method has been in use in China from time immemorial. Among European nations, France took the lead on the invention of Bonnemain's apparatus (1777). It has made great progress in our own country since 1880, when Mr. C. Hearson brought out his apparatus, by the use of which a much larger percentage of eggs are successfully hatched than when placed under hens. This method is largely adopted by gamekeepers for rearing pheasants.

INDEX EXPURGATORIUS, THE, is a catalogue of books showing what books Roman Catholics are absolutely forbidden to read, and what books they may read in such editions only as have been expurgated of objectionable passages.

INDIA. Refer to *Index*.

INDIAN ARCHIPELAGO, THE, lies between the Indian and Pacific Oceans, and includes a large number of islands. The chief are Borneo, the Philippines, the Sunda Islands, including Sumatra, Java, Bali, Sumbawa, Flores, &c.; the Celebes, Moluccas, Key, and smaller groups.

INDIAN CIVIL SERVICE. Refer to *Index*.

INDIAN CORN. See *Maize*.

INDIAN MUTINY, THE, 1857–8, was supposed to have been caused by the introduction into the army of cartridges which had been greased with a mixture of cows' and hogs' fat, the handling of which was abhorrent both to the Hindoo and to the Mohammedan. No doubt this led to the immediate outbreak, but the desire to shake off the English yoke had long been gaining ground. The Mutiny commenced May, 1857, at Meerut, where the Sepoys refused to obey their English officers, and murdered them. The mutineers marched to Delhi, which remained in the hands of the rebels for four anxious months. In September the city was stormed and taken by General Nicholson. The neck of the rebellion was now broken, but another year elapsed before the country was pacified. The commander-in-chief of the army that accomplished this result was Sir Colin Campbell, afterwards Lord Clyde. Among the men who covered themselves with glory during the mutiny were Sir John Lawrence, who kept the Sikhs loyal; General Havelock, who brought relief to the British garrison at Lucknow; General Outram, who chivalrously served under Havelock, although entitled to take the command out of his hands; and Lord Canning, the Governor-General, with his cool head, firm will, and courage that never faltered. On the re-establishment of British authority, a royal proclamation announced, 1st November, 1858, that the governing power of the East India Company was abolished, and that henceforth the Sovereign of England would be the supreme ruler of India. And in 1877 the Queen was proclaimed "Empress of India."

INDIAN OCEAN, THE, lies south of Asia, and between Africa and the Eastern Archipelago. It has been navigated from the earliest times, as the winds which blow across it are regular. The northern part is within the region of the monsoons, and the southern part in that of the trade winds.

INDIANS, RED. See *American Indians*.

INDIAN TERRITORY, about 32,000 square miles south of the Red River, U.S.A., set apart in 1832 for Indian tribes, where they settled, became more or less civilized, and established an organized government, churches, banks, schools, &c. The population is about 400,000, but of these only about 13 per cent. are Indians, the rest being whites and negroes.

INDIA RUBBER. See *Rubber*.

INDIGO is a vegetable dye-stuff yielding a beautiful blue colour, obtained from the leaves and stem of the genus *indigofera*, found in the East and West Indies and in Mexico. The only European plant producing indigo is the common woad. It is now manufactured in the chemical laboratory, especially in Germany.

INDO-CHINA, or Further India, comprises the following States :—(1) *Native State*, Siam. (2) *British States*, Burma, Straits Settlements and Protected Malay States. (3) *French States*, Cochin-China, Tonquin, Protectorates of Cambodia and Annam.

INDRA, the name of a Hindu deity. He is called "the lord of the virtuous and the discomfiter of those who neglect religious rites." He is represented as riding on an elephant, and when painted is covered with eyes.

INDUCTION. (1) The act of putting into office; for example, a parson into actual possession of his living. (2) In *logic*, the process of the mind by which we establish general truths from particular instances. (3) See *Electricity* and *Dynamo*.

INDULGENCES are relaxations or remissions of the penitential works and temporal punishments that a penitent in the Roman Catholic Church is called upon to undergo. Indulgences were freely sold from the 13th to the 16th centuries, and their sale by Tetzel, a Dominican friar, roused the indignation of Martin Luther, and turned his mind to the need of a reformation in the Church.

INDULGENCE, DECLARATION OF, was issued by James II. in 1687 on his own authority, suspending the penal laws against Roman Catholics and Nonconformists. This was opposed by the latter, as they saw that it was an attack on civil liberty. In 1688 the Declaration was re-issued and ordered to be twice read in all churches. Most of the clergy refused to obey, and Archbishop Sancroft, with six bishops, presented a petition to the king, begging him not to insist on the Declaration being read in Churches. The bishops were arrested and tried on a charge of seditious libel, but acquitted, 1688.

INDUS, THE, 1,800 miles long, rises on the tableland of Tibet, flows through deep gorges between the Himalaya and Hindu-Kush mountains, and empties itself by several mouths into the Arabian Sea. About 470 miles from the mouth the Indus is joined by the Panj-nad, which receives the waters of the Jhelum, Chenab, Ravi, and Sutlej. On the right bank is the Kabul, which joins it at Attock, from which town the river is navigable, but on account of the shifting character of its banks, no important town is found near the main stream.

INERTIA is the inability of matter to change its state of rest into that of motion, or *vice versa*, without the application of force.

INFALLIBILITY, PAPAL. Infallibility is the exemption from possibility of error.

In very early times it was claimed for the Councils of the Church when properly constituted. The infallibility of the Pope, though held by many Roman Catholics, was not made an article of faith until 1870, when, at a council assembled at Rome, it was declared that when the Pope in the discharge of his office defines a doctrine, what he states respecting such, is in conformity with the Divine will.

INFANT'ICIDE, the murder of a child, was a common crime in ancient Greece and Rome, and still prevails among some Islanders in the Pacific. In India very many female children were put to death as soon as they were born, until the practice was made punishable by English law. In England the laws are strict with regard to life. It is a crime to abandon or expose an infant to danger, or to fail to supply it with proper food and clothing.

INFER'NO, the first part of Dante's poem "Divina Commedia," written about 1300, describes a vision in which the poet is conducted by Virgil through Hell, and holds conversations with celebrated persons who had recently died.

INFERNAL MACHINES are boxes containing dynamite or other explosive, with a clock work arrangement to cause an explosion at a given time. Bombs or hand grenades may be included in infernal machines, as they have been used by anarchists for assassination.

INGELOW, JEAN, poet and novelist, *b.* at Boston, Lincolnshire, 1820, *d.* 1897. The publication of her poems, in 1863, brought her name into prominence. Her best known novels are *Off the Skelligs* and *Fated to be Free*.

INGLIS, SIR JOHN, *b.* in Nova Scotia 1814, *d.* 1862. During the Indian Mutiny he succeeded Sir Henry Lawrence in the chief command of the Residency at Lucknow, until its relief by Sir Henry Havelock, 1857. Shortly afterwards he became major-general and K.C.B.

INGOLDSBY LEGENDS, an English adaptation of old French stories by Richard Barham, Canon of St. Paul's, who wrote under the name of Thomas Ingoldsby.

INGOLSTADT, a fortified town of Upper Bavaria, on the left bank of the Danube.

INGRAM, ARTHUR FOLEY WINNINGTON, *b.* 1858; was curate of St. Mary, Shrewsbury, 1884-5; chaplain to the Bishop of Lichfield, 1885-8; and became head of Oxford House, Bethnal Green, 1888, where for nearly eight years he devoted himself to work among the poor in connection with the University Settlement. He was also Rector of St. Matthew's, Bethnal Green. 1895-7. He was ordained Suffragan Bishop of Stepney in 1897, and Bishop of London, 1901. He has taken the lead as a mission preacher in his diocese.

INK. (1) *Black Writing Ink* is prepared from powdered nut galls, solution of sulphate of iron, gum arabic and water; *Coloured Ink* is made by dissolving a particular pigment and adding it to the three latter ingredients. (2) *Printing Ink* is made by mixing lampblack with linseed oil and a certain amount of yellow soap. *Indian Ink* is made by mixing pure lampblack with gum or gelatine and drying the paste so formed.

INKERMAN, a village in the Crimea, 33 miles from Sebastopol, noted for the defeat of the Russians by the English and French. 1854.

INLAYING is inserting one material into another differing in nature or colour. The following terms designate the different kinds of inlaid work according to the materials employed:—*Bidri*, thin plates of silver let into an alloy of zinc, copper, or lead; *Damascening*, inlaying gold and silver into iron or steel; *Buhl work*, inlaying brass into tortoiseshell; *Marquetry*, inlaying woods of various forms and colours; *Pietra dura*, the inlaying of stones of various kinds; *Mosaic*, the inlaying of small pieces of stone to form patterns.

IN MEMORIAM, a poem by Lord Tennyson, written as a tribute of affection to the memory of the friend of his college days, Arthur Hallam, son of the historian.

INN, a tributary of the Danube, rises in a lake at the foot of the Rhætian Alps, flows through the valley of the Engadine, and then through Tyrol into Bavaria; for a part of its course it forms the boundary between Bavaria and Austria, and joins the Danube at Passau.

INNER TEMPLE. See *Inns of Court*.

INNISFALLEN, an island in the lower lake of Killarney, containing the ruins of an abbey founded in the 6th century. Here the annals of Ireland were compiled in the 13th century, and a copy of them is preserved in the Bodleian library at Oxford.

INNOCENT III., POPE, *b.* 1161, elected Pope 1198, *d.* 1216. He is regarded as one of the greatest of Pontiffs. Endowed with great natural ability, and believing that the supreme authority of the Church in secular as well as spiritual matters should be recognized by all, he gradually succeeded in bringing nearly the whole of Christendom into subjection to the Papal power. Among others, King John of England was compelled to submit to him. He established inquisitorial tribunals, from which arose the Inquisition.

INNSBRUCK, the capital of Tyrol, Austria, on the Inn, lies in a deep valley. It has manufactures of wool, cotton, silk, and glass. The most noted buildings are the Hofkirche, containing the tomb of the Emperor Maximilian I., the Chancery with the golden roof, and the Imperial Castle.

INNS OF COURT, THE, are corporate bodies to which all barristers and students of law must belong. The term also designates the buildings belonging to each society. In London there are four of these courts:—The Inner Temple, the Middle Temple, Lincoln's Inn, and Gray's Inn. Each of these is governed by a body of benchers. The privileges of the Inn are to admit men to become students of law, and to confer the right to practise in the Law Courts. They have the power of refusing to admit a person as member without stating a reason, and also of disbarring one considered unworthy of the profession.

INOCULATION is the operation of communicating the poison of a certain disease into the system which, by exciting a mild attack of the disease, helps to protect the person from a more violent attack. The Chinese, it is said, practised this process for small pox from very early times. It was in use in the east of Europe in the 18th century, and was introduced into England by Lady Mary Wortley Montague in 1717, who, while in Turkey, had it tried on her own son. Gradually the practice grew in England until displaced by vaccination—a method of dealing with small-pox discovered by Dr. Jenner about 1796. Inoculation for hydrophobia has been of late years practised by Dr. Pasteur, and inoculation for consumption has been tried by Dr. Koch.

INQUISITION, THE, a tribunal for the punishment of heresy, was instituted by Innocent IV. in 1248. It was introduced into Italy, France, Germany, and Spain. In the latter country, during the reign of Isabella and Ferdinand, it became a state tribunal, and was carried on with extreme secrecy, rigour, and cruelty. The usual punishment for those found guilty was death by fire. The Inquisition was finally abolished in Spain in 1835. In Rome it still exists as a tribunal for ecclesiastical offences.

INSECTS, properly so called, have bodies divided into three parts:—(1) *head*, which contains the mouth, the antennæ or organs of feeling, and the eyes; (2) *thorax*, bearing organs of motion consisting of three pairs of jointed legs and two or four wings; (3) *abdomen*, containing organs of nutrition and reproduction. Respiration is carried on by means of air tubes which terminate at the surface. The higher insects undergo three changes or metamorphoses.

INSECTIV'OROUS PLANTS are those which, in addition to the usual mode of feeding, have the power of capturing insects and devouring them. Though there are many such plants they may be thus grouped:—(1) those with leaves provided with pit-like traps, filled with a viscid fluid, which secures any insect alighting on them, for example, the common pitcher plant; (2) those which have no pits in the leaves, yet secrete a viscid fluid, as the common sundew; (3) those whose leaves not only secrete a viscid fluid but also have a movement by which they secure the insect, for example, the Venus' fly-trap.

INSPECTOR GENERAL OF THE FORCES, an officer whose duty since 1904 has been to inspect fortifications and other land defences, and to perform other duties formerly undertaken by the Commander-in-Chief.

INSPIRATION. In ordinary language is (1) the act of receiving air into the lungs, (2) any elevating influence conveyed to the mind by something apart from the individual, (3) in theology it is the supernatural influence of the Holy Spirit on the human mind by which the sacred writers were qualified to receive and set forth Divine communications.

INSTINCT is that natural impulse which leads animals, apart from experience, to perform certain acts which tend to promote the welfare of the individual, or the perpetuation of the species. Examples: migration of birds, construction of nests, formation of comb by bees in the dark, and the laying of eggs by butterflies and moths on the leaves of plants on which the larvæ are to feed.

INSTITUTE OF FRANCE. A learned body, corresponding in some measure to the Royal Societies in England, and formed on October 25th, 1795, to replace those academies which had been suppressed during the Revolution. Its object is the advancement of the arts and sciences by continual researches, by the publication of new discoveries, and by correspondence with the most distinguished scholars of all countries.

INSURANCE. Refer to *Index*.

INTAGLIO, a representation of an object made by incised engraving on the surface of a gem or other substance, as opposed to carving in relief. From an intaglio impressions in relief may be made on soft substances such as wax.

INTERLAKEN—"between the lakes"—a town in Switzerland on the left bank of the Aar, between the lakes of Brienz and Thun. It is 26 miles from Berne, and from it are obtained magnificent views of the Jungfrau and other peaks of the Bernese Alps.

INTERDICT, PAPAL, is a penalty of the Roman Catholic Church laid upon persons, places or countries, debarring them from the sacraments, the celebration of public worship, and the privilege of Christian burial. The most famous interdicts were that laid by Alexander III., on Scotland in 1180, that by Gregory VII. on Poland, that by Innocent III., on France in 1200,

and on England in 1209. The interdict in England was the result of King John's refusal to receive the Pope's nominee as Archbishop of Canterbury. It lasted six years, and was not removed until John consented to place his crown in the hands of the papal legate and receive it back as a vassal of the Pope.

INTRANSIGEANTS (Irreconcilables), members of a political party uncompromisingly hostile to an existing government, the term being used chiefly in Spain, France, and Italy; e.g., the republicans in Spain in 1873.

INTROIT. In the ancient office for Holy Communion a psalm, hymn, or anthem was sung as the clergy were entering the chancel and taking their places before the altar. It was called the *Introit*, the psalm of *entry*.

INTUITION is the faculty by which beliefs or judgments present themselves to the mind with irresistible force as self-evident truths, such as Euclid's axioms; in brief, it is the faculty by which, without reasoning, we recognize the truth.

INVERARAY, capital of the county of Argyle, is beautifully situated at the head of Loch Fyne. In close proximity is the castle of the Duke of Argyle.

INVERCLYDE (John Burns), **FIRST BARON,** *b.* 1829, *d.* 1901; son of one of the three founders of the Cunard Line of steamships. On their retirement he became head of the firm, and in 1897 was made a peer. He wrote a history of the Cunard Line, and a work on the adaptation of merchant ships for war purposes. See *Cunard Line.*

INVERNESS, the capital of the northern Highlands, stands at the mouth of the river Ness and near the entrance to the Caledonian Canal. It received its first charters from William the Lion, 1165–1214. About five miles from the town is Culloden Moor, where Prince Charles Stuart was defeated by the Duke of Cumberland, 1746.

INVERTEBRA'TA, literally, destitute of backbone. In zoology a collective term used to denote all the animals which are destitute of an internal frame-work of bone. [For the classification of invertebrates, see under *Zoology.*]

INVESTITURE, the act of formally bestowing some office, possession, or benefice, such as the grant of land in fief or the rights and possessions of an ecclesiastical dignitary, by giving a branch, some instrument of office, or other symbol of that which was intended to be conveyed.

INVINCIBLE ARMADA. See *Armada.*

INVINCIBLES, a secret society of Irish or Irish Americans formed to overthrow British authority in Ireland by the assassination of officials. In 1867 some of the members blew down part of Clerkenwell prison wall, and in 1882 other members murdered Lord Henry Cavendish and Mr. Burke in Phœnix Park, Dublin.

IO. (1) In Greek mythology, the beautiful daughter of Machus, king of Argos, changed by Hera (Juno) in a fit of jealousy into a white heifer. (2) In astronomy, an asteroid, and also a satellite of Jupiter.

IODINE is an elementary substance originally obtained from kelp, the ashes of certain sea-weeds. It is now chiefly prepared from the S. American nitrate, or *caliche.* Iodine and its compounds are extensively used in medicine, photography, and the production of many brilliant colours.

IO'NA a small island of the Hebrides. Here St. Columba landed, with twelve disciples, from Ireland and founded a monastery, about 563, which became a great missionary centre.

IONIAN ISLANDS, THE, lying west and south of the Greek mainland, consist of seven principal islands, of which Corfu is the largest, and a number of smaller islets. They are uniformly mountainous, and enjoy a fine climate. The chief productions are olives, grapes, currants, and honey, and these form the chief exports. The imports are wheat and other grains, manufactured articles, cured fish, and hardware. The town of Corfu, on the east coast of the island of that name, is the chief town and is the seat of a university.

IPHIGENI'A in Greek mythology was the daughter of Agamemnon, who served as priestess of the goddess Artemis. She is the heroine of two plays by Euripides.

IPSWICH, the county town of Suffolk, on the Orwell. It was the birthplace of Cardinal Wolsey, and among its old buildings is Wolsey's Grammar School. The town has a considerable trade in agricultural machinery and artificial manures. It sends two members to Parliament. (For population. etc.. see p. 902.)

IRAWADI or **IRRAWADDY,** the great river of Burma, is navigable as far as Bhamo, 840 miles from the sea. About 90 miles from the Gulf of Martaban, into which it discharges its waters, the river forms a delta, with nine main channels, of which the Bassein on the west and the Rangoon on the east are the chief. Towns on its banks—Rangoon, Mandalay, and Bhamo.

IRELAND, the most westerly of the British Islands, is separated from Great Britain by the Irish Sea. Since 1801 Ireland has ceased to have a separate Parliament. The country since that date has been represented in the Imperial Parliament by 103 members in the House of Commons and by 28 representative peers in the House of Lords. It has, however, a distinct executive government, headed by the Viceroy, or *Lord-Lieutenant*, with the *Chief Secretary for Ireland* as his principal minister. Ireland has its own Privy Council, Lord Chancellor, and Attorney-General, and a Constabulary under the direct control of the Viceroy. As the King's representative the Viceroy holds courts and levées and discharges the social duties that commonly fall to a sovereign. The Chief Secretary is directly responsible to the House of Commons for the acts of the Irish Government, and therefore to a certain extent occupies the position of prime minister to the Viceroy, subject, however, to the direction of the Ministry in London. Refer to "Ireland" in *Index.*

IRELAND, CHURCHES IN. The Irish Church, of Celtic origin, was founded by St. Patrick in the 5th century, and in the two following centuries was a distinguished missionary church; for example, it sent Columba to convert Scotland. Until the 12th century it remained independent of Rome. From the 12th to the 16th century there were two churches: Anglo-Norman and Celtic, both subject to Rome. At the Reformation the former became "Protestant," the latter with four-fifths of the people remained "Catholic." The Church of the minority, however, was by law the Established Church, and so remained until 1869. In the 17th century a new element of religious confusion was introduced on the settlement in Ulster of Scottish Presbyterians. The Roman Catholics were penalised more shamefully than ever after the accession of William III., until the Catholic Emancipation Act, 1829, removed their disabilities. Since 1869, when the "Irish Church" was disestablished, the State has ceased to favour one Church more than another. The disestablished Anglican Church has about 1500 clergy, with 11 bishops and 2 archbishops; the Roman Catholic Church has about 3500 clergy, with 23 bishops and 4 archbishops; and the Presbyterian Church about 700 ministers.

IRENÆ'US, SAINT, supposed to have been a native of Smyrna, was born probably between 120 and 140 A.D. He was a pupil of Polycarp and Papias. He became a presbyter, and at a later period bishop of Lyons. He actively opposed the Gnostics, and wrote several works in defence of the Christian faith. Except a fragment in Greek, entitled "Adversus Hæreses," all his writings have been lost. He suffered martyrdom at Lyons in the persecution of Septimius Severus in 202.

IRETON, HENRY, *b.* 1610, *d.* 1651; was a general in the Parliamentary Army in the Great Rebellion. He married a daughter of Cromwell, and took a leading part in the trial of Charles I. During the Commonwealth he assisted in the reduction of Ireland, and died at Limerick.

IRIS—"the rainbow,"—(1) in Greek mythology a goddess of Olympus, a messenger of the gods to men frequently mentioned in the Iliad of Homer. (2) In botany the name of the common flag of our gardens. (3) In anatomy, the coloured portion of the eye surrounding the central pupil. It is sensitive to light and contracts or expands as the light increases or decreases.

IRISH GUARDS formed in 1900, by command of Queen Victoria, in recognition of the gallantry of her Irish soldiers in the Boer War. See *Guards, The.*

IRISH PARLIAMENT. An Irish Parliament, so-called, existed long before the Tudors, but it had no representative character. Henry VIII. was the first to summon chiefs of the native Irish to a parliament in Dublin, but it was not until the reign of George III. that the Irish Parliament exercised any authority of its own. Its complete subservience to the English Parliament, previous to that reign, is plainly set forth in *Poynings' Law* (which see). Ireland's opportunity came with England's peril in the course of the American War of Independence. In 1778 Grattan began his illustrious career, and by 1782 succeeded, with the aid of Flood and Malone, in securing the independence of the Irish Parliament. At first no Irish Catholic could sit as a member, or even vote for one. The right to vote was at length conceded, but a Bill entitling Catholics to become members was vetoed by the King, who also refused to sanction the removal of many other of their disabilities. Irish discontent led to the rebellion of 1798. When this had been put down Pitt by unscrupulous means induced the Irish Parliament to pass the Act of Union, which came into force in 1801. See *Grattan, Henry.*

IRKUTSK, capital of East Siberia, on the Angara, not far from Lake Baikal. It is the largest city in Siberia, and a great centre of the tea and fur trade. Population exceeds 50,000.

IRON is almost always found as an ore, either as an oxide or a sulphide. The two common forms of the oxide are the red hæmatite and brown hæmatite, both rich in iron, and as they do not contain sulphur can be at once smelted. The common form of the sulphides is the clay iron-stones. These are always roasted before being smelted. Iron as obtained by smelting is very brittle, and hence neither malleable nor ductile; both these qualities are obtained by the process of refining and puddling.

IRON AGE is that period in the history of man when his implements and weapons were made of iron. This period succeeded the Bronze Age, and this the Stone Age, when his weapons were made of flint. It

is not known at what period of time, nor in what country, the iron age commenced.

IRON DUKE, THE, was the name given in his latter years to the Duke of Wellington, on account of his strong, iron constitution, coupled with his personal intrepidity and great moral courage.

IRON GATES, the name given to that part of the Danube which flows through a narrow gorge between the Carpathians and an offshoot of the Balkans, a little above the town of Gladdova. The river here flows over a bed of jagged rocks, which, until 1849, formed an effectual barrier to all vessels drawing more than 2½ feet of water. The obstruction formed by these rocks has since been removed by blasting.

IRONSIDES, the name given to the troopers of Cromwell's army, because they were sober, solid, brave, God-fearing men, who could be relied on to stand firm in the severest shock of battle.

IRONY is that mode of speech by which a speaker conveys a meaning the direct opposite of that which the words naturally express. See 1 Kings xviii. 27.

IROQUOIS, a confederation of the Mohawks and other Indian tribes in North America, known to the English as the "five nations." In the struggle with the French for supremacy in North America, they sided with the English, whose fortunes they also shared in the American War of Independence. On the conclusion of that war the Mohawks removed in a body from the United States and settled in Canada, north of Lakes Erie and Ontario.

IRREDENTISTS, the name of a political party in Italy, which, in 1876, was placed at the head of the Government, and raised the cry of "Italia Irredenta,"—that is, the redemption or recovery of those territories which at one time formed part of Italy, and were then in the occupation of other Powers. The movement did not, however, make much progress, and soon ceased.

IRVING, EDWARD, *b.* at Annan 1792, *d.* 1834, a celebrated Scotch minister. He became famous as a preacher in London, but his peculiar doctrines respecting the gift of tongues and of prophesying led to his deposition by the Presbytery of Annan. He subsequently founded the Irvingite or "Catholic Apostolic Church," which still survives, though its members are few.

IRVING SIR HENRY *b.* 1838, *d.* 1905, whose real name was John Henry Brodribb. began his career at Sunderland, in 1856, as Gaston in *Richelieu.* In 1866 he first played to a London audience at St. James's Theatre, and in 1871 made his first appearance at the Lyceum, where during the next thirty years he not only raised himself to the top of his profession but did much to raise the profession itself in public estimation. His fame began with his representation of Mathias in *The Bells,* was reinforced by his interpretation of Hamlet. and firmly established by a long series of successful performances in association with Miss Ellen Terry, who joined him in 1878 on his becoming lessee of the Lyceum. In 1895 he was knighted.

IRVING, WASHINGTON, *b.* at New York, 1783, *d.* 1859; an American essayist and novelist. He wrote a burlesque history of New York, and after travelling in Europe published his "Sketch Book" and "Tales of a Traveller."

IRVINGITES, followers of Edward Irving after his deposal by the Presbytery of Annan. They formed the "Catholic Apostolic Church," which has a four-fold order of ministry—apostles, prophets, evangelists, and teachers.

ISAIAH, the greatest of the Hebrew prophets, who prophesied in the days of Uzziah, Jotham, Ahaz, and Hezekiah, kings of Judah, from about 700 or 710 B.C. He is sometimes called the "Evangelical Prophet," on account of the many remarkable Messianic prophecies in the book that bears his name; but in the opinion of many scholars of repute the latter part of Isaiah (chapters xl.–lxvi.) is the work of a later prophet, who is spoken of as *Deutero-Isaiah,* the second Isaiah.

ISANDLANA, in Zululand, ten miles from Rorke's Drift, where a body of British troops, in 1879, was almost annihilated by an overwhelming Zulu force. Out of 800 British soldiers only 40 escaped.

ISHTAR, a Babylonian deity who seems to have united in her person the attributes of Venus and Mars, being regarded as the goddess of love and war.

ISINGLASS, a gelatine prepared from the air-bladder of the sturgeon and other fishes and used in confectionery and for clarifying wines.

ISIS, one of the chief divinities of Egypt in ancient times. She was worshipped as the moon-goddess, the wife of Osiris, the sun-god. She was represented in the form of a woman with the horns of a cow, as they were supposed to symbolise the crescent moon. She was regarded as the mother and nurse of all things good and beautiful.

ISLAM, the religion of Mohammed. Refer to *Index.*

ISLE OF MAN, situated in the Irish Sea, midway between England and Ireland; area 220 square miles, population about 55,000. Many of the inhabitants are engaged in mining and fishing. Chief towns are Douglas, the capital, Castleton, Ramsey, and Peel. The natives, who are called Manx, enjoy complete home rule, but they have no representative in the House of Commons. The legislative body, called the "House of Keys," is composed of 24 members. The arms of the island are formed of three legs.

ISLE OF FRANCE. See *Mauritius.*

ISLE OF WIGHT, situated off the coast of Hampshire, from which it is separated by Spithead and the Solent; area 135 square miles, population about 80,000. It is noted for its picturesque scenery The chief places of interest are Carisbrooke Castle, where Charles I. was confined in 1647; Osborne House, a residence of Queen Victoria, but now a convalescent home for officers and a college for naval cadets; Shanklin and Blackgang, each with its chine; and Ventnor with its convalescent homes. The chief towns are Newport, Ryde, and Cowes.

ISMAIL PASHA, *b.* 1830, *d.* 1895; was a grandson of the celebrated Mehemet Ali. He made Egypt virtually independent of the Sultan of Turkey, and in 1873 was acknowledged by him as Khedive, with the right of succession in his family. He engaged in great public works, the chief of which was the construction of the Suez Canal; but he became so involved in debt that he sold his shares in the Canal to the British Government. His extravagance led to the dual control of Egypt by France and England, and ultimately to his abdication, 1879. He was succeeded by his son, Tewfik.

ISMAILIA, a town in the Isthmus of Suez, 46 miles south of Port Said. It came into existence during the construction of the Suez Canal, and is the centre of the engineering works connected with it.

ISOBARS are lines drawn through those points on the earth's surface where the mean pressure of the atmosphere is the same.

ISOCRATES, (a-tes) a Greek orator and friend of Plato, who wrote orations for others to use. Of these twenty-one are extant. He died in 338 B.C., at the age of 97.

ISOTHERMAL LINES are those drawn on a map or globe to show the places which have the same mean annual temperature. Latitude alone does not determine this, but elevation, prevailing w nds, distance from the sea, and other circumstances.

ISPAHAN', the ancient capital of Persia, and still its second city. It is situated in the midst of a fertile plain in the centre of the country, and is the seat of important manufactures. It still possesses many relics of its ancient splendour. It was captured by Tamerlane in 1387, and sacked by the Afghans in 1722; popula tion about 60,000.

ISTHMIAN GAMES, THE, were those celebrated on the Isthmus of Corinth from pre-historic times in alternate years. The games included a variety of athletic performances, horse and chariot racing, and contests in music and poetry. The prize was a simple wreath of parsley, pine, or ivy, but it shed lustre not only on the victor but on his family and city.

ITALIA IRREDENTA, "unredeemed Italy," embracing those districts out of Italy where the Italian speech prevails. such as Southern Tyrol, Trieste, Istria. and Dalmatia. See *Irredentists.*

ITALY consists of a peninsula stretching into the Mediterranean Sea, with Sicily and Sardinia, and many small islands. Italy is noted for its sunny skies, beautiful flowers, and fine fruits. Among its famous cities, with their treasures of art, are Rome, Naples, Milan, Florence, Venice, and Turin. It is also interesting for its volcanoes—Etna, Vesuvius, and Stromboli, and for the remains of the buried cities of Herculaneum and Pompeii. Its mineral products are marble, mineral ores, and sulphur; its chief exports — olive oil, wine, candied fruits, silk, and works of art; its fisheries are highly valuable; its manufactures suffer from want of coal. Area 110,000 square miles, population upwards of 32,000,000.

ITALY, KINGDOM OF. Before 1859 Italy was under the rule of many sovereigns, the chief being the Austrian Emperor, the King of Sardinia, the Pope, and the King of Naples and Sicily. In the first half of the 19th century the Italians had made many futile attempts to free themselves from the tyranny of their rulers. In 1859 the French under Napoleon III. united with Victor Emmanuel, king of Sardinia, to help the Italians to throw off the yoke of Austria. As a result of the victories of the allies over the Austrians at Magenta and Solferino, Lombardy was made part of the kingdom of Sardinia. Four of the smaller states of Italy were also by their own desire annexed to that kingdom. In 1860 Garibaldi drove the king of Naples and Sicily out of his dominions, and proclaimed Victor Emmanuel King of Italy. In 1861 the first Italian Parliament was held at Turin. In 1866 Austria ceded Venetia to the king of Italy, and in 1870 the union of Italy was completed by the withdrawal of Rome from papal authority.

ITO, PRINCE, *b.* 1838, a Japanese statesman, who spent much time in Europe and America, studying the educational and military systems as well as the various constitutional forms of government. Returning to his own country he became the leader of all the great reforms, which, commencing in 1871, gradually transformed Japan and raised it to a first-rate power. Assassinated at Harbin, 1909.

IVAN THE GREAT, the founder of the monarchy of Russia, began his reign in 1462. He abolished Tartar rule, and

brought the various provinces and principalities of Muscovy under a central government. He was nevertheless a brutal tyrant, and most of his successors during the next two centuries were of the same character. His immediate successor, known as "Ivan the Terrible," was the first to assume the title of *Tzar*.

IVEAGH (Edward Cecil Guinness) **BARON**, *b.* 1847, at one time head of the great brewery firm of Guinness, Dublin. On the sale of the business in 1889 to a company for £5,200,000, he gave £250,000 to build workmen's dwellings, to be let at low rents, one-fifth to be expended in Dublin and the rest in London. He was created a baron in 1891. He has also expended £250,000 in clearing an insanitary area in Dublin, building thereon workmen's dwellings, baths, concert hall, &c.; and £250,000 to the Jenner Institute in London for the study of Preventive Medicine.

IVORY is obtained from the tusks of the elephant, hippopotamus, walrus, narwhal, and sperm whale. African elephants yield much more ivory than the Indian, and also of a better quality. The value of the ivory depends much upon the size of the tusks, as well as their texture and colour. In 1902 more than 10,000 cwt. was imported into England, valued at £400,000. Most of the ivory used in Russia is obtained from the fossil tusks of the mammoth, a gigantic elephant now extinct. Ivory has from ancient times been used for ornamental purposes. The most skilful ivory-carving at the present day is executed in India and China.

IVORY GATE, THE. In the mythology of Greece and Rome the gate of sleep, through which false dreams are sent from the lower world.

IXI'ON, in Greek mythology, king of the Lapithæ, who for his base ingratitude to Zeus (Jupiter), was punished by being chained to a fiery wheel ever revolving n the world below.

JABIN, king of Hazor in Palestine, the head of a confederacy of native princes opposed to Joshua, who defeated them utterly at the Waters of Merom, about 1450 B.C. See Jos. xi. 7, 8.

JACK AND JILL, a nursery rhyme founded apparently on the Icelandic myth, that two children thus named were kidnapped by the moon while carrying water in a bucket between them.

JACKSON, "STONEWALL," *b.* 1824, *d.* 1863; an American general who fought on the Confederate side in the Civil War. At the first battle at Bull's run, 1861, he and his men stood as firm as a wall, enabling their comrades to rally, and ultimately win the day. From that day, "Stonewall" was the name his firmness at a critical moment earned for him. After the battle of Chancellorsville, while returning from a reconnaissance beyond the lines, he was mistaken for the enemy, and mortally wounded by his own men.

JACOBINS, the members of a French political club formed at the outbreak of the French Revolution in 1789, and so called from the Jacobin convent, in Paris, in which they held their meetings. The club had branches all over France, and became the greatest power in the land, all the great events which happened during the "Reign of Terror" being determined by it. The fall of Robespierre, its president, in 1794, led to its dissolution.

JACOBITES, the adherents of James II. after his abdication, and of his son and grandson, the two Pretenders. They rose in rebellion in 1715 and 1745. The name is derived from *Jacobus*, the Latin form of James.

JACOBS, WILLIAM WYMARK, *b.* 1863, entered the Post Office Savings Bank, 1883. In 1896 he commenced publishing a succession of amusing books of tales and sketches of nautical life, including "Many Cargoes," "The Skipper's Wooing," "A Master of Craft," "Light Freights," "The Lady of the Barge," and "Captains All."

JACOTOT, JEAN JOSEPH, *b.* 1770, *d.* 1840, a well known French educationist, who devised a new method of teaching founded on certain paradoxes—such as "Tout est dans tout"—at the root of which lay a truth of great importance. His great practical maxim was "Répétez sans cesse."

JACQUARD, JOSEPH MARIE, *b.* at Lyons, 1752, *d.* 1834; inventor of the Jacquard loom, which turns out figured silks. His invention at first aroused the wrath of the workers in silk, but they learnt to regard him as the best friend of their trade. His statue was erected at Lyons in 1840, on the spot where nearly 40 years before his loom had been destroyed by a mob.

JAC'QUERIE is the name given to a revolt of the French peasants against the privileged classes, in 1358, after the name assumed by their leader, *Jacques Bonhomme*. It was put down with ruthless severity at the cost of 12,000 lives.

JADE is a hard, tough, silicious rock of a leek-green colour, with a smooth surface. It takes a fine polish, and is much used for ornaments in China and Japan, and by the natives of New Zealand.

JAEL, the wife of Heber the Kenite, secretly killed Sisera while he was asleep in her tent. See Judges iv. 21.

JAINAS or **JAINS**, a sect of Hindus, the followers of Jina, a sage who is held to have attained omniscience, and who comes to reform abuses. A *Jina* appears at intervals, and on his decease he is worshipped as a deity. The sect numbers about 400,000.

JAMAICA, the largest of the British West Indies, area about 4,000 square miles; population about 650,000, three-fourths of whom are negroes. From the sea-coast the land rises by a series of ridges culminating in the W. Peak of the Blue Mountains, 7,360 feet high. Kingston, with a good harbour, is the capital. In January, 1907, great havoc was wrought in and around Kingston by an earthquake, and more than 700 persons were killed. Jamaica exports sugar, coffee, dyewoods, rum, bananas, and other fruits. It was captured by the British during the Commonwealth, in 1655.

JAMES, three of this name are mentioned in the New Testament. (1) James, the son of Zebedee, an apostle put to death by Herod Agrippa I. (Acts xii.) (2) James the son of Alphæus, also one of the twelve Apostles. (3) James, "the Lord's brother." It is probable that the last named is the James who presided at the Council of Jerusalem (Acts xv.) and wrote the Epistle of St. James.

JAMES IV. OF SCOTLAND, reigned 1488–1513, married Margaret, daughter of Henry VII., of England, a marriage which resulted in the accession of his grandson, James VI., to the throne of England. As the ally of France he led an army across the Border, and was defeated and slain at the battle of Flodden Field, 1513.

JAMES I. OF ENGLAND, who reigned 1603–25, was the first king of Great Britain. He was the son of Mary Queen of Scots and Lord Darnley. He had an excessively high opinion of his kingly office and dignity, believing in "the divine right" of kings, and in the duty of "passive obedience" on the part of their subjects. He had great learning but little common sense, and was wittily called "the wisest fool in Christendom." James was usually under the influence of some favourite, such as George Villiers, whom he created Duke of Buckingham. In his reign there was a constant struggle for power between King and parliament, which was continued in the reign of his successor, and ended in the great Rebellion.

JAMES II, son of Charles I, reigned 1685–88. Owing to illegal acts in his endeavour to re-establish the Roman Catholic religion in England, he was obliged to flee the country. After making an unsuccessful attempt in Ireland to regain the crown, he finally retired to St. Germains, in France, where he died, 1701.

JAMES, GEORGE PAYNE, *b.* in London 1801, *d.* at Venice 1860; was the son of an eminent physician. When quite young he showed literary talent, and became a prolific writer, being the author of at least 60 works of fiction, besides several historical works.

JAMESON, MRS., *b.* 1794, *d.* 1860; the daughter of an Irish miniature painter, was an authoress of repute. In 1842 she began to write on art subjects, and gained distinction by her work on "Sacred and Legendary Art."

JAMESTOWN, on the James river in Virginia, was the first permanent English settlement in America, founded in 1607, and named after the reigning sovereign, James I.

JAMRACH, JOHANN, *b.* at Hamburg 1815, *d.* in London 1891, a celebrated collector of wild animals, and dealer in all kinds of zoological curiosities.

JAN'ISSARIES, a body of Turkish infantry formed about 1330 as the Sultan's body-guard, and consisting at first chiefly of Christian captives. It was dissolved, 1826, after a revolt purposely provoked, it is said, by the Sultan Mahmud II.

JANUARIUS, SAINT, a native of Benevento, and bishop of that see, who suffered martyrdom under Diocletian, about the close of the 3rd century. His head and two phials of his blood are preserved as relics at Naples, and on certain occasions the relics are carried to the high altar, where, after prayer, the blood is believed to liquefy, and in this condition is presented to the people for their veneration.

JANUS, an ancient Latin deity, who presided over the beginning of everything, and was therefore invoked first in every undertaking; hence the first month of the year is named after him. At Rome a covered passage (not a temple), bearing his name, was closed only in the rare occurrence of peace throughout the Empire. He is represented with two faces, denoting peace and war; and he holds a sceptre in his right hand and a key in his left, to signify his guardianship of gates and doors, as the opener and the shutter. (*Janua*=door.)

JAPAN consists of four large islands, and about 3,000 small ones; area 160,000 square miles; population about 46 millions. Since 1870, Japan has adopted, to a great extent the arts, mode of government, and civilisation of western nations. The principal towns are Tokio the capital, with Yokohama as its port, Kioto, Osaka, and Nagasaki. The chief exports to England are rice, silk, camphor, antimony, porcelain, and lacquered wares; the chief imports, cotton and woollen goods, machinery, sugar, and petroleum.

JAPANNING is the art of coating wood, metal, etc., with a hard durable varnish, in imitation of the famous lacquered work of Japan. Black japan for tinned-iron goods consists of an intimate mixture of asphaltum, gum, and linseed oil, applied in layers, which layers are successively hardened at about 200° F., and finally polished by rubbing.

JARRAH is a hard, durable wood resembling mahogany, obtained in West Australia from the *eucalyptus marginata*. It is much used in England for street paving.

JARROW, a town on the Tyne, near Newcastle, in the county of Durham, important for its shipbuilding and iron works and export of coal. The Venerable Bede spent his early years in Jarrow monastery; population about 35,000.

JASON was the leader of the Argonauts on their voyage to Colchis to gain the golden fleece, which was guarded by a sleepless dragon. By the aid of Medea, daughter of the King of Colchis, they succeeded, and Jason married Medea. After ten years Jason married Glauce, daughter of a Corinthian king, and Euripides, in one of his greatest tragedies, has dramatised the story of Medea's revenge. Jason, on a subsequent voyage, was shipwrecked, and saved only to meet his death by being crushed by the poop of the ship "*Argo*."

JASPER is an opaque variety of quartz, generally red or brown in colour, but sometimes striped wth green or yellow. It takes a high polish, which renders it valuable for ornamental purposes.

JAVA is the most important Dutch possession in Southern Asia: capital, Batavia. It has a rich vegetation due to a volcanic, therefore fertile, soil, a warm climate, and a population of twenty-six millions, which is forced to be diligently agricultural under the old Dutch "system of culture." Home grown rice is the staple food, and Javanese coffee is highly prized. The Dutch have governed the island since 1595, except for the six years (1811–17), when it was captured and held by the British.

JEAMES is colloquially used for a footman or flunky, and is another form of James. Thackeray created the name in his "Yellowplush Papers."

JEANNE D'ARC, Joan of Arc, Maid of Orleans. Henry VI. of England claimed the throne of France, by the Treaty of Troyes, 1422, on the death of Charles VI.; and the English regent in France, the Duke of Bedford, was supported by the Burgundians against the Dauphin Charles and the Orleanists. The English over-ran the north of France, and invested Orleans, the only city of importance left to the Dauphin, when their victorious career was checked by this heroine of the Middle Ages. Stirred by visions of "our lady of Bellemont," commanding her to help the French, she sought the presence of Charles, who, half in earnest, half in despair, entrusted her with the leadership of his troops. Such a striking leader inspired the followers with a fanatic enthusiasm for their cause, and a succession of French victories led to the raising of the siege of Orleans, and the crowning of Charles at Rheims, 1429. Joan, leading a sally at Compiègne, was captured by the Burgundians and handed over to the English. Condemned as a sorceress, she was sent to the stake at Rouen, May 30th, 1431.

JEDBURGH, county town of Roxburghshire, possesses the ruins of a famous abbey of the twelfth century. It saw stirring times in the Middle Ages, and originated "Jeddart Justice," a lynch law by which a man was hanged and then tried.

JEFFERIES, JOHN RICHARD, *b.* 1848, *d.* 1887; commenced literary work as a journalist and writer of newspaper articles and magazine essays on rural and agricultural subjects. In 1878 he published "The Gamekeeper at Home," which at once established his fame as a writer minutely acquainted with life in the fields, woods, and hedgerows of Southern England. This was followed by "Wild Life in a Southern County," "The Amateur Poacher," "Life of the Fields," "Red Deer," and other similar works.

JEFFERSON, THOMAS, *b.* in Virginia, 1743, *d.* 1826; a great American statesman, and third president of the United States. He drafted the "Declaration of American Independence," which was adopted July 4, 1776. He was strongly in favour of giving a large measure of independence to individual states, and drew up the constitution for Virginia. In 1801 he became president, and was re-elected in 1805.

JEFFREY, FRANCIS, LORD, *b.* 1773, *d.* 1850; was called to the Scottish bar in 1794, and soon obtained a great reputation. In 1802 he was made editor of the *Edinburgh Review*. His editorship and his brilliant critical contributions brought him great fame. His writings have been published in four volumes.

JEFFREYS, JUDGE, *b.* Denbigh, 1648, *d.* 1689; a famous and most infamous English lawyer. By his marvellous skill in cross-examination he rose in his profession, becoming Recorder of London in 1678. After Monmouth's rebellion he was sent on the Western Circuit to try the rebels, and the "Bloody Assize" resulted in 320 recorded deaths. His hideous glare, hard features, and fierce shouts, terrified his victims, and his drunken habits almost led to his own death. On the flight of James II. Jeffreys disguised himself, but was identified by an attorney, and narrowly escaped death by the mob, only to die miserably in the Tower.

JEHOSHAPHAT, VALLEY OF, is mentioned by the prophet Joel as the place where Jehovah would gather the heathens after the captivity, to judge them for their misdeeds to Israel. Whether merely a visionary spot, or the valley so-named, lying between Jerusalem and the Mount of Olives, is doubtful.

JEHOVAH, the sacred Old Testament name for God, so sacred that the Hebrews seldom, if ever, spoke the word, using as a substitute Adonai or Elohim. The primitive meaning of Jehovah was, "I am that I am," or "The eternal," but its meaning gained in fulness as the Jewish religion invested the name with all the attributes of a national deity.

JEHU, son of Nimshi, (2 Kings ix. 20), a leader in the army of Jehoram, king of Israel, anointed king by order of Elisha. He brought about the death of Jehoram, Ahaziah, and the infamous Jezebel, and his cruelty towards the relations of his victims, and the priests of Baal is almost unequalled in Jewish history. "Jehu" is now a slang word for a coachman.

JELALABAD, in Afghanistan, half-way to Cabul from the Indian frontier, and famous for its defence against the Afghans by Sir R. Sale, 1842.

JELLY FISH, sea-blubbers, and sea-nettles are all popular names for the bell-shaped Medusæ, which, lying on the sands, resemble a mass of jelly. They vary in size from a few inches up to twenty feet, with tentacles carrying stinging cells, which often seriously annoy swimmers. See "Jelly-fish Stings" in *Med. Dict.*

JEMMAPES, a manufacturing village near Mons in Belgium, and the scene of an Austrian defeat, 1792, which gave France possession of Belgium.

JENA, a town in Saxe-Weimar, Germany, near which Napoleon gained a decisive victory over the Prussians in 1806.

JENGHIZ KHAN (1162–1227 A.D.), a Mongol emperor, and one of the world's greatest conquerors. After consolidating the various Mongolian tribes, he twice overran China. His envoys to Transoxiana being executed, his army started on its great career of conquests. They looted Bokhara and Merv, drove the Turks into their present European homes, whilst part of his forces successfully ravaged southern Russia and northern India. Death overtook him whilst over-running China for the third time, but the news was prevented from prematurely reaching Mongolia, by the slaughter of all who encountered the funeral procession.

JENKINSON, ANTHONY, a famous trader and traveller of Elizabeth's reign. He travelled in the Levant, and afterwards to the White Sea, and obtained trading privileges for the English Muscovy Company. He was the first Englishman to penetrate to Khiva and Bokhara, and the records of his adventures are intensely interesting and instructive.

JENKINS, ROBERT, captain of a West Indian trading vessel, asserted before the Parliament of George II. that the Spaniards, after fruitlessly searching his ship for contraband, cut off his ears, which he dramatically produced. Report said he lost these in the pillory; but his case so suited the temper of the nation that Walpole, the Prime Minister, was forced against his will into war with Spain, 1739.

JENNER, EDWARD, *b.* Berkeley 1749, *d.* 1823: apprenticed near Bristol, and educated under the celebrated surgeon, John Hunter, he practised medicine in his native town. Many physicians knew the popular idea regarding cow-pox, as conferring immunity from small-pox, but Jenner demonstrated the truth of this fact, and introduced a method of propagating cow-pox by inoculating one person from another. This process, under the name of "vaccination," gradually gained acceptance. He was rewarded by a grant of £30,000 from Parliament, and he won world-wide professional honours.

JENNER, SIR WM., *b.* at Chatham, 1815, *d.* 1898; a celebrated English physician, who became physician in ordinary to Queen Victoria, 1862. He was made a baronet, 1868, and was President of the College of Physicians, 1881-8. He was the first to distinguish clearly between typhus and typhoid. He attended the Prince Consort in his last illness, 1861, and the Prince of Wales in his attack of typhoid in 1871.

JENNINGS, SARAH, favourite of Queen Anne, and wife of the great Duke of Marlborough. She was on such familiar terms with the Queen that they agreed to address each other, the Queen as Mrs. Morley, and the Duchess as Mrs. Freeman. At length her imperious conduct led to her downfall, her place in the Queen's affection being taken by a Mrs. Masham.

JEPHTHAH, an illegitimate son of Gilead, who, for defeating the Ammonites, was made judge in Israel. Jephthah's vow, to sacrifice in honour of his victory the first thing emerging from his house, unhappily led to the sacrifice of his own daughter. His defeat of the Ephraimites who disputed his authority is remarkable for the means employed to identify the fleeing enemy by their inability to pronounce "Shibboleth."

JERBOAS, or jumping mice, are fawn-coloured burrowing mammals, having a body about eight inches long, short fore legs, and very long hind legs enabling them to take enormous leaps. They live in colonies, collect roots and grain by night, and store food for winter use. They are found in Asia, Eastern Europe, and Africa.

JEREMIAH, son of Hilkiah of Anathoth, near Jerusalem, one of the great Hebrew prophets. But a "child" when called to his prophetic office (629 B.C.), he passed through the troublous times of Josiah and Jehoahaz. Jehoiakim burned the roll he had dictated to Baruch, foretelling the coming of Nebuchadnezzar; and for similar

prophecies, the princes of Zedekiah cast him into a miry dungeon, from which he was rescued by Nebuchadnezzar. He was granted an asylum with Gedaliah, the governor for the Babylonians, but was carried by the murderers of Gedaliah to Egypt, where he is said to have been stoned to death, about 580 B.C.

JEROBOAM, son of Nebat, the first king of Israel (the ten tribes). On the death of Solomon, 975 B.C., he was chosen by ten of the tribes of Israel as king instead of Rehoboam, Solomon's son, who reigned over Judah and Benjamin, the remaining two tribes. Jeroboam set up golden calves at Dan and Bethel for the people to worship, and, in spite of prophetic warnings, continued the idolatrous worship of the calves, gaining the infamous title of the "man who made Israel to sin."

JEROME, SAINT, *b.* 340. *d.* 420 A.D. One of the most learned of the Latin fathers. His early life is not altogether blameless, but after a serious illness at Antioch he became a devout recluse and student. Returning to Rome, he became Secretary to Pope Damasus. After the death of this pontiff he entered a monastery at Bethlehem, and devoted himself to the study of Hebrew and Theology. He produced a Latin version of the Scriptures, which, under the name of the "Vulgate," still remains the authorised version in the Roman Catholic Church.

JEROME OF PRAGUE, *b.* 1360, *d.* 1416. Educated at Prague, he came to Oxford, where he imbibed those principles which led to his subsequent preachings against the abuses of the hierarchy, and the loose morals of the clergy. Favoured in Poland and Hungary, he rashly journeyed to Constance to aid John Huss, and was seized by the Duke of Bavaria, and condemned for his errors against the Catholic faith. His imprisonment temporarily broke his spirit, and he retracted, but afterwards he disowned his retractation and bravely met his fate at Constance, where he was publicly burned, about a year after the martyrdom of Huss.

JERROLD, DOUGLAS, *b.* London 1803, *d.* 1857; a kindly and distinguished dramatist and humourist. Relinquishing a seafaring life, he rose from compositor to dramatic critic, through his critique on Der Freischütz, anonymously submitted. As play-wright his "Black-Eyed Susan," 1829, drew an audience for three hundred nights. His contributions to *Punch*, especially of "Mrs. Caudle's Curtain Lectures," and the increased circulation of *Lloyd's Weekly Newspaper*, under his editorship, testified to his success in periodical literature.

JERRYMANDERING, political trickery, such as manipulating the boundaries of electoral divisions, to the unfair advantage of a certain party, after the manner of Governor *Jerry* of Massachusetts.

JERSEY, largest of the Channel Isles; capital St. Helier. Fertile, picturesque, and with a mild climate, it offers inducements to tourists. Its early potato crop brings it £250,000 annually. The ordinary and legal language is French; population about 60,000.

JERSEY CITY, on the west side of Hudson river, opposite New York, a typically busy American city, of rapid growth (population 7,000 in 1850, now 170,000), and manufacturing importance.

JERUSALEM, the well known sacred city in Palestine, standing on the hills of Zion, Acra, Moriah, and Bezetha, and thus a natural fortress almost impregnable in ancient times. Its early history is Biblical. The Jebusites, its earliest inhabitants, were defeated by Joshua and David, the latter making it his capital, 1049 B.C. Successive attacks by Egyptians, Assyrians and Babylonians bring us to its destruction by Nebuchadnezzar, 588 B.C., and the Jewish Captivity. Though rebuilt by Ezra and Nehemiah, under edict from Cyrus, it knew no peace, being sacked by Ptolemy Soter, and only regained its independence for a time under the Maccabees, 165 B.C. It fell under the power of Rome, 37 B.C., and was utterly destroyed by Titus 70 A.D. The Moslems have held possession since 637, except for the temporary possession by the Crusaders in the twelfth century.

JERUSALEM, COUNCIL OF. See *Apostolic Council.*

JERUSALEM CHAMBER, on the south-west side of Westminster Abbey, so called from including in its original decorations a view of Jerusalem, and scriptural references to it. It dates from the 14th century. Here Henry IV. died, and here, in 1870, the committee met to revise the Authorised Version of the Bible.

JERVIS, SIR JOHN, Earl of St. Vincent, *b.* at Meaford 1734, *d.* 1823. Entering the navy as a boy, he became commander after the capture of Quebec, 1759. As Vice-Admiral he reduced the West Indies, and gained his earldom for his victory over the Spaniards off St. Vincent, 1797. He does not rank high as a tactician, but he was a master of good order and discipline

JESTERS, COURT, "Court fools," a regular institution of early times. These buffoons, in motley, with hood surmounted by a cockscomb and bells, made sport of all even to the king, emphasizing their antics with the bauble or stick from which depended a blown bladder. Among the famous jesters were Dagonet of King Arthur, Scogan of Edward IV., Yorick of Denmark, and Archy Armstrong of Charles I. The Court fool did not survive the Puritanical spirit of the Commonwealth.

JESUITS, members of the Society of Jesus, a prominent Roman Catholic religious order, founded 1534, and sanctioned by papal bull, 1540. A severe training and a high standard in education were demanded of the members, with rigid vows of chastity, poverty, and absolute obedience to the "general" of the order. Within a few years they were established in most European countries, numbering 12,000 in 1640 and 24,000 in 1740. They also founded important establishments in India, China and S. America. They considered ends rather than means, they employed subtle distinctions to justify their methods, and they were very often accessory to political plots. Pascal's witty "Provincial Letters" represent the feeling of opposition that was abroad against the order. The year 1759 saw their suppression in Portugal, followed rapidly in France and Spain; and finally, as a measure to preserve peace in the Church, Pope Clement XIV. disbanded the order in 1773. They were rehabilitated by Pope Pius VII., 1814, and are still tolerated in Switzerland, the Netherlands, the British Empire, and the United States.

JET, a compact black variety of lignite (brown coal), easily carved and polished, and so, especially suitable for the making of mourning jewellery. Whitby, in Yorkshire, is the seat of the English industry, but jet is now being supplanted by the use of vulcanite.

JETHRO (Raguel or Reuel), a priest or prince of Midian, father-in-law of Moses. Visiting Moses at Sinai he wisely counselled him to appoint a council to assist him in his arduous administration (Exod. xviii. 21.)

JEUNESSE DORÉE, a party of Parisian youths under de Fréron, aiming at a counter revolution on the fall of Robespierre, 1794. *Jeunesse Dorée*, "gilded youth," is now the equivalent of fop or coxcomb.

JEWELL, JOHN, *b.* near Ilfracombe 1522, *d.* 1571; a father of the English Reformation. On Mary's accession he recanted his Protestantism of the previous two reigns, but at Frankfort he made a public retraction of his recantation, and by Elizabeth was awarded the bishopric of Salisbury. His teaching was based entirely on Christ and the gospels, and a copy of his "Apology for the Church of England" was to be found chained in every church for a hundred years after his death.

JEWELLERY, or Jewelry, personal ornaments, which are often of great value from their being made of precious metals, or decorated with costly gems. The term is applied to the art and business of the goldsmith.

JEWS, descendants of Abraham, originally called Hebrews, then Israelites, and finally Jews on their return from captivity. Their early history is Biblical:—Abraham was blessed by God, the blessing passed on to Isaac, thence to Jacob, from whom descended the twelve patriarchs, ancestors of the tribes. Joseph found a home for his kinsmen in Egypt, whence Moses led their descendants to Canaan, the Promised Land. This land was conquered by Joshua and administered by judges till the days of Saul. Their captivity in Babylon, their return by Cyrus' leave and rule by governors, such as Ezra and Nehemiah, bring us towards the end of Old Testament history. Their subsequent history is that of Jerusalem. The Jews are now a scattered race, numbering about 6,000,000 in Europe. The mention of Mendelssohn, Rubenstein, Heine, and Meyerbeer indicates the Jewish wealth of genius, yet the Jews have generally been persecuted. The French, after the Revolution, were the first to treat them on terms of equality, but it was not until 1858 that we finally removed all the disabilities of the Jews, as citizens, by opening the doors of Parliament to any Jew who could secure his election.

JEZEBEL, daughter of Eth-Baal, a Zidonian king, wife of Ahab, King of Israel. She treacherously obtained Naboth's vineyard, bringing upon herself, through Elijah, the judgment: "the dogs shall eat Jezebel by the walls of Jezreel." This was literally fulfilled when Jehu headed a rebellion and entered Jezreel as victor. (2 Kings ix.)

JEZREEL, a royal city of the kings of Israel, sixty miles north of Jerusalem.

JIDBALLI, Somaliland, where General Egerton defeated the Mullah's troops, 1904.

JINGO is supposed to be derived from the Basque mountain soldiers employed by Edward I. in Wales swearing by *Jainko*, or "the supreme God." The term now indicates an aggressive British policy, and really dates from M'Dermott's music hall song, 1878, against Russia, (*"We don't want to fight, but by Jingo if we do."*)

JINN (sing. *Jinnee*), in Arabian demonology, beings created 2000 years before Adam, and degraded from their high estate for their disobedience to the Creator. Eblis was their chief. They had power over nature, and their services could be commanded by means of talismans. In the "Arabian Nights" the jinnee is called *genie*, e.g., the "genie of the lamp."

JOAB, son of David's sister Zeruiah, and commander-in-chief of David's army. He valiantly defeated the Syrians and Ammonites, but his share in the death of Abner, Uriah, Absalom, and Amasa shows him to have been a revengeful, ambitious leader, fully deserving the fate decreed by Solomon. (1 Kings ii. 31.)

JOAN, POPE, a mythical female Pope, supposed to have occupied the Papal chair as John VIII., 855 A.D., until the birth of a child during a public procession disclosed her sex. The whole story was a fabrication of an infamous kind.

JOAN, "The Fair Maid of Kent," *b.* 1328, *d.* 1385, wife of the Black Prince, and mother of Richard II., derived her title from her comeliness, and from becoming Countess of Kent on her brother's death.

JOAN MAKEPEACE, *b.* in the Tower of London 1321, *d.* 1362; was a daughter of Edward II., and married, 1328, to David Bruce, aged four years, to *make peace* with the Scots.

JOAN OF ARC. See *Jeanne d'Arc.*

JOB. It is doubtful whether Job as an individual ever existed. Many critics of eminence regard the Book of Job as a moral and religious apologue, designed to show that God's government of the world is inexplicable, on the theory that men's temporal blessings and afflictions are proportioned to their goodness and wickedness respectively. It enforces the duty of obedience and submission to the will of God, who will "at the latter day," Job believes, "stand upon the earth," and vindicate His faithful servants and His own righteous government.

JOBBER. Refer to *Index.*

JOCKEY CLUB, founded in 1750, to regulate horse-racing. It makes rules and regulations concerning flat-racing, arranges weights to be carried by different horses, &c.; decides all disputes, and, although it has no legal authority, its decisions are accepted by all engaged in flat-racing. The Grand National Hunt Committee, formed in 1866, performs a similar service for steeplechasing.

JOHANNESBURG, a busy gold-mining centre in the Transvaal, founded in 1887, in consequence of the discovery of rich gold-reefs in the surrounding district known as the "Rand." In less than ten years Johannesburg became a town of 100,000 inhabitants. Its growth and prosperity were only temporarily checked by the Boer War.

JOHN BULL, a personification of the English people, originated by Arbuthnot; with us, typifying good humour and honesty; on the continent, often typifying rudeness and combativeness.

JOHN COMPANY, an old title for the East India Company, derived from *Jan Kompanie,* the Eastern name for the Dutch East India Company.

JOHN, KING, *b.* Oxford, 1167, *d.* 1216. Though the favourite son of Henry II. he rebelled against his father; though favoured by his brother Richard I. he schemed to gain the throne in Richard's absence; and though crowned without dissent, murdered Arthur, his nephew, to prevent a possible rival, a murder resulting in the loss of Normandy. His rage at the Pope for not appointing his nominee to the see of Canterbury set him violently against Rome; but in the end, after his kingdom had been laid under an interdict, and he himself had been excommunicated, he submitted ingloriously to Papal authority, and received the crown as a Papal gift. His last years saw all classes of the people leagued against him, and his reluctant signing of the Magna Charta, 1215, was but the prelude of a war against his own subjects, happily cut short by death. English history paints no blacker page of ingratitude, insincerity, and cruelty than the record of John.

JOHN O'GROAT'S HOUSE, in the north of Scotland, near Duncansby Head, Caithness. Its octagonal shape, with eight doors, windows, etc., is ascribed to the desire of John of Groat (about 1500 A.D.), to prevent quarrels as to precedence at the annual meetings of his family. From John O'Groat's to Land's End is analogous to the Jewish expression, "from Dan to Beersheba," both indicating the whole length of the country.

JOHN OF GAUNT, Duke of Lancaster, *b.* Ghent (Gaunt) 1340, *d.* 1399; fourth son of Edward III. He married, as his second wife, Constance, eldest daughter of Pedro the Cruel, the deposed king of Castile. He made a futile attempt to gain the throne of Castile, but though a brave knight, he was an incompetent general. He was so unpopular with the common people that, in the course of Wat Tyler's insurrection, his palace of the Savoy in London was destroyed, 1381. His son, Henry of Bolingbroke, became Henry IV.

JOHN OF LEYDEN, a prominent leader of the Anabapists, the most fanatical Reformers of Luther's time. Seizing Münster, in Westphalia, he tried to establish a "Christ-like kingdom," 1532, but was overcome by force of arms, 1535, by the Bishop of Münster, by whose orders he suffered death by torture in the usual mediæval fashion.

JOHN, SAINT, apostle, "that disciple whom Jesus loved," was the son of Zebedee, a fisherman, and Salome. Originally a disciple of the Baptist, he accompanied Jesus during the whole of his ministry. In the early days of his ministry as an apostle Jerusalem was the centre of his activity, but in later life Ephesus became his headquarters. He suffered persecution under Domitian (95 A.D.), and after banishment to Patmos, where he probably wrote the book of "The Revelation," he died at Ephesus. Naturally of a fiery disposition —gaining with his brother James, the surname of *Boanerges,* "Sons of Thunder," he became the eloquent apostle of "Love."

JOHN SOBIESKI was chosen king of Poland, 1674, for so ably defending the country against the Russians. He aided the Austrians in driving the Turks out of their country, and reigned over the Poles until his death in 1696.

JOHNSON, DR. SAMUEL, *b.* at Lichfield 1709, *d.* in London 1784; a distinguished writer, lexicographer, and conversationalist. He was a prodigy of learning as a child, studied at Pembroke College, Oxford, and, after two futile attempts to keep a school, came to try his fortune in London. Here, in spite of hunger, lack of shelter, and melancholia, his reports of the Parliamentary debates as "Debates in the Senate of Lilliput," his 'Vanity of Human Wishes," and his bi-weekly journal the "Rambler," gained him a name as a writer. His famous dictionary, published in 1755, and "Rasselas" in 1759, led to a government pension of £300, which enabled him to maintain his social standing among the wits and politicians of his time. Boswell's monumental biography has caused the vigorous and sonorous sayings, and the great and rugged figure of the doctor to attain a unique distinction in the world of letters.

JOHN THE BAPTIST, son of Zacharias, a priest, and Elizabeth, was born six months before our Lord. Living a strikingly austere life, the "Forerunner" prepared the way of the Lord by preaching the approach of His kingdom, and the obligation of repentance as a preparation for His coming. His powerful preaching and ascetic manner of living converted high and low. Herod Antipas, tetrarch of Galilee, however, threw him into prison, and caused him to be beheaded, to carry out a foolish oath to Salome, whose mother, Herodias, he had unlawfully married.

JONAH, BOOK OF. This book in the form of an allegory, rebukes Israel's perverseness and narrowness of mind, sets forth God's care for all men, and justifies His mode of government.

JONATHAN, BROTHER, a personification of the people of the United States, derived from Jonathan Trumbull, Governor of Connecticut, to whom, as "Brother Jonathan," Washington often appealed for advice.

JONES, HENRY ARTHUR, *b.* 1851, one of the most prolific play writers. His best known dramas are "The Clerical Error," "Silver King," "The Middleman," and "Saints and Sinners"; his chief comedies are "The Liars," "Rogue's Comedy," "Whitewashing Julia," and "Joseph Entangled."

JONES, INIGO, *b.* in London 1572, *d.* 1652; studied in Italy, worked in Denmark, then returned to England. He was the first architect of his time, a period marked by the revival of the classical style of architecture. Among his works, the most famous are the Banqueting-hall, Whitehall, the famous gateway of St. Mary's, Oxford, and the Piazza of Covent Garden.

JONES, PAUL, *b.* in Kirkcudbrightshire, 1747, a Scottish naval adventurer, by many regarded as "The father of the American Navy." He received his first commission in the American navy in 1775, during the American War of Independence. Cruising round the British coasts he captured the *Drake,* a British sloop of war. In 1779, when France was at war with England, made captain of a French ship, called the *Bonhomme Richard,* he engaged the *Serapis* (44 guns) and captured it. The battle was fought by moonlight in the North Sea, in presence of thousands of spectators. Jones died (1792) and was buried in Paris. In 1905 his remains were conveyed to the United States by a squadron of the U. S. Navy sent over to France for that purpose.

JONES, SIR EDWARD BURNE. See *Burne-Jones.*

JONGLEURS were the French mediæval wandering minstrels who memorialised in song and story the deeds of their various patrons or national heroes. They varied their musical entertainments with buffoonery and juggling.

JONSON, BEN, *b.* at Westminster 1574, *d.* 1637; poet, dramatist, and friend of Shakespeare. His personal bravery distinguished him in the Dutch Wars, and it was unhappily put to the test in a duel in which he killed a brother actor. When but twenty-four years old, "Every man in his humour" brought him success as a dramatist, and his further dramas, "Sejanus," "Cataline," "Volpone," "Epicœne," and the "Alchemist" led to King James I. making him poet-laureate. His humour and ripe learning made him the recognised leader of the meetings of wits held at the "Apollo" and the "Mermaid" taverns. He was buried in the Abbey, where his epitaph, "O Rare Ben Jonson," is to be seen in the Poets' Corner.

JORDAN, the well-known sacred river of Palestine. It rises at the foot of Lebanon, and, flowing through Lake Tiberias, reaches the Dead Sea, 1316 feet below the sea level; length 120 miles.

JOSEPHINE, Empress of the French, *b* in Martinique 1763, *d.* 1814. By her first husband, Vicomte Alexandre Beauharnais, she had two children—Eugene, afterwards viceroy of Italy, and Hortense afterwards Queen of Holland, and mother of Napoleon III. After the execution of her husband, during the Reign of Terror, 1794, she married General Bonaparte, and was crowned with him, 1804. She was his good genius and a universal favourite. In 1809, that Napoleon might marry Maria Louisa of Austria, she was

divorced. She retired to Malmaison with the title of Empress queen-dowager.

JOSEPHUS, FLAVIUS, *b.* at Jerusalem 37, *d.* 97 A.D., a celebrated historian of the Jews. After leading an ascetic life he became a Pharisee, and at twenty-six was entrusted with a mission to Nero at Rome. In one Jewish rebellion he was the leading Jewish general in Galilee, but on his capture was spared by Vespasian, and marched with Titus against Jerusalem. These experiences, and his great learning, fitted him to write the famous "History of the Jewish Nation" and "Jewish Antiquities."

JOSHUA, son of Nun, an Ephraimite, was Moses' minister or attendant. He commanded the Israelites in their battle with the Amalekites at Rephidim, was one of the two spies that reported in favour of attempting the conquest of Canaan, and on the death of Moses became his successor. Under his leadership, the Israelites made good their footing in Canaan.

JOSIAH. 641–609 B.C., last of the good kings of Judah. His reign is marked by the vigorous restoration of the worship of Jehovah, the finding of the book of the law, and the fulfilling of the prophecy made against Jeroboam 350 years before (1 Kings xiii. 2). He fell at Megiddo, as ally of the Assyrians, fighting against Pharaoh-Necho of Egypt.

JOUBERT, PETRUS JACOBUS, of Huguenot descent, *b.* 1833, *d.* 1900, was, with Krüger, the mainstay of the Boer Government. He was State Attorney of the Transvaal, 1867, but twice unsuccessfully contested the Presidency. His distinguished career as a general was marked by his success against General Colley at Majuba, 1881, and against Dr. Jameson, 1896. As Commandant General in Natal he proved himself "a soldier and a gentleman, and a brave and honourable opponent."

JOUSTS. See *Tournaments.*

JOWETT, BENJAMIN, *b.* 1817, *d.* 1893; was elected Master of Balliol College, Oxford, in 1870. His influence on the work of the University was very great. He was a Broad Churchman, and wrote "The Interpretation of Scripture" in *Essays and Reviews*, for which he was tried for heresy but acquitted. As a writer, he is best known for his translation of Plato's Dialogues.

JUBILATE (a-te), "shout ye," the second canticle in the morning service of the Church of England.

JUBILEE, in the Jewish law, signified every fiftieth year, when lands were restored and slaves freed. It now signifies the 50th anniversary of any important event. Two jubilees were celebrated in Queen Victoria's reign, one in 1887, at the conclusion of the 50th year, and one in 1897, at the conclusion of the 60th year of Her Majesty's reign. The latter is known as the "Diamond Jubilee."

JUDAH, son of Jacob and patriarch of the greatest of the twelve tribes. Judah and Benjamin, under Rehoboam, separated from the other tribes, 975 B.C., and remained apart until the days of the Captivity, 588 B.C. The remnants of the whole nation on their return from captivity reunited, and all without distinction were known thenceforth as Jews. David, Solomon, and the Messiah himself were among the remarkable descendants of Judah.

JUDAS MACCABÆUS, Judas the "hammerer," so named in honour of his bravery. He succeeded his father in 166 B.C. as leader in the struggle against Antiochus Epiphanes, King of Syria. He regained the independence of Judea and restored the worship of Jehovah. The struggle with the Syrians still went on, and at last, with his army crushed, he fell fighting near Jerusalem, 160 B.C.

JUDEA. In the time of our Lord a province in the south of Palestine (which see.)

JUDITH, a beautiful and pious Jewish heroine of the 7th century B.C. Being in Bethuliah when besieged by the Assyrians, she visited the camp of Holofernes, the opposing general, ingratiated herself in his affections, and in the night cut off his head, carrying it into Bethuliah. Inspired by this deed, a sally was made, resulting in a complete Assyrian defeat.

JUGGERNAUT, "Lord of the World," one of the titles of Vishnu, the second of the Hindoo gods (Brahma, Vishnu, and Siva). At Puri, in Orissa, a special feast, in honour of Juggernaut, is annually held in June, when his car is drawn in procession amid a vast concourse of pilgrims, often numbering 200,000. Some fanatics in former times threw themselves beneath the car, but the deaths at the feast are now either accidental or due to exhaustion. The term "Juggernaut" is now figuratively applied to any blind devotion to an object.

JUGGLING, the performing tricks by legerdemain or sleight of hand, no deception being practised as in conjuring.

JU-JITSU, or **JIU-JITSU,** an ancient art of self-defence practised from remote ages by the governing and military classes in Japan, and now encouraged in all classes by the Japanese Government. It has been introduced into England. It is a form of athletics and wrestling which keeps the body in good training and enables it to meet all attacks with the body covered only with a loose jacket and breeches. It cultivates quickness of the hand, eye, and foot, and prepares for all forms of bodily contest without weapons.

JU-JU, the name of any fetish, idol, or charm among the negroes of West Africa. It is also applied to witchcraft and anything magical or supernatural.

JULIAN, surnamed "The Apostate," nephew of Constantine the Great, *b.* at Constantinople 331, was Roman Emperor 361–363. He was brought up as a Christian, but, on his elevation to the throne, he announced his conversion to paganism, and issued an edict granting toleration to all religions. He was killed by an arrow when engaged in war with Persia. He wrote several treatises against Christianity, many of which are remarkable for their philosophic spirit.

JULIUS CÆSAR, *b.* 100 B.C., the most famous of Roman generals, an orator, a statesman, and a historian. Early in life his democratic sympathies, and marriage with Cornelia, daughter of a democratic leader, forced him to leave Rome, but returning on the death of the dictator Sulla, 78 B.C., he became extremely popular. He formed with Pompey and Crassus the first Triumvirate, 60 B.C. His own "Commentaries on the Gallic Wars" describes the subjugation of Gaul, 58 B.C., and Britain, 55–54 B.C., conquests which increased his popularity but stirred the envy of Pompey. As Pompey schemed his ruin, Cæsar "crossed the Rubicon," a little river that divided his province from that of Pompey, marched to Rome, and, following Pompey, defeated him at Pharsalia, in Greece, 48 B.C. Pursuing the followers of Pompey into Egypt, he came under the fatal fascination of Cleopatra, and this resulted in his joining in the Alexandrine War. After having crushed the Pompeian party he was offered by Mark Antony the kingly crown. This act led to the conspiracy of patriots, like Brutus, and of patricians envious of Cæsar's popularity and power, and resulted in his assassination, at the base of Pompey's Pillar in the Senate House, on the Ides (15th) of March, 44 B.C.

JULY, the seventh month of our calendar, named after Julius Cæsar, who was born on July 12th. It was originally named *Quintilis* or "fifth" month, March being then the first month.

JULY REVOLUTION, was the revolution by which Louis Philippe became king of France in the place of Charles X., 1830.

JUMNA, the chief tributary of the Ganges, 900 miles long, feeds important irrigation canals. Delhi and Agra stand on its banks. At its junction with the Ganges is the important railway centre and fortress of Allahabad.

JUNE, the sixth month of our calendar, possibly named after some Roman *gens* or clan. "*The Glorious First of June*" was in 1794, when Lord Howe defeated the French fleet off Brest.

JUNG BAHADUR, SIR, *b.* 1816, *d.* 1877; became Commander-in-Chief of the army of Nepaul, and in 1846 made himself Prime Minister to the Maharajah or prince of that state. In the Indian Mutiny, 1857, he assisted the British by sending a body of Goorkhas. For this he was knighted and received the Grand Cross of the Star of India.

JUNGFRAU, a mountain in the Bernese Alps, Switzerland, about 13,700 feet high. Its name means "maiden" or "virgin," and it may have been so called from its conspicuous beauty when seen from Interlaken, and other points of view. The construction of the railway, daringly designed to reach the summit, has been suspended, if not abandoned.

JUNGLE is the name given to such tracts of swampy land as abound along the southern bases of the Himalayas. They are rendered almost impassable by the dense growth of banyans, screw-pines, and bamboos, and by the rank undergrowth of tropical vegetation; they are the abode of tigers, elephants, monkeys, and snakes. The heat and moisture of the jungle are answerable for the well-known Indian remittent fever.

JUNIUS, LETTERS OF, seventy letters signed *Junius*, in Woodfall's Public Advertiser, 1769–73. It has never been settled who Junius was, though the evidence strongly indicates Sir Philip Francis; but the audacity, vehemence, and acerbity of the letters, their polished, concise style, and the intimate acquaintance of the author with all the political and court intrigues have rendered them classical.

JUNKER, WILHELM, German traveller, *b.* 1840, *d.* 1892, explored the Upper Nile, 1877, and Central Africa, 1887.

JUNO, a Roman goddess, corresponding to the Greek *Hera*, was the wife of Jupiter, and was worshipped by the Romans as the Queen of heaven. No Roman wife or maiden entered upon an undertaking without soliciting the help and favour of *Juno Regina*, the protectress of womankind.

JUNOT, ANDOCHE, Marshal of France, *b.* 1771, *d.* 1813. In 1807 he commanded a French army which entered Portugal and captured Lisbon. His non-success at Vimiera, against Wellington, and in Russia under Napoleon, in addition to the effect of old wounds, brought on the insanity which resulted in his death by suicide.

JUPITER. (1) Supreme Roman deity, later identified with the Greek Zeus. As father of gods and men, ruler of thunder, lightning, wars, and vintages, his worship was conducted on the Ides of each month, with great pomp and ceremony, all the priests, chariots, and even sacrifices being robed in his sacred white. (2) Largest planet of our solar system, 1250 times the size of the earth. Its day and

night combined equal but 9 hours 58 minutes, and it has at least eight moons. It was discovered by Galileo, 1610, and the eclipses of its moons enabled Römer to calculate the velocity of light.

JURA MOUNTAINS, offshoots of the Alps, forming a plateau 150 miles by 40 miles, with an average height of 3,000 feet. They separate Switzerland from France.

JURY (SCOTLAND). In civil cases it consists of twelve men, but unanimity is not required. If after three hours' deliberation at least nine agree, the verdict is accepted. In criminal cases it consists of fifteen men, and the verdict of a majority suffices. (See *Not Proven* and refer to "Jury" in *Index.*)

JUSTIN, surnamed the Martyr, a learned father of the early Christian Church, of the first half of the second century. He was at first a pagan, but became a Christian, and, gaining experience by disputing in Rome, Ephesus, and elsewhere, he wrote the account of these disputes in his "Dialogue with Trypho the Jew." He also wrote a defence of Christianity in his two "Apologies." He is said to have been scourged and beheaded at Rome for his impiety to the gods.

JUSTINIAN, THE GREAT, Emperor of Byzantium 527–65, A.D. By the aid of his wife, the imperious Theodora, and of his great generals, Belisarius and Narses, who subdued the Vandals and Ostrogoths in Africa and Italy, he restored these countries to the Byzantine Empire. He is best remembered for the thorough revision of the whole system of law, which he caused to be made, resulting in the "Institutions" and three other legislative works which, under the name of "Corpus Juris Civilis," constituted the Roman law in Europe for the next four centuries.

JUTE, a textile fabric obtained from the inner bark of a plant grown extensively in Bengal. The plant averages eight feet in height, and its inner bark, after being soaked or *retted*, for a few days, allows the strong yellowish fibre to separate in lengths of about six feet. After being softened by crushing in oil and water it is ready for the manufacturing process. This process includes breaking into lengths about sixteen inches long, *carding*, and *drawing* into parallel even slivers or long strands, and *roving*, by which the slivers are lengthened and given that slight twist which makes it more compact and ready for weaving. Dundee takes three-fourths of our 400,000 tons of imported jute, and makes of it grain-bags, carpets, carpet backings, and table cloths.

JUTES, one of the three Low German tribes—Angles, Saxons, and Jutes—who conquered Britain in the 5th and 6th centuries. Coming from Jutland they landed near Ramsgate, 450 A.D., and, having helped to defeat the Picts, settled in Kent.

JUTLAND, the peninsula and mainland province of Denmark. The western half is low-lying and generally barren, but the eastern part has excellent pasturage and produces good cereal crops; area, about 13,000 square miles; population, about one million.

JUVENAL, lived about 50-130 A.D., one of the two greatest of Roman satirists. His reputation commenced, when his satires were published, after he was sixty. Though inflated in style, they showed his wit, command of language, and force and fulness of thought. They have been commended by Christian writers as storehouses of moral precepts, tending to the encouragement of virtue as well as the chastisement of vice. They have been translated into English by Dryden and others.

KAABA. See *Caaba.*

KAAP, or **DE KAAP,** a gold bearing district of the Transvaal Colony, situated to the north-east of Barberton.

KABUL. See *Cabul.*

KAFFIRS or Caffres, that part of the Negro race, including the Zulus and Kaffirs proper, which forms the bulk of the natives of South Africa. The name is Arabian and signifies "infidel," or one who refuses Islam. They inhabit conical huts which form a tribal kraal, and the men mind the cattle whilst the women work in the fields. We were engaged, on and off, during the whole of the last century, suppressing this war-like, stalwart people, and annexing their land. *Kaffirs* on the Stock Exchange is the name for shares in South African mines.

KAISER WILHELM CANAL, a ship canal, 70 miles in length, joining Kiel on the Baltic, to the mouth of the Elbe near Brunsbuttel on the North Sea. Besides enabling the German fleet of the North and Baltic Seas to concentrate rapidly without the journey round Denmark, it has materially stimulated the North German trade since its completion in 1895.

KALAHARI DESERT, a wide district, partly German, partly British, extending 600 miles north of the Orange River, with an average elevation of 3,500 feet. Though almost waterless it is inhabited by a considerable number of Bushmen, and is the home of herds of antelopes.

KALEIDOSCOPE, an optical instrument useful to designers, and an interesting scientific toy, was invented by Sir David Brewster, 1817. It consists of a tube containing mirrors having their reflecting surfaces inclined at 60° or other submultiple of 360°. The eye aperture is in the cap at one end. The other end is closed by a piece of ground glass with pieces of coloured glass, which are kept loosely in position by another glass disc. The reflections of these coloured glasses in the mirrors assume beautiful regular forms, and, by shaking the tube, coloured reflections may be obtained in an infinite variety of forms.

KALENDS, or Calends, the 1st day of every month in the ancient Roman calendar. Dates were reckoned backward from three fixed points, Kalends, Nones, and Ides; thus May 28th was IV. Kal. Jun., or the 4th day before the 1st day of June. To pay on the "Greek Kalends," means not to pay at all, for the Greeks did not use the term Kalends.

KALGOORLIE, a town situated at the eastern end of the Coolgardie gold-field, Western Australia. A railway connects the town with the capital. Though the gold-field came into prominence as recently as 1895, the population of Kalgoorlie in 1901 exceeded 18,000.

KALI, one of the names given to the wife of Siva, one of the Hindu Trinity. She is represented as wearing round her neck a string of human heads.

KALMUCKS, a nomadic race of Western Mongolia, inhabiting Central Asia and south-east Russia, in colonies under a khan or chief. They are small in stature, warlike, and noted horsemen.

KAMTSCHATKA, a mountainous peninsula of Eastern Siberia, having an average width of 200 miles, and stretching 800 miles into the Pacific Ocean. Its 7,000 hardy inhabitants hunt and fish in their three months' summer, and, in the long winter, retire to a lazy life in earth pits only accessible through the one outlet in the roof. Capital, Petropavloski.

KANAKAS are the natives of the Hawaii Islands, but the name is especially applied to the natives of New Hebrides, and other South Sea Islands, who were formerly employed on the Queensland sugar plantations.

KANDAHAR. See *Candahar.*

KANDY, the old capital of Ceylon, stands in the centre of the Ceylon coffee districts, and possesses as a relic, in one of its temples, the adored tooth of Buddha; population about 19,000.

KANGAROO, an Australian marsupial, or pouch-bearing quadruped. The "Great Kangaroo," which may be taken as a type, stands as tall as a man, and obtains its balance with the aid of its long tail. It possesses long, powerful hind legs with which it can spring upwards of 20 feet. The young are nursed in a pouch, which contains the nipples from the milk glands. They are grass feeders, and are hunted as a pest to the farmer; their flesh is nutritious, and their skin makes good leather.

KANO, a walled town situated in Northern Nigeria. Leather and cotton cloths are manufactured, and there is a considerable trade with the Arabs and the Barbary States.

KANT, IMMANUEL, the greatest modern metaphysician, *b* Königsberg, 1724, *d.* 1804. He was professor of mathematics, theology, philosophy, and logic in the University of Königsberg, and in his earlier works actually anticipated the discovery of the tidal drag on the earth, and the nebular hypothesis. His great works, the *Critique of Pure Reason*, 1781, and the *Critique of Practical Reason*, 1788, have had a greater influence on modern philosophy than the works of any other philosopher.

KAOLIN, or **CHINA CLAY,** is the fine white clay used in the manufacture of porcelain. It is derived from the decomposition of felspar in rocks, such as granite. The chief British source of supply is the claypits of Devon and Cornwall. Kaolin is also used for the sizing of printing paper and cotton cloth, and in the preparation of certain pigments.

KARA'CHI or Kurrachee, a flourishing seaport on the delta of the Indus, where the produce of the north-west of India finds an outlet. It is the terminus, on the Arabian Sea, of the Indus Valley State Railway, and a place of fast-growing importance.

KARAKORUM MOUNTAINS, the western branch of the Himalayas, lying between Eastern Turkestan and Kashmir; highest peak 28,000 feet. The Karakorum Pass has an altitude of 18,550 feet.

KARA SEA, lies between Nova Zembla and the north Russian mainland, and was first explored by Nordenskjöld and Wiggins. It is navigable two months annually, opening, by the Obi and Yenisei, the trade of Western Siberia.

KARNAK, a village on the Nile, near Luxor, Egypt. The grand remains of the temples of Ancient Thebes, in its vicinity, have rendered it famous.

KAROO, THE GREAT, a vast plateau at an elevation of 3,000 feet, extending across Cape Colony, between the Nieuveld Berge and Zwarte Berge. Its clayey soil, though barren in summer, after the rains furnishes grass for the goat, sheep, and ostrich farms.

KARS, city and fortress of Asiatic Russia, 100 miles N.E. of Erzeroum. The Russians took it from the Turks in 1828, again in 1855, when gallantly defended by General Fenwick Williams, and finally in 1877, after which it was ceded to Russia by the Berlin Treaty.

KASHGAR, chief city of Chinese Turkestan, Central Asia. British influence at Kashgar has declined since its reconquest by the Chinese, 1879, from Yakoob Bey, its Moslem ruler. Population 16,000.

KASHMIR. See *Cashmere.*

KASSASSIN, twenty miles from Ismalia, Egypt. Here Arabi Pasha's troops were routed, 28th August, 1882, by the British under General Graham, and again on the 9th September, 1882.

KATRINE, LAKE, a beautiful lake in the Trossachs, not far from Loch Lomond, immortalised in Scott's "Rob Roy," and "The Lady of the Lake." Though set in the midst of romantic scenery and associated with romantic story, its waters are utilized to supply the needs of Glasgow.

KATSURA, VISCOUNT, *b.* 1847; a Japanese soldier and statesman. He studied military methods in Germany, and on his return to Japan assisted in the reform of the Japanese army. His services in Korea and Manchuria during the Chino-Japanese War were rewarded by a peerage.

KATYDID, a large, green kind of grasshopper of the central and eastern States of America, so named from the sound made by the male to attract the female, a sound made by grating its wings against its body.

KAURI PINE, a tree found only in New Zealand, and highly valued for its resin (Kauri gum), which is used in making varnish. The gum is found in a fossil state wherever Kauri forests once stood.

KAY-SHUTTLEWORTH, SIR JAMES, *b.* at Rochdale, 1804, *d.* 1877; was a pioneer of popular education in England. He was instrumental in persuading the local authority of Manchester to adopt measures for the improvement of the sanitary conditions of the mill workers. He took a leading part in the movement for "educating the people," and was the first secretary of the Committee of the Privy Council on Education, 1839. He may be regarded as the father of the pupil-teacher system in England, and the author of the celebrated Minutes of the Council on Education, 1846.

KAZAN or Kasan, a fortified town on the Kasanka, a tributary of the Volga, Russia. Its recent growth has been rapid, owing to its shipbuilding and fur trade. It is the seat of a University and of a Greek Archbishopric; population about 150,000.

KAZANLIK, a town of Roumelia, at the foot of the Balkans, near the Shipka Pass. Its great manufacture of attar of roses received a serious check during the Russo-Turkish War, 1876–8.

KEAN, EDMUND, a celebrated actor, *b.* in London 1787, *d.* 1833. He was almost unequalled in his renderings of the tragic characters of Shakespeare, and was at the head of his profession when only 27. His private life unfortunately led to an outbreak of popular indignation against him, and, though he regained public favour, his intemperance led to a most dramatic breakdown during a performance of Othello, February, 1833.

KEATS, JOHN, a true English poet, *b.* at Moorfields, London, 1796, *d.* Rome 1821. When but 21, under the genial encouragement of Leigh Hunt and Hazlitt, he published his "Endymion," which was mercilessly criticised by the "*Quarterly Review.*" The next year his "Eve of St. Agnes" and his "Hyperion" were better received; but his promising career was cut short by consumption.

KEBLE, JOHN, a celebrated divine, *b.* at Fairford, Gloucester, 1792, *d.* 1866, became Professor of Poetry at Oxford, 1831, and settled at Hursley, near Winchester, 1836, where he worked as a parish priest to the end of his life. By his sweetness of character, his saintly life, his sound learning, and his "Christian Year"—a volume of religious poetry, published 1827—he exercised a wide and beneficent influence on the English Church and nation.

KEBLE COLLEGE, OXFORD, dedicated, 1870, in memory of John Keble, to provide a liberal education for men intending to seek orders in the Church of England.

KEEWATIN, a district north of Manitoba bordering on Hudson Bay, Canada, and extending to the Arctic Ocean; area about 250,000 square miles. It is well-wooded, rich in minerals, and has valuable fisheries; but Hudson Bay, its natural outlet, being open to navigation only a few months of the year, Keewatin attracts only a few traders.

KELPIE, the water spirit of Scottish folk-lore. It took the form of a man or a horse, and was described as rising from the water of a river on the approach of a person who was fated to be drowned in the stream.

KELVIN, LORD, (William Thomson), a celebrated scientist, *b.* at Belfast, 1824. His father was a professor of mathematics, and in that subject William Thomson distinguished himself at Peterhouse, Cambridge, gaining a fellowship, which was followed by the Chair of Natural Philosophy at Glasgow, 1846. From the first, his contributions to scientific knowledge were marked by wonderful originality and great fertility of resource. As an inventor and designer of scientific apparatus, he was recognized as one of the greatest living workers. He devised and laid the first Atlantic cable; the Admiralty use his compass and sounding apparatus; even so commonplace a thing as a water-tap he has perfected; and scientists owe to him many of their most delicate electrical instruments. His discoveries in pure science are marked by the same vivid imagination, and are most suggestive. He was knighted, 1866, and raised to the peerage, 1892. English and foreign honours were showered on him, as standing among the first in the scientific world; *d.* 1908, buried in Westminster Abbey.

KEMBLE, JOHN PHILIP, celebrated actor, *b.* at Prescott, 1759, *d.* at Lausanne 1823. He was educated for the Roman Catholic priesthood, but the Kembles, including his own father, his sister Mrs. Siddons, his brothers Stephen and Charles, and his daughters Fanny and Adelaide, were born for the stage, and John scored a triumph when but 24 at Drury Lane. He managed Drury Lane for 14 years, and Covent Garden 6 years, but suffered during the "O.P." (*old price* for theatre seats) Riots, 1809. An educated gentleman, his noble bearing exactly suited the more dignified Shakespearian characters.

KEMBLE, FANNY, actress, *b.* London, 1809, *d.* 1892; of the Kemble family of great actors, she gained distinction in tragedy and, after her unfortunate American marriage, in readings from Shakespeare.

KEMPENFELT, RICHARD, *b.* Westminster 1718, *d.* 1782. He saw service in the East and West Indies, and as a rear-admiral is renowned for his brilliant outmanœuvring of the French fleet under De Guichen, 1781. Cowper, in the "Loss of the Royal George," has memorized his death with that of his crew, numbering 800, from the over-heeling of the ship, when in harbour at Portsmouth, through the sudden moving of the guns.

KEMPIS, THOMAS À, *b.* about 1380, in Rhenish Prussia. He entered St. Agnes' Monastery, Zwolle, in the Netherlands, 1400, became Prior, 1448, and remained there till his death. The profound piety of his book "On the Imitation of Christ," has appealed to all Christians regardless of sect, and has caused it to be translated into nearly every language.

KEN, THOMAS, a learned divine, *b.* at Berkhampstead, 1637, *d.* 1711. He was the author of the morning hymn, "Awake my soul" and of the evening hymn "Glory to Thee." Though one of the "Seven Bishops" protesting against the "Declaration of Indulgence" of James II., his loyalty to James made him a "Non-juror," and cost him his see of Bath and Wells.

KENDALL, HENRY CLARENCE, *b.* in New South Wales, 1841, *d.* 1882; an Australian civil servant, journalist, and poet, whose poems, "Leaves from an Australian Forest," and "Songs from the Mountains," give vivid descriptions of scenes in the Australian bush.

KENILWORTH, a town near Warwick. The extensive ruins of its castle still include the Norman keep, but the greater part consists of Elizabethan work. This castle was the prison of Edward II., 1327, and in 1575 the scene of entertainments given by its owner, the Earl of Leicester, to Queen Elizabeth. See Sir Walter Scott's "Kenilworth."

KENNICOTT, BENJAMIN, an eminent theologian, *b.* at Totnes 1718, *d.* 1783. His life work was the "Hebrew Old Testament with various readings," towards which monumental work over 600 Hebrew MSS. were collected, his own devoted exertions being well seconded by a public subscription of £10,000, and the assistance of eminent theologians and scholars.

KENOSIS, literally "an emptying," is the doctrine taught by St. Paul in Phil. ii. 6-8. It expresses the limitation imposed upon Himself by our Lord in taking human nature. See Mark xiii. 32.

KENSINGTON, the royal borough of London. Its attractions for the sight-seer are unique. Within the circuit of a mile he may visit the Victoria and Albert Museum of decorative art (free M. Tu. S.) the Natural History Museum, the Indian, and the Scientific Museums (all free daily), the Imperial Institute, the Royal College of Music, and the Albert Hall (often open to inspection), the beautiful Kensington Gardens with the Albert Memorial, and the Kensington Palace, containing the room in which Queen Victoria was born (free daily).

KENT, a county in the south-east corner of England, separated from France by the Strait of Dover. Here the Romans and the Jutes landed in their invasions of Britain. It was the scene of the preaching of Augustine and his fellow-missionaries in 597. Among its places of interest are Canterbury with its cathedral, Dover with its castle, Woolwich with its arsenal, and Chatham with its dockyard, Greenwich with its hospital and observatory. It is extremely fertile and is noted for its hop and fruit gardens; population about 1,200,000.

KENT, DUKE OF (Edward Augustus), fourth son of George III. and father of Queen Victoria, *b.* 1767, *d.* 1820.

KENTISH FIRE, a series of three claps of the hands repeated three times in succession, to mark approval of a speaker's remarks or the favourable reception of a toast. The same means are sometimes adopted to interrupt a political speaker. It received its name from the circumstance that the method was practised by Kentish audiences during the agitation against Catholic emancipation, 1828-29.

KENT'S CAVERN, near Torquay, Devon. As a result of explorations in this cavern conducted by the Royal Society, 1858, and the British Association, 1864, it has been proved from the remains found in the cavern, that man using flint tools, bone needles, etc., existed in England contemporaneously with the mammoth

and many animals now extinct, or not now found in England.

KEPLER, JOHANN, astronomer and mathematician, a contemporary of Tycho Brahé and Galileo, *b.* Weil, Würtemberg, 1571, *d.* 1630. In spite of a life of difficulties both as a student at Tübingen and as professor of astronomy at Gratz, Prague, and Rostock, his diligent research enabled him to enunciate the three laws which have become the basis of all subsequent astronomical investigation, viz. *Kepler's Laws*: (1) that the path of a planet is elliptical, the sun occupying one of the foci, (2) that the line joining the centre of the sun and the centre of each planet passes over equal areas in equal times. (3) that for every planet, the square of the time of its complete revolution round the sun forms with the cube of its mean distance a constant ratio.

KERRY, a maritime county of Ireland, south of the estuary of the Shannon. Its population has been reduced through emigration by 200,000 during the last 50 years, in spite of its abundant oat and potato crops, and splendid slate-quarrying. The beautiful Lakes of Killarney, flanked by the highest and most picturesque mountains of Ireland, attract tourists from all parts of the Empire.

KESWICK, a market town of Cumberland, on the beautiful lake Derwentwater. was once noted for its black-lead mines; it is now a tourist centre for the Lake District.

KETCH, JOHN, nicknamed Jack Ketch. hangman of the time of Charles II. and James II., notorious for his barbarous methods, specially shown at the execution of Russell and of Monmouth.

KETCHUP, or **CATSUP,** a condiment or sauce usually made from mushrooms, tomatoes, or walnuts, by expressing their juice, boiling this juice down and appropriately seasoning it.

KETCHWAYO, or **CETEWAYO,** elected chief of all the Zulus in 1873. Lord Chelmsford, after a great reverse at Isandlana, completely defeated the Zulus at Ulundi, 1879, and divided their country among thirteen distinct chiefs. These chiefs quarrelling, an attempt was made to restore Ketchwayo, but a rival chief defeated him and drove him into the British reserve, where he died 1884.

KEW, a village of Surrey on the Thames, famous for its Botanical Gardens, with their unsurpassed collection of exotics, palm houses, arboretum, and pagoda. The gardens are open free every day, and, since the institution of the cheap electrical car-service with West London, they attract over one million visitors annually. The Kew Observatory keeps the standards for adjusting magnetic, thermometrical, and meteorological instruments.

KHARTOUM stands at the junction of the Blue and the White Nile. For nearly a century it served as the emporium for the ivory and gum of the Soudan, and until recently was a great market for slaves. It is celebrated for the heroic defence made here against the Mahdi and his Soudanese troops, by General Gordon, who was slain 26th January, 1885, when the city was captured by the Mahdi. Thirteen years after it was retaken, 1898, by an army of British and Egyptian troops under General Kitchener. The city has been rebuilt and is the capital of the Egyptian Soudan.

KHELAT or Kelat, capital of Baluchistan. This hill fortress, the residence of the Khan, was taken by the British in 1839 and 1877, and now our resident agent at Khelat, to a great extent, controls the country as a dependency of British India: population about 15,000.

KHYBER PASS, or Kaibar Pass, thirty miles in length, between Peshawar in India, and Cabul in Afghanistan, with precipitous sides in many parts from 1,000 to 3,000 feet high, and in some places only three or four yards apart. It is regarded as the military key to north-west India from Afghanistan, but that key is now in British hands.

KIAO-CHAU, a sea-port of the Yellow Sea, on the Shan-tung Peninsula in China, with a good harbour as outlet for the mineral wealth of the district. It was leased to Germany, 1898.

KIDDERMINSTER, a manufacturing town of Worcestershire, famous for its carpets and tapestry, and as the birthplace of Rowland Hill: population about 25,000.

KIEFF, OR KIEV, a town on the Dnieper, south-west Russia, once the capital of the Muscovite Empire. Its cathedral dates from the 11th century, and marks the position of Kiev as the "Canterbury of Russia;" population about 185,000.

KIEL, a Baltic seaport, German naval station, and capital of Schleswig-Holstein. It has rapidly risen in importance, especially in its provision and dairy trade, since the opening of the Kaiser-Wilhelm Canal: population about 70,000.

KILAUE'A, the largest active crater in the world, the crater being two miles across and 1,000 feet deep, and always seething with lava. It is situated halfway up Mauna Loa, a volcanic mountain 13,700 feet, of Hawaii, Sandwich Islands.

KILIMANJA'RO, a mountain of German East Africa, situated almost on the equator, of volcanic origin, and consisting of two connected peaks, Kibo, 19,700 feet, and Kima Wenzi, 17,500 feet. They are possibly the famous "Mountains of the Moon," of which ancient geographers wrote.

KILLARNEY, LAKES OF, about 45 miles west of Cork, Kerry, Ireland. Their beautiful and impressive scenery attracts thousands of visitors annually. The lower lake, Lough Leane, is about six miles by two and a half miles. It has two richly-wooded islands, Ross and Innisfallen, and is connected with two smaller lakes by a winding stream which passes Muckross Abbey. In a particular part of its channel is heard the celebrated *Eagle's Nest Echo.*

KILLIECRANKIE, a wild, picturesque pass on the Garry, a tributary of the Tay, Perthshire. Here Graham of Claverhouse, Viscount Dundee, fighting for King James II., fell in the hour of victory, 1689. His loss proved the death-blow to the Jacobite cause in Scotland.

KILMAINHAM, a suburb in the west of Dublin. The Royal Hospital for old and maimed soldiers was designed by Sir Christopher Wren, and erected here in 1680, on the site of an ancient priory. In 1881 Parnell and other leading members of the Land League were confined in the gaol as "suspects" under the Coercion Act of that year.

KILT, the short woollen petticoat that forms part of the national dress of the Scottish Highlanders, was adopted during the reign of James VI., and the variety in the pattern and colouring of the tartans which distinguish the various clans is a still more modern development.

KIMBERLEY, South Africa, about 600 miles north-east of Cape Town. The discovery of diamonds in 1870 caused the great rush which resulted in Kimberley becoming the chief inland city of Cape Colony. During the Boer War its inhabitants, including Cecil Rhodes, endured a three months siege, until relieved by General French, February, 1900.

KINDERGARTEN, a modern system of education for very young children, originated by Friedrich Froebel (1782–1852) and introduced into England 1851. This system aims at the unfolding of the child's whole nature spontaneously by organised games and attractive object lessons. It aims at training the child to seek knowledge from a natural desire to learn. The whole system is directed towards the simple and harmonious development of all the faculties—mental, moral, and physical. Kindergarten methods are now general in England, and, when applied in the spirit of the founder, are undoubtedly an educational success.

KING GEORGE'S SOUND, a bay on the south-west of Australia, on which stands Albany, a calling station for P. and O. steamers.

KINGLAKE, ALEXANDER WILLIAM, *b.* near Taunton, 1811, *d.* 1891; the author of two well-known works: "Eothen," an account of his travels in the East, and the "Invasion of the Crimea." In the latter, which is marked by exhaustive detail and picturesque description and narrative, he embodies the results of his personal observations and information gleaned from the papers of Lord Raglan.

KING LEAR, one of the finest Shakespearian tragedies, published 1608. Holinshed, from whom Shakespeare derived the plot, records how Lear, "ruler over the Britains in the year of the world 3105," had three daughters, Gonorilla, Regan, and Cordelia. Gonorilla and Regan, protesting great love for Lear, were rewarded with lands and noble marriages; whereas Cordelia, full of dutiful affection, but void of pretence, was left by her father without dower or husband. Cordelia by her beauty gains a powerful husband, Aganippus of Gallia, and furnishes comfort to Lear in the grief and trials caused by his undutiful daughters.

KING MAKER, THE, Richard Neville, Earl of Warwick, the last of the powerful barons of the Middle Ages. By means of his 30,000 retainers he was instrumental in placing Edward, Duke of York, on the throne, 1461; but, displeased by Edward's marriage, he restored Henry VI. to the throne (1470). The restoration lasted only a few months, for Warwick was defeated and slain at Barnet, April, 1471. Lytton's historical romance, "The Last of the Barons," is based on the career of the king-maker.

KING'S EVIL, an old name for *Scrofula* (which see in *Med. Dict*). In Mediæval times it was customary to bring patients to the king to be touched for a cure, and the Prayer Book of Henry VIII. contained a special Healing Service. Edward the Confessor and Anne were respectively the first and last English sovereigns to "touch" for the disease.

KINGSLEY, CHARLES, clergyman, social reformer, novelist, poet, *b.* near Ashburton, Devon, 1819, *d.* at Eversley, Hants, 1875. His two novels, "Alton Locke" and "Yeast," illustrated his views on his Christian Socialism, and they were ably seconded by his many periodical articles under the name of *Parson Lot.* "Hypatia," "Westward Ho!" "Two Years Ago," and "Hereward the Wake," are still great favourites, and well illustrate the range of his sympathies, and his sturdy manliness. He was rector of Eversley, 1844, professor of history at Cambridge, 1859–1869; he became Canon of Chester, 1869, and Canon of Westminster 1873.

KINGSLEY, HENRY, novelist, *b.* 1830, *d.* 1876; brother of Charles Kingsley. After visiting Australia, he wrote "Geoffrey

Hamlyn," "Ravenshoe," etc., and for a short time was editor of the *Edinburgh Daily Review*.

KINGSLEY, MARY, *b.* in London, 1862, *d.* 1909; a niece of Charles Kingsley. She was a brave, enterprising traveller in West Africa, and published accounts of her journeys and observations under the titles: "Travels in West Africa," "West African Studies," and the "Story of West Africa."

KINGSTON. (1) A flourishing ancient town of Surrey, on the Thames, about 12 miles south-west of London; population about 50,000. It retains in its market-place the "king's stone" that commemorates the crowning of seven Anglo-Saxon kings. (2) A city of Ontario, Canada, on Lake Ontario, with an excellent harbour and with busy ship-building and steam-engine works; population about 20,000. (3) The capital and chief port of Jamaica, with a splendid harbour. It exports sugar, rum, coffee, fruits, spices; population about 40,000. (See *Jamaica.*)

KINGSTOWN, a seaport, six miles south of Dublin. Originally *Dunleary*, it was named Kingstown in honour of a visit of George IV., 1821. Passengers and mails from Holyhead are landed at its two splendid piers.

KIOTO, a city at the south end of Niphon, Japan. As *Miaco*, until 1868, it was the residence of the Mikado. This "Paradise of Japan" is particularly famous for its silks, lacquer work, and bronzes.

KIPLING, RUDYARD, a famous writer of short stories, and occasional and humorous verse, *b.* Bombay, 1865. He was educated at Westward Ho, Devon, but returning to India, 1882, became famous when just turned twenty by his stirring verse and graphic stories of Indian military life, as in "Departmental Ditties," "Plain Tales from the Hills," and "Soldiers Three." His popular "Barrack Room Ballads," 1892, his two inimitable "Jungle Books," 1894–5, his fascinating romance, "Kim," and other later works, have made him perhaps the most popular writer of the day. Received the Nobel Prize in Literature, 1907.

KIRGHIZ, a nomadic people of the steppes of Asia, between the Ural and Altai Mountains. They number about 2½ millions, speak a Turkish dialect, and, though professing Islamism, retain their heathen practices. Their civilisation is in every respect yet in its infancy.

KIRKE'S LAMBS, a regiment whose flag bore the Paschal Lamb as its emblem. Their cruelties in the West of England, after Monmouth's rebellion, 1685, gained them this ironical title.

KIRKWALL, a seaport on Mainland, Orkney Islands. Its people are engaged in fishing. St. Magnus' Cathedral, an interesting structure, dates from 1137; its choir is now the parish church.

KISMET, "Fate or Destiny," expresses the absolute submission of Mohammedans to the decrees of Allah, who foreordains every circumstance in the life of all individuals.

KIT-CAT CLUB, a club founded about 1688 and dissolved about 1720. It derived its name from that of its caterer, Christopher Cat. The club soon assumed a political character, its members including Marlborough, Walpole, and other Whig leaders. The club room was adorned with three-quarter length portraits of its members, painted by Sir Godfrey Kneller, and from this circumstance portraits thus reduced have been called kit-cat portraits.

KITCHENER (Horatio Herbert) **LORD,** *b.* at Ballylongford, Kerry, 1850. He saw service as a French volunteer in the Franco-German War, 1870. He joined the Royal Engineers at twenty-one, served on surveys of Palestine and Cyprus, had command of the cavalry in Egypt, under Sir Evelyn Wood, and became Sirdar of the Egyptian army, 1892. After dealing the Dervishes a deadly blow, 1896, he earned his peerage and a parliamentary grant for breaking the power of the Khalifa at Omdurman, 1898. In the Boer War he was chief of the staff to Lord Roberts, and, as Commander-in-Chief in South Africa, after Lord Roberts returned to England, he reduced the Boers to submission. Made Commander-in-Chief in India, he reorganised the Indian army, adding greatly to its efficiency. On leaving India 1909, he was made Field Marshal and appointed Commander-in-Chief of the Mediterranean, but he never took up this command, resigning it in 1910.

KITTO, JOHN, an eminent writer on Biblical subjects, *b.* at Plymouth, 1804, *d.* 1854. He began life as a working mason, but, becoming deaf from a fall, he tried his hand in turn at shoemaking, dentistry, and printing. His "Essays and Letters" gained him a patron and opportunity for travel in the East, which he turned to good account in his "Pictorial Bible," "Pictorial History of Palestine," etc.

KLEPTOMANIA, a form of insanity in which the patient displays an uncontrollable desire to steal without motive. The disease is more common among women than men, and attacks them more frequently during pregnancy than at other periods.

KLONDIKE, a river which flows into the Yukon, and which gives its name to a gold district in the north-west territory, Canada, near Alaska. Klondike is richly auriferous, and the difficulties of reaching the district, the high price of necessaries there, and its Arctic climate, have not deterred the adventurous gold-digger from seeking his fortune around Dawson City, its capital.

KNELLER, SIR GODFREY, *b.* Lübeck about 1647, *d.* Twickenham, on Thames, 1723. The finest portrait painter of his time, he received the patronage of five English sovereigns, including Charles II. and George I. He was buried in Westminster Abbey.

KNIGHTHOOD, a dignity originally conferred by the sovereign for distinguished military services. It was introduced into England by the Norman kings, who made the investiture a solemn religious ceremony. With the decline of the Feudal system, knighthood ceased to be an exclusively military order, and now the honour is conferred by the sovereign on men distinguished in the arts of peace as well as of war. For "Orders of Knighthood" refer to *Index*

KNOT. the nautical name of a geographical mile, about 1⅛ of a statute mile, used to express the rate of a vessel's motion. The rate is ingeniously reckoned, for, the log-line being divided by *knots* into parts each $\frac{1}{120}$ of a geographical mile, the number of such divisions run out in half a minute is evidently equivalent to the rate per hour at which the vessel is travelling.

KNOUT, a whip formed of long, triangular thongs of hide, artificially hardened and grooved, and pointed with metal. It was formerly an instrument of punishment in Russia. A single stroke has been known to prove fatal, and few victims have endured more than thirty.

KNOX, JOHN, the great Scotch reformer, *b.* at Gifford Gate, Haddingtonshire, 1505, *d.* 1572. He was ordained priest, and, when forty years of age, commenced his strenuous life of religious reforms. Captured by the French, he served in their galleys one or two years. On his release he was appointed one of the royal chaplains to Edward VI., but, being opposed to episcopacy, he declined to accept a bishopric. On the accession of Mary he joined Calvin at Geneva. Returning to Scotland, 1559, he stirred the people to excesses of reform. Incited by his intemperate zeal, they demolished all that was beautiful in most of their cathedrals and churches. He exercised, however, a deep and lasting influence on the whole moral and intellectual life of his countrymen.

KOCH, ROBERT, an eminent German bacteriologist, *b.* 1843. *d.* 1910. Becoming member of the Imperial Board of Health, he discovered, in 1882, the bacillus of tuberculosis, and, after research in India and Egypt, that of cholera. Professor in the University of Berlin, and Director of the Institute of Hygiene, he gave the world, in 1890, a specific cure for phthisis, but it has not proved an effectual remedy. Received the Nobel Prize in Medicine, 1905.

KOH-I-NUR, "Mountain of Light," one of the most famous diamonds of the English crown. Traditionally, it dates back 5,000 years, but its known history dates from the Mogul Emperor, Shah Jehan, to its passage, on the annexation of the Punjab, into the hands of Queen Victoria, 1849. Once nearly 800 carats, it has by successive cuttings been reduced to 106. See *Cullinan Diamond.*

KOLA NUTS, or Gura nuts, the seed of an African plant, are highly prized by the Soudanese, because of their power to ward off exhaustion. Analysis shows this power to be due to a stimulating alkaloid, similar to that found in tea, and this is the only justification for the recent introduction of Kola preparations among some of our foods.

KÖNIGGRÄTZ, a town on the Elbe, in Bohemia. Here the Prussians gained a great victory over the Austrians, 3rd July, 1866; the battle is also named *Sadowa.*

KÖNIGSBERG, a fortified seaport on the Pregel, in the north-east of Germany. It has an important export trade in amber, timber, grain, and hemp. Large ships must now unload at Pillau, its outer port, owing to the bar; but a large ship canal connecting Königsberg with the Baltic is projected; population about 175,000.

KORAN. Refer to *Index.*

KORDOFAN, that part of the Eastern Soudan lying between Darfur and the White Nile. Its capital is El Obeid, and its population about 300,000. Millet is the chief grain, and the negroes and Arabs trade in hides, ostrich feathers, and until lately also in slaves. The Mahdi, in 1883, wrested the country from the Khedive of Egypt, but recently, with the aid of British arms, it has been recovered.

KOREA. See *Corea.*

KOSCIUSKO, MOUNT, the loftiest mountain in Australia, 7,308 feet high, situated in New South Wales. In it the river Murray has its source.

KOSSUTH, LOUIS, a noted Hungarian patriot, *b.* 1802, *d.* 1894. At first a lawyer and member of the Austrian diet, he was imprisoned for his extreme views on the liberty of the subject. After this he became, in 1844, leader of the National League, which aimed at Hungarian independence. In 1848 the Hungarians rose in rebellion, and the diet declared the independence of Hungary, and appointed Kossuth governor. The rebellion was put down by the Austrian emperor, and Kossuth was compelled to take refuge in Turkey. He resided for a while in England, and afterwards in Italy, his hostility to the Austrian govern-

ment making him unwilling to avail himself of the general amnesty.

KOUMISS. See *Med. Dict.*

KRAKATO'A, a small island lying between Sumatra and Java, famous for its volcanic eruption in 1883. This tremendous explosion, heard over nearly a tenth of the earth's surface, caused an air-wave to travel thrice round the earth, and a water-wave which engulfed 30,000 people. The beautiful sunsets of that year in England and elsewhere were due to the suspended dust cast into the atmosphere by this eruption.

KREMLIN, THE, a fort or citadel of Moscow, enclosing in its walls numerous churches, with palaces and arsenals. At the Cathedral of the Assumption the Czars are crowned, and near the great tower of Ivan the Great, 266 feet high, is a tower with the famous bell, "Great Ivan," now cracked, weighing 200 tons.

KRIEGSPIEL, "War Game." The game is played by means of relief maps on a large scale and metal blocks representing bodies of troops, so that the movements of the blocks on the map represent the operations of the two armies over that part of the country. The "commanders" move alternately, and the results of each move are decided by the "umpire," who has previously laid down the general idea of the operations and the special idea for each side.

KRISHNA, a form of Vishnu, one of the three principal gods of the Hindoos—*Brahma*, *Vishnu*, and *Siva*. Vishnu, "the preserver," is destined, the Hindoos believe, to have in all ten incarnations, Krishna being the eighth of the series, Buddha the ninth, with the wonderful *Kalki*, as tenth, yet to come.

KRUGER, PAUL, president of the late Transvaal Republic. *b.* in Cape Colony, 1825, *d.* 1904. When a boy of twelve he trekked with his father and a large company of Boers from Cape Colony to escape British rule. The boy was early inured to the life of a hunter and herdsman of the wild veldt, and took a conspicuous part in war with the natives. In mature manhood he developed a strong puritanical spirit, drawing his inspiration from one sole source—the Bible. Kruger led the Transvaal Boers in 1881, when they rose in arms to assert their independence, and as *Oom Paul* became their president in 1883. After the Jameson Raid, 1896, his hostility to the British and the "Outlanders" generally was more marked than ever. As a result of the war with the British, he fled from South Africa, first settling in Holland, and lastly at Mentone.

KRUPP, ALFRED, *b.* Essen, 1812, *d.* 1887; established one of the greatest steel and ordnance manufactories in Europe. He introduced into his German workshops the Bessemer process for the making of steel, and the great steam hammers of Nasmyth. He was thus enabled to turn out the enormous steel castings, and the great, modern breech-loading guns, which have made his name famous.

KUBLAI KHAN, a grandson of the celebrated Jenghis Khan, and emperor of the Mongols in the 13th century. In 1267 he invaded China, and established there the Mongol dynasty. He extended his conquests over Cochin-China, Tibet, and beyond the Ural mountains westward, thus creating one of the largest empires ever known. Marco Polo describes the splendour of his court and the wisdom of his rule.

KUENLUN MOUNTAINS form the northern boundary of the plateau of Tibet, and are sparsely inhabited by a nomadic people.

KULTURKAMPF, the controversy during the years 1872 to 1882 between the Prussian Government and the Church of Rome. As a result, ultramontane politicians were excluded from nearly all administrative offices. The name signifies a struggle for education and enlightenment.

KUMASI, or Coomassie, the capital and chief town of Ashanti, West Africa. A British army, led by Sir Garnet Wolseley, captured and burnt the town in 1874. It was again taken by the British in 1896, since when Ashanti has formed a British Protectorate, with Kumasi as the seat of the British resident.

KURDISTAN, a mountainous district in Western Asia, south of Armenia, chiefly round the upper reaches of the Tigris, belonging partly to Persia and partly to Turkey. Its turbulent and almost uncivilised people, numbering two millions, acknowledge the rule neither of Turkey nor Persia, but only that of their own tribal chiefs. The Christians of Armenia have suffered terribly from the cruel outrages of their lawless neighbours, the Kurds.

KUROKI, BARON, *b.* 1846, one of Japan's brilliant generals. He saw active service during the Chino-Japanese War of 1894, and took part in the storming of Wei-hai-wei. In the war of 1904-5 he was present at the operations along the Yalu, and in the subsequent Japanese advance took command of the right wing, and played an important part in the victories of Liao-Yang, the Shaho, and Mukden.

KUROPATKIN, ALEXEI, *b.* 1848. He gained military experience in various Russian operations in Central Asia and in the Russo-Turkish War of 1877, during which he acted as chief of the staff to Skobyloff, and was present at Plevna. On the outbreak of war with Japan he was appointed to the command of the main Russian army, acting under Alexieff. On the recall of the latter he was left in sole command, but, after the battle of Mukden, was, at his own request, superseded by Linievitch.

KUROSHIWO, the Black Current of Japan, whose warm waters, from the Pacific Equatorial Current, beneficially affect the climate of Japan, and of the west coast of North America, in the same manner as the Gulf Stream affects our climate.

KURRA'CHEE. See *Karachi.*

LAAGER, the term applied first by the Boers to a defensive camp improvised out of ox-wagons. The wagons are arranged close together in a circle, with the baggage, etc., piled up between the wheels so as to form a continuous rampart.

LABARUM, the banner or standard of Constantine the Great. The pike, with its cross-piece bearing the banner, was crowned by a circle enclosing the letters *X* and *P*, the Greek initial letters for Christ. This design of good omen is supposed to have been revealed to Constantine in a dream.

LABRADOR, a vast peninsula in Canada, between the Gulf of St. Lawrence and Hudson Bay. Its soil is so barren and its climate so rigorous that its inhabitants number only a few thousand Eskimos and Indians, who carry on the fish-oil and fur trades respectively. It was first sighted by Cabot, 1497.

LAC. (1) A yellow, resinous substance exuded from the twigs of plants on the irritation of a tiny insect, *Coccus Lacca*, or produced by the insect itself from the twig, as its hatching ground. In its different preparations as *stick-lac*, *seed-lac*, *shell-lac*, etc., it is generally of a pale yellow colour, due to the presence of the insect; this colouring matter, extracted by the use of alkalis, forms *lac-dye*. Lac, dissolved in alcohol, forms varnish. India, Burma, and China supply most of the shell-lac. (2) In India, *lac*, or *lakh*, is a word denoting 100,000, and is generally used with reference to rupees—a lac of rupees.

LACE, network, generally composed of linen or cotton threads, used for ornamental purposes. The Bible records its manufacture in gold; ancient Grecian art gives evidence of its use; and the Middle Ages have handed down most beautiful specimens, worked chiefly by nuns for use in churches. The finest lace is of linen, hand-made, and of two varieties, point-lace and pillow-lace. *Point-lace* is worked entirely by the needle, and the 16th century Venetian specimens led to the later Brussels and Maltese varieties. *Pillow-lace* is made on a pillow by the manipulation of bobbins with thread, and the 15th century specimens from Flanders led to the Honiton, Mechlin, and Valenciennes varieties. *Machine-made lace* owes its introduction to John Heathcote, 1809, of Notts, and it is often difficult to distinguish the more beautiful specimens of this kind of lace from the true, hand-made lace.

LACH'ESIS. (1) In Greek mythology one of the three fates, *Clotho*, *Lachesis*, and *Atropos*, presiding over man's destiny. (2) A venomous kind of snake found in the north-east of South America, one variety possessing at its tail the well-known *rattle*.

LACHINE RAPIDS, on the St. Lawrence, near Montreal. Steamers avoid these rapids in ascending the river by means of a canal; but in descending, even the largest steamers shoot the rapids.

LACHRYMÆ CHRISTI—"Tears of Christ"—the name given to the wines produced from the vineyards around the foot of Mount Vesuvius. They are red or white, sweetish to the taste, and of very good bouquet.

LACORDAIRE, JEAN BAPTISTE, a celebrated French preacher, *b.* 1802, *d.* 1861. His training for the law, and his democratic ideas, eminently fitted him to appeal to the French people. His thrilling discourses at Notre Dame, Paris, will long be remembered.

LACQUER, varnish formed by dissolving lac in spirit, and coloured, if required, with saffron, gamboge, etc. It is applied to metals to prevent the surface tarnishing, The Japanese lacquer wood and papier-mâché ware by the application of several coats of a native varnish.

LACTOMETER, an instrument for determining the proportion of cream in milk. The simplest is a tube graduated to one-hundredths, in which good milk, after standing, would indicate 12 or 13 hundredths of cream. Floating lactometers are graduated in accordance with the fact that the natural specific gravity of good milk is 1·029. Lactometers, however, do *not* aid in detecting adulteration, this being only possible by careful chemical analysis.

LADIES' MILE, the drive north of the Serpentine, Hyde Park, London. Here, during the season, the Coaching and Four-in-hand Clubs meet.

LA'DOGA, the largest lake in Europe, area 7,000 square miles, situated near St. Petersburg, with the River Neva as outlet. In conjunction with many canals it forms a valuable waterway, besides giving employment to numbers of fishermen on its many islands.

LADON, the hundred-headed, sleepless dragon appointed by Juno to guard the apples in the gardens of the Hesperides.

LADYSMITH, a town in the north of Natal, South Africa, memorable for the British defence, under General White, against the Boer forces from November, 1899, to February, 1900, when it was relieved by General Buller.

LAFAYETTE, MARQUIS DE, *b.* 1757, *d.* 1834; a French general and statesman, celebrated alike in the history of the United States and of France. He took an important part as general in the American War of Independence, 1777–81. He played a prominent part in the French Revolution as commander-in-chief of the National Guards. His methods were too mild to please the Revolutionary leaders, and to save his life he withdrew from France. In 1830 he again commanded the National Guards, and was instrumental in placing Louis Philippe on the throne.

LA FONTAINE, JEAN DE, French writer; *b.* 1621, *d.* 1695. His *Fables* are world-famous, and place him high among the geniuses of his time, Molière, Racine, etc.

LAGOS, an island off the Slave Coast, West Africa. Previous to its occupation by the British in 1861 it was a great slave market, but it is now a great trading-centre; its chief exports are palm oil, wax, and ivory; population about 30,000.

LA HOGUE, CAPE, west of Cherbourg, France. Near La Hogue, James II. witnessed the wrecking of his hopes in the defeat of the French fleet by the English and Dutch, 1692.

LAHORE, a town near the Ravi, is an important railway centre, and capital of the Punjab; population nearly 200,000. Near Lahore is the important but dreary military station of Mean Meer.

LAING'S NEK, the scene of the defeat of the British under General Colley by the Boers in 1881, is a defile in the Drakensberg Mountains in Northern Natal.

LAISSEZ FAIRE, "Let things take their course," a term used in political economy to describe the principle of unrestricted competition in industrial enterprises as opposed to regulation by the State.

LAKE DISTRICT, the district round Lakes Windermere, Ulleswater, and Derwentwater, on the borders of Cumberland, Westmoreland and Lancashire. Its most beautiful lake and mountain scenery and the many interesting associations with the so-called Lake poets—Wordsworth, Southey and Coleridge—as well as with the Arnolds and Ruskin, make Ambleside and Keswick the head-quarters of thousands of tourists annually.

LAKE DWELLINGS. The remains of these dwellings in Switzerland give evidence of their existence in the Stone and Bronze Ages, some thousands of years ago. From the remains, they appear to have stood on piles, and to have been the homes of hunters and fishermen, not unacquainted with agriculture, weaving, and ingenious methods of making tools. The Irish *Crannogs* are similar, but of a later date, and were mainly intended for defensive purposes.

LALLA ROOKH, an Oriental romance by the celebrated Irish poet, Thomas Moore, published 1817. It is a series of four tales describing, with felicitous Oriental colouring and imagery, how Lalla Rookh, daughter of Aurungzebe, obtains her princely lover, through meeting him in the guise of a minstrel. For this poem Moore received 3,000 guineas from Longmans.

L'ALLE'GRO, one of the best of Milton's earlier poems. It praises mirth and gaiety, and forms a fitting companion to his Il Penseroso."

LAMAISM, a form of Buddhism, established in Tibet about the 7th century. The head, both of Church and State, is called the *Dalai Lama*, or Grand Lama, and is considered by the Tibetans to be the incarnation of their chief god. All the other members of the priesthood are called *lamas*, and hence the religion of the Tibetans is known as *Lamaism*. One remarkable feature of their religion is the use of "praying wheels." These are cylinders containing rolls of prayers, which are supposed to be said as often as the cylinder is turned.

LAMARTINE, ALPHONSE, a French poet and politician, *b.* 1790, *d.* 1869. When thirty, he published his "Méditations Poétiques," which placed him in the front rank of French authors. He took a prominent share in the affairs of his country. His "Histoire des Girondins" is thought to have precipitated the Revolution of 1848, which drove Louis Philippe from the throne.

LAMB, CHARLES, a famous English essayist, *b.* in London, 1755, *d.* 1834. He was a most lovable man, and he devoted his life to the care of his sister who, in a fit of insanity, had killed her mother. He spent thirty-three years as clerk in the service of the East India Company, 1792–1825, during which time he published, in conjunction with his unfortunate sister, the "Tales from Shakespeare," still highly prized, and commenced in the London Magazine the delightful "Essays of Elia," on which rests his fame as an author.

LAMBERT, JOHN, *b.* Kirkby Malham, Yorks, 1619, *d.* 1692; was an able general in the Parliamentary army, who substantially contributed towards the victories of Marston Moor, Dunbar, and Worcester. He was a staunch Republican, opposed the movement for crowning Cromwell as king, and even helped to bring about the downfall of Richard Cromwell. He also set himself against the restoration of Charles II., and was in consequence banished to Guernsey, where he spent the last thirty years of his life, chiefly in flower-gardening.

LAMBETH CONFERENCE, a meeting of the bishops of the Anglican Communion from all parts of the world. It was first held in 1867, and since then once each decade. It only meets for consultation, its resolutions having no legal force.

LAMBETH PALACE, the city residence of the Archbishop of Canterbury, situated in Lambeth, a Metropolitan borough, south of the Thames. The building dates from the 13th century and contains a valuable library.

LAMMAS DAY, first day of August. It was originally a religious harvest festival, *lammas* meaning "loaf mass"—a term indicative of the offerings at this festival.

LAMMAS LANDS are lands in England over which certain people have common rights from old Lammas Day, August 12, to Lady Day in every year. During the remainder of the year the lands revert to private ownership.

LAMPBLACK, an amorphous form of carbon, manufactured by burning turpentine, resins, and other substances, rich in carbon, in chambers furnished with a limited supply of air. The *soot*, collected on blankets, is purified, and then used as the basis of printers' ink, black paint, etc.

LAMPREY, an eel-like fish with a slimy body, without jaws, paired fins, or scales, and having the power of attaching its mouth, lined with teeth, by suction to fishes on which it preys. The Romans used them as food, and the death of Henry I. from a surfeit of lampreys has given them an historical interest.

LAMPS, ELECTRIC. See *Electric Lighting*.

LANARKSHIRE, the busiest manufacturing and most populous county of Scotland, is situated round the Clyde; hence its name Clydesdale. It contains Glasgow, Hamilton, and Airdrie, all owing their importance to the rich coal and iron fields of this county; population about 1,200,000.

LANCASHIRE, which includes the detached portion, Furness, is the busiest manufacturing and the most populous county of England. Its principal industry is cotton, and Manchester, the centre of that industry, is the most famous city in the world for the trade in cotton goods. Besides Manchester, the following towns are engaged in the cotton manufacture:—Bolton, population 178,000; Oldham, 140,000; Blackburn, 133,000; Preston, 115,000; Burnley, 102,000; Rochdale, 86,000; Bury, 58,000; Ashton, 50,000; and Middleton, 30,000. But Lancashire does not depend on cotton alone. Its manufacture of machinery is of great importance. Its famous seaport, Liverpool, accounts for about one-fourth of the imports, and two-fifths of the exports, of the United Kingdom. Other industries, too, are numerous:—Barrow-in-Furness (population 60,000) is an important iron-manufacturing and ship-building town; St. Helens (90,000) is one of the most important glass-manufacturing towns in the kingdom; Wigan (86,000) has extensive iron smelting and manufacturing works; Warrington (68,000) extensive manufactures of iron, soap, and leather; and Widnes (30,000), large alkali works. The population of the county exceeds 4,000,000.

LANCASTER, the county town of Lancashire, occupies an eminence on the left bank of the Lune, 7 miles from the sea. It has suffered in most of the wars carried on on English ground. The old castle, much strengthened by John of Gaunt, is now used as a prison; population over 40,000.

LANCASTER, HOUSE OF, the descendants of John of Gaunt, Duke of Lancaster, fourth son of Edward III. The claim of the House of Lancaster to the throne was based on the consent of parliament.

LANCASTER, JOSEPH, *b.* in London, 1778, *d.* in New York, 1838; an enthusiastic educationalist, the first to found large schools for poor children in England and to work them on the monitorial system, using the least ignorant to teach the rest.

LANCERS, cavalry regiments armed with the lance. The weapon consists of a shaft of ash, beech, or bamboo several feet in length, with a steel point 8 or 10 inches long. In some continental armies the shaft is of tubular steel. The use of the lance spread into Western Europe from Russia and Poland, was adopted by the Prussians in 1812, by the French in 1813, and by the British army, which now includes six regiments of lancers, in 1815.

LANDER, RICHARD LEMON, *b.* at Truro, 1804, *d.* 1834, was the first African explorer to trace out and map the course of the Niger. He died of the effects of a wound inflicted by natives while on his third expedition.

LANDES, THE, a dreary expanse of sand and marsh with patches of pasture, in the south-west of France on the Bay of Biscay. Large flocks of sheep are here tended, but the former custom of using stilts is being abandoned. Drainage and the planting of trees are reclaiming the marshes and fixing the sand-dunes.

LANDOR, ARNOLD HENRY SAVAGE, *b.* at Florence, an English writer, artist, and traveller. His published accounts of his travels in the Far East brought him into prominence, and his attempt to penetrate through Tibet into Lhassa in 1897, and the account of his capture and tortures still further quickened public interest. His chief works are: "Alone with the Hairy Ainu,"—an account of his

journeys in Yezzo and the Kurile Islands—and "In the Forbidden Land."

LANDOR, WALTER SAVAGE, *b.* at Warwick, 1775, *d.* 1864, a great master of English prose. His impulsive disposition led to his expulsion from Rugby and Oxford, and in 1808 he raised a band of volunteers to oppose Napoleon in Spain. He married unwisely, and lived his last years in Florence. His "Imaginary Conversations" contains much noble prose of classical correctness.

LANDSEER, SIR EDWIN, *b.* in London, 1802, *d.* 1873, an eminent English animal painter, who, like Millais, exhibited at the Academy whilst still a youth. Among his most popular works are "High Life and Low Life," "Dignity and Impudence," "The Challenge," and the famous lions of the Nelson monument in Trafalgar Square.

LAND'S END, a granite promontory, 100 feet high, forming the most westerly point of England. The *Longships Lighthouse* is a mile distant from the headland.

LANDSTURM, a section of the German army reserve enrolled exclusively for home defence. It consists of all males between the ages of 17 and 45 who do not belong to the regular army or to the reserves. The force is called out only in case of threats of invasion.

LANDTAG, the name given to the Parliament of Prussia, Saxony, and certain other German States.

LANDWEHR, a force of the army reserve in Germany and Austria, consisting of those men who have served a continuous period with the colours, and have also assembled for annual drills during an additional period in the First Reserve. Five years are spent in the first class of the Landwehr, and service continues in the second class until the age of 39. In case of war the various army corps are brought up to war strength by drawing on the reserve and Landwehr.

LANE, EDWARD WILLIAM, *b.* at Hereford, 1801, *d.* 1876, the most notable Arabic scholar that England has produced. He was the first to produce an accurate translation of the *Arabian Nights*, and his Arabic Lexicon, a work of many years of labour, has a European reputation. His works include "Account of the Manners and Customs of Modern Egypt."

LANFRANC, *b.* about 1005, *d.* 1089, the chief ecclesiastical adviser of William the Conqueror. He was an Italian, and was educated at Pavia. He became Prior of a monastery founded by the Conqueror at Caen, and accompanied him to England, where he was raised to the primacy.

LANG, ANDREW, *b.* at Selkirk, 1844; a literary critic and writer of versatile talents. He has distinguished himself in many branches of literature, including poems, ballads, fairy tales, novels, and biographies, in addition to numerous articles in magazines and translations from the Classics.

LANGLAND, WILLIAM, an English poet contemporary with Chaucer, about 1340–1400. His great work is "Piers Plowman," an alliterative poem dealing with the social grievances of the middle and lower classes of England, and attacking the clergy for their laxity and dishonesty.

LANGTON, STEPHEN, *b.* about 1150, *d.* 1228, was nominated by Pope Innocent III. to the Archbishopric of Canterbury against the will of King John. He took a leading part in the movement by which the Barons gained the Magna Charta.

LANSDOWNE, HENRY CHARLES, MARQUIS OF, *b.* 1845. After holding various offices under Mr. Gladstone, he was appointed Governor General of Canada in 1883, and five years later became Viceroy of India. As a Liberal Unionist he accepted the office of Secretary of State for War in the third ministry of Lord Salisbury in 1895, and became Foreign Secretary in 1900. This latter office he held until the resignation of Mr. Balfour, in December, 1905. His administration of the office was marked chiefly by an Anglo-Japanese Agreement, 1902, and its renewal, with fresh stipulations, in 1905; also by an Anglo-French Agreement, 1904. His policy won the approval of the whole nation.

LAOCOÖN, a priest of Neptune, at Troy, was destroyed, according to the legend, with his two sons by two huge serpents, because he angered Minerva by warning his fellow-countrymen against the device of the wooden horse (See *Troy*).

LAPIS LAZULI, a beautiful mineral of azure colour used in mosaics. It consists of a silicate of alumina with a small percentage of iron and lime. Ultramarine was at one time obtained as a pigment from this stone.

LAPLACE, PIERRE SIMON DE, a renowned French Scientist, *b.* 1749, *d.* 1827. He rose from humble circumstances to a high position in scientific circles in Paris, making his mark particularly in the application of mathematics to astronomical and physical science. He formulated the famous Nebular Hypothesis in his "Exposition du Système du Monde."

LAPLAND, a region in the extreme north of Scandinavia, and extending eastward to the White Sea. The Lapps, a race of little people of great endurance, are hospitable but not cleanly. The "mountain Lapps" are virile and energetic, and employ the reindeer as a domestic animal; the "sea Lapps" are an impoverished folk who live by fishing.

LA PLATA, RIO DE, the estuary of the South American rivers Parana and Uruguay, is rendered difficult of navigation by a prevalent, squally wind known as the *pamperos*. Monte Video, on the north side, has good harbourage, but Buenos Ayres is difficult to reach.

LAPUTA. Swift's "Travels into several remote nations of the World" describes Gulliver's *Voyage to Laputa*, an imaginary island peopled by philosophers and men of science. In this way the great satirist attacked Newton and the Royal Society.

LARCH, a deciduous, cone-bearing tree found in Canada, Great Britain and the mountainous parts of Europe, yields a resinous wood valuable in ship-building. Turpentine and gum are obtained from it, and its bark is used for tanning.

LARES (-es), the Roman deities who presided over the household and public places as their protectors, if properly respected and propitiated. The hearth typified the altar to the Lares, and was considered a sacred emblem of home life.

LA ROCHELLE, a seaport of France, midway between Nantes and Bordeaux. It was the stronghold of the Huguenots in the 16th and 17th centuries; population 20,000.

LARVA, the name applied to the first stage of development in an insect after it has emerged from the egg; thus, the caterpillar is the larva of butterflies and moths.

LASCAR, a term in Hindustani for a camp-follower, but now used to denote the natives employed on large British ships that visit Eastern ports. They are good sailors, of a quiet disposition, and, for the most part, are Mohammedans.

LASSO, a rope, often made of hide, with a running noose, used by ranchmen in Mexico and on the pampas of South America. The lasso is attached to the saddle, and the rider, by a dexterous cast, flings the noose over the head of the horse or ox, and brings it to the ground half strangled.

LAS PALMAS, the chief town in the Canary Islands, is situated on the north-east shores of Grand Canary. The town enjoys considerable trade, and is coming into prominence as a health resort; population exceeds 44,500.

LATAKI'A (formerly *Laodicea*), a seaport of Syria, on the mainland opposite to Cyprus, 50 miles south of Antioch. The harbour is choked with sand, but an export trade is carried on in Latakia tobacco, which grows on the hills behind the town; population 10,000.

LATERAN, THE, a palace in Rome, originally named from the Roman family Lateranus. Till the 14th century the Lateran was the usual residence of the Pope. Adjoining the palace is the famous church, *Lateran, Saint John*, "the mother and head of all churches" in Rome.

LATIMER, HUGH, *b.* at Thurcaston, Leicester, 1488, *d.* 1555, a Protestant martyr. He was appointed bishop of Worcester by Henry VIII., but resigned the office to preach and to tend the poor. He was an outspoken man of lovable disposition, and a greater preacher than theologian. He perished at the stake with Ridley at Oxford in the reign of Mary.

LATITUDE is distance north or south of the equator expressed in degrees, minutes, and seconds. The distance from the equator to the pole is divided into ninety equal parts called degrees. Many methods of finding the latitude of a place are employed, the most common being the observation of the altitude of the pole star above the horizon, which gives the latitude.

LATTER-DAY SAINTS, the name given to themselves by the Mormons.

LAUD, WILLIAM, Archbishop of Canterbury, *b.* at Reading, 1573, *d.* 1645. During the period of his autocracy, Charles I. carried out the directions of Laud in church matters and enforced them through the Court of High Commission. Laud's attachment to High Church principles and his attempt to impose the English liturgy on the Scottish Presbyterians, aroused opposition, and he was beheaded on a Bill of Attainder passed by the Long Parliament, against the wishes of the King and the Lords.

LAUGHING GAS, or nitrous oxide, is used as an anæsthetic in dentistry and minor surgical operations. It produces temporary insensibility, during which some patients laugh or cry hysterically.

LAURENCE, SAINT, a Christian martyr of Spain, who was burnt to death on a grid-iron during the Valerian persecutions.

LAURIER, SIR WILFRID, *b.* at St. Lin, Quebec, 1841; the first French Canadian to become premier of the Dominion. He began his political career in 1871 as a member of the Quebec Provincial Parliament. In 1874 he was elected to the Federal Parliament, and soon took a prominent position, his great powers of oratory gaining for him the title of "Silver-tongued Laurier." As Premier, a position he attained in 1896, his policy has been marked by loyalty to Great Britain, as evidenced by his tariff legislation of 1897, which gave our country preferential treatment, and by the prompt despatch of Canadian troops to South Africa in the Boer War.

LAUSANNE, near the northern shore of Lake Geneva, has Ouchy as its lake-side port. It is famous as the scene of the labours of Gibbon the historian; population over 36,000.

LAVA is the molten matter which issues from volcanoes. The surface lava has a porous appearance due to the escape of gases, but at a depth below the surface

it is compressed and glassy. Pumice stone is the lava-froth of the surface. Examples of the cooling of lava in curious columnar forms are seen in Fingal's Cave and the Giant's Causeway.

LAVOISIER, ANTOINE LAURENT, the originator of modern chemistry, *b.* in Paris, 1743, executed 1794. He was the first to show that combustion was a form of chemical action due to the union of oxygen with other elements. As a holder of government offices he fell a victim to the Reign of Terror.

LAW, JOHN, financier, *b.* at Edinburgh, 1671, *d.* 1729. His scheme for a paper currency of bank notes was rejected in Scotland, but was phenomenally successful in Paris, where Law won the support of the Regent Orleans. An enterprise which became famous under the name of the "Mississippi Scheme" proved his ruin. Law was driven from France and his estates forfeited.

LAW, WILLIAM, *b.* at Kingscliffe, Northamptonshire, 1686, *d.* 1761; a controversial and devotional writer. His "Serious Call to a Devout and Holy Life" has been described as one of the most powerful works of devotion in the English language; this, together with his "Treatise of Christian Perfection," and the influence he exercised over the Wesleys and other young men, gave a great impetus to the religious revival of the period.

LAWRENCE, SIR HENRY, *b.* in Ceylon, 1806, *d.* at Lucknow, 1857. He served in the Afghan and Sikh Wars and became Commissioner of Oudh. He was killed by a shell during the memorable defence of the Residency at Lucknow in the Indian Mutiny. The Lawrence Military Asylums in India form a most fitting memorial to this great soldier and his brother.

LAWRENCE, JOHN, LORD, *b.* 1811, *d.* 1879, brother of the above, entered the Indian Civil Service in 1829, and became Chief Commissioner of the disturbed province of the Punjab in 1853. On the outbreak of the Indian Mutiny in 1857 he enlisted the support of the Sikhs and sent a large contingent to the aid of our troops at Delhi, besides despatching a number of heavy guns for the siege of that city, thus contributing largely to the success of our arms. He became Governor-General of India in 1863, and was afterwards raised to the peerage.

LAWRENCE, MRS. PETHICK, a leader of the militant suffragists, and treasurer of the Woman's Social and Political Union; editor with her husband of the suffragist paper, "Votes for Women."

LAWRENCE, SIR THOMAS, *b.* at Bristol, 1769, *d.* 1830, a famous portrait painter. He had the support of George III., became the most fashionable portrait painter of his day, and was President of the Royal Academy.

LAYARD, SIR AUSTEN HENRY *b.* at Paris, 1817, *d.* 1894, was a famous archæologist. In 1845 he undertook, at his own expense, extensive explorations on the site of ancient Nineveh, and made valuable discoveries which he described in "Nineveh and its Remains" and "Monuments of Nineveh." The famous Assyrian bulls from the palace of Sardanapalus were presented by him to the British Museum. He also rendered good service to his country as British Ambassador to Constantinople, 1877–80.

LAZZARONI, a low class of Neapolitans without settled homes or occupation, and named after Lazarus, the beggar of the parable, or from the Hospital of Saint Lazarus where they sought relief.

LEAD, a heavy, malleable metal of great commercial value. It is particularly useful for gas and water pipes and for roofing. Solder, type-metal and pewter are alloys of lead. The oxides of lead, litharge, red lead and white lead are used by painters and plumbers, and sugar of lead is used medicinally. Lead poisoning is an insidious evil almost unavoidable by workers in lead, because its effects are cumulative. Scrupulous cleanliness is the best preventive, and meals should never be eaten in the work-room.

LEAMINGTON, a fashionable health-resort of Warwickshire, noted for the efficacy of its mineral springs. It is situated on the Leam, 2 miles from Warwick. Winter is *the season* of Leamington; population nearly 30,000.

LEANDER. See *Hero.*

LEATHER, the prepared hides or skins of animals. The hides, imported in great quantities from South America, Australia and the Cape, are cleansed, cleared of hair, stretched, then tanned by soaking in a strong astringent solution, as of oak bark or nut galls. The leather is then pounded or rubbed, and softened with oils. *Morocco* leather, originally made from goat-skin, *roan* leather from sheep-skin, and *Russia* leather from calf-skin with a dressing of the odorous oil of birch-bark, have special preparations.

LEBANON, two parallel ranges of mountains in Syria, north of Palestine. Its famous cedars are still worthy of their reputation. Mount Hermon, the highest point of Lebanon, is snow-clad and reaches a height of 10,500 feet.

LECKY, WILLIAM HARTPOLE, *b.* at Dublin, 1838, *d.* 1904, one of the most prominent historians of the 19th century. His reputation rests on his "History of European Morals," his "History of the Rise and Influence of the Spirit of Rationalism in Europe," and his "History of England in the Eighteenth Century."

LEE, ROBERT EDWARD, *b.* 1807, *d.* 1870, the able leader of the Confederate troops in the American Civil War. Only the diminishing resources of the South and the increasing resources of the North caused his generalship to be unavailing. He was at the head of the States Military Academy before the outbreak of the war, and he had seen service in Mexico.

LEECH, JOHN, *b.* 1817, *d.* 1864, a famous "Punch" artist and illustrator. He was a schoolfellow of Thackeray at the Charterhouse, and his colleague on the staff of Punch. His political cartoons, and humorous sketches in that paper, greatly added to its reputation, and form one of its most valuable series of contributions. His illustrations in "Hood's Comic Annual" and Dickens' "Comic History of England" are famous.

LEECHES, blood sucking, worm-like creatures, one variety being particularly notable for its medicinal uses. The medicinal leech is found occasionally in British ponds, but the principal supplies come from the marshes of France. The leech-gatherer wades into the water and allows the leeches to attach themselves to his legs. The practice of leeching was very common formerly, and is still used on occasions to reduce inflammation. See *Med. Dict.*

LEEDS, a busy manufacturing city on the Aire, in the West Riding of Yorkshire, noted especially for its woollen industry. Yorkshire College, Leeds, formerly one of the constituent colleges of Victoria University, obtained a Charter in 1904, and is now known as Leeds University. The ruins of Kirkstall Abbey with its grounds on the outskirts of Leeds, were presented to the city by the late Colonel North. (For population, etc., see p. 902.)

LEEWARD ISLANDS, THE, a British Colony in the West Indies. See *West Indian Possessions,* page 878.

LEGAL TENDER. See *Com. Dict.*

LEGATE, a papal ambassador, who, on particular missions, is empowered to act with almost full papal authority. The powers of a legate were usually conferred upon the Archbishops of Canterbury before the Reformation, the presence of foreign legates in England being repugnant to the nation.

LEGEND. 1. At first this was the title of the book containing the lessons appointed to be read daily in the early church. Later the term was applied to a collection of the lives of saints and martyrs, and remarkable stories concerning them. One of the most celebrated is the "Golden Legend," translated into English by Caxton, and printed by him in 1483. As much that was recorded in these collections was pure invention, the term legend gradually came to be applied to any fiction that claimed to be the truth. 2. The superscription round the head of a coin or medal.

LEGHORN, an important seaport of Italy and a strong naval station, 15 miles south of Pisa. It exports straw hats, silks, wine and dried fruits; population 100,000.

LEGION, in ancient Rome a body of troops, numbering from 3,000 to 6,000 at various times. At first it consisted solely of Roman citizens, and was divided into *maniples* of 60 foot soldiers with two centurions and a standard-bearer, the younger men in battle forming the front line with the veterans at the back. In the first century B.C., foreign auxiliaries were admitted and the legion became a self-contained unit resembling an army corps.

LEGION OF HONOUR, a French order established in 1802 by Napoleon to reward distinguished military and civil service. The honour is now conferred as a distinction upon foreigners as well as Frenchmen, and the number of members is limited to 30,000. The decoration consists of a white enamelled star of five rays, suspended by a scarlet watered-silk ribbon, and on it is inscribed, *République Française,* 1870, and *Honneur et Patrie.*

LEGITIMISTS, supporters of the older branch of the Bourbon family during the revolutions in France in the 19th century. Louis Philippe, the representative of the younger or Orleanist branch, gained the throne from Charles X. in the revolution of 1830. The two branches, however, united in supporting the claims of the Comte de Paris after the Republic of 1871 was firmly established.

LEIBNITZ, GOTTFRIED WILHELM VON, *b.* at Leipsic, 1646, *d.* 1716, one of the greatest of German philosophers and mathematicians. After seeing Sir Isaac Newton's method of "Fluxions," he invented the differential and integral calculus, and was one of the pioneers in the study of comparative philology, collecting words and phrases from many languages for the purpose of comparison.

LEICESTER, the county-town of Leicestershire, one of the midland counties of England. It has important hosiery, boot and lace industries. (For population, etc., see p. 902.)

LEICESTER, EARL OF, *b.* 1531, *d.* 1588, the favourite of Queen Elizabeth, was a younger son of the Duke of Northumberland. The suspicious death of his wife, Amy Robsart, forms a dramatic episode in Scott's "Kenilworth." He was not successful as a military leader in the Netherlands, but he was entrusted with the command of the land forces at Tilbury in the year of the Armada.

LEICHHARDT, FRIEDRICH, *b.* 1813, near Berlin, an Australian explorer who published excellent records of his travels in Northern Queensland. He probably lost his life in a journey across Cape York

Peninsula in 1848, as no news was heard of him after April of that year.

LEIGHTON, FREDERICK, LORD, *b.* at Scarborough, 1830, *d.* 1896, one of the foremost British painters of the 19th century. He travelled and studied on the continent, developing remarkable power as a colourist and designer. In 1878 he became President of the Royal Academy, and during the eighteen years of his office did more to add dignity and bring prosperity to this Society than any of his predecessors.

LEIGHTON, ROBERT, *b.* about 1611, *d.* 1684, a Scottish divine whose life and writings revealed a remarkable saintliness of character. He was appointed against his wish to the See of Glasgow, from which he retired after vain attempts to justify episcopal government in the eyes of Scotsmen. After his death was published his "Rules and Instructions for a Holy Life."

LEINSTER, in many respects the most important of the four provinces of Ireland, occupies the south-eastern part of the island. Dublin, the Irish capital, is in Leinster, and the chief ports are Dundalk, Drogheda, Kingstown, and Wexford.

LEIPSIC, an important city in Saxony, 100 miles south-west of Berlin, has a great printing and book-binding industry, and its university and conservatoire of music have a great reputation. Here, in the "Battle of the Nations," in 1813, an allied force of Prussians, Austrians and Russians succeeded in defeating Napoleon; population about 485,000.

LEITH, a seaport adjoining Edinburgh, with an important Baltic trade in grain and timber, and a large export trade in coal, cotton and iron. It has large flour mills, distilleries, breweries, engineering and chemical works; population about 75,000.

LELAND, JOHN, *b.* in London, 1506, *d.* 1552. After travelling on the continent he became chaplain and librarian to Henry VIII., and received the title of royal antiquary. He spent six years in searching the archives and libraries of cathedrals, abbeys, priories and colleges for material illustrating the history and archæology of England and Wales, but died before completing the systematic arrangement of his treasures. Most of his collection was placed in the Bodleian Library.

LELY, SIR PETER, *b.* 1618, in Westphalia, *d.* 1680, in London, a portrait painter who had as patrons Charles I., Cromwell and Charles II. For the latter monarch he painted the well-known "Court Beauties," now exhibited at Hampton Court.

LEMBERG, a trading city of Galicia, in Austria, the seat of an Armenian, a Roman Catholic and a Greek Archbishopric. The Jews form a third of the population; they manage the great fairs and control the transit trade of the city.

LEMON, a fruit of the same order as the orange and lime, which it resembles. It is widely cultivated in Southern Europe. Its juice, containing citric acid, is anti-scorbutic and makes a wholesome and refreshing drink. Its rind, when candied, is used in cakes and puddings, and from the oil extracted from it a flavouring known as essence of lemon is obtained. Salt-of-Lemon is a chemical product of potash not related in any way to the fruit.

LENA, a great river of eastern Siberia, rising near Lake Baikal. After a course of 2,800 miles it enters its delta and flows into the Arctic Ocean. It is frozen for more than half the year, but its basin furnishes an invaluable network of waterways in a district rich in minerals. Yakutsk is the chief town on its banks.

LENSES are plates of transparent material, glass or pebble, whose curved surface causes the rays of light that pass through them to converge or diverge, thus producing a decrease or increase in the apparent size of the objects viewed. Ten varieties of lenses may be obtained by combining convex, plane and concave surfaces, the well-known magnifying or microscopic lens having two convex surfaces. In a camera it is essential that the image produced by a lens should be well defined. Rays of light, however, entering the lens near the centre do not coincide exactly with those that enter near the edge; hence arises the use of the circular stop in the photographic camera to restrict the area of the lens. The unequal refraction of light in single lenses gives rise to colour bands, which may be obviated by the use of a combination of lenses, which are then known as achromatic lenses.

LENT, a penitential period of forty days observed in the Christian Church as a time of preparation for Easter. The first day of Lent, or Ash Wednesday, is observed with great solemnity in the Roman Catholic Church. Sundays are not included in the fast. The festival of *mi-carême*, or mid-lent, is observed on the Continent as a relief from the rigours of the long period of abstinence.

LENTHALL, WILLIAM, the Speaker of the *Long Parliament*, became famous by his refusal to tell the King whether any of the "Five Members" were present or not. When the Long Parliament reassembled after the death of Cromwell, he resumed his office as Speaker, and favoured the Restoration.

LEO, POPE, surnamed "The Great," occupied the papal chair 440–461. In his time the invasions of the Huns under Attila threatened Rome, and it was due to his interposition that the danger was warded off from the city. He was not, however, equally successful in dealing with Genseric, a Vandal chief, by whom, in 455, Rome was sacked.

LEOFRIC, Earl of Mercia in the 11th century. Through his influence with the Witan, Edward the Confessor was elected king. He is closely associated with the traditions of Coventry as the husband of Lady Godiva. (See *Godiva, Lady*).

LEONARDO DA VINCI, *b.* at Vinci, near Florence, 1452, *d.* 1519. He was a gifted artist, a sculptor, architect, mathematician and engineer, and is one of the greatest examples of true versatility of genius. His most famous painting is a fresco, "The Last Supper," on the walls of the Convent of Santa Maria, in Milan, and this, despite its ruinous condition, remains one of the world's masterpieces.

LEONIDAS. See *Thermopylae.*

LEOPOLD I., king of the Belgians, 1831–65. He was the youngest son of Francis, duke of Saxe-Coburg. His sister, Maria Louisa, was the mother of Queen Victoria, and his brother Ernest was the father of the Prince Consort. For three months, in 1830, he occupied the throne of Greece, but he abdicated it and accepted the Belgian kingdom, which he ruled with remarkable wisdom and firmness for thirty-four years.

LEPANTO, a small seaport on the Gulf of Corinth, now of little importance owing to the silting up of the harbour. It was the scene of the destruction, in 1571, of the Ottoman fleet of 200 galleys and 60 other vessels by the combined fleets of the Christian States around the Mediterranean.

LEPROSY. See *Med. Dict.*

LE SAGE, ALAIN RENÉ, *b.* 1668, *d.* 1747, a French dramatist and novelist who first attracted public attention by a drama, "Turcaret," in which he attacked the impositions of the "farmers-general" of taxes. His greatest work, "Gil Blas," has given him a place among the best of novelists.

LESLIE, DAVID, a famous Scottish general who served under Gustavus Adolphus and fought for the Parliamentarians at Marston Moor. He opposed Cromwell after Charles II. signed the League and Covenant, but was decisively beaten at Dunbar, 1650, and after the Battle of Worcester was taken prisoner. At the restoration he was made a peer with the title Lord Newark, and was awarded a pension. He died in 1682.

LESSEPS, FERDINAND DE, *b.* 1805, *d.* 1894, a great French engineer, who designed and superintended the construction of the Suez Canal, 1859–69. His scheme for cutting a canal across the Isthmus of Panama led to a financial collapse, for which de Lesseps, being held to be partly responsible, was condemned in his old age to a term of imprisonment, which, however, was not carried into effect.

LESSEPS, JACQUES DE, a grandson of Ferdinand de Lesseps, the second man to cross the Channel from France to England by aeroplane. He started his flight at Les Barraques, near Calais, and ended it in a meadow about three miles east of Dover, within 35 minutes, May 21st, 1910.

LESSING, GOTTHOLD EPHRAIM, *b.* 1729, *d.* 1781, one of the first of German writers to forsake the French school of thought and the French style, and to reflect German ideals and national sentiments. His "Laocoön" is a brilliant essay in art criticism, his "Nathan the Wise" is a didactic drama, whilst his pungent theological writings helped to lay the foundations of Biblical criticism in Germany. "Emilia Gulotti" is considered his best tragedy.

LE'THE is, in Greek mythology, the river of Hades, whose waters confer upon the "shades" passing to the Elysian Fields forgetfulness of their earthly ills.

LETTERS, or epistles, whether of a private or public kind, have at various times reached a literary excellence that has secured for them a place in literature. The epistles of Cicero on philosophical questions, and those of Saint Paul to the infant churches, occupy a high place among the best of writings. The 18th century was an age of letter writers in England and, amongst others, Pope, Swift, Gray, Cowper, and Horace Walpole are especially noteworthy, whilst among later writers, Shelley, Byron, and Keats showed a facility in prose that rivals their gift of poesy.

LETTRES DE CACHET, sealed warrants issued by the French kings up to the time of the Revolution of 1789, authorising the arrest of individuals who might be deemed dangerous to the State, and their detention in prison without a trial.

LEVANT, the eastern portion of the Mediterranean and the coast regions of Syria, Asia Minor, and Egypt.

LEVANTER, the prevailing summer wind off the Mediterranean coasts of Africa.

LEVÉE, a ceremonial morning reception held by the sovereign or his representative. The function differs from a drawing-room in the circumstance that only gentlemen are present at a king's levée, while both ladies and gentlemen are admitted to a drawing-room.

LEVER, CHARLES JAMES, *b.* at Dublin, 1806, *d.* 1872, the popular Irish novelist, was educated as a doctor in Dublin, and, turning to literature, wrote "Harry

Lorrequer" and "Charles O'Malley," at the age of thirty. His books abound in rollicking good humour and adventure. He spent the last twenty-seven years of his life in the English consular service.

LEVERRIER, URBAIN, *b.* 1811, *d.* 1877, an eminent French astronomer, who shares with the English astronomer, Adams, the honour of discovering the planet Neptune from observations of the variations in the length of a revolution of Uranus. This discovery, a remarkable triumph of mathematical astronomy, forms one of the greatest confirmations of the application of the Laws of Gravitation to the Solar System.

LEVITES, THE, a Jewish tribe descended from Levi, the son of Jacob and Leah. To this tribe was entrusted the duty of the priestly ministrations and sacred offices of the Temple. The tribe numbered 40,000 in the time of David, but after the captivity only forty could be gathered together. As a separate caste the Levites seem to have disappeared after the Roman occupation of Palestine.

LEWES, the county-town of Sussex, is a market town and a railway junction of some importance. Near Lewes, Henry III. was defeated by Simon de Montfort, 1264; after the battle a treaty, known as the Mise of Lewes, was signed, by the terms of which Montfort became practically the ruler of England.

LEWIS CARROLL. See *Dodgson.*

LEYDEN, an important town of Holland, situated about 6 miles from the sea. It is the seat of an important university which was established in 1575. Leyden was founded by the Romans, during the 17th century was famous for the manufacture of cloth, and since that time it has declined in importance; population about 54,000.

LHASSA, the capital of Tibet, is situated upon a tributary of the Sanpo, on a dreary plateau whose altitude is about 12,000 feet. It is the great holy city of the Buddhists and the residence of the Dalai Lama, their high priest. Lhassa had been visited but rarely by Europeans until 1904, when it was occupied by a force of the Indian army led by General Macdonald and Colonel Younghusband. The town is exceedingly dirty, and the principal building is the Potala, the residence of the Dalai Lama, a huge structure possessing a gilded roof. Lhassa is the most important trading centre of Central Asia; population about 50,000, of which a large number are monks.

LIANAS, the name given to various species of climbing and twining plants, which grow in great profusion in tropical forests. Lianas twine themselves about the trunks of trees, and in time form a barrier which is almost impenetrable. They resemble hempen cables, and frequently twine themselves so tightly about a tree that the latter is crushed.

LIAOTUNG, the most southern of the three provinces of Manchuria. The province was the scene of the principal land operations during the Russo-Japanese War. The chief towns are Mukden, the capital of Manchuria, Newchwang, a treaty port at the head of the Gulf of Liaotung, and Port Arthur and Dalny, near the extremity of an extensive peninsula jutting into the Yellow Sea.

LIAO-YANG, a town of Manchuria, situated about 40 miles in an approximately south-westerly direction from Mukden. It stands in one of the most fertile districts of Manchuria. Near here, in September, 1904, the Russians were defeated by the Japanese in one of the most sanguinary battles of modern times.

LIBATION, properly a drink-offering made to a god. Amongst the Romans, libations were offered at meals to the Lares or household gods. The term was also used of offerings of meal, honey, etc., which were placed upon the altar of a god.

LIBAU, a Russian port situated upon the Baltic coast. It possesses a fine harbour, and exports oats, flour, flax, and eggs. Libau harbour is kept practically free from ice, and on that account is much used by the Russian navy; population 65,000.

LIBERAL PARTY, the name given to one of the two great political parties of Great Britain. Its members have in the past supported the extension of the franchise, and free trade, and, during the closing years of the 19th century, Home Rule for Ireland. The name was bestowed upon the party about 1832, on the occasion of the passing of the Irish Reform Bill; previous to that time its members were known as Whigs.

LIBERAL UNIONISTS, the name given to those members of the Liberal party who refused to support Mr. Gladstone's Home Rule Bill in 1886, and who, under the leadership of the Marquis of Hartington (later the Duke of Devonshire), threw in their lot with the Conservatives. The two parties thus combined took the name of *Unionists*, the corner-stone of their policy being the maintenance in its integrity of the union between Great Britain and Ireland.

LIBERIA, a negro republic situated on the Guinea coast of West Africa. It was established in 1822 by a number of philanthropists as a home for freed slaves. The principal productions are coffee and rubber. Liberia has an area of 45,000 square miles, and an estimated population of over two millions. The capital is Monrovia.

LICK OBSERVATORY, situated on Mount Hamilton, California, obtains its name from James Lick, by whom it was founded and equipped. On its completion, in 1888, it was handed over to the University of California. The observatory contains a world-famous refracting telescope, which possesses an aperture 36 inches in diameter.

LICTORS, the attendants of the magistrates of ancient Rome. They preceded the latter in the streets of Rome, and attended to the arrest and punishment of criminals. The lictors carried bundles of rods called fasces, and axes, the instruments of punishment. The number of lictors attending upon a magistrate varied from six to twenty-four, according to the rank of the latter.

LIDDON, HENRY PARRY, *b.* in Hampshire, 1829, *d.* 1890; an eminent theologian and preacher. In 1866 he delivered his famous Bampton Lectures on "The Divinity of Our Lord." In 1870 he was created canon of St. Paul's Cathedral, where he preached with great effect. Most of his sermons have been published and have exercised a great influence on religious thought.

LIDFORD LAW, an expression implying to hang first and try after. The term is said to have arisen from the practice that once held at Lidford, in Devonshire, the castle of which served as the prison of the Stannaries. William Browne, a local poet of the 16th century, refers to the practice in some stanzas, commencing:

"I oft have heard of Lidford Law:
How in the morn they hang and draw
And sit in judgment after."

LIEBIG, BARON VON, *b.* at Darmstadt, 1803, *d.* 1873, a celebrated German chemist. He was educated at Bonn and Paris, and subsequently became Professor of Chemistry at Giessen, and later occupied a similar post at Munich. His researches were of a most varied nature, but he devoted much time to the study of the chemistry of food and agriculture. The Extract of Beef and the Food for Children prepared from his prescriptions are well known.

LIÉGE, a large manufacturing town, is situated upon an extensive coalfield in the south of Belgium. Coal, iron and zinc are mined, and Liège specialises in the manufacture of small-arms, and produces in addition machinery, woollen goods, leather and sugar; population about 175,000.

LIEN. See *Commercial Dictionary.*

LIFEBOAT, a boat designed to save persons from vessels in distress, and so constructed that it will keep afloat in the most stormy seas. Its principal properties are strength, stability, and power to right itself when capsized. The ordinary lifeboat has a continuous deck, between which and the bottom is situated an air-tight chamber containing ballast. In addition to this air-space, there are usually two chambers placed above the deck, designed to keep the boat afloat should this chamber be stove in, and to assist the boat in righting itself should it capsize. The deck of the boat is a few inches above the surface of the water, and is connected with the water by a number of valved tubes, which allow the water which is shipped to escape, but do not permit the outside water to enter. Lifeboats are usually provided with a carriage, by means of which they may be taken along the shore to any desired spot.

LIFE GUARDS, the name given in England to two cavalry regiments which form part of the Household Troops, and which are engaged in personal attendance upon the sovereign.

LIFE-SAVING APPLIANCES. (1) The Life-belt is an ordinary canvas belt, to which are attached pieces of cork. When in use the belt is fastened round the body. Occasionally life-belts are constructed with air-tight chambers. (2) The Life-buoy is usually circular in form, and is composed of cork covered with canvas. In the navy some life-buoys are fitted with flares, which are lighted automatically when the life-buoy is sent adrift, and serve to indicate the position of the latter. These are used at night to rescue a man who has fallen overboard. (3) One of the most useful appliances is known as the "Rocket Apparatus." A rocket having a light line attached to it is fired from the shore over a vessel in distress; by means of the line a hawser is hauled on board from the shore and made fast to the mast. Along this hawser, by means of a sling buoy, the persons on board the vessel are hauled ashore.

LIFTS, the name given to certain contrivances for raising heavy weights. They consist essentially of a cage or chamber, which is capable of moving up and down a vertical shaft. The cage may be raised by means of a rope attached to a drum or by means of an hydraulic press. In the latter case the plunger of the press is placed beneath the floor, the press itself being some distance below the basement. In all cases, to reduce the work, the cage is counterpoised by a weight about equal to its own weight.

LIGHT. The sensation which is called light is produced when certain rays proceeding from the sun or other luminous body fall upon the retina of the eye. These rays are conveyed through the medium known as ether, which pervades all space and matter. Light itself is invisible, but is made visible by the minute dust particles in the air. The velocity of the light rays has been determined in various ways, and

is about 186,000 miles per second. It is found that ordinary sunlight is composite in character. If a ray be admitted into a darkened room, passed through a glass prism and thrown upon a screen, it is seen that the image has become a band showing in order the following colours—red, orange, yellow green, blue, indigo, and violet. These are not seen in distinct bands, but one colour merges into those situated on either side of it. "White light" is the result of the blending of these colours.

LIGHT CURE. See *Finsen.*

LIGHTFOOT, JOSEPH BARBER, *b.* at Liverpool. 1828, *d* 1889, became Bishop of Durham, 1879. He was one of the finest Biblical scholars of the 19th century, and in addition to writing several brilliant commentaries on the Pauline Epistles and on the writings of the Early Fathers, he assisted in the revision of the Authorised Version of the New Testament.

LIGHTHOUSE, a beacon which is placed on some prominent part of the coast, on a reef, or at the entrance to a harbour. The modern lighthouse is constructed usually of granite, and is cylindrical in form. The lamp is usually an oil lamp, the wicks being arranged in concentric rings. The light is either continuous or of the flash variety. In order to increase the brilliancy of the light, reflectors or lenses are used. In each case the result is the same, the rays are all sent out parallel to one another, and thrown where they are required. The flash light is produced either by causing the light with its reflectors, etc., to revolve, or by shutting off the light by means of a screen, the apparatus being moved by clockwork. Every important lighthouse has its own distinctive flash, which is obtained by producing long and short flashes at varying intervals, or. occasionally, by giving both red and white flashes.

LIGHTNING, the name given to the flash observed when an exchange of electricity occurs between one cloud and another, or between a cloud and the earth. It thus corresponds to the spark which may be obtained by means of an electrical machine. Lightning is usually classified into forked lightning, sheet lightning and ball lightning. The last is of somewhat rare occurrence. Forked lightning is usually wavy in character and does not in the least resemble the conventional pictures of it. When it occurs below the horizon, its reflection in the upper parts of the atmosphere gives rise to the lightning of the sheet variety.

LIGNITE, sometimes called brown coal, is a kind of partially carbonised wood. It is formed when peat, which has subsided some distance in the earth, is submitted to a moderate pressure. Lignite contains about 55 per cent. of pure carbon, as against about 85 per cent. found in good coal.

LILLE, an important manufacturing town situated in the north of France, near the Belgian border. It manufactures textiles of all kinds, iron goods and sugar; population about 220,000.

LILLIBULERO, the name applied to a political song aimed at James II., and very popular in England previous to the Revolution, 1688. It derives its name from the refrain which ran "Lullibulero, bullen—a—lah." The words, which are mere doggerel, were written by Wharton and were set to music by Henry Purcell.

LILLIPUT, a country mentioned in Swift's 'Gulliver's Travels," which was inhabited by a race of pygmies no bigger than one of Gulliver's fingers.

LIMA, the capital of Peru, is situated a few miles from the Pacific coast. It is very unhealthy and much troubled by earthquakes. Lima contains the tomb of Pizarro, who, at the head of a Spanish force, took the town, 1535, and was murdered there a few years later; population 113,000.

LIME, or oxide of calcium, in its pure state is a whitish solid or powder, which is obtained by heating, or burning limestone in a kiln. It is slightly soluble in water. When water is added to freshly burnt lime, or quicklime, as it is commonly called, chemical combination ensues and a large quantity of heat is given off. Lime treated in this way is known as slaked lime. The most important compound of lime is chloride of lime, commonly called bleaching powder.

LIMELIGHT, a light which may be obtained by projecting an ordinary bunsen flame upon a piece of quicklime. The latter becomes incandescent, and a brilliant white light of high illuminating power is produced. Instead of the bunsen flame, a mixture of coal gas and oxygen, or of hydrogen and oxygen, is generally used. Limelight is used for magic lanterns and for scenic effects in theatres.

LIMERICK, the chief port on the west coast of Ireland, is situated at the head of the estuary of the Shannon. Its exports include bacon and dairy produce. Limerick was the last town in Ireland to surrender to William III., and then the inhabitants surrendered to General Ginkel, on condition that they should not be punished, and that they should retain their religious liberties. These conditions were embodied in the Treaty of Limerick, 1691. The Protestant party at Dublin repudiated this treaty, and Limerick was for some time after known as "the city of the violated treaty."

LIMESTONE, or calcium carbonate, is one of the most abundant of the rocks which compose the crust of the earth. Ordinary limestone, so called, is a hard compact rock with a grey or bluish grey colour. It is slightly soluble in water containing carbon di-oxide. When water which contains calcium carbonate in solution evaporates the latter is left behind, and thus stalactites and stalagmites are commonly found in limestone districts in which caverns usually abound. Chalk and statuary marble possess the same chemical composition as limestone; in fact, to scientists, they are known as limestone.

LIN'ACRE, THOMAS, *b.* 1460, *d.* 1524, a celebrated physician, who was for some time private physician to Henry VIII., and was one of the founders of the Royal College of Physicians.

LINCOLN, the capital of Lincolnshire, is situated on the river Witham. It is an important agricultural centre, manufactures agricultural implements, and possessing one of the largest horse-fairs in England. Lincoln cathedral is famous for its magnificent towers and its beautiful angel choir. The town was a place of considerable importance under both the Romans and Saxons; population about 49,000.

LINCOLN, ABRAHAM, *b.* in Kentucky, 1809, *d.* 1865, was the sixteenth president of the United States. He was elected in 1861, the election being fought largely on the slavery question. The civil war broke out shortly afterwards, and much of the success of the Federal government was due to his perseverance and practical good sense. He was re-elected president, 1865, but was assassinated in the following year by John Wilkes Booth.

LINCOLN, FAIR OF, the name given to a battle fought near Lincoln, 1217, in which the Earl of Pembroke, acting as regent for Henry III., defeated Louis, son of Philip II. of France. The battle is so called from the enormous amount of booty which fell into the hands of the victors.

LINCRUSTA, a material used as an ornamental covering for dados and ceilings. It is a mixture of paper, cellulose, etc., worked into a kind of paste with oils, and then made into a substance like paper and plaster with a pattern in relief.

LIND, JENNY, *b.* at Stockholm, 1820, *d.* 1887, a celebrated prima donna, commonly known as the "Swedish Nightingale."

LINEN, a cloth made of the fibres of the flax plant. The fibres which occur in the stem of the plant are separated from one another by soaking them in water. They are then dried, the woody portions removed and the fibres separated by combing into longs and shorts. The remaining operations are spinning the yarn and weaving it into cloth. The chief linen manufacturing districts of the British Isles are in Ulster, Fife and Forfar. In the former district, fine linen goods are made; Dunfermline specialises in table linen; and the coarser goods, such as canvas, are made at Dundee, Montrose, etc. There is also some linen manufactured in Yorkshire, at Barnsley and Leeds.

LINGUA FRANCA, "Free Tongue," the dialect employed in intercourse between Europeans and the inhabitants of the coast regions of North Africa and the Levant. It is a corrupt form of Italian, with an admixture of words from other languages, and proves of great use to travellers and business men trading in those districts. The term is also applied to any similar mixture of tongues used in commercial intercourse, e.g., the *Pidgin English* of the East.

LINIEVITCH, GENERAL, *b.* 1843; a Russian general who saw active service against the Tartars, in the Russo-Turkish War, and during the Boxer rising in China. During the Russo-Japanese War he commanded the Russian left, and offered the most stubborn resistance to the Japanese advance. After the Battle of Mukden he succeeded Kuropatkin as commander-in-chief.

LINNÆ'US, CAR'OLUS, *b.* 1707, *d.* 1779, a famous Swedish botanist. He introduced a classification of plants based upon the sexual system, which possessed the merit of simplicity, but has since given way to one more scientific, which is based upon the comparison of all the organs of the plant. Linnæus was one of the pioneers in the modern study of natural science.

LINOLEUM, a floor covering composed of ground cork, colouring matter and oxidised linseed oil. A certain proportion of gum and the colouring matter necessary to produce the ground colour required are added to the oil, and the whole is formed into a paste by mixing it intimately with the ground cork. The paste is then pressed on to a backing of stout canvas and allowed to dry, after which patterns in various colours may be printed on the upper surface.

LINSEED, the seed of the flax plant, from which a valuable oil is extracted. Linseed oil is used in the manufacture of varnishes and printers' ink, and, mixed with lime-water forms a valuable remedy under the name of "Carron-oil," for burns. The seeds, after the oil has been extracted, are used as food for cattle.

LIPTON, SIR THOMAS, *b.* at Glasgow, 1850. Starting life as a small retail dealer, he gradually built up a huge business, with branches in all the most important towns in England, acquired tea and coffee estates in Ceylon, and developed an extensive cold storage business in the United States. In 1899, 1901, and 1903 he attempted, without success, to win the

world-famous yachting trophy, the America Cup. He was knighted in 1898, and created a baronet in 1902.

LIQUEUR, a mixture of alcohol and water flavoured with the oil obtained from some fruit. The best known liqueurs are Curaçoa, Maraschino, Kirsch, Benedictine and Chartreuse.

LISBON, the capital of Portugal, is situated upon a magnificent harbour, at the mouth of the Tagus. It does considerable trade with South America, Madeira and the Azores, and is a port of call for the Cape Liners. Lisbon was a place of considerable importance under the Romans, and from the 8th to the 12th century was held by the Moors. In 1755 it was almost entirely destroyed by a terrible earthquake, and since that date has been practically rebuilt.

LISTER, JOSEPH, *b.* 1827, a distinguished surgeon who occupied the post of "Surgeon-Extraordinary" to Queen Victoria, who in 1896 created him a baron. He is one of the leading authorities on bacteriology, and is famous as the introducer of the antiseptic treatment in performing surgical operations.

LISZT, FRANZ, *b.* in Hungary, 1811, *d.* 1886, a celebrated musician. He was one of the most brilliant pianists of his day, and his own musical compositions are very numerous.

LITHOG'RAPHY, a method of printing in which calcareous stones take the place of blocks or type. In this method of printing advantage is taken of the following facts, namely, that stones of the class used rapidly absorb grease, and that two greasy substances will mix, but that water and grease will not. Stated simply the process is as follows:—A drawing is made upon the stone by means of a pen or brush, the ink used being very greasy; a wet roller is then passed over the stone causing the parts not inked to become damp. Thus certain parts of the stone have absorbed grease, and others, water. Now, if the stone be inked by means of a roller, the ink will adhere only to those portions which are already greasy, the damp portions being left quite clean. Thus an impression of the drawing may be obtained.

LITMUS, a blue pigment which is obtained from a species of lichen. From the fact that acids cause the litmus to turn red, it is used by chemists as a test for acids. If the reddened litmus be placed in a liquid of an alkaline nature, it reverts to its original colour, and thus it can also be used as a test for alkalies.

LITRE, a measure of capacity used in the Metric System. See "Metric System" in *Index*.

LITTLE PARLIAMENT, sometimes called "Barebones Parliament," was summoned by Cromwell, 1653, and consisted of 140 members, all of whom were nominees of "Independent" ministers of the Gospel. They did practically nothing, and resigned after sitting for about five months.

LIVADIA. (1) The name given by the Turks to that portion of Greece which is bounded on the north by Thessaly and on the south by the Gulfs of Corinth and Aegina. (2) The name of a summer residence of the Czar of Russia, in the Crimean Peninsula.

LIVERPOOL, the second largest town and seaport of England, is situated on the northern shore of the estuary of the Mersey. Its docks extend for a distance of about 7 miles. A large portion of them are included in Bootle, a northern suburb of Liverpool, now forming a separate municipal borough; population about 60,000. The principal imports are raw cotton, grain, cattle and timber, and it exports manufactured goods of all kinds. Liverpool, for long a village of little interest, dates its importance from the opening up of the South Lancashire coalfield and the rise of the cotton industry, in the 18th century. (For population, etc., see p. 902.)

LIVERY, the name given to the distinctive dress which is worn by the household servants of the wealthy. In feudal times the servants of the household formed a fighting force in war time, hence the origin of the distinctive dress. The members of the various companies of the City of London formerly wore distinctive dresses or liveries, and hence are often known as the City liverymen.

LIVERY COMPANIES, of which there are seventy-eight in London, consisted originally of the members of the various trades exercised within the city. Admission is by inheritance or by payment. [Refer to "Livery Companies" in *Index*.]

LIVINGSTONE, DAVID, *b.* at Blantyre, near Glasgow, 1813, *d.* 1873, a famous missionary and explorer, who spent the greater part of his life in Southern and Central Africa. He discovered Lake Ngami and the Victoria Falls, and explored parts of the Zambesi basin as well as the district in the neighbourhood of the great lakes. In 1871 fears were entertained for his safety, and Stanley was sent to find him. They met at Ujiji, but Livingstone resolved to remain where he was. Two years later, 1873, he succumbed to dysentery. His heart was buried in Africa, but his body was brought to England and buried in Westminster Abbey.

LIVY (Titus Livius), *b.* 59 B.C., *d.* 17 A.D., was one of the greatest of the Latin prose writers and historians. He spent the greater part of his life at the Court of the Emperor Augustus, and wrote a history of Rome, only one-fourth of which is extant.

LIZARD, a reptile common in most of the tropical and temperate districts of the globe. Many species are recognised, one of which is poisonous. The length of the lizard varies from a few inches up to nearly 6 feet. It usually possesses four legs, though occasionally some or all of its legs may be absent. Four species are found in the British Isles.

LLAMA, an animal which is a native of South America. In many respects it resembles the camel, though it is smaller and possesses no hump. It is usually about 3 feet high, and is covered with long hair, either black or white in colour. The llama is a valuable beast of burden, and is closely allied to the vicuna, alpaca, and guanaco.

LLANDUDNO, a popular watering place situated in Carnarvonshire, in the neighbourhood of Great Orme's Head; population about 9,500.

LLANOS, the name given to the extensive plains in the northern parts of South America, in Venezuela and parts of Colombia. They are grassy plains, with here and there patches of woodland, and they make excellent grazing grounds. The total area of the Llanos is about 150,000 square miles.

LLOYD GEORGE, DAVID, *b.* 1863, began his education at a National School in Wales; became Solicitor 1884, and M.P. for Carnarvon district 1890. He has proved himself an effective debater and popular platform speaker. In 1906, he became President of the Board of Trade, and passed the Patents Act, 1907. He succeeded Mr. Asquith as Chancellor of the Exchequer, and by his Budget of 1909, came into great prominence.

LLOYD'S. See *Commercial Dictionary*.

LOAD LINE, the mark placed on the sides of British ships to indicate the extreme limit of immersion permitted by the Board of Trade in loading them with cargo. The mark, which is also known as Plimsoll's mark, from the efforts made by Samuel Plimsoll to secure the passing of the Merchant Shipping Act of 1876, consists of a circle with a horizontal line passing through its centre.

LOADSTONE, or magnetic iron ore, is so called from the fact that it possesses the power of attracting iron—the word meaning "leading" or "drawing-stone." It is found in large quantities in Sweden.

LOBSTER, a shell fish which is found in large numbers in the shallow waters around the British coasts. It is bluish-black in colour whilst living, though on boiling, the colour changes to a brilliant red. Lobsters are carnivorous, and are caught in traps of wicker work, which have been baited with dead fish.

LOCH LEVEN, a lake situated in the county of Kinross, Scotland. It contains several islands, upon one of which formerly stood Loch Leven castle, in which Mary Queen of Scots was imprisoned by the Scottish nobles, 1567–1568.

LOCKE, JOHN, *b.* in Somerset, 1632, *d.* 1704, one of the greatest of English philosophical writers. He was a close friend of the Earl of Shaftesbury, and on the latter going into exile, 1682, Locke accompanied him. He lived in Holland until the Restoration. His greatest work, entitled "Essay concerning Human Understanding," took him nearly twenty years to write, and is still regarded as one of the finest works of its kind. His other works include "A Treatise upon Government," and "Some Thoughts concerning Education."

LOCUST, winged insects, like the grasshopper, from 3 to 8 inches in length. The best known species is that known as the "Migratory Locust" which infests Southern Asia and Africa. These locusts travel about in enormous numbers, eating every green thing they meet with, and converting large areas of fertile country into an absolute desert. It is impossible to arrest or divert their flight, and visitations from them are the prelude to a period of famine. Within restricted areas their advance is checked by digging water-trenches or by laying waste with fire a strip of territory that crosses their direction of progress. In many districts the insects are eaten, after being roasted or salted.

LODESTAR, literally "a guiding star," the name applied in general to any star by means of which a traveller determines the direction in which he is journeying; it is most frequently applied to the North Pole Star.

LODGE, SIR OLIVER, F.R.S., *b.* 1851, scientist; pioneer of wireless telegraphy, prominent in psychical research, writer of "Man and the Universe," and a "Catechism for Parents and Teachers."

LOFO'DEN ISLANDS, a chain of islands situated off the west coast of Norway, within the Arctic Circle. The waters in the neighbourhood form one of the most valuable fishing grounds in the world, the fish being mainly cod and herring. The season lasts from January to April or May. Between two of the islands, towards the south of the group, occurs the whirlpool called the *Maelstrom*.

LOG, a simple apparatus used to determine the velocity of a ship. It consists of a triangular piece of wood, connected at two of its corners, with the log-line, which is divided into lengths equal to $\frac{1}{120}$ of a nautical mile. The method of using the log is as follows:—One man stands with a half-minute sand glass, whilst another throws the log overboard. When the sand has run out, the length of rope which has passed over is noted. Since the lengths into which the log-line is divided bear the same ratio to a nautical mile (1 : 120) as a half-minute

does to sixty minutes, the number of lengths (or knots) gives the velocity of the ship in nautical miles per hour. Many patent logs are now in use, but their construction is of an exceedingly complicated nature.

LOG, KING, a character in one of Æsop's Fables. The frogs desired a king, and Jupiter sent them an ordinary log of wood. They were dissatisfied with this and Jupiter sent them a stork, which promptly commenced to devour its subjects.

LOGIC, the science of pure reason or the science of the laws of correct thinking. It may be divided into two branches, called respectively Deductive and Inductive Logic. Deductive logic is that branch which deals with the establishment of particular from general propositions, and Inductive logic deals with the establishment of general truths from particular propositions.

LOGWOOD, the wood of a tree which grows in Central America, and which is exported in large quantities from Honduras. The tree grows to a height of about 40 feet, and its wood furnishes a most valuable dye. The harder parts of the tree are cut into small pieces and thoroughly soaked, the resulting liquid being of a reddish-brown colour. This can be changed to red, blue green, etc., by the addition of certain mineral salts, and thus a dye of almost any colour may be obtained.

LOHENGRIN, is the hero of a German mediæval poem, the son of Parsival. He liberated Elsa, daughter of the King of Brabant, but concealed his name. Being pestered to reveal it when he had achieved fame in fighting against the Huns and Saracens, he was carried away by a white swan. The story forms the foundation of one of Wagner's best operas.

LOIRE, the longest river of France, rises in the Cevennes. After flowing for some distance in a northerly direction, it bends to the west and empties itself into the Bay of Biscay, after a course of about 600 miles. The Lower Loire flows through one of the most fertile districts in France. Its principal tributaries are the Allier, Vienne and Sarthe, and the largest towns upon its banks are Orleans, Tours, Angers and Nantes.

LOLLARDS, a name applied to the followers of John Wyclif. The Lollards were regarded as heretics by the Church, and in 1401 one of their leaders, William Sawtre, was burnt at the stake. They objected to the use of church decorations, images, and the celebration of the mass, and are regarded by many as the precursors of the Reformation. The origin of the word "Lollard" is uncertain. It may be derived from the Low German "lullen," "to sing," or it may be the name of one of the early leaders.

LOMBARDS, Italian merchants who first settled in England in the 13th century. They gave a great impetus to trade, and were for a long time the only persons who carried on any sort of banking. Our kings often found it convenient to borrow from them. Lombard Street perpetuates their memory.

LONDON, the capital of England and the largest city in the world, is situated at the head of the estuary of the Thames. The administrative county of London has an area of over 117 square miles, and contains a population of more than 4½ millions. It extends from Highgate and Hampstead on the north to Sydenham on the south, and from Woolwich on the east to Hammersmith and Putney on the west (all inclusive). The foreign element numbers about 66,000, of whom more than 55,000 live in the borough of Stepney. London returns sixty-one members to the House of Commons. For municipal purposes it is divided into twenty-seven boroughs, in addition to the cities of London and Westminster. The affairs of the city of London are managed by the City Corporation, and the general local authority for the remainder of London is the County Council. The Lord Mayor is elected by the former body. The port of London extends from London Bridge to Blackwall, and is one of the largest and busiest in the world. Its imports and exports are of a most miscellaneous character. The industries carried on in London are both numerous and varied; among the most important are brewing, distilling, the manufacture of tobacco and cigars, sugar refining, the making of musical instruments, cabinet making, clothing boots and shoes, printing, shipbuilding and the manufacture of marine engines and boilers. The principal places of interest are the Houses of Parliament, Westminster Abbey, St. Paul's Cathedral, the Mansion House, the British Museum, South Kensington Museums, the Law Courts and the Tower.

LONDON BRIDGE connects the City of London with the borough of Southwark. The present structure was designed by John Rennie, and was commenced in 1824. It is a handsome granite bridge with a length of over 300 yards. The first bridge mentioned in history was a wooden one, which was destroyed in 1091 by a storm; the first stone bridge was built in the 12th century; it was lined with houses on both sides, and in the middle was a chapel dedicated to St. Thomas of Canterbury.

LONDONDERRY, a seaport situated on the north coast of Ireland at the mouth of the Foyle. The exports are mainly dairy produce, and the town contains some linen factories and distilleries. It is famous for the brave stand made by its inhabitants against the army of James II., 1689; population about 40,000.

LONDON GAZETTE, the government official newspaper. In it are published proclamations and orders, etc., and other official notifications. All bankruptcy proceedings are published in it, and all legal announcements required by law. It is issued on Tuesdays and Fridays.

LONGFELLOW, HENRY WADSWORTH, *b.* in Maine, 1807, *d.* 1882, one of the most famous of American poets. During the years 1835–1854 he occupied the chair of Modern languages at Harvard University. Among his best known works are "Evangeline," "Song of Hiawatha," "Courtship of Miles Standish" and "The Golden Legend." The work of Longfellow appeals much more strongly to British readers than is usually the case with the work of American poets.

LONG FIRM, the name given to a particular variety of fraud or swindling. A Long Firm fraud is one in which a number of persons, under the pretence of opening a business, secure the delivery of a large quantity of goods upon credit; with these they decamp and renew their operations in another district.

LONGITUDE, distance east or west from some fixed line. For most countries, in accordance with the decision of the Geodetic Congress of 1884, this line is the meridian passing through Greenwich Observatory. But French maps still reckon from Paris, and Portuguese maps from Ferro.

LONG PARLIAMENT, the name given to the parliament which conducted the civil war. It was summoned in 1640, and its first work was the impeachment of Strafford and Laud. It then drew up the Grand Remonstrance which led Charles I. to attempt the arrest of the "Five Members." In 1648 the Presbyterian members, to the number of about 100, who refused to sit in judgment upon Charles, were excluded, the act of expulsion being known as Pride's Purge. The remnant, fifty-three in number, known as the Rump Parliament, continued to sit until 1653, when Cromwell expelled the members and closed the House of Commons. On the death of Cromwell it was recalled by the army, dismissed by Lambert, recalled again by Monk, and finally, in 1660, the year of the Restoration, after issuing writs for a new parliament, it dissolved itself.

LORDS, HOUSE OF. Refer to *Index.*

LORELEI, a cliff about 430 feet in height, situated upon the bank of the Rhine, a few miles below Bingen. According to tradition, the Lorelei is the abode of a siren; it is the subject of an unfinished work by Mendelssohn.

LORENZO MARQUES, a town and harbour of Portuguese East Africa, on the north side of Delagoa Bay. It is one of the few really good harbours on the east coast of Africa, and is the best port for Pretoria, to which there is a railway; population about 7000.

LORETTO, a small town situated in Italy, near Ancona. In the cathedral of Loretto is shown a small building known as the *Casa Santa*, which is said to be the house in which Christ dwelt at Nazareth, and which was miraculously deposited at Loretto during the 13th century. The town is, in consequence, much visited by pilgrims.

LOTHIANS, THE, the three counties of Haddington, Edinburgh, and Linlithgow, in Scotland. For some centuries the whole district from Tweed to Forth was called Lothian, and formed part of the Anglian Kingdom of Northumbria, but in 1018 it was taken by the Scots, and the name got restricted to the portions above mentioned.

LOTTERY, a kind of gambling in which prizes are allotted by chance. In an ordinary lottery, each person participating buys a ticket, which bears a certain number. The prize winners are determined in the following way: tickets, which are numbered similarly to the lottery tickets issued, are placed in a hollow cylinder; whilst in another cylinder are placed an equal number of tickets, on some of which are inscribed the various prizes offered, the remainder being left blank. A ticket is drawn simultaneously from each cylinder, and when a prize ticket appears, the ticket drawn at the same time from the other cylinder indicates the winner. The operation is continued until all the prize-winners have been determined. Lotteries are illegal in England, but in most European countries they are allowed, under very stringent State supervision. It is worthy of notice that a portion of the money required to establish the British Museum was raised by means of a lottery.

LOTUS-EATERS, a people of Libya, North Africa, who lived in the Syrtic district around the gulf now called Sidra. The lotus is still plentiful there. It is a prickly shrub with a sweet fruit, from the juice of which a wine is made. When Ulysses' sailors, after their long wanderings, had tasted the fruit, they had no longer a desire to return home.

LOTUS, THE SACRED, a kind of waterlily that grows in the Nile and elsewhere. It is still regarded as sacred among the Chinese and Hindus, many of whom burn certain parts of the leaf and stalk before the shrines of their deity.

LOUIS XIV., king of France, 1643–1715, commonly called "Le Grand Monarque," was the son of Louis XIII. and Anne of Austria. He ascended the throne when

five years of age, and during his minority, his mother, assisted by Mazarin, acted as regent. His reign was marked by a long succession of wars, in which England took a prominent part. Louis married Maria Theresa, and on her death Louise de Maintenon. In 1685 he revoked the Edict of Nantes, thereby causing many thousand Huguenots to emigrate. His reign is sometimes called the Augustan age of French literature; among the noted writers who were his contemporaries were Molière and Corneille. Louis was the idol of the French people, but he was a despot in every sense of the word, and the enormous expenditure and consequent heavy taxation his wars entailed, undoubtedly paved the way for the French Revolution of 1789.

LOUIS XVI., *b.* 1754, *d.* 1793, ascended the throne in 1774. During his reign the French Revolution commenced, and Louis and his queen, Marie Antoinette, were guillotined. He was a man actuated by the best of motives, but was weak and incompetent. On his devoted head fell the punishment due to the selfish despotism of his Bourbon ancestors.

LOUIS NAPOLEON. See *Napoleon III.*

LOUIS PHILIPPE, *b.* 1773, *d.* 1850, was the eldest son of Duke Louis of Orleans. He supported the Revolution, but was suspected of aiming at the crown, and was compelled to leave France, 1793. He did not return until after the fall of Napoleon, having spent the intervening time in Austria, America and England. After the Revolution of 1830, and the abdication of Charles X., he was elected King of the French. He held this office until 1848, when another revolution occurred, and he retired to England, where his death occurred two years later.

LOURDES, a small town in the south of France, upon the river Pau, in the department of Hautes Pyrénées. In the neighbourhood is a famous sacred spring, the waters of which are reputed to possess remarkable healing properties. The town is annually visited by a large number of sick and infirm persons, who come to the church of Our Lady of Lourdes and bathe in the waters.

LOVE FEASTS. See *Agapæ.*

LOVER, SAMUEL, *b.* at Dublin, 1797, *d.* 1868, a celebrated Irish novelist and song-writer. Among his best-known novels are "Rory O'More" and "Handy Andy"; and of his songs, "Molly Bawn," "Father Molloy," "Four-Leaved Shamrock" and "The Low-backed Car" are well known.

LOWE, ROBERT. See *Sherbrooke, Lord.*

LOWELL, JAMES RUSSELL, *b.* in Massachusetts, 1819, *d.* 1891, a celebrated American essayist and poet. From 1857 until 1862 he acted as editor of the Atlantic Monthly, and on resigning that post became editor of the North American Review. His best known works are "My Study Windows," a series of essays, and "The Biglow Papers," a collection of poems in which he gives his views on some of the social and political problems then agitating the minds of American people.

LOWESTOFT, a fishing town, and seaside resort of Suffolk, 9 miles south of Yarmouth. It is a clean and well-built town, with a fine esplanade and good piers. The cliff on which it is built forms part of Lowestoft Ness, the most easterly cape of England; population 30,000.

LOW SUNDAY, the name given to the Sunday which follows Easter Day.

LOYOLA, IGNATIUS DE, *b.* in Spain, 1491, *d.* 1556, the founder of the order of Jesuits, or as it is properly called the "Society of Jesus." Loyola was originally a soldier, and was severely wounded whilst serving in the army of Ferdinand V. On his recovery he devoted his life to the service of the Church. The Society of Jesus was established about 1530, and formally recognised about ten years later. Loyola became the first general of the order, and remained in office until the end of his life. He was canonised in 1622.

LUBBOCK, SIR JOHN. See *Avebury.*

LUBECK, a free city of the German Empire situated on the coast of the Baltic Sea. It was formerly one of the chief seaports in Europe, and a leading city of the Hanseatic League, but its importance has considerably declined of late years owing to the opening of the Kaiser Wilhelm Canal, between the Baltic and the North Sea, as a result of which Kiel has taken much of its trade. The trade of Lübeck at the present time is mainly with other Baltic ports; population about 82,000.

LUCERNE, the capital of the canton of Lucerne, is the great tourist centre of Switzerland. It is situated on Lake Lucerne, and in the immediate neighbourhood are The Rigi and Mount Pilatus, both much visited by tourists; population 30,000.

LUCIFER, the morning star, the name applied to Venus; but when the latter appears as an evening star it is known as Hesperus. From a passage occurring in Isaiah xiv., "How art thou fallen from heaven, O Lucifer, son of the morning," in which the King of Babylon is referred to, the name has been in error applied to Satan.

LUCIFER MATCHES. See *Matches.*

LUCKNOW formerly the capital of the kingdom of Oudh, is situated on both banks of the Gumti, a tributary of the Ganges. It is an important railway junction and military centre. Lucknow played a prominent part during the Indian Mutiny. In the early days of the Mutiny it was defended by Sir Henry Lawrence, and partially relieved by General Havelock. The final relief was effected by Sir Colin Campbell in 1858; population 264,000.

LUDDITES, the name given to the rioters who during the years 1811–16 wrecked a large number of textile machines in the towns of Lancashire, Yorkshire and the north Midlands. They derived their name from one of their number, an idiot named Lud.

LUKE, SAINT, the author of the third Gospel and of the Acts of the Apostles. By profession he was a physician, but became the constant companion of Saint Paul in his missionary journeys.

LURCHER, a dog which is a cross between a collie and a greyhound. It is noted for its intelligence and speed, and is the favourite dog of the poacher.

LUSIAD, the national poem of the Portuguese, was written by Camoens, 1572. It deals with the deeds of Vasco da Gama and the various Portuguese navigators and soldiers who had been engaged in planting colonies in the East and West Indies.

LUTE, a musical instrument which was formerly much used, but which is now regarded almost as a curiosity. It closely resembled the guitar, and sometimes possessed as many as twenty-four strings.

LUTHER, MARTIN, *b.* 1483, *d.* 1546, was perhaps the greatest of the religious reformers of the 16th century. He was educated for the law, but in 1505 he became a monk. In 1517 Luther published a series of propositions condemning the sale of indulgences. These were at once declared to be heretical, and he was summoned to appear at Rome. He declined to go and was excommunicated, 1520. Luther now broke away entirely from the Roman Catholic Church. He burnt the Papal bull at Wittenburg, and proceeded to the formation of a reformed church. He was summoned to appear at Worms before the Emperor, Charles V. Here he defended himself ably but found it expedient to conceal himself for a time. By 1530 his followers had increased to such an extent that he had nothing to fear from the Pope. Luther was an able writer, and his writings are fairly numerous, the most valuable being his translation of the Bible into German. As a man he was enthusiastic and excitable, but he was by no means the fanatic that his enemies represented him. He advocated peaceful measures where possible, and cannot be blamed for the acts of violence committed by the more ignorant of his followers. His "Table Talk," a collection of *obiter dicta*, shows him to have been a man of much personal charm.

LUXOR, a village situated in Upper Egypt, which occupies a portion of the site of ancient Thebes. In the neighbourhood are magnificent ruins, among which are those of the great temple of Rameses II.

LYALL, EDNA, *b.* at Brighton, *d.* 1903, the *nom de plume* of Ada Ellen Bayly, was a popular novelist. Among her best known novels are "Donovan," "Won by Waiting," "Knight Errant" and "Hardy Norseman."

LYCEUM, the name of an exercise ground and gymnasium of Ancient Athens. It was here that Aristotle expounded his system of philosophy, and the name has in consequence been applied since to various educational establishments.

LYCH GATE, a churchyard gate which is provided with a roof. Lych gates are still to be seen in various parts of England, especially in the counties on the Welsh border. Formerly the first part of the burial service was held at the gate of the churchyard, under the shelter of the roof.

LYCURGUS, *b.* in the ninth century B.C., the great legislator of Sparta, where, after his death, he was honoured as a god.

LYDDITE, a very powerful explosive, named from Lydd, in Kent, where it is manufactured. Its exact composition is a government secret, but it is largely composed of picric acid. Its shattering effect is about three times that of gunpowder.

LYELL, SIR CHARLES, *b.* in Forfar, 1797, *d.* 1875, the father of modern geology. He showed that the earth of to-day has been produced by continuous gradual changes, and not by great and sudden changes at long intervals, the view previously accepted. It was the study of his "Principles of Geology" that set Darwin to work to prove the same law in Biology.

LYNCH LAW, the name applied to the administration of justice by the mob. It is practised in certain lawless districts of the southern United States. The term is said to have arisen in the state of Virginia, where one of the early settlers, a farmer named Lynch, set himself up as an unofficial judge.

LYONESSE, the country of King Arthur, was probably situated somewhere in Cornwall. According to tradition it occupied a position between Land's End and the Scilly Islands, and is now beneath the Atlantic Ocean.

LYON KING OF ARMS, the Scottish official who superintends the armorial bearings of all the noblemen and gentlemen of the kingdom. With his heralds and pursuivants he is also responsible for all public ceremonials and proclamations. His state costume is very gorgeous.

LYONS, the second largest city of France, is situated on the Rhone, at the junction of that river with the Saône. It is the largest silk-manufacturing town in Europe. The Greeks established a colony

at Lyons about 550 B.C., and it was a place of some importance in the time of the Romans, population 470.000.

LYTTON, EDWARD BULWER (first Baron Lytton). See *Bulwer-Lytton*.

LYRE, the most ancient of stringed instruments. It possessed seven strings, but no stops, and consequently was capable of producing but seven notes. It was played either with the fingers or with a "plectrum."

LYRIC, originally a piece of poetry which was capable of being set to music, and sung to the accompaniment of the lyre. It is the name given generally to that species of poetry in which the writer expresses his own emotions.

MAB, QUEEN, a queen of the fairies, the subject of an early poem written by Shelley.

MAC, a Gaelic prefix, found in the names of persons, and signifying "son of."

MACADAM, JOHN LOUDON, *b.* at Ayr, 1756, *d.* 1836; the inventor of a method of making and mending roads known as "macadamising." The method is extremely simple. Fragments of some hard rock are placed upon the surface of the road to the depth of six inches or more; these are pressed together, some binding substance being scattered over them, and a hard compact surface is thus obtained. A new kind of macadam called *tar-mac* is now largely used. In this the stones are first covered with tar, and when rolled produce a hard, smooth surface like that of asphalt roads.

MACAO, a small island situated at the mouth of the Canton River. It is about 2½ square miles in area, and belongs to Portugal. The inhabitants are engaged in the tea, silk, and opium trades.

MACARONI, a foodstuff prepared in the form of long pipes or threads, the latter form being known usually as vermicelli. It consists of wheaten flour and water, and is made principally in Italy.

MACAULAY, THOMAS BABINGTON, *b.* in Leicestershire, 1800, *d.* 1859; a famous essayist and historian. In 1830 he entered parliament, but resigned shortly afterwards to take up the post of legal adviser to the Indian government. Returning to England, he was appointed Secretary of State for War in the Liberal Ministry, an office he held for three years. His present reputation is based upon his writings, of which the best known are a "History of England, from 1685–1697," "Essays," and "The Lays of Ancient Rome." Much of his best work was published in the Edinburgh Review. He was created a peer in 1857 in acknowledgment of his great literary ability.

MACBETH, a ruler of the Scottish district of Moray during part of the 11th century. He murdered Duncan, king of Scotland, and seized the throne, 1140. After reigning for 17 years, he was killed in a battle with Malcolm, the son of Duncan, 1157. These historical facts are embodied in Shakespeare's noble tragedy, *Macbeth*.

MACCABEES, a family of heroic patriots who delivered the Jews from the tyranny of Antiochus Epiphanes, King of Syria, 175–164 B.C. The most famous of these leaders were Mattathias and his son Judas Maccabæus. The latter, who succeeded his father, 167 B.C., completed the deliverance of his countrymen. His brother Jonathan became prince and high-priest, and the sovereignty of the Jewish nation was exercised by other Maccabæan princes until 37 B.C. This dynasty of priest-princes is usually called the Asmonæan dynasty.

McCLURE, SIR ROBERT, *b.* at Wexford, 1807, *d.* 1873; a famous Arctic explorer. He took part in the search expedition organised to find Sir John Franklin in 1848, and in 1850 succeeded in making his way along the north coast of Canada and discovering the north-west passage to India.

MACDONALD, FLORA, a native of the Island of South Uist, one of the Hebrides. She assisted Prince Charles Edward to escape from Scotland after he had been defeated at the battle of Culloden, 1746.

MACDONALD, GENERAL, SIR HECTOR, *b.* 1852, *d.* 1903; a gallant Scotsman who rose from the ranks, served nine years as a private in the Gordon Highlanders. He was promoted Lieutenant for his distinguished conduct at the battle of Candahar (July, 1880). His subsequent brilliant services, especially in the Battle of Omdurman, marked him out for the highest place, when his sad death by suicide closed his career.

MACDONALD, GEORGE, *b.* at Huntly, Aberdeenshire, 1824, *d.* 1905; Scottish poet and novelist, was educated for the ministry, but took to literature. All his novels, however, are replete with religious thought and purpose. "David Elginbrod," "Robert Falconer," "Malcolm," and "The Marquis of Lossie," are characteristic. He has written some beautiful poems.

MACDUFF, a more or less mythical individual, who lived in the 11th century. He is sometimes known as "The Thane of Fife," and is said to have assisted Malcolm, son of Duncan, to defeat Macbeth, 1157.

MACE. (1) A weapon used in the Middle Ages. It was a club about five feet long, with a metal head studded with spikes. It survives at the present time as an emblem of authority, used by public officials. (2) The outer covering of the nutmeg kernel, used as a spice, and obtained from the islands of the Malay Archipelago.

MACEDONIA, the name of a portion of the Turkish province of Roumelia. Macedonia attained the height of its power under the rule of Alexander the Great, about 330 B.C. The population at the present time is very mixed, consisting of Turks, Greeks, Albanians, and Wallachians. Partly owing to this, partly to differences in religion, but largely owing to Turkish misrule and Bulgarian intrigue, Macedonia is always on the verge of revolt. Massacres are of common occurrence—the inhabitants suffering at the hands of both Turks and Bulgarians. At the present time (1904), the slightest occurrence might produce a rebellion; in fact, it is only the fear of Austria and Russia that has kept Bulgaria from declaring war during the past two years. The inhabitants are engaged mainly in the rearing of goats and sheep. The principal productions are attar of roses and carpets. The chief town is Salonika, the terminus of an important railway from Vienna.

MACHIAVELLI, NICCOLO, *b.* at Florence, 1469, *d.* 1527, a famous Italian diplomatist and writer. His writings, which are both political and historical, are characterised by a calculating, cynical, and unscrupulous tone.

MACHINE GUN. The principal machine guns in use at the present time are the Maxim, Hotchkiss, and Colt, used respectively by the British, French, and Americans. They consist of a single barrel of small calibre, and after the first discharge are capable of firing a large number of bullets in rapid succession, the working being perfectly automatic. The gun is fed from a belt or bandolier. The Maxim differs from the others in that the energy of the recoil is used to perform the mechanical work. By it, the used cartridge is ejected, the gun reloaded, the lock closed, and the new cartridge fired with extraordinary rapidity. Over 400 discharges in a minute are possible, but a water jacket is necessary to keep the temperature down. The amount of water used is about a gallon, and at the rate of 400 shots per minute, this is boiling in about 90 seconds. The Hotchkiss and the Colt are not provided with this jacket. In these the heat is dissipated by increasing the surface of the barrel, and so quickening the radiation of the heat. In the Hotchkiss this increase is effected by fitting metal rings on the barrel; in the Colt, by using a very thick barrel. In both forms the mechanical operations are effected by using a portion of the gas produced by the explosion of the powder. They are much simpler in construction than the Maxim. The rate of discharge is slightly higher in the Hotchkiss than the other two, 500 per minute against about 400, whilst the range of the Maxim is greatest, about 2,500 yards against 2,000.

MACINTOSH, CHARLES, *b.* at Glasgow, 1766, *d.* 1843; a celebrated chemist, the inventor of the fabric of which macintosh cloaks are made. It consists of a thin sheet of india-rubber sandwiched between two sheets of woven fabric.

MACKAY, CHARLES, *b.* 1814, *d.* 1889; journalist, popular poet, and war correspondent. His real forte was song-writing: "Cheer, Boys, Cheer," "There's a Good Time Coming," and "To the West," set to music by Henry Russell, took the world by storm. He was war correspondent to the *Times* during the American Civil War.

MACKAY, JOHN WILLIAM, *b.* in Dublin, 1831, *d.* 1902; the "Silver King," went to New York when quite young. In the rush to Nevada he was one of the first, and acquired great wealth through his shares in the "Bonanza" silver mine.

MACKENZIE RIVER, a Canadian river, rising in the Rocky mountains, and flowing into the Arctic Ocean. It is about 1,100 miles in length, reckoning from Great Slave Lake. It was discovered and explored in 1789 by Alexander Mackenzie, an officer of the North West Fur Company.

MACKENZIE, SIR ALEXANDER. See under "Explorers" in *Index*.

MACKENZIE, SIR MORELL, *b.* 1837, *d.* 1892; a great authority on throat diseases; studied medicine in London, Paris, and Vienna. He had a great share in establishing the Throat Hospital in Golden Square. His reputation caused him to be summoned to attend the Emperor Frederick in 1887, whose cancer, however, he could not cure. His "Manual of Diseases of the Throat and Ear" is a standard work.

MACKEREL FISHING. The chief fishing grounds are on the south and west coasts of the British Isles and the east coast of North America. Mackerel are usually caught with a drift net, left in the water during the night. In shallow waters, seine nets are sometimes used. The shoals appear in British waters in May or June.

McKINLEY, WILLIAM, *b.* 1843, in the State of Ohio, *d.* 1902; president of the United States from 1897 until his death. In 1890 he was chairman of a committee which drafted a revenue bill, imposing heavy duties upon imports, especially manufactured goods. This bill is known as the McKinley Tariff Bill. In 1897 he was elected president, defeating the Republican candidate, William Bryan. During his term of office, the Spanish American War was fought, and the tariffs increased by the passing of the Dingley Tariff Bill. In 1901 he was re-elected, but was shot in September of the following year, at Buffalo, by an anarchist named Czolgosz. He was a most popular president, both at home and in Europe.

MACLAREN, IAN. See *Watson, John.*

MACLISE, DANIEL, *b.* 1806, *d.* 1870; an artist. His best known works are the two frescoes, each 45 feet long and 12 high, in Westminster Hall, one representing the meeting of Wellington and Blucher, the other the death of Nelson.

MACMAHON, MARSHAL, *b.* 1808, *d.* 1893; a French military commander. He commanded the French division at the storming of the Malakoff, Sebastopol, 1855. In 1859 he led the combined French and Sardinian army, which inflicted a crushing defeat upon the Austrians at Magenta, in Lombardy. During the Franco-Prussian War he was in command of an army corps. He was wounded, and surrendered to the Germans at Sedan, 1870. In 1873 he became President of the Republic, an office which he resigned in 1879, owing to disagreements with the Republican party.

MACPHERSON, JAMES, *b.* 1738, *d.* 1796, claimed to be the discoverer of the Ossian poems, the work of a Gaelic writer of the 3rd century. The publication of these poems led to a heated discussion, but it has since been proved beyond a doubt that they were Macpherson's work.

MACREADY, WILLIAM CHARLES, *b.* in London, 1793, *d.* 1873; a great actor. He began to act in 1810, and left the stage in 1851. His Shakesperean plays marked an epoch in English stage management. He was especially successful in Macbeth, Lear, King John, and Iago. His American tours ended sadly in a riot promoted by his rival, Forrest, in which seventeen people were killed.

MADAGASCAR, the third largest island in the world. It is situated on the east coast of Africa, from which it is separated by the Mozambique Channel, which is about 250 miles wide. Its area is about 230,000 square miles, and its population is estimated to be nearly four millions. Minerals are fairly abundant, but the people are mainly engaged in agriculture, and are noted for their skill in metal work. The capital is Antananarivo, and the chief port Tamatave; the exports are hides, rubber, and dyewoods. Since 1895 it has been under French protection, the ruling race previously being the Hovas.

MADEIRA ISLAND, the most important of a group of islands situated in the Atlantic Ocean, about 700 miles west of Lisbon. It is a Portuguese Colony with a dry climate, specially suitable for consumptive patients. The population is about 140,000, and the principal town and seaport, Funchal, is a port of call for Atlantic steamers. The principal exports are fruit and wine.

MADONNA, a representation, in painting or statuary, of the Virgin, frequently with the Child Christ.

MAD PARLIAMENT, held at Oxford in 1258. The barons attended armed, and forced Henry III. to agree to the appointment of a council, whose special work was to reform the government of the country.

MADRAS, the third town and seaport of India. It is the capital of the division of Madras, and is situated on the east coast of the peninsula. Much money has been spent on the construction of harbour works, but goods have still to be landed in surf boats and lighters. The native town is very unhealthy. The principal building is the citadel, Fort St. George. Madras was founded by the English in 1639, and, with the exception of the period 1746-9, during which it was occupied by the French, it has remained in their possession ever since. It has now an important university. Its principal exports are teak, tobacco, and sugar, and much of its trade is with ports situated to the east.

MADRID, the capital of Spain, population 540,000. It is situated on a lofty and dreary plateau. The climate is one of extremes; the summers are intensely hot, and the winters so cold that skating is not uncommon. The importance of Madrid is purely political. Its principal buildings are the Royal Palace and the Royal Picture Gallery.

MÆANDER, a river in Asia Minor. Its serpentine course has made its name expressive of the windings of a stream.

MÆCE'NAS, a Roman statesman who lived in the time of the Emperor Augustus. He is famous as a patron of literature, Horace and Virgil being amongst those whom he encouraged.

MAELSTROM, a whirlpool situated off the coast of Norway, near the Lofoden Islands. It is perilous at certain states of the wind and tide, but otherwise can be crossed without much danger.

MAFEKING, a small town in British Bechuanaland. It is one of the most important posts on the railway from Capetown to Salisbury, and is about 700 miles from the former town. It is famous as the town from which Jameson started on his famous raid in 1895, but will be remembered for the heroic stand made by its garrison under Colonel (now General) Baden-Powell during the Boer War. From the outbreak of the war in October, 1899, until the following May, it successfully resisted all efforts to take it. At one time General Cronje, with 8,000 men, attempted its capture, though later the besieging force was much smaller. Altogether the Boers lost during the siege about 1 000 men and 5 guns. A few days before the actual relief by Colonel Mahon, a determined effort made by the Boers resulted in the garrison taking over 100 prisoners. The relief was effected (May 12th, 1900), 215 days after the commencement of the war. Colonel Plumer, who had been making heroic efforts to relieve the place from the north, entered the town a few days later.

MAFFIA, a secret society whose headquarters are in Sicily. The society exists mainly for the protection of smugglers, though its avowed object is the overthrow of the government. Its members do not resort to violence, except to avenge personal wrongs.

MAGDALA, a stronghold in Abyssinia. It is situated about 9,000 feet above sea level. It was taken by storm and destroyed by Sir Robert Napier in 1868, during the Abyssinian war.

MAGDEBURG, a strongly fortified town on the River Elbe. It is the capital of the province of Prussian Saxony, and its strategic importance is due to the fact that it commands the direct road from Cologne to Berlin. Its inhabitants (about 215,000) are mainly engaged in the manufacture of beet sugar and spirits. In the 17th century, the device known as the Magdeburg hemispheres was constructed by the Burgomaster, Otto von Guericke, the inventor of the air-pump. It consists of two immense hemispheres, the edges of which fit each other exactly, and is intended to illustrate the great pressure of the atmosphere. The burgomaster had the air withdrawn from the interior of the hemispheres, and then attached a horse to each, to pull in vain in opposite directions.

MAGEE, WILLIAM CONNOR, *b.* 1821, *d.* 1891; bishop of Peterborough for twenty-three years, and Archbishop of York for a few weeks; combined oratorical gifts of a high order, both as preacher and speaker, with wit, humour, and practical common-sense.

MAGELLAN, FERDINAND, a Portuguese navigator who in 1520, commanded the first expedition which sailed round the world. He did not finish the voyage, being killed in a fight with the natives of the Philippine Islands.

MAGENTA. (1) A small town in Lombardy, the scene of a battle between the French and Austrians in 1859, in which the latter suffered a severe defeat. (2) One of the aniline dyes, obtained from coal tar and named from the battle fought in the year of its discovery.

MAGGIORE, LAGO, or Lake Maggiore, is situated in the North of Italy, but partly in Switzerland. It is the second largest of the Italian lakes, being 39 miles long and 7 miles broad, and is noted for the beauty of the scenery in the neighbourhood. The river Ticino passes through it.

MAGI, the priests of the ancient Persians. They were the teachers of the people, and were deeply versed in astrology. The name was afterwards applied generally to men who possessed a reputation for great wisdom.

MAGIC, the name used to account for any striking occurrence when the producing causes are unknown, or not understood. In early times the name was applied to sorcery and witchcraft.

MAGIC LANTERN, an optical instrument invented in the 17th century, by means of which an enlarged image of photographs, or of pictures and diagrams painted with transparent varnish on glass slides, is projected on a screen in a darkened room. The lantern is a cubical box, to the front of which is fixed a horizontal tube in two parts, one sliding within the other. At the anterior end of the movable portion a double convex lens is placed, and a second lens of small focus is inserted at the junction of the fixed tube with the lantern, and just behind it a slit is made for inserting the inverted slides. Within the lantern is a powerful lamp, the light of which is adjusted in the focus of a concave reflector, and level with the tube. The rays are reflected on to the fixed lens, which directs them upon the slide. The movable lens then receives them, and forms an image of the brightly illuminated picture, and projects it on to the screen. This image may be made larger or smaller, by increasing or diminishing the distance between the two lenses. In the best lanterns, an arc light, or an oxyhydrogen lamp, is used.

Dissolving views are produced by having two similar lanterns, placed side by side, and directed towards the same part of the screen. A metallic diaphragm closes the aperture of one lantern, while that of the other is being opened, and, as a result, the image projected by the one merges into that projected by the other.

MAGNA CHARTA, the great charter of English liberty, which the barons compelled King John to sign at Runnymede, near Staines, in 1215. It enacted: (1) that taxes should not be levied without the consent of the Great Council. (2) that justice should not be delayed or denied to any man, (3) that no man should be imprisoned or outlawed but by the judgment of his equals, and by the law of the land. It contained many other clauses dealing with the matters which have ceased to be of interest at the present time, notably the severe forest laws, and the rights of the barons. It has always been regarded as the foundation of British liberty, and has been confirmed many times.

MAGNESIA, a town in Asia Minor, situated near Smyrna, and now called Manisa. It was at this town that the attractive properties of the loadstone were discovered, hence the terms magnet, magnetism, etc. It has also given its name to magnesia, the oxide of magnesium.

MAGNETISM. The ancients gave the name magnet to certain hard black stones, particularly abundant in Magnesia, in Asia Minor, which possessed the property of attracting to them small pieces of iron and steel. Somewhere about the 11th century it was discovered that, if a long piece of this stone were freely suspended by a fine thread, it possessed the remarkable property of pointing north and south. The discovery was made use of in navigation, and, from that time, the name *Lodestone*, i.e., leading stone, was applied to the natural magnet. Dr. Gilbert further investigated its properties, and, in 1600, he published the results of his experiments. He discovered that the attractive force was greatest at two positions on the stone. In a long piece these two positions are generally at or near the ends, and the force gradually diminishes to the middle, where no attraction takes place. The positions of greatest attraction he named the *Poles*, and the neutral line he called the *Equator* of the magnet. The stone is an oxide of iron, and is abundant in Sweden, Spain, Elba, and parts of the United States, though it does not always possess magnetic properties.

It has been found that the lodestone has the power of communicating its properties to small bars of steel, and without any loss of magnetism to itself. Thus, if a steel knitting-needle, or a piece of a watch-spring, be rubbed with one end of a lodestone about twenty times, from end to end, in one direction only, it will acquire all the powers of a magnet: it will attract small pieces of iron or steel; or, if balanced freely at the centre, will set itself in a position from north to south, and, if deflected from that position, will oscillate from side to side, and at length come to rest pointing in the original direction, the end that pointed north at first always returning to that position. If two such needles are brought close to each other, the north-seeking end (pole) of the one will repel the north-seeking pole of the other, and will exert an attractive force on the south-seeking pole. Every magnet, whether natural or artificial, has two poles. If it is broken into two parts, each part will still have two poles of opposite kinds. A magnetised bar of steel retains its magnetism almost indefinitely, but its powers may be destroyed by rough usage, or by heating the bar to redness. In addition to iron and steel, nickel, cobalt, chromium, and manganese are attracted by a magnet; and, a short time ago, Professor Dewar showed that, if a powerful magnet were brought near a vessel containing liquid oxygen, the liquid would spring upwards, and adhere to the glass nearest to the poles of the magnet.

The compass needle is a magnet properly mounted and balanced. The direction which it takes is due to the fact that the earth is a great magnet, and behaves as though a huge magnetic bar lay within its mass, with its poles not quite coinciding with the geographical poles. Sir James Ross discovered, in 1830, that the magnetic north pole was situated in Boothia Felix, a peninsula to the north of North America, just within the Arctic circle. The fixing of the position of the South Magnetic Pole was one of the scientific problems which the four expeditions to the Antarctic, in the period 1900–04, set themselves to solve. It is believed to be situated somewhere about 168° east longitude and 76° south latitude. In England the compass needle does not point due north and south, but in a direction which at present is deflected approximately 16° from the geographical meridian. The amount of this variation or *declination*, as it is called, varies from time to time. About the year 1660 the compass pointed true north. At the beginning of the 19th century, the north-seeking pole pointed in a direction 24° 17′ west of true north. Since then the declination has slowly diminished, and it is calculated that about the year 1976 the needle will again point due north and south, after which the declination will be to the east of north. Occasionally disturbances occur in the earth's magnetism which affect all the compass needles over a considerable region of the globe. Such occurrences are known as magnetic storms. A magnetic storm of unusual intensity occurred on October 31st, 1903, and greatly interfered with the working of the telegraph lines and cables over a wide area.

There is a close relationship between Electricity and Magnetism. The one is easily converted into the other. The passage of a current of electricity through a silk-covered, copper wire, wound in a spiral of many turns round a core of soft iron, converts the latter into a powerful magnet as long as the current is passing. Such a combination is known as an electro-magnet. Its strength depends on the strength of the magnetising current, and the number of turns of wire in its coils. A powerful magnet of this kind, bent into the shape of a horseshoe, is capable of supporting 200 lbs. for every square inch of area in the ends of the iron core. Electro-magnets are employed for the production of the magnetic field necessary for the inducing of a current of electricity by means of a dynamo, and in electric motors, as explained in the article on electricity. They are also used by magnet makers for magnetising bars of steel, an operation which is accomplished by moving the bar from end to end, across one pole of the electro-magnet, and then moving it in the opposite direction across the other pole. An electro-magnet is also an essential part of every electric bell.

MAGNIF'ICAT, the name given to the song of the Virgin Mary, (St. Luke i. 46–55). It forms part of the evening service both of the Anglican and Roman Catholic Churches. It obtains its name from the fact that the first word in the Latin version is *magnificat*, "doth magnify."

MAGPIE, a member of the crow family of birds. It is usually about 16 inches long, standing some 9 inches in height, and is dark purple and white in colour. It can be taught to repeat words and phrases, and is an arrant thief. It has always been regarded by the ignorant with superstitious fear. They supposed it to be in league with the Evil One, and that to meet it was an indication of coming misfortune.

MAGYARS, the ruling race in Hungary, a branch of the Mongolian family, closely allied to the Finns. They settled in Hungary in the 10th century, and are remarkable for their energy and courage.

MAHAN, ALFRED MAYER, *b.* in New York, 1840; one of the foremost living critics and writers on naval matters. His best known work is entitled "Influence of Sea Power on History." He was an officer in the U.S. Navy, and was appointed to the post of Naval Expert to the U.S. Government.

MAHDI, a descendant of Mohammed, who disappeared in the 9th century. It is believed by Mohammedans that he will reappear and establish their religion throughout the world. There have been several pretenders to the title, the best known being Mohammed Ahmed, who caused the Soudan War of 1883–5.

MAHOGANY, a tree which grows in Mexico, Central America, and the West Indies. Its wood, which is very hard and capable of being beautifully polished, is much used in cabinet work.

MAHOMET. Refer to *Index*.

MAHRATTAS, a Hindu race who inhabit the north-western districts of the Deccan, in India. They were defeated by Sir Arthur Wellesley at Assaye, in 1803, and their territory became part of the British possessions.

MAID OF ORLEANS, Joan of Arc, a peasant girl of Lorraine, who in 1429 led the French army which compelled the English to raise the siege of Orleans. See *Jeanne d'Arc*.

MAIDS OF HONOUR, are the Queen's personal attendants, one of whom must be always in waiting. Queen Victoria had eight, but Queen Alexandra has only four. Each one is entitled to the prefix "Honourable" in virtue of her position.

MAIDSTONE, the county town of Kent, is on the Medway 7 miles south of Rochester. It is a very busy and thriving town and has an important trade in hops and other agricultural produce. It also possesses several paper mills and breweries; population 35,000.

MAIMONIDES, *b.* at Cordova, 1135, *d.* 1204; a famous Jewish writer and philosopher.

MAINTENANCE, CAP OF. See *Cap of Maintenance*.

MAINTENON, MARQUISE DE, *b.* in a prison at Niort, France, 1635, *d.* 1719; the second wife of Louis XIV. of France. She was, previous to her marriage, governess to one of his children. Her marriage was never openly acknowledged, but her influence knew no bounds in matters both of Church and State.

MAINZ, or Mayence, a strongly fortified town situated on the left bank of the Rhine, at its junction with the Main. The surrounding district is very fertile, and Mainz is the centre of an important wine district. It has a large river trade. The principal objects of interest are the Cathedral, the house of Gutenburg, the inventor of printing, and the remains of an aqueduct, constructed by the Romans, who founded the town; population about 85,000.

MAIZE, a cereal grown largely in the United States and South Eastern Europe. It is used in our country as fodder and in some countries it is mixed with rye to make black bread.

MAJOLICA, a valuable kind of pottery, deriving its name from Majorca, an island in the Mediterranean Sea, where it was originally made.

MAJUBA, a precipitous hill on the borders of the Transvaal and Natal, the scene of a battle fought, 27th February, 1881, between a British force of 650 men, under Sir George Colley, and a Boer force fighting for their independence. The British suffered a severe defeat, losing over 200 men in killed, wounded, or prisoners, Sir George Colley being amongst the slain.

MALACHI, the last of the "Minor Prophets." His book concludes with the prophecy of the coming of Elijah (John the Baptist).

MALACHITE, a variety of copper ore, green in colour, found in vast quantities in Russia, Australia, and Chile. Some of the finest specimens are cut and polished for ornamental purposes.

MALAGA, a province of Spain bordering on the Mediterranean Sea. The principal town, also called Malaga, is a seaport exporting the productions of the province —wines, fruits, and lead and iron ores; population about 130,000.

MALAKOFF, the strongest fortress of Sebastopol, in the Crimean War. Its capture by the French, 1855, compelled the Russians to evacuate the town.

MALAY ARCHIPELAGO same as the *Indian Archipelago.*

MALAY PENINSULA, the long narrow peninsula situated to the south-east of Burma, and connected with it by the Isthmus of Kra. It has an area of 70,000 square miles and an estimated population of four millions. The greater part is under British protection. There are two British colonies, Wellesley and Malacca, in addition to the adjoining islands of Penang and Singapore. The principal export is tin, one-half of the world's supply coming from this district. The inhabitants are Malays or Siamese, though much of the mining is done by Chinese coolies.

MALAYS, one of the divisions of the human race, found in the Malay Archipelago, Polynesia, Philippine Islands, and Madagascar. They are brown in colour, and have high cheek bones and obliquely set eyes. The pure Malays are a quiet race of traders and sailors, Mohammedans in religion, who at one time attained a high degree of civilisation.

MALIBRAN, MARIA FELICITA, née Garcia, *b.* 1808, *d.* 1836; one of the greatest prima-donnas the world has seen; made her first appearance in London in 1825. After a brief stay in New York, where she married M. Malibran, she returned to Europe. Her appearances were a series of triumphs, cut short by her early death at Manchester.

MALLEE SCRUB, a very dense growth of dwarf Eucalyptus trees found especially in South Australia, where there is a tract of 9,000 square miles covered with an unbroken expanse of this scrub.

MALMSEY, a wine obtaining its name from Malvasia, a seaport in Greece, from which it was originally exported. It is now made in Madeira, Sicily and Sardinia.

MAL'ORY, SIR THOMAS, the author of "Morte d'Arthur," a collection of legends, some original, concerning King Arthur and the Knights of the Round Table. Malory lived in the reign of Edward IV., and spent most of his life in France.

MALPLAQUET, a village in France on the Belgian border. It was the scene of a battle in 1709, during the war of the Spanish Succession, in which the French were defeated by a combined army of British and Germans, led by Marlborough and Eugene; 30,000 were slain.

MALTA, a rocky island situated in the Mediterranean Sea, south of Sicily. From 1522 until 1798 it belonged to the Knights of St. John of Jerusalem. The French then obtained possession, but Nelson took the island in 1799. It has remained in the possession of the British since then, and is an important naval and coaling station. Refer to "Malta" in *Index.*

MALTHUS, THOMAS ROBERT, *b.* near Guildford, 1766, *d.* 1834, a famous political economist. His best known work is entitled "An Essay on the Principle of Population." He was convinced that the population of the world was fast outgrowing the means of subsistence, and his methods of averting the evil came as a shock to society.

MALVERN, a health resort situated in Worcestershire. It possesses some famous medicinal springs, and the "Open air" treatment for consumptives is much practised. Its death rate, 10 per 1000, is the lowest of all the watering places of England; population about 16,500.

MAMELUKES, light cavalry soldiers forming the body guard of the Caliph of Egypt, in the 13th century. They mutinied and established a new dynasty, which lasted from 1254 until 1517. Even then they continued to exercise considerable power until the beginning of the 19th century, when there occurred a wholesale massacre of them, carried out under orders of the Sultan of Turkey.

MAMMALS, those members of the animal world whose young are suckled by the female for a short period after birth. They possess a backbone, a more or less developed covering of hair, and are warm blooded. Besides man and all the quadrupeds, they include the bat and the members of the whale, porpoise, and dolphin families. These three last differ from fish, in the possession of warm blood and of lungs, which necessitates their coming to the surface to breathe.

MAMMON, the "god of riches," in Assyrian mythology. It now signifies the spirit of avarice.

MAMMOTH, an extinct animal whose remains are abundant in the northern hemisphere, especially Siberia. In form it resembled a very large elephant, one nearly complete specimen measuring 16 feet long, and standing 9 feet high, possessing ivory tusks 9 feet long. The remains are valuable on account of the tusks.

MAMMOTH CAVE, a large limestone cave situated in Kentucky. The total length of its tunnels is estimated to be 150 miles, of which about 10 miles have been explored. Two remarkable species of fish are found in the cave, one quite blind, the other without even rudimentary eyes.

MAN, ISLE OF. See *Isle of Man.*

MANCHE, LA, the name applied by the French to the English Channel.

MANCHESTER, the largest of the cotton manufacturing towns of Lancashire. It is situated on the Irwell, a tributary of the Mersey, and upon an important coalfield. The town was founded by the Romans, and attained some importance in the 14th century, when the manufacture of woollen goods was introduced by Flemish weavers; its present importance dates from the introduction of machinery. The principal buildings are the Town Hall, the Exchange, the Cathedral, and Owen's College, the latter the seat of the recently constituted University of Manchester. Manchester was converted into a port by the opening of its Ship Canal, which was constructed in the years 1887–91, at a cost of about 15 millions sterling. It is 35½ miles in length and 26 feet in depth. (For population, etc. (not including Salford). see p. 902.)

MANCHURIA, a division of the Chinese Empire, situated to the north of China proper. It is 400,000 square miles in area, and has a population of 12½ millions, the majority engaged in agriculture and the rearing of cattle. The exports are beans, oil (obtained from beans), maize, wheat, barley, and hemp, silk and furs. The trade has decreased of late years owing to the unsettled state of the country. The principal towns are Mukden, Kirin, and Newchwang, the latter the chief port, situated near the mouth of the Liau River.

MANCHUS, the original inhabitants of Manchuria. They are a nomadic people, a branch of the Mongolian family engaged in the rearing of cattle, and numbering about 500,000. They would probably have disappeared as a distinct race before this, but for the fact that the ruling family in China is of Manchurian origin. The pigtail method of dressing the hair was introduced into China by the Manchus.

MANDALAY, the chief town of Upper Burma, is situated near the river Irawadi. The chief sources of wealth are fabrics, silver, teak and rubies; population about 180,000.

MANDEVILLE, SIR JOHN, the assumed name of a compiler of travels of the reign of Edward III. The work appeared in Latin, and received papal recognition Versions in French, Italian, and Spanish exist, and the author is said to have made the English version on which is based his fame as the "father of English prose." There is little to be said in favour of the authenticity of either the travels or the English version. The work is evidently a compilation for the delectation of pilgrims to Jerusalem.

MANDINGO, name of the members of a negro tribe inhabiting Senegambia. They are Mohammedans in religion, and have attained a high degree of civilisation. They number about eight millions, and are engaged mainly in agriculture.

MANDRAKE, a plant found in southern Europe and Northern Africa. In shape it bears some resemblance to the human form, and the ancients invested it with miraculous powers.

MANGE, a scab or itch which affects the coats and skins of dogs and cattle.

MANGO, a tree found in tropical countries, which produces a kidney-shaped fruit. This fruit is one of the most common foodstuffs in the districts in which the tree grows.

MANGROVE, a tree found in swampy tropical districts. It grows down to the water's edge, and it spreads by means of aerial roots, a curious process, in which the drooping branches take root on reaching the mud. Its mode of growth helps in reclaiming swampy districts.

MANHATTAN ISLAND, the long narrow island upon which stands a large part of New York. It is situated at the mouth of the Hudson River, and is separated from Long Island by East River. It has an area of 22 square miles.

MANICHÆANS, a religious sect, followers of Mani, who lived in the 3rd century. They professed a religion which was a mixture of sun-worship, Buddhism, and Christianity. The sect survived in the Mediterranean countries until the 7th century.

MANILA, the capital of Luzon, the largest of the Philippine Islands. It is situated on the east side of the island, upon a fine harbour, and exports besides cigars and sugar a fibre known as Manila hemp, much used for cordage. It was founded in 1571 by the Spaniards, and remained in their possession until taken by Admiral Dewey during the Spanish-American War, 1897. It has a population of about 300,000, of whom 15,000 are Europeans.

MANIOC. See *Cassava.*

MANITOBA, an inland province of Canada. It has an area of 74,000 square miles, and a rapidly increasing population. It possesses an exceedingly fertile soil, and is one of the great wheat-producing districts of the world; its other crops are oats and potatoes. Manitoba became a province of the Dominion in 1870. The principal town is Winnipeg, situated on the Red River, near Lake Winnipeg.

MANLIUS CAPITOLI'NUS, a Roman leader. In 390 B.C. the Gauls attacked Rome, and would have taken the Capitol, had not Manlius, roused from his sleep by the cackling of the sacred geese, given the alarm to the garrison. He was thrown from the Tarpeian Rock five years later, on a charge of inciting the people to revolt.

MANNA, a sweetish liquid which exudes from the bark of a species of ash found in Italy and the district around Mount Sinai. It is gathered in the early morning, because at that time the cold causes it to congeal.

MANNING, HENRY EDWARD, *b.* at Totteridge, 1808, *d.* 1892. Originally a member of the English Church, he resigned the Archdeaconry of Chichester in 1850, and became a Roman Catholic. In the latter church he rose rapidly, and on the

death of Cardinal Wiseman, in 1865, he was appointed to the see of Westminster, which he held until his death. He was created a cardinal.

MANNY, SIR WALTER, the founder of the Carthusian Monastery, situated near Aldersgate Street, E.C., now known as the Charterhouse. He lived in the 14th century.

MANOA, the capital of *El Dorado*.

MANSION HOUSE, the official residence of the Lord Mayor of London. It is situated at the eastern end of Cheapside, in the heart of the City of London, and was constructed during the years 1739-1753, at a cost of about £70,000. The only portion open to visitors is the police court, over which the Lord Mayor presides. To view the various rooms special application must be made.

MANX, the original inhabitants of the Isle of Man. They are a branch of the Celtic race, and still retain their own language, a dialect of Gaelic, though practically all speak English in addition.

MAORIS, the members of the aboriginal race of New Zealand. They are a branch of the Malay family, and are a vigorous and intelligent race, brown in colour, with thick lips and straight black hair; they are very fond of tattooing their bodies. The bulk of the Maoris, who number about 40,000, are found in North Island.

MAPLE, a tree common throughout the northern hemisphere; about fifty species are known. Of the varieties found in England, the sycamore and plane tree are the most important; their timber is of considerable value. The sugar maple, so called because sugar is obtained from its sap, is found in Canada and the eastern districts of the United States. A small hole is bored in the trunk of the tree near the base and the sap drawn off through an elder tube. An ordinary tree will yield about five pounds of sugar each year. The leaf of the maple tree is the national badge of the Canadians.

MARABOUTS, men among the Berber tribes of North Africa who devote themselves to a religious life. They have very great influence among the common people, and many of them are, in their way, very devout; but others use their supposed sanctity as a cloak for their own selfish ends.

MARASCHINO, a very fine liqueur distilled from cherries and sweetened with white honey or the finest sugar. The best is made at Zara, in Dalmatia, and in Corsica. An inferior kind is made in Germany.

MARAT, JEAN PAUL, *b.* 1742, *d.* 1793; one of the most prominent leaders of the French revolutionists. He edited the paper which expressed the views of the revolutionary party, and wrote for it many inflammatory articles, in which he advocated wholesale murder. To escape punishment he was compelled to hide in the Paris sewers. He subsequently became a member of the committee of public safety and president of the Jacobin club. He was assassinated by Charlotte Corday, whose lover he had caused to be murdered.

MARATHON, a small village situated in Greece, about 20 miles north-east of Athens. In 490 B.C., it was the scene of one of the most famous battles in the world's history, in which the Greek forces, led by Miltiades, defeated the Persian army of Darius.

MARBLE, the name applied to various kinds of crystalline limestone capable of being highly polished. Marble is found in various colours, and is often beautifully veined. It has at all times been much used in decorative and artistic work. The pure white marble used for statuary is obtained from Carrara, in Italy.

MARCH, the third month of the year. It obtains its name from Mars, the god of war in Roman mythology. Among the Romans and in England, until the introduction of the Gregorian calendar, 1752, March was the first month of the year, and March 25th was the beginning of the legal year.

MARCONI, GUGLIELMO, *b.* at Bologna, 1875, a famous electrical engineer. He is the inventor of a method of transmitting telegraphic messages without the aid of wires. After pursuing his researches for some years, he succeeded, in 1899, in sending messages across the English Channel. Since that date he has improved his appliances and has sent messages from Newfoundland and Cape Breton to Cornwall, a distance of over 2,000 miles. His system enables ships on a voyage to communicate with the land and each other.

MARCO POLO, *b.* about 1256, *d.* 1323; a famous Venetian traveller. He explored parts of Central Asia, China, and South-Eastern Asia, districts previously quite unknown to Europeans. His accounts of the countries and peoples he had seen were generally discredited by his contemporaries, but subsequent explorations have proved that his statements were by no means fictitious.

MARCUS AURELIUS, *b.* 121, *d.* 180 A.D., the adopted son of Antoninus Pius, whom he succeeded as Emperor of Rome, A.D., 163. He was a scholar of considerable eminence and a philosopher of the Stoic school. His writings, entitled "Meditations," have been translated into many languages and are still widely read. Despite the fact that he conducted a vigorous persecution of the Christians, he ranks as one of the best of the Emperors of Rome.

MARDI GRAS, the name given by the French to Shrove Tuesday. It is the last and most important day of the carnival, which in France and other countries precedes the Lenten fast. The carnival lasts for three days, and is a period of feasting and general enjoyment, hence the term Mardi Gras, which literally means "Fat Tuesday."

MARENGO, a village situated in the north of Italy near the town of Alessandria. In 1800 it was the scene of a stubbornly contested battle, in which the French army, led by Bonaparte, defeated the Austrians. The French victory was largely due to a brilliant cavalry charge led by Kellerman.

MARGARET, SAINT, *b.* 1047 in Hungary, *d.* 1093; a queen of Scotland, the wife of Malcolm Canmore. She was the sister of Edgar the Atheling, and was educated at the court of Edward the Confessor. After her marriage she did much towards civilising her husband's subjects, and put new life into the Christian Church of Scotland. She was renowned for her piety and purity of life, and was canonised, 1250.

MARGARET, "The Maid of Norway," was the daughter of Eric II., King of Norway, and grand-daughter of Alexander III. of Scotland. On the death of the latter, which occurred when she was quite a child, she was the only direct heir to the Scottish throne. A council of regency was appointed, and arrangements were made to betroth her to the son of Edward I., but she died at the Orkney Islands on her way to Scotland.

MARGARET OF ANJOU, *b.* 1425, *d.* 1482; the wife of Henry VI. of England. She was the daughter of René, Duke of Anjou, and one of the conditions of the marriage settlement was that Anjou and Maine, which had been taken by the English in the preceding reign, should revert to the French. She was, in consequence, exceedingly unpopular in England. On the outbreak of the Wars of the Roses she took an active part in the military operations; she defeated the Duke of York at Wakefield 1460, and caused both him and his son, the Earl of Rutland, to be beheaded. In the following year she defeated Warwick, the king-maker, at St. Albans. In 1471 she was defeated by Edward IV., at Tewkesbury, her son was put to death after the battle, and for the next four years she was a prisoner. She was eventually ransomed by Louis XI., 1476.

MARGARET TUDOR, daughter of Henry VII., became the wife of James IV. of Scotland. From her the Stuart kings derived their title to the English crown. The only child of this marriage was James —afterwards King of Scotland—the father of Mary, Queen of Scots. After the death of James IV. she married Archibald Douglas, Lord Darnley, who married Mary, Queen of Scots, was her grandson by this marriage.

MARGARINE. By an Act passed in 1887 it was made the legal name for imitation butters made from beef-suet, milk, butter, and vegetable oils, with colouring matter.

MARIA LOUISA, *b.* 1791, *d.* 1847; was the daughter of Francis I. of Austria. In 1810 she became the wife of Napoleon, who had divorced Josephine his first wife in order that the marriage could take place. In Napoleon's absence from France she acted as regent; after his fall she returned to Vienna, and subsequently became the ruler of the grand duchy of Parma, in Italy. Here she contracted a marriage with her chamberlain, Count Neipperg.

MARIA THERESA, *b.* at Vienna, 1717, *d.* 1780; was the eldest daughter of the Emperor Charles VI. of Austria. The latter, previous to his death, had made an agreement with the European powers, called the Pragmatic Sanction, by which his daughter was to succeed him as ruler of Bohemia, Austria, and Hungary. On his death, in 1740, the Elector of Bavaria claimed Bohemia, and Frederick II. of Prussia seized Silesia. The war of the Austrian Succession ensued, Great Britain supporting the claims of Maria. The war was eventually finished in 1746, Frederick retaining Silesia, and Maria's husband being recognised as Emperor. In 1773 Maria Theresa was a party to the partition of Poland, receiving the province of Galicia as her share. The most famous of her children was the unfortunate Marie Antoinette.

MARIAMNE, a princess of the Asmonæan dynasty. She became the wife of Herod the Great, who ruled over Palestine 40-4 B.C. Herod was passionately fond, and also exceedingly jealous of her. On two occasions when he was compelled to leave Palestine he left her in the charge of a friend, with injunctions that she was to be put to death if anything serious happened to him. Mariamne heard of this and openly expressed her disgust at such brutality. This so incensed Herod that he caused her to be murdered, B.C. 29.

MARIE ANTOINETTE, *b.* at Vienna, 1755, *d.* 1793: the daughter of Maria Theresa and Francis I. of Austria. She became the wife of Louis XVI. of France, but was always very unpopular in that country. On the outbreak of the revolution, 1789, both Louis and his queen were thrown into prison. The latter intrigued with Austria and induced that country to make preparations for an invasion of France. When this became known the awful Reign of Terror occurred, during which both Louis and Marie Antoinette were executed, 1793. The revolutionists circulated many disgraceful tales about the queen, but though her excessive freedom of manners gave an air of probability

to them, there is little doubt that for the most part they were false.

MARINES, a military force, which is under the control of the Admiralty, and serves on the vessels of the British navy. There are two branches, the Royal Marine Light Infantry and the Royal Marine Artillery, and when on shore they are stationed at the various dockyard towns. Kipling's phrase "Soldier and Sailor too" aptly describes the marine. They number about 15.000.

MARINER'S COMPASS, THE, seems to have been known to the Chinese from very early times. Thus it is reported that after an action fought, about 2,600 B.C., an Emperor of China successfully navigated his fleet through a fog, by the aid of some instrument, which was probably a kind of compass. There is a mention of it in a Chinese dictionary dated about 120 A.D. The Mariner's Compass was also known to the Arabs a considerable time before Europeans became acquainted with its use. It is said to have been discovered, or possibly introduced into Europe, by an Italian about the year 1300. The same uncertainty exists with respect to the discovery of the variation of the compass. Both Columbus and Sebastian Cabot have been credited with the discovery, though it was probably known before this time. See *Magnetism.*

MARIONETTES, the name given to puppets or small figures representing human beings, which are worked by strings and made to perform various simple movements. These were in use among the ancient Greeks and the Romans, and became popular in Italy in the 17th century. The puppets were frequently made to perform little plays, the talking being done by the individual working the figures. The modern Punch and Judy show is a survival; but in this case the figures are moved by hand instead of by strings.

MARIUS, CAIUS, *b.* 157, *d.* 86 B.C., a famous Roman commander and politician; he was elected consul seven times. In 102 B.C. the Romans were thrown into a panic by the news that the Teutones and Cimbri were preparing to invade Italy. Marius, who had previously made his name in the war against Jugurtha, 107, was entrusted with the command of the Roman army. He defeated the Teutones in a great battle at Aquae Sextiae (Aix), and then marching south inflicted a crushing defeat upon the Cimbri in Lombardy. Some years later a dispute arose between Sulla and Marius concerning the command of the army which was being despatched against Mithridates, and Marius was forced to fly from Rome. He returned a short time afterwards and inflicted terrible vengeance upon the supporters of Sulla, many of them being ruthlessly put to death.

MARK, a coin pretty general in the Middle Ages in Europe, and still used in Germany, where it is the unit of the coinage. The old English mark was worth 13s. 4d.; the Scottish mark 1s. 1½d. (See "British and Foreign Coinage" in *Index.*)

MARK ANTONY. See *Antony, Mark.*

MARK, SAINT, the writer of the second of the Gospels. He is identified with the "John, whose surname was Mark," mentioned in Acts xii. 12. He accompanied Paul and Barnabas on their first missionary journey through Asia Minor as far as Perga, and there left them, apparently shrinking from the task before them. His Gospel was compiled largely or entirely from information obtained from St. Peter, whose secretary or amanuensis he was.

MARK TWAIN. See *Clemens.*

MARL, a sedimentary rock, that is, one deposited by the action of running water. It consists of a mixture of lime and clay, which crumbles after exposure to the atmosphere. It is largely used as a manure.

MARLBOROUGH, DUKE OF. See *Churchill.*

MARLBOROUGH HOUSE, a royal residence, usually that of the Prince of Wales. It is situated at the western end of Pall Mall, and was built for John Churchill, Duke of Marlborough, from designs by Sir Christopher Wren, 1709-1710. The mansion was bought by the Crown, 1817, and was presented to the late King Edward VII., when Prince of Wales, in 1860. It was also occupied by King George V. when Prince of Wales.

MARLINSPIKE, a small iron tool, resembling a large pin in shape, used to separate the strands of a rope in splicing.

MARLOWE, CHRISTOPHER, *b.* 1564, *d.* 1593; a famous dramatist. He was the first writer to make successful use of blank verse in drama, and he exercised considerable influence over Shakespeare, a fact which is made evident by a comparison of the works of the two writers. His principal plays are "Tamburlaine," "Jew of Malta," and "Edward II." He also wrote portions of Titus Andronicus and other plays which Shakespeare afterwards partly rewrote. He was killed in a tavern brawl at Deptford at the early age of twenty-nine.

MAR'MORA, SEA OF, is situated between the Black Sea and the Mediterranean. It is connected with the former by the Bosphorus, and with the latter by the Dardanelles. It is 150 miles long and 50 miles broad at its widest part, and contains several islands; the largest of these is called Marmora, from the fact that marble was, and is still, quarried there, and it is from this island that the sea itself obtains its name.

MAROCHETTI, CARLO, *b.* at Turin, 1805, *d.* 1868, a famous sculptor. The statue of Colin Campbell (Lord Clyde), situated in Waterloo Place, London, is the work of Marochetti, as is also that of Queen Victoria placed in George Square, Glasgow.

MARONITES, a sect of Christians, established about the 7th century, whose name is connected with the monastery of St. Maron. They inhabit the district in the neighbourhood of Mount Lebanon, Syria, and at the present time number about 250,000. The sect became a part of the Roman Catholic Church in the 13th century, though in some instances their regulations differ from those of that church, notably in the fact that their priests are permitted to marry.

MAROONS, the name formerly given to runaway negro slaves in Jamaica and Guiana. When the former colony passed into the possession of the British, a large number of slaves escaped to the hills and defied the authorities until 1795. The name was given to the members of this body. The word probably originated among the Buccaneers, who often "marooned" troublesome individuals, that is, placed them alone upon a desert or uninhabited shore.

MARQUE, LETTERS OF, a commission from a government authorising the captain of a ship to make war on, and capture the vessels of, another country. Ships thus commissioned were called privateers. Privateering was abolished by the "Declaration of Paris" (1856).

MARQUETRY, or inlaying, the name given to the process of fixing thin sections of various coloured woods upon a suitable foundation in such a way as to produce a design. The process is much used in the construction of ornamental floors. The term was formerly used in a wider sense, and applied to almost any kind of inlaying.

MARRYAT, FREDERICK, CAPTAIN, *b.* 1792, *d.* 1848; captain in the Royal Navy, and author of sea stories; went to sea at fourteen, and in the next twenty-four years saw stirring service in every clime. Then he settled down to write those unequalled stories which portray every phase of life in the navy. "Frank Mildmay" was his first novel; "Peter Simple" and "Jacob Faithful" perhaps his best.

MARS. (1) In Roman mythology Mars was the god of war and corresponded to the Greek god Ares. According to legend he was also the father of Romulus and Remus, the former of whom founded the city of Rome. The Campus Martius, the "playing fields" of the Romans, and the month of *March* derive their names from Mars. (2) Mars is also a planet whose orbit lies without that of the earth, and nearer to it than that of any other planet. The average distance of Mars from the sun is about 133,000,000 miles, and its minimum distance from the earth 34,000,000 miles. Its time of revolution is 686 of our days, and of rotation 24 hours 37 minutes. It possesses two small moons, each less than ten miles in diameter, one of which makes a complete revolution around the planet in about nine hours.

MARSEILLAISE, LA, the song of the French revolutionists during the great revolution. It was written and composed by a French officer, named De Lisle, and obtained its name from the fact that it was first sung in Paris by a band of revolutionists hailing from Marseilles. Its stirring melody soon made it very popular, but on the restoration of the monarchy it was suppressed. On the outbreak of the Franco-Prussian war the Emperor allowed it to be revived, and it is now regarded as the national song.

MARSEILLES, the third largest town of France and the first seaport. It is situated on the Mediterranean coast a short distance to the east of the delta of the Rhone. Its imports include grain, wine, coal, and oil-seeds. Marseilles was founded by the Phœnicians about 600 B.C., and its importance has recently increased rapidly owing to the opening of the Suez Canal. Two British Steamship lines make Marseilles a port of call, the Peninsular and Oriental and the Orient-Pacific; population about 500,000.

MARSHAL, EARL. Refer to *Index.*

MARSHALSEA PRISON, THE, formerly the prison attached to the court at which servants of the royal household were tried. It was situated in Southwark, near St. George's Church. In 1849 the Court established there was abolished, and Marshalsea Prison was reserved mainly for debtors. It has since been destroyed, but will always be remembered as the residence of *Little Dorrit,* the heroine of a story written by Charles Dickens.

MARSTON MOOR, situated about seven miles west of York, the scene of a battle, 1644, during the Civil War, in which the forces of Charles I., led by Prince Rupert, were defeated by the army of the parliament. The victory of the latter was largely due to the work of Cromwell's Ironsides, a cavalry force who made their first successful appearance in this battle.

MARSUPIALS, or pouched aminals, are so called because the female possesses an external pouch situated at the lower end of the abdomen in which the young are carried for some time after birth. Marsupials include kangaroos, opossums, wombats, bandicoots, etc., and with the exception of some of the opossums found in North America, are now restricted to Australia and the adjacent islands, but their fossil remains have been found in Europe.

MARTEN, an animal resembling the weasel in shape and size which feeds upon flesh and usually makes its home in trees. Martens are widely distributed, and include several species, the most valuable being the sable-marten.

MARTIN, SAINT, *b.* about 316, *d.* about 400. In 360 he founded a convent at Poictiers, and in 371 was appointed, against his wishes, Bishop of Tours. November 11th is dedicated to his honour, and this particular day is, in Scotland, one of the four quarter days of the year. In England the sheriffs are chosen on "the morrow of Saint Martin."

MARTINIQUE, an island belonging to France in the West Indies, and forming one of the group known as the Lesser Antilles. In 1902 Martinique was the scene of a terrible volcanic eruption, during which St. Pierre, the capital, was totally destroyed, and 30,000 persons perished. Mount Pelée, a volcano situated near the town, was partially destroyed by a terrific explosion, which tore away the side of the mountain and scattered the molten fragments over the town. The whole of the shipping in the harbour, with the exception of the Roddam, commanded by Captain Freeman, was destroyed. The productions of the island include sugar, molasses, rum, and fruits; population about 200,000, most of whom are negroes.

MARTYN, HENRY, *b.* at Truro, 1781, *d.* 1812, a famous missionary. He spent the best part of his short life in India and Persia, where, having mastered Hindustani and Persian, he translated portions of the Bible and Prayer-book into those languages.

MARVEL, ANDREW, *b.* at Hull, 1620, *d.* 1678, a poet and writer who lived during the time of Oliver Cromwell and Charles II. He travelled abroad for some time and became famous as a linguist. On his return he became assistant to John Milton, who occupied the post of Latin Secretary to the Protectorate. He afterwards entered Parliament.

MARY I., Queen of England, *b.* at Greenwich, 1516, *d.* 1558, was the daughter of Henry VIII. and Catharine of Aragon. She was brought up in the Roman Catholic faith, and lived in retirement during the reign of her brother, Edward VI. She ascended the throne in 1553, and her reign was made notorious by the persecution of Protestants, about 300 of whom perished by fire. Mary married Philip II. of Spain, but her husband left England shortly after the marriage and did not return. Among other notable events of her reign were the execution of Lady Jane Grey and the loss of Calais.

MARY II., Queen of England, *b.* at St. James's Palace, 1662, *d.* at Kensington Palace, 1694, was the daughter of James II. and Anne Hyde. She was educated as a Protestant, and married William, Prince of Orange. After the revolution her husband was appointed king, on the understanding that he and his wife should be joint rulers. Mary took little part in the active work of government, sensibly leaving William III. to do as he thought best.

MARY, QUEEN CONSORT OF GEORGE V., daughter of the Duke and Duchess of Teck, *b.* Kensington Palace, May 26th, 1867. She has always been popular with the British people, and in her girlhood she was universally known as the "Princess May"; she became engaged to the Duke of Clarence in 1891, but he died in January, 1892. She was married to George V., then Duke of York, in 1893.

MARY, QUEEN OF SCOTS, *b.* at Linlithgow, 1542, *d.* 1587, was the daughter of James V. of Scotland and Mary of Guise. She became queen a few days after her birth, and a council of regency was appointed. Mary was educated in France and married the Dauphin. Her husband died in 1561, little more than a year after his accession, and Mary returned to Scotland, where she married her cousin, Lord Darnley. The marriage was unfortunate in every way, and within a year Darnley, in a mad fit of jealousy, led the party which murdered David Rizzio, Mary's Secretary. Darnley was murdered a short time after, and within three months Mary had married Lord Bothwell, who was suspected of the murder. This conduct caused a rebellion in Scotland, and Mary was imprisoned at Loch Leven Castle. She escaped and went to England to obtain the assistance of Queen Elizabeth, 1568. The latter kept her in confinement, and thus she remained until 1587, when she was executed for complicity in one of the several plots which aimed at dethroning Elizabeth and putting Mary in her place. Much has been written concerning the "beautiful but unfortunate" Mary, but she was certainly exceedingly impulsive, and was possessed of all the fatal charm of the Stuarts. She was the mother of James I. of England.

MARY OF GUISE, *b.* 1515, *d.* 1560, the queen of James V. of Scotland, and the mother of Mary, Queen of Scots. During the childhood of the latter she acted as regent of Scotland for a short time. She was a woman of many good qualities, but was far too much under the influence of the French court to be popular with the Scots.

MARY OF MO'DENA, *b.* 1658, *d.* 1718, the second wife of James II. of England, and the mother of James Francis Edward, the "Old Pretender."

MARYLAND, one of the United States of America. It is situated upon the Atlantic coast, is about 12,000 square miles in area, and has a population of about 1,200,000. The principal exports are tobacco, tinned fruit and oysters. Maryland obtains its name from Henrietta Maria, the queen of Charles I. This monarch, in 1632, granted a charter to Cecil, Lord Baltimore, to establish a settlement in this particular district. The principal town, Baltimore, obtains its name from the title of its founder.

MASHAM, LADY (Abigail Hill), *b.* in London, 1670, *d.* 1734, a cousin of Sarah Jennings, Duchess of Marlborough, by whose influence she became a lady-in-waiting to Queen Anne. The two ladies became deadly rivals, and Mrs. Masham eventually succeeded in bringing Harley into power, and was thus largely responsible for Marlborough's downfall. She married a Mr. Masham, who was afterwards raised to the peerage.

MASHONALAND, a district forming part of South Rhodesia, with an area of 114,000 square miles, and an estimated population of 270,000. The land is fertile, the climate healthy for Europeans, and certain parts are said to be rich in gold. The inhabitants, known as Mashonas, are a quiet race, who were for some time oppressed by their warlike neighbours, the Matabele. Mashonaland became a British protectorate in 1888, and is now governed by an official appointed by the Crown, assisted by a legislative council, partly representative in character.

MASK, a covering for the face, used amongst civilised nations to conceal the identity of the wearer. Masks are in common use among savage nations, by whom they are used to scare away demons, and are therefore hideously and grotesquely ornamented. Masks were used for a similar purpose by the Romans and ancient Greeks, and thus the faces of their dead were usually covered with them.

MASKELYNE, J. N., *b.* at Cheltenham, 1839; early studied the art of illusion, for at sixteen he gave a successful public exhibition. He could detect all the tricks of other conjurers, while his own remain secret. His long reign at Egyptian Hall, Piccadilly, was the source of amusement and amazement to thousands. His "Hall of Mystery" is now removed to St. George's Hall, Regent Street.

MASQUE, a kind of play which was very popular in England during the 16th and 17th centuries. It took the place of the more modern private theatricals, the performers, who wore masks, usually being persons of rank and fashion. Performances of masques were very common at the court during the period mentioned above. The greatest poets of the time wrote masques, the finest of these compositions, entitled "Comus," being the work of John Milton.

MASQUERADE, usually a dance or ball at which all present wore masks. They were popular in France and Italy, and the gatherings were often of a most disreputable description. The modern custom of wearing masks, at certain types of fancy-dress ball, is a survival of the masquerade.

MASSACHUSETTS, one of the United States of America. It is situated on the Atlantic coast, is about 8,000 square miles in area, and has a population of nearly 2,800,000, mainly engaged in the manufacture of textiles, boots and shoes, paper and hardware. The first settlement was made in 1620 by the Pilgrim Fathers, who left England in the *Mayflower*, and landed at the spot at which the town of (New) Plymouth now stands. Massachusetts took a leading part in the war of the American Revolution, and the battles of Lexington and Bunker's Hill were fought in this State. The principal towns are Boston, Cambridge, Lynn, and Worcester.

MASSÉNA, MARSHAL, *b.* at Nice, 1758, *d.* 1817, was one of the most famous of Napoleon's marshals. He rose from the ranks, and for services in Switzerland and Italy was created Duke of Rivoli and Prince of Essling. In 1810 he was appointed commander of the French forces in Spain. Sir A. Wellesley (Duke of Wellington), who was in command of the British army, retired within the lines of Torres Vedras, and Massena, being unable to obtain provisions, was compelled to retreat. He led his troops in masterly style through Spain, but was deprived of his command by Napoleon, and spent the remainder of his life in retirement.

MASSINGER, PHILIP, *b.* at Salisbury, 1584, *d.* 1639, a celebrated English dramatist. Many of his plays were written in collaboration with Fletcher; they are carefully constructed but often very coarse. Among the best are "City Madam," "Maid of Honour," and "A New Way to Pay Old Debts."

MASSÓRAH, "tradition," a body of critical notes on the text of the Hebrew Scriptures, with rules for the guidance of copyists and statistics relating to the number of words and even letters in each book. The object in view was absolute correctness in writing and reading the Old Testament.

MASTIC, a straw-coloured resinous substance which is obtained from a species of evergreen found in the countries adjacent to the Mediterranean Sea. Mastic is obtained by making incisions in the bark of the tree, and appears in the form of pear-shaped drops. It is used in the manufacture of varnish.

MASTIFF. There are two kinds of mastiff, the European and the Asiatic. The European mastiff is a powerful, smooth-

haired dog with a large, heavy head, and hanging lips. Its colour is either black or tan, mixed with greyish white patches, and it stands from 25 to 30 inches high at the shoulder. It is remarkably faithful, and makes a good watch-dog. The Asiatic mastiff is somewhat larger than the European variety, and differs from it principally in the possession of a rough coat.

MASTODON, an animal, now extinct, which belonged to the elephant family. Its remains are widely distributed throughout Europe, Asia, and North America, and show that it was somewhat larger than the existing elephant.

MATABELE LAND, a part of Southern Rhodesia, is situated to the north of the Transvaal, and to the south-west of Mashonaland. It has an area of 61,000 square miles and a population of about 155,000. The Matabele are a warlike tribe closely allied to the Zulus, and, under King Lobengula, they bravely resisted the forces of the Chartered Company for some time For particulars of annexation and government see *Mashonaland.*

MATADOR. See *Bull Fighting.*

MATCHES came into use during the years 1830–40, and are now made in enormous quantities in Sweden, Belgium and England. The ordinary method of manufacture is as follows:—The wood is usually yellow or white pine, and trees with a diameter of from 12 to 20 inches are considered most suitable. These trees are cut into blocks about 14 inches long. The bark having been removed, one of these blocks is placed upon a kind of lathe and a continuous band of uniform thickness turned from it; and at the same time, by means of suitably fixed knives, the band is divided into seven strips each 2 inches in width. The strips are divided into lengths, and by means of a knife machine cut into splints, the machine being capable of dealing with about 120 strips at a time. The splints are now arranged in frames and dried in an oven; they are then dipped first into paraffin, and then into the composition which is to form the substance of the head. The matches are dried and packed by hand into boxes. In some of the cheaper varieties sulphur is used instead of paraffin to make the wood burn readily, but this method produces a particularly evil-smelling match. The head of the ordinary match is usually composed of phosphorus, chlorate of potash and glue. In the safety match the phosphorus is placed upon the side of the box and the head made of sulphide of antimony, chlorate of potash and glue. By this means the danger of accidental ignition in reduced to a minimum. Vestas resemble matches in every respect except that the splints are replaced by short pieces of thin wax taper.

MATHEMATICS, the science which treats of the properties and relationships of numbers and magnitudes. It is divided into Pure Mathematics and Mixed or Applied Mathematics. The former branch deals with magnitudes in a purely abstract manner, and includes Arithmetic, Algebra, Geometry, Trigonometry, Differential and Integral Calculus, etc.; the latter applies the principles of pure mathematics to the study of nature. This branch includes Acoustics, Optics, Heat, Dynamics, Astronomy, etc.

MATHEW, THEOBALD, *b.* in Tipperary, 1790, *d.* 1856, is usually known as the "Apostle of Temperance." He was originally a priest, but in 1838 opened a temperance mission at Cork. He was an eloquent speaker, and met with astonishing success, over 150,000 converts being obtained in Cork alone. He continued preaching in other parts of Ireland, and in England and the United States. For his work he received a pension of £300 per annum from Government.

MATSYS, QUENTIN, *b.* 1466, *d.* 1531; a Flemish artist and portrait painter, said to have been a blacksmith in early manhood. His best sacred pictures are the altar-pieces at Louvain and Antwerp, while the "Money Changers" shows great skill in depicting character.

MATTERHORN, one of the peaks of the Pennine Alps, about 14,700 feet high. It is situated in southern Switzerland, near the town of Zermatt. The first successful attempt to climb the Matterhorn was made in 1865, and resulted in the loss of four lives. The ascent is still a matter of some difficulty and danger.

MATTHEW OF PARIS, a famous English chronicler or historian who lived during the reign of Henry III. His work was written in Latin, and includes a History of England from the Norman Conquest up to the reign of Henry III.

MAUNDY THURSDAY, the name given to the day preceding Good Friday. On this day, in the Roman Catholic Church, it is still the custom in some continental countries to make the washing of the feet of certain poor people a part of the ceremonial. In England the sovereign formerly did so, but the practice was discontinued in the reign of James II. The ceremony was followed by the giving of doles, and this part is still retained in England.

MAURICE, FREDERICK DENISON, *b.* near Lowestoft, 1805, *d.* 1872, a prominent churchman and social reformer. In 1846 he became professor of Theology in King's College, London, but on the publication of his "Theological Essays" he was obliged to resign his professorship. At one time he was a leader of the "Christian Socialists," and in 1856 was appointed principal of a "Working-men's College." In 1866 he was elected professor of Moral Philosophy at Cambridge. He wrote numerous works on theology and philosophy, and exercised a marked influence on the thought of his day.

MAURITIUS, an island, formerly called Isle of France, which is situated in the Indian Ocean, about 600 miles east of Madagascar. It has an area of about 700 square miles, and a population of 380,000, of whom 260,000 are Hindu coolies, mainly engaged in the production of sugar. Mauritius is a crown colony of Great Britain, and was acquired from the French during the Napoleonic wars in 1810.

MAUSO'LUS, a king of Caria, in Asia Minor, who died about 380 B.C. Artemisia, his wife, erected to his memory a beautiful sepulchre, which was considered to be one of the seven wonders of the world. From his name the word "mausoleum" is derived.

MAXIM, SIR HIRAM, *b.* in the state of Maine, 1840, a famous engineer and inventor. Amongst his many inventions the Maxim machine gun is the best known. Of late years he has spent much time and money in the invention of a flying machine.

MAXIMILIAN, FERDINAND, Archduke of Austria, *b.* 1832, *d.* 1867, was the brother of the Emperor Francis Joseph of Austria. In 1863 the French sent an expedition to Mexico, and under their influence, an assembly of Mexican notables adopted an imperial form of government, and offered the throne to Maximilian. He accepted, and on reaching Mexico, ordered the execution of all taken in arms against the new government. The United States interfered, and Maximilian, deserted by his followers, was compelled to take to the hills. He was captured and shot, 1867.

MAX-MÜLLER, FRIEDRICH. See *Müller, Friedrich Maximilian.*

MAX O'RELL, the pen-name adopted by Paul Blouet, *b.* 1848, *d.* 1903, a celebrated French journalist and lecturer. In 1872 he came to England as a newspaper correspondent, and during the years 1876–84 was the French Master at St. Paul's School, London. His writings deal mainly with the British and their foibles, and are marked by good nature and humour. Among his best known books are "John Bull and his Island," "John Bull and Co.," and "Jonathan and his Country."

MAXWELL, JAMES CLERK, *b.* at Edinburgh, 1831, *d.* 1879; one of the greatest and most original mathematicians and scientists of late years; was educated at Edinburgh University and at Cambridge. His chief work consisted of researches in electricity and magnetism, in heat and light, and in the behaviour of gases, on all which subjects his writings are very suggestive.

MAY, from the Latin *Maia,* the goddess of increase. The approach of this month was marked in old Rome by the feast Floralia, when great license was taken in outdoor rejoicings.

MAYBRICK, MRS. FLORENCE, the wife of Mr. James Maybrick, a Liverpool cotton broker. She was accused and found guilty in 1889 of attempting to poison her husband by means of arsenic derived from fly-papers. Her death sentence was commuted to penal servitude for life, but she was released in 1904.

MAY DAY, the first of May, formerly the occasion of a festival held to celebrate the return of Spring. In every village flowers were gathered in the early morning, a 'Queen of the May" chosen and crowned with a garland of flowers, and a procession made to the village green, where the remainder of the day was spent in sports and dancing. The May-day celebrations were suppressed by the Puritans, and, although revived after the Restoration, 1660, have gradually declined in importance, until at the present time they have almost disappeared.

MAYENCE. See *Mainz.*

MAYFLOWER, the ship which carried the Puritan Fathers to America. The Puritan Fathers, 102 in number, left England, 1621, because they were denied freedom in religious matters. After a short stay in Holland they sailed for America, where they founded a colony at New Plymouth, in what is now the State of Massachusetts.

MAYNOOTH, a small village situated in County Kildare, Ireland. It is the seat of an important Roman Catholic College, which was established in 1795 by the Irish Parliament. In 1846 it was granted a permanent endowment of £25,000 annually. By the Irish Church Act, 1869, this was withdrawn and a capital sum fourteen times its amount granted in lieu thereof. It contains over 500 students preparing for ordination.

MAYOR, originally the title bestowed upon a steward. It is now applied to the chief magistrate of a corporate town. The mayor is elected by the councillors and aldermen. He presides over the meetings of the town council, and holds office for one year. The chief magistrates of London, Dublin, York, Liverpool, Newcastle, Manchester, Birmingham, Bristol, Leeds, Sheffield Norwich, Belfast, and Cork are Lord Mayors; and those of Edinburgh, Glasgow, Aberdeen, Perth, and Dundee are Lord Provosts.

MAY, PHIL, *b.* at Leeds, 1864, *d.* 1903; designer and caricaturist, had a hard time when he first came to London. His first

success was in connection with the St. Stephen's Review after which he spent three years in Australia. Then he worked both on the "Graphic" and on "Punch," besides doing independent work such as "Phil May's Annual." etc.

MAZARIN, CARDINAL, *b.* 1602, *d.* 1661, a celebrated statesman who entered the service of the French government and, on the death of Cardinal Richelieu, 1642, became prime minister of France. He possessed great influence over Anne of Austria, whilst she was acting as regent of France, and later, over her son, Louis XIV.

MAZARIN BIBLE, probably a copy of the first Bible printed with movable type. It is so called because one was found in the library of Cardinal Mazarin. It is supposed to have been printed about 1450, and was divided into two volumes; about twenty copies are known to be in existence at the present time.

MAZEPPA, IVAN, *b.* 1644, *d.* 1709, a Polish soldier of fortune. He was accused of secretly meeting the wife of a Polish nobleman, and as a punishment, was stripped and tied on the back of a horse, which carried him to the Ukraine district of Southern Russia. He was kindly received by the Cossacks, and attained a position of considerable influence amongst them. Although he was admitted to the friendship of Peter the Great, he entered into a secret alliance with Charles XII. of Sweden, and fought in his army in the battle of Pultova. He escaped from the battlefield and spent the remainder of his life in Turkey.

MAZZINI, GIUSEPPE, *b.* at Genoa, 1807, *d.* 1872, a celebrated Italian patriot and political agitator, who spent his life in endeavouring to unite the various sections of Italy under a republican form of government. In 1848 he was successful in establishing a republic, which survived about a year. He refused to recognise Victor Emmanuel when the latter became King of Italy, 1861.

MEAL-TUB PLOT, an imaginary plot concocted by Thomas Dangerfield in 1679, accusing the Roman Catholics of a design to murder Charles in order to set James on the throne. He said that papers about the plot were concealed in a meal-tub in the house of a Roman Catholic lady. Dangerfield was accidentally killed as he was being whipped back from Tyburn.

MECCA, the birthplace of Mohammed, the sacred city of the Mohammedans, and the nominal capital of Arabia. The great Mosque contains the Caaba (which see) and all Mohammedans are expected to make at least one pilgrimage to it. More than 100,000 persons visit it as pilgrims annually. Since 1517 Mecca has been in Turkish hands, and has been visited by Christians on very few occasions, and then only in disguise; estimated population 60,000.

MECHANICS, the science which treats of force and the action of force upon matter. It is subdivided into Kinematics and Dynamics. *Kinematics* considers the motion of a body without reference to the force producing that motion. *Dynamics* is divided into two sections, Statics and Kinetics. *Statics* deals with bodies in a state of equilibrium, and considers the forces which produce that state; *Kinetics* treats of bodies in motion with reference to the forces causing that motion.

MEDALS, pieces of metal, usually circular in form, which are struck or cast to commemorate some notable event of historical importance. In England they date from the reign of Henry VIII.; since 1793 a medal has been struck to commemorate every great naval or military victory. In the case of a prolonged campaign the plan adopted is to have one medal, which is served out to all taking part in the campaign, whilst those present at any particular victorious engagement receive a bar or clasp, bearing the name of the engagement. This bar is attached to the ribbon by which the medal is suspended. The most coveted of English medals is the Victoria Cross, instituted in 1856, and bestowed for conspicuous bravery in action; it is in the form of a Maltese Cross.

MEDE'A, in classical mythology, a sorceress, the daughter of Aetes, king of Colchis. She assisted Jason to obtain possession of the Golden Fleece, and afterwards became his wife.

MEDIA, the name formerly given to a district situated south of the Caspian Sea. As an independent state, Media attained the height of its power about 700 B.C. It was conquered by Persians and annexed by them 558 B.C.

MEDICI, the name of a distinguished Italian family, the members of which attained great power in Florence and Tuscany during the 14th, 15th and 16th centuries. The founder of the family's greatness was Giovanni de Medici (*b.* 1360, *d.* 1429), who amassed a large fortune in trade, and used his money to obtain political power. His descendants adopted the same means to keep this power, and for a considerable time the Medici were almost absolute rulers of Florence. The members of the family were distinguished by their generous patronage of art and literature, though several acquired also an unenviable reputation for cruelty, vice and tyranny. Cosmo de Medici 1389–1464), and Lorenzo (1448–1492), surnamed the Magnificent, were two of the greatest. One of Lorenzo's sons became Pope in 1513 as Leo X., and another Medici became Pope as Clement VII., by whom our Henry VIII. was excommunicated. Catherine de Medici became the wife of Henry II. of France in 1533, and Maria de Medici, the wife of Henry IV. of France in 1600. The family became extinct about 1740.

MEDI'NA, a small town situated in Arabia. It is the second great holy city of Mohammedans. Medina contains the tomb of Mohammed, who took refuge there after his flight from Mecca, 622 A.D.; population about 16,000.

MEDITERRANEAN SEA, the sea which separates Europe from Africa. It is connected with the Atlantic Ocean, of which it forms a part, by the Strait of Gibraltar, which in its narrowest part is only fourteen miles wide. Its extreme length is over 2,000 miles, and it has an area of nearly a million square miles. The Mediterranean Sea is practically tideless, and owing to the fact that the loss of water by evaporation is greater than the gain from the rivers, there is a current from the Atlantic through the Strait of Gibraltar. As a consequence of this evaporation the water of the Mediterranean is salter than that of the adjoining ocean. The principal islands are Corsica, Sardinia, Sicily, Malta, Cyprus and Crete, and the largest indentations of its coast, the Adriatic Sea, the Ægean Sea and the Gulfs of Lyons, Genoa, Cabes, and Sidra. The eastern part of the Mediterranean is sometimes called the Levant.

MEDJIDI, a Turkish order of knighthood and decoration instituted in 1852. It was bestowed upon a number of British officers who fought in the Crimean War.

MEDUSA, in classical mythology, one of the Gorgons. She was originally a most beautiful woman, but incurred the wrath of Minerva, who turned her hair into serpents, and caused her to present such a horrible appearance that any person looking at her was converted into stone. Medusa was slain by Perseus, and her head placed in the centre of the shield of Minerva, where it still retained its terrifying appearance.

MEERSCHAUM, a greyish-white or yellowish mineral which is found in parts of Asia Minor, Greece, Morocco, etc. It is a mixture of silica, magnesium, and water, and is capable of being highly polished. Meerschaum is made into pipes, which are highly prized by smokers on account of the markings made upon them by the nicotine.

MEERUT, a town and military station situated in India, between the Ganges and the Jumna. Meerut was the scene of the outbreak of the Indian Mutiny, May, 1857: population 119,000.

MEGAPHONE, an instrument used to carry the sound of the voice to a distance with little loss of intensity. It is used on ship-board for speaking to passing vessels, by "coaches" training crews for rowing, etc. It consists of a tube of metal or cardboard, conical in shape, and fitted with a mouthpiece. The waves of sound in passing through the instrument undergo a series of reflections. They are thus prevented from spreading in all directions, but are concentrated, as it were, towards the person they are desired to reach.

MEGATHERIUM, an extinct animal of the sloth species. Its remains are abundant in South America, and show that it was one of the largest and most powerful of land animals. The length of a full grown megatherium, including the tail, was about 18 feet; it was furnished with very short and tremendously powerful legs and a strong thick tail about 5 feet long. The animal fed upon the leaves and young shoots of trees, and its body was so constructed as to permit of its uprooting the trees, in order to reach its food.

MEGIDDO, an ancient city of the Canaanites, which was situated in the Valley of Jezreel. It was the scene of the battle in which Deborah and Barak defeated Sisera (Judges iv. and v.).

MEGRIM, the name of a kind of headache which affects one side of the head only in the region of the temple. The name is sometimes applied to a complaint from which horses suffer in hot weather, the symptoms of which are dizziness and staggering, accompanied occasionally by complete insensibility.

MEISSONIER, JEAN LOUIS, *b.* at Lyons 1815, *d.* 1891, a famous French painter. His pictures are, as a rule, very small, and remarkable for their extraordinary accuracy of detail. They fetch very high prices. "The Cuirassiers" being sold for £16,000.

MELANCHTHON, PHILIP, *b.* at Baden, 1497, *d.* 1560, the name assumed by Philip Schwarzerd, the assistant and friend of Martin Luther; the name Melanchthon is simply the Greek translation of the German. Melanchthon was a brilliant scholar and a zealous reformer, though he was much more tolerant than many of his fellow-workers. His writings are very numerous and include the "Augsburg Confession," an exposition of the Lutheran Creed.

MELANESIA, the name given to the group of islands situated in the Pacific Ocean, and extending from New Guinea to the Fiji Islands. The area of the group is about 390,000 square miles, and they contain an estimated population of about one million. The principal islands are New Guinea, New Britain, New Caledonia, New Hebrides, the Solomon Islands, Santa Cruz, the Loyalty Islands and the Fiji Islands, and they are practically all under either German, French, or British protection.

MELBA, MADAME (Mrs. C. Armstrong), a famous prima donna. She takes her name from her native city, Melbourne; made her début at Covent Garden in 1888. Her fee for one evening at a private party has been 1000 guineas. At Sydney £2660 were taken at one of her concerts.

MELBOURNE, the capital of the colony of Victoria, and the largest town in Australia, is situated on the Yarra River, near its entrance into Port Philip Bay. It is a modern, well-built town which was founded in 1835, and became the capital of Victoria in 1851. The principal exports are gold and wool; population about 500,000.

MELBOURNE, LORD, *b.* 1779, *d.* 1848, the statesman who occupied the post of premier at the time of Queen Victoria's accession. He was one of the officials to whom fell the task of informing the young queen of the death of William IV., and consequently of her own accession.

MELINITE, a powerful explosive. It is a yellow crystalline solid and exceedingly dangerous to handle. Melinite is either pure picric acid, or a mixture of picric acid and ammonium nitrate. Picric acid is obtained by treating carbolic acid with nitric acid.

MELLITUS, the first Bishop of London. He attempted to introduce Christianity among the East Saxons. Mellitus was consecrated by Augustine A.D. 604, and was Archbishop of Canterbury, 619–624, being the third to hold that office.

MELODRAMA, the name originally given to a kind of musical play. At the present time a melodrama is a play which abounds in striking and sensational incidents, and one in which, generally speaking, probability is treated as of secondary importance. The tension, which is often considerable, is relieved by the introduction of low-comedy parts.

MELON, a plant extensively cultivated in tropical countries for its fruit, which is much used as food. There are several distinct varieties, of which the best known in this country are the Common or Musk Melon and the Water Melon. The former is a native of Asia, and its fruit is rounded in form with a diameter of from 5 to 12 inches. The water melon is grown both in Asia and America, and its fruit is rather larger than that of the Common Melon, frequently having a diameter of from 15 to 18 inches.

MELROSE, a small town situated in Roxburghshire. It contains the ruins of a famous Cistercian Abbey, which are considered to be the finest in Scotland. They are mentioned in Sir Walter Scott's "Lay of the Last Minstrel," and are visited annually by a large number of tourists.

MELTON MOWBRAY, a small market town situated in Leicestershire. It is the centre of the most popular hunting district in England. Melton Mowbray is also noted for its pork pies and Stilton cheese; population about 3,000.

MEMNON, one of the heroes who fought on the side of the Trojans in the Trojan war. A celebrated temple at Thebes, in Egypt, was erroneously supposed to have been erected in his honour. The statue in front of this temple was said to give out a musical sound at sunrise.

MEMORY, the faculty of retaining and reproducing at will, mental or sensory impressions. Memory is so necessary even in the every day affairs of life, that its phenomena were early the subject of thought and observation. The power of memory seems strongest with regard to ideas recorded through the sight. Sounds seem to give the next strongest impression; we can all, even the most unmusical, remember a tune we have often heard, and like. Impressions derived from the senses of taste and feeling do not seem to last so well, and it is doubtful whether one can actually recall a smell. The power of memory shown by individuals is astonishing. Some people, like Julius Cæsar, never forget a face once seen; others, like Lord Macaulay, can repeat hundreds of lines of either poetry or prose that they have read over twice. [See *Mnemonics*.]

MEMPHIS. (1) An ancient town of Egypt, once the capital, now in ruins, on the left bank of the Nile, about ten miles above the Pyramids. (2) Town in U.S.A., in the State of Tennessee, on the Mississippi, 800 miles above New Orleans. The river is navigable for large vessels up to Memphis; and it is also an important cotton mart and manufacturing town. Population 100.000.

MENAI STRAIT, the long narrow channel between the Isle of Anglesea and Carnarvon. The Suspension Bridge, designed by Telford, was opened in 1825; the Britannia Tubular Bridge for railway traffic, designed by Robert Stephenson, in 1850.

MENDELSSOHN-BARTHOLDY, FELIX, *b.* 1809, *d.* 1847; the great musical composer and conductor. Born at Berlin, of Jewish parentage, he spent the later years of his life at Leipsic, where he died. He frequently visited England, and one of his last public acts was to conduct his "Elijah," at Exeter Hall. This work, together with his "Songs without Words," (Lieder Ohne Worte), will render him immortal.

MENDICANT ORDERS, certain orders in the Roman Catholic Church whose members give up all their property, and live upon alms. The principal are the Dominicans, Franciscans, Carmelites, and Augustinians.

MENELA'US, King of Sparta, the abduction of whose wife, Helen, was the cause of the Trojan War.

MENENIUS AGRIPPA, one of the early consuls of Rome, 503 B.C. His arguments, illustrated by the well known fable of "the belly and the members," healed the first great rupture between the Plebeians and the Patricians of Rome, 493 B.C.

MENNONITES, a Protestant sect that originated early in the 16th century and soon spread through Holland and Germany to Switzerland. They are named from Menno Simons (1505-61) who denounced the excesses of the Anabaptists, and set himself to reorganize the body on more rational lines. The sect still lingers, and is rather strong in America, where they bear a high reputation for integrity and simplicity of life.

MENTO'NE, a town of France on the Mediterranean, about 2½ miles from the border of Italy, a favourite winter resort of the wealthy. Population 15,000.

MENTOR, a faithful friend of Ulysses, and guardian of his son during his absence at Troy. From the wise counsel he always gave, the word Mentor has become an expression for wise counsellor.

MEPHISTOPH'ELES, (e-les) the name given to the devil in Marlowe's "Doctor Faustus," and Goethe's "Faust," hence a term applied to any cynical or malicious person.

MERCA'TOR (Gerard Kremer), *b.* 1512, *d.* 1594; the inventor of a method of making maps in which the meridians and parallels cut one another at right angles, thus making the distances appear greater as they get farther from the equator. The name *Mercator* was probably given to Kremer because of the usefulness of his projection to mercatores or merchants.

MERCIA, the last formed of the kingdoms into which the Saxons and Angles divided England after the conquest and expulsion of the Britons. It occupied the central part of England.

MERCILESS PARLIAMENT, a parliament summoned by King Richard II. in 1388, at the dictation of Thomas, Duke of Gloucester. By this Parliament the Duke of Suffolk and Robert de Vere were outlawed, and seven others of the king's ministers were ordered to be executed.

MERCURY. (1) A Roman deity, son of Jupiter and Maia. Originally the god of traffic and gain, he was, through the attributes of the Greek god Hermes being assigned to him, also looked upon as the messenger and herald of the gods, and the god of eloquence and of thieves. (2) The planet nearest the sun, from which its average distance is about 36 million miles. Its diameter is about 3,200 miles.

MERCURY. See *Quicksilver*.

MER DE GLACE, one of the most famous of Alpine glaciers, on the northern slope of Mont Blanc, above the valley of Chamouni

MEREDITH, GEORGE, novelist and poet, one of the most strenuous writers of the latter half of the 19th century, was born in 1828, and died 1909. "The Egoist," "The Ordeal of Richard Feverel," "Evan Harrington," and "Diana of the Crossways" are perhaps his best novels. O.M. in 1905.

MEREDITH, OWEN, the pseudonym of the first Earl of Lytton.

MERIDIAN, an imaginary great circle passing through any given place, and through the North and South Poles. The sun is "on the meridian" of a place, i.e., at its highest point in the heavens, at midday.

MERIVALE, CHARLES, *b.* 1808, *d.* 1893, dean of Ely from 1869 to his death, was educated at Harrow and Cambridge. He was one of the best examples of the union of athletic and mental powers. His "History of the Romans under the Empire" is an eminently readable book, and on the whole very reliable.

MERLIN, the name of an ancient British bard and magician, supposed to have lived during the time of the struggle between the Britons and the Saxons. He is a character in Tennyson's "Idylls of the King." Another set of legends locates him in what is now Scotland, and his grave is still shown near the Tweed.

MERMAID, a fabulous creature, half woman and half fish, said to inhabit the sea. The idea undoubtedly arose from the reports of sailors who had seen the manatee, sea-cow, or woman-fish, as it is called by the Portuguese. These huge fish, having breasts with which they suckle their young, are found in the mouths of African and American rivers.

MEROM, WATERS OF, a small lake in the upper course of the Jordan, identified with the present Bahr-el-Huleh.

MEROVINGIANS, the first dynasty of Frankish kings in Gaul. The name is derived from Mervig, king of the Salian Franks from 448 to 457. Pepin the Short finally deposed the Merovingians and caused himself to be crowned king of the Franks, in 751.

MERSEY, a river in the west of England separating Lancashire from Cheshire, and flowing into the Irish Sea. The Irwell, which joins it on the right bank flows past Manchester, while Liverpool stands near the mouth of the main river.

MERTHYR-TYDFIL, or **TYDVIL**, on the river Taff, in Glamorganshire, is one of the most important iron-smelting towns in the country. Much of the iron-ore here treated comes from Spain. (For population, etc., see p. 902.)

MERV, a town on an oasis of Turkestan, between Bokhara and Persia, occupies an important position with regard to the routes from Russia and Siberia to Persia

and India. The Russians took possession of the oasis in 1884. The ancient city of Merv has a most interesting history, dating back even to the time of Alexander the Great.

MESMER, FRIEDRICH ANTON, *b.* 1734, *d.* 1815; the originator of the doctrine of animal magnetism, also called mesmerism. The same power is professed now by certain persons under the name of Hypnotism.

MESOPOTAMIA, (between the rivers), the country between the rivers Tigris and Euphrates, extending from the Armenian Mountains to about Bagdad. It has an area of 55 000 square miles, most of it of extraordinary fertility when under good cultivation. Since the blighting rule of the Turks fell on it, in 1515, the land has been more and more neglected, until systematic cultivation now hardly exists.

MESSAGERIES MARITIMES, the leading steamship company of France, trading mostly with the East and with South America. Its fleet amounts to a quarter of a million tons, and comes sixth in importance. Marseilles is its headquarters.

MESSENGER, a thoroughbred horse, which was imported into the United States from England about 1788, and from which most of the celebrated American trotters derive their descent.

MESSIAH. (1) A Hebrew word equivalent to the Greek "Christos," the Anointed One. The word denotes, in the Old Testament, the Great Prophet whom the Jews expected to be sent by God to raise their nation to a state of political and spiritual domination. (2) An Oratorio by Handel, first performed in 1742. It is hard to say whether this, or Mendelssohn's "Elijah," ranks as the greatest oratorio.

MESSI'NA, the second city of Sicily, stands on the Strait of the same name. It is a place of call for many of the ships which pass through the Mediterranean to or from the Suez Canal. It was destroyed by earthquake, Dec. 28, 1908.

MESSINA, STRAITS OF, are between Italy and Sicily, 24 miles long and from 2½ to 14 miles wide. The famous Scylla and Charybdis were located here.

METAMORPHIC ROCKS, a term introduced by Sir Charles Lyell, and now generally adopted by geologists, to include the deepest system of rocks composing the earth's crust. These rocks have undergone a change in texture or structure through which they have lost their original sedimentary character, and become hard, shining, and crystalline. They include marbles, serpentine, graphite, and roofing-slate. From the fact that neither animal nor vegetable remains have been found in it, the system is also known as the *non-fossiliferous* or the *azoic* system.

METAMOR'PHOSIS. (1) In zoology, a term for certain well-defined changes undergone by certain insects and amphibians at different stages of their existence, as from caterpillar to chrysalis, or from tadpole to frog. (2) In ancient mythology the term is applied to the changes in outward semblance which gods and goddesses were wont to undergo, and which supplied material to many writers for their poetic fancy. The "Metamorphoses" of Ovid are still widely read and greatly admired.

METAPHOR, a figure of speech by which one thing is put for another which it only resembles in some quality or effect. Thus David speaks of God's law as being "a light to his feet and a lamp to his path." Metaphor plays an important part in the language of every man, whether he knows it or not, as when he speaks of a ship "ploughing" the waves. Hence language has been called "petrified metaphor."

METAPHYSICS, that branch of science or philosophy which deals, or attempts to deal, with existence as such. It treats of that which underlies all phenomena, giving unity and meaning to the whole system of things in the realm of both mind and matter.

METAYER SYSTEM, the system under which a large part of France and most of Italy is cultivated. The tenant, called *metayer*, supplies simply the skill and labour, the landlord supplying all else, and receiving generally half the produce.

METEMPSYCHO'SIS, a word denoting a migration of the soul from one body to another at death. It is better known under the name of the "transmigration of souls," a doctrine which still prevails in some parts of Asia, particularly India. Refer to "Transmigration of Souls" in *Index*.

METEOR, a small luminous body, seen for a few moments in the sky, and then disappearing, being either entirely dissipated, or falling to the earth as a mass of stone. There are various collections of small bodies travelling in different directions round the sun. The earth, in its orbit, now and then comes near one or other of these collections, with the result that some of the smaller bodies are attracted to the earth. Some of these bodies are exploded by the heat which their rapid flight through our atmosphere generates; others reach the earth, and are generally known as *aerolites*.

METEOROLOGY, the science of the laws which govern the weather; the science which treats of and investigates the various phenomena of the atmosphere. The importance of the subject to the farmer, the sailor, and the miner, as well as to mankind in general, can hardly be over estimated, and the increased attention paid to it of late years has resulted in many useful warnings being given to the three classes mentioned. The invention of the Barometer made "Meteorology" possible.

METHODISTS. Refer to *Index*.

METRE. (1) In poetry, the regular arrangement of syllables into feet, lines, and stanzas. A foot may contain two or three syllables, and it may have the accent on any syllable. Thus we arrive at five distinct kinds of feet: the *Trochee*, in which the accents fall as in "surplus"; the *Iambus*, as in "depart;" the *Dactyl*, as in "merrily"; the *Amphibrach*, as in "containing"; the *Anapæst*, as in "undesigned." The greatest of English poems are written in lines of five feet, or pentameters; and the commonest English foot is the iambic. Unrhymed iambic pentameters form the metre of *blank verse*, in which are written Shakespeare's plays and Milton's "Paradise Lost." (2) The unit of measurement in the Metric or Decimal System of Weights and Measures.

METRIC SYSTEM, THE. Refer to *Index*.

METRONOME, a small machine for marking intervals of time, used by musicians. It is practically an inverted pendulum moved by clockwork, and is made to go faster or slower by lowering or raising the weight.

METROPOLITAN POLICE COURTS. Of these there are fourteen, situated in various parts of London, presided over by twenty-five magistrates, receiving mostly a salary of £1500 a year. They must have been barristers of at least seven years' standing and actual practice previous to appointment, or else stipendiary magistrates in the provinces.

METROPOLITAN WATER BOARD was constituted by the Water Act of 1902. It consists of sixty-six members, representative of the London County Council, the London boroughs, the surrounding County and District Councils, and the Thames Conservancy. It took over the works and responsibilities of the eight large water companies, paying them a total of 42 millions as compensation.

METTERNICH, PRINCE VON, *b.* 1773, *d.* 1859, an eminent Austrian statesman and diplomatist, was born at Coblenz. After filling minor posts, he became Austrian minister at the Court of Dresden in 1801. From that time till 1848 he may be said to have shaped the policy and determined the action of Austria. It was he, more than any one else, who contrived the marriage between Maria Louisa and Napoleon; he it was who formed, in 1813, the continental coalition which gave the blow to Napoleon's power and led to his abdication and exile at Elba. On the re-settlement of Europe, after the final defeat of Napoleon at Waterloo, Metternich devoted all his energies to repressing what he termed the revolutionary tendencies of the age. At last the storm of 1848 proved too much for him, and he fled to England. On the re-establishment of monarchy in Austria he returned, but took no further open part in the government.

METZ, a town and fortress of Germany, in Alsace-Lorraine, which, previous to the Franco-German War in 1870–71, belonged to France. The loss of Metz, 1870, after a siege of two months, and the surrender of Bazaine with his army of 173,000 men, rendered the struggle of the French against the Germans hopeless.

MEXICO, the most southerly country of North America, is a federal republic, containing 27 States. With an area of 760,000 square miles, it has a population of only about 13½ millions. The country consists of a vast table-land, with a belt of more or less level land round the coast. The mineral productions of Mexico constitute its chief wealth. The precious metals still constitute two-thirds of the total value of its exports. So rich in silver were its mines that they are supposed to have furnished as much as the rest of the world. Agriculture is backward, and the roads are deplorable, but the railways, where they exist, are fairly good. Mexico revolted from Spain in 1810, from which time until 1876 it was in a state of constant revolution. The attempt of Napoleon III., 1864–67, to impose Maximilian, an Austrian prince, on the Mexicans, as their Emperor, was an utter failure, and resulted in the execution of Maximilian. In 1876 Porfirio Diaz, a Mexican general, became President of the Republic, and from that time the government has been stable and effective. Chief towns—Mexico, the capital, population 345,000, and Vera Cruz, the chief port, on the Gulf of Mexico.

MEXICO, GULF OF, a large body of water between North and South America, having the United States on the north and Mexico on the west and south. A portion of the equatorial current of the Atlantic flows into the Gulf by the southern entrance, and after getting heated in its passage round the Gulf, passes out by the northern channel, to flow over to Europe under the name of the Gulf Stream.

MEYERBEER, GIACOMO, *b.* 1791, *d.* 1864, was, like Mendelssohn and many other great musicians, of Jewish descent. At the age of five he improvised on the piano, and at nine was considered an accomplished pianist. Meyerbeer will be best remembered for his operas, especially "Robert le Diable," "Les Huguenots," "Le Prophète," and "L'Etoile du Nord."

MICA, a name given to a group of minerals which split very readily into very thin plates, nearly transparent. In some countries they are used as a substitute for glass in windows; it is also used for

gas-chimneys, and stove doors, because of its heat-resisting power.

MICAH, a prophet who lived during the reigns of Jotham, Ahaz, and Hezekiah, and so was contemporary with Isaiah, Hosea, and Amos. He foretold the destruction of Jerusalem and the birth of the Messiah at Bethlehem.

MICHAEL, SAINT, is mentioned in the Old Testament as the "great prince" of Israel. In the Revelation, his name is given first in the list of the seven archangels. From these facts it is inferred that he is the chief of the angels. Milton calls him "prince of celestial armies."

MICHAELMAS DAY, a festival instituted in 487, in honour of St. Michael and All Angels. In England it is one of the four quarter days on which rent becomes due.

MICHELANGELO BUONARROTI, painter, sculptor, and architect, was born in Tuscany, 1475, of an ancient and honourable, though not wealthy family. He early gained distinction as a sculptor in Florence, and under the patronage of Lorenzo de Medici he executed his "Battle of the Centaurs," and the "Madonna." Rome then claimed him for a time, and here among other work he executed his "Cupid." Another stay at Florence was cut short by a summons from Pope Julius in 1503, who wanted him to design his tomb, a work, however, which was never carried out. Julius' successor, Pope Leo, sent him back to Florence, to enrich the Church of San Lorenzo with his work, but this was interrupted by the siege of Florence, in the defence of which Michelangelo took an active part. In 1542 he was appointed architect of St. Peter's, Rome, and took an active interest in the progress of the Cathedral till his death. His achievements in painting were due rather to the persuasion of his friends than to his own inclination. Sculpture was undoubtedly the form of art in which he most excelled, though his frescoes remain as evidence of his great genius.

MICROBE. See "Bacteria" in *Med. Dict.*

MICROM'ETER, an instrument for measuring small distances or angles. One of the most common forms of micrometer is the vernier, employed on barometers and astronomical instruments to give accurate readings; another is the micrometer screw, whose head has its circumference divided into a great number of equal parts. The micrometers attached to astronomical telescopes are delicately adjusted to fine, movable threads, which cross the field of vision, and accurately determine the movements and direction of the heavenly body under observation.

MICRONESIA, a group of small islands lying between the meridians of 130° and 170° east longitude, and extending from the Equator to about 10° north latitude. Till 1899 they belonged to Spain, but were then handed over to Germany.

MICROPHONE, an instrument for increasing the intensity of faint sounds. It usually consists of a long piece of carbon loosely supported by two other fixed pieces. The fixed pieces are made part of the circuit of a telephone, and on a slight noise being made on the wooden support of the microphone it is heard greatly augmented at the earpiece of the telephone.

MICROSCOPE, an instrument for magnifying the apparent size of small objects. It consists essentially of two lenses placed one at each end of a small tube. The one nearer to the object to be looked at gives an inverted and enlarged image of the object within the tube, while the eyepiece or lens near the eye still further magnifies this image. The dissecting microscope is of one lens only.

MIDAS, a fabled king of Phrygia, who begged that all he touched might turn into gold. The god Bacchus granted his request, but Midas soon wished it otherwise. When his food and drink became gold on touching his mouth, he was fain to ask the god to revoke his gift.

MIDDLE AGES, a period generally understood to extend from the destruction of the Roman Empire, towards the end of the 5th century, to about the time of the discovery of America, in 1492. It comprises the rise and fall of the Feudal System, with all its attendant struggles, evils, and benefits.

MIDDLESBOROUGH, a great iron manufacturing, and shipping town on the Tees, in Yorkshire. In 1829 a solitary farmhouse occupied the site. By 1900 it housed about 90,000 persons. Its rapid growth is due to the discovery of iron-ore in the adjacent Cleveland Hills. (For population, etc., see p. 902.)

MIDRASH, the exegesis, explanation, or interpretation of the Jewish Scriptures, as given after the Captivity by Ezra, and by succeeding rabbis and teachers.

MIDSHIPMAN, the second rank of combatant officers in the Royal Navy, cadets in training forming the first or lowest. The greater part of a midshipman's time is spent in study. For his course of training refer to "Midshipman" in *Index.*

MIKADO, the ruler of Japan. The office is hereditary only in the male line. Until 1868 the Mikado's sovereignty was only nominal, the real power being in the hands of the Shogun, or Tycoon, a military dictator, whose office was practically hereditary, so that the Shogun was regarded as the business head of the nation, although great reverence was paid to the Mikado as spiritual ruler.

MILAN, next to Naples the largest city in Italy, stands in the great plain of Lombardy, in the north-west of Italy. The Cathedral, commenced in 1386, and not yet entirely completed, is one of the most striking ecclesiastical edifices in the world. The theatre of "La Scala" is known by repute all over the world. Population exceeds 500,000.

MILAN, KING OF SERVIA, *b.* 1854, *d.* 1901; was the grand-nephew of the celebrated Milosh Obrenovitch, founder of Servian autonomy. He was adopted by his cousin Michael, and educated at Paris, where he was thought to show great talents. On the assassination of Michael in 1868, Milan was declared regent, although only 14 years of age, and in 1872 he assumed the government. His quarrels with his wife Natalie, his abdication in favour of his son Alexander, and his sudden death at Vienna, were matters of European interest.

MILAN DECREE, a proclamation issued from Milan in 1801 by Napoleon, forbidding all continental nations to whom he could dictate to deal in any way with England.

MILFORD HAVEN, a harbour in Pembrokeshire, 10 miles long and from one to two miles wide, one of the safest and most commodious in the kingdom. Pembroke, which stands on the southern side of the haven, is an important naval dockyard.

MILITIA, a body of troops raised for the defence of the country against invasion. Theoretically, all men between 18 and 35, with certain exceptions, are liable to serve, but the ranks are readily filled without having recourse to compulsion. The militia assembles annually for not more than 56 days' training, during which officers and men receive the same pay and allowances as those of the same rank in the regular army, and on disbanding, the privates receive a bounty of £1 or more.

MILK, CONDENSED, is simply milk from which a large proportion of the water has been removed by heating, sugar being generally added to preserve it.

MILKY WAY, THE, a luminous band seen on a clear night to stretch across the sky. It is really an innumerable host of stars, so distant as to be inseparable to the naked eye.

MILL, JAMES, *b.* 1773, *d.* 1836, was a native of Montrose, in Scotland. Educated at Edinburgh University, he soon took to literature, and in 1802 went to London. His "History of British India" brought him fame, and gained him confidential employment under the East India Company. He took a leading part in the foundation of University College, London.

MILL, JOHN STUART, *b.* 1806, *d.* 1873, son of the above, said "he never was a boy." His father early took his education in hand with good results intellectually. As a speculative reformer few could keep pace with him, but many of the reforms he advocated are now accomplished, especially with regard to the legal status of women.

MILLAIS, SIR JOHN, *b.* 1829, *d.* 1896, was born at Southampton of an old Jersey family. He early showed talent and became a pupil at the Royal Academy in 1840. In 1846 he became an exhibitor. With Holman Hunt and Rossetti he was responsible for the initiation of the "Pre-Raphaelite" movement. Many of his pictures, as "Cherry Ripe," "Bubbles," and "Cinderella" have been extensively reproduced in various forms.

MIL'LENARY PETITION, a petition presented by the Puritans to James I. on his accession, supposed to be signed by 1000 ministers, asking release from certain obligations enjoined by the Church of England.

MILLENNIUM, "a thousand years," a time during which the kingdom of the Messiah is expected by many to exist visibly on earth. Its establishment will, it is believed, be preceded by great portents and calamities.

MILLER, HUGH, *b.* at Cromarty, 1802, *d.* 1856; worked in his youth as a stonemason, and carried on his education in the evenings. It is as a geologist that his name will endure. His "Old Red Sandstone" was an undoubted contribution to the geological knowledge of the day.

MILLET, a cereal, native of the East Indies, but much cultivated in most warm countries. The grain is about ⅛ of an inch in length, and very nutritious.

MILLET, JEAN FRANCOIS, *b.* 1814, *d.* 1875; one of the greatest of modern French painters. His favourite subjects were of a pastoral character, as "Gleaners," "Sheep Shearing," and "Peasants Grafting." His masterpiece is the 'Angelus."

MILNER, ALFRED, VISCOUNT, *b.* 1854, was educated at King's College, London, and at Oxford, where he had a brilliant career. He was for some time assistant-editor of the "Pall Mall Gazette," after which he served in Egypt under Lord Cromer in the Finance Department. His selection in 1897 to be Governor of Cape Colony was universally approved, and his able handling of affairs through the Boer War and afterwards, justly earned him a peerage. His "England in Egypt" is accounted a classic.

MILO, of Crotona, in Italy, was a Greek athlete famous for his strength. His greatest feat was his lifting up and carrying a live ox four years old on his

shoulders. He is said to have perished miserably by wolves while his hands were caught in the cleft of a tree which he had endeavoured to rend.

MILTI'ADES (a-des), a celebrated Athenian general, one of the ten chosen to lead the army against the Persians when they landed at Marathon, B.C. 490. It was by his advice that the Athenians risked the battle, and when the victory was won, and the generals had to decide by vote who had done most to gain it, each was found to have one vote as the best general, but Miltiades had nine votes as the second best.

MILTON, JOHN, *b.* 1608, *d.* 1674; the great English epic poet, was born in Bread Street, Cheapside. His father, John Milton, a well-to-do scrivener, was a Puritan, and a man of much intelligence and refinement. Perceiving the promise of his son, the scrivener devoted himself to securing for him the best education possible. At St. Paul's School, and at Cambridge, Milton greatly distinguished himself. And during the next six years, which he spent quietly at his father's seat at Horton, in Buckinghamshire, he produced the pastoral poems "L'Allegro" and "Il Penseroso," as well as "Comus" and "Lycidas." A visit to Italy brought the leisurely part of his life to a close; henceforward he was to be for some years the strenuous political writer. He became Latin Secretary to the Protector's Government, and did good service in this capacity. His tractate on Divorce, the "Areopagitica" and the "Eikonoklastes," show his prose powers at their highest. His marriage was about as unfortunate as could have been. He espoused, in 1643, Mary Powell, the daughter of an Oxfordshire squire, an ardent Royalist and Church woman, too volatile to have the faintest sympathy with her husband's views or ways. After a few weeks she went home, and did not return to Milton till 1645. She died in 1652, the year in which his sight wholly failed, leaving him three daughters, who proved no comfort to him. In 1663 Milton married again. The Restoration set him free for his real work, and between that event and his death he produced "Paradise Lost," "Paradise Regained," and "Samson Agonistes." Milton was buried in St. Giles's, Cripplegate, beside his father.

MIMICRY, a certain adaptation of an animal or insect to its surroundings, with the result that it oftens escapes observation. Certain animals are found with white fur in winter but their coat in summer is brown, so as to be undistinguishable at a distance from the surrounding herbage. Certain insects imitate the bark of trees, dried sticks, &c. This is not conscious imitation, but the result of the fact that the individual thus protected has escaped its natural enemies, and the peculiarity, at first accidental, has become hereditary. Mimicry also consists in the striking resemblance that one animal or insect bears to another to which it is not closely related; thus, certain moths look like wasps and many flies like bees. The fear of their supposed stings has a protective effect.

MINCH, THE, a channel off the north-west of Scotland, between the mainland and the island of Lewis. The "Little Minch" is between the island of Skye and Long Island.

MINCIO, THE, a tributary of the Po, rises in the Tyrol, and flows south into Lake Garda, and thence to the Po, a distance of 93 miles. In this part of its course it passes Mantua, near which town the great Latin poet, Virgil, was born.

MINDEN, a town in Westphalia, on the Weser, population 25,000, is one of the most ancient towns in Germany. Near it a combined army of Germans and English gained a great victory over the French, 1759.

MINERAL OIL. See *Petroleum.*

MINERAL WATERS, waters containing mineral matter in solution, and having medicinal value and use according to the mineral contained; they usually contain either carbonic acid gas, iron, salts, or sulphur. Bath, Leamington, and Harrogate are the towns best known in England for these waters. Waters artificially aerated and manufactured are usually known as "mineral waters."

MINERVA, a Roman goddess, patroness of arts and crafts, the protectress of all who wished to excel, whether in mental or manual pursuits. Warriors also were under her especial protection, and she is represented with a helmet, shield, and coat of mail. The Greek goddess Athena was later identified with Minerva.

MINES IN WARFARE. (1) *Military Mines* are employed to defend the approaches to fortifications or encampments. At intervals along the land approaches cylinders filled with dynamite, lyddite, or other powerful explosive are buried to a depth of from 6 to 12 inches, according to the nature of the ground. These are exploded by electricity from within the position, or by a highly inflammable composition spread over the sites of the mines, the friction engendered by the tread of a number of troops over it being sufficient to fire it. (2) *Submarine Mines* are used in the waterways approaching harbours or fortresses. They are held in position at a certain depth below the surface by means of sinkers, and are fired by electricity from some observation point at a distance from the mine field, the limits of which are marked by buoys, so that the look-out is able to tell when a ship is within the zone. (3) *A Floating Mine* consists of a hollow cylinder fitted with a conical shaped end which is sufficiently weighted to keep the whole contrivance upright and floating at the surface. Round the inside of the case several needles are fitted with their points in contact with a layer of detonating compound. The impact of a vessel against a mine drives in the side of the cylinder, and causes one or more of the needles to penetrate the detonating compound and fire it. This lights a layer of touch paper with which it is in contact, and a train of gunpowder conveys the fire to layers of gun-cotton and fulminate of mercury or other powerful explosive. An earlier type of floating mine was fired by the breaking of a bottle of sulphuric acid embedded in a mixture of chlorate of potash and sugar.

MINNEAP'OLIS, the largest town in Minnesota, U.S.A., population 200,000, lies on both sides of the Mississippi, at the Falls of St. Anthony, the water-power derived from which is the chief source of the city's prosperity. Immense quantities of timber and flour go out from the mills of Minneapolis, and other industries are flourishing.

MINNESINGERS, (old German *minne*, love), the German lyric poets of the twelfth and thirteenth centuries, whose lays were mostly of an amatory nature. Wagner's "Tannhauser" is a beautiful picture of the minnesinger's life.

MINORCA, the second largest of the Balearic Isles, in the Mediterranean. It lies 25 miles north-east of Majorca, the largest, and has an area of 284 square miles. Port Mahon, the capital, population 16,000, has a splendid harbour.

MINOS, in Greek mythology. (1) A ruler of Crete, celebrated for his wisdom and justice, made after his death one of the judges in the lower world. (2) Grandson of the above, also ruled Crete. He conquered the Athenians, and made them pay tribute of seven youths and seven maidens annually, who were devoured by the Minotaur.

MIN'OTAUR, a fabulous monster, half bull and half man, confined by Minos in his "labyrinth." He used to devour the children sent annually from Athens, but was eventually killed by the hero Theseus.

MINT, an establishment for making coins. The English mint, on Tower Hill, was erected in 1810. Here all our gold and silver coins are made, the metal being first cast into bars, and then rolled into sheets the exact thickness of the coin they are intended to make. Pieces are cut out of the sheets the exact size of the coin required, and then placed in a powerful press to receive the impression of the faces and the milling, in the case of gold and silver coins. Our bronze coins are largely minted at Birmingham. Mints also exist at Sydney and Melbourne in Australia.

MIR, a commune in Russia consisting of the inhabitants of one or more villages. The land around belongs to the whole community, and is redistributed among the villagers from time to time to suit changed circumstances, and to prevent any person from acquiring exclusive right to any part of the land.

MIRABEAU, HONORÉ GABRIEL, *b.* 1749, *d.* 1791; was one of the chief movers in the great French Revolution, and perhaps its greatest orator. His courageous answer to the king when the latter sent commanding the National Assembly to dissolve, is memorable: "No one shall drive us out except by the force of bayonets." His youth had been dissolute, and this caused him to be distrusted when he tried to give the course of the Revolution a moderate turn. The people thought he had been bought by the Court. He died of a fever. Had he lived, monarchy might now be existing in France in a constitutional form.

MIRACLE PLAYS, or **MYSTERIES,** a kind of rude drama much used in the Middle Ages. The subjects were drawn from Scripture, and the monks were at first both writers and performers. These plays derived their name from the fact that they portrayed the miraculous events of the Bible narrative. Some lasted two or three days. The passion play at Ober-Ammergau, in Bavaria, is a survival of them.

MIRAGE, a phenomenon frequently observed in the desert. The rays of light proceeding obliquely from an object are more and more refracted by the cooler and denser layers of air as they proceed upward, until they are at last totally reflected and reach the observer, perhaps miles away, who sees the object as though reflected in a lake.

MISHNA, the "Oral Law" of the Jews; a series of ordinances traceable in tradition to the time of the encampment at Mount Sinai. The Mishna is the first part of the Talmud.

MISSAL, a Roman Catholic book of worship, containing the prayers and ceremonies of the Mass. It was drawn up by Pope Pius V., in 1570, and, with slight alterations in 1604 and 1634, is in use to-day.

MISSEL-THRUSH, or Mistletoe-thrush, takes its name from its fondness for the berries of the mistletoe, which hardly any other bird will touch. It is rather larger than the mavis, or song-thrush, and much bolder, facing the marauding jay or daw with great courage in defence of its young. It is common in England and Central Europe.

MISSISSIPPI, THE. Next to the Amazon, the Mississippi, with its tributary the Missouri, is the mightiest river in the world. Measuring from the source of the Missouri, it has a length of 4,200 miles, draining an area of 1,250,000 square miles. Below the Ohio it is subject to frequent floods, the land around being covered for a breadth of 150 miles. The steamer traffic along it is immense; the four towns Minneapolis, St. Paul, St. Louis, and New Orleans contributing an immense volume of trade.

MISSOURI, the chief tributary of the Mississippi has a general easterly course from its sources in the Rocky Mountains to its junction with the Mississippi just above St. Louis. Its length is 3,047 miles, but it is little navigated owing to its windings and sandbanks. Omaha, on its right bank, has a population exceeding 100,000.

MISTLETOE, a parasitic plant, i.e., one which draws its sustenance from another, is found on many trees, but chiefly on the apple. The Druids highly esteemed it when found growing on the oak.

MISTRAL, a north-west wind which often blows in winter on the Mediterranean coast of France. It is very cold and dry, and sometimes very violent.

MITHRIDA'TES (a-tes), one of the great ones of old who just missed the rank of an Alexander or a Cæsar. King of Pontus, in Asia Minor, from about 120 to 63 B.C., he had repeated contests with the Romans until subdued by Pompey. To avoid falling into the hands of the Romans he poisoned himself. He is said to have spoken 22 languages.

MITRE, the head-dress; sometimes worn by a bishop as part of his official robes. It is commonly used by English bishops as the heraldic badge of their office, on carriages, plate, etc.

MNEMONICS, a system of training the memory and assisting it by artificial aids. According to the subject on which the memory is to be exercised, certain words are chosen, the repetition of which in a given order will recall the required fact, date, or number to the memory. The ancients suggested the choosing of a known house, and the associating of the required facts with the rooms in their order.

MOA, a genus of ostrich-like birds, now extinct, formerly found in New Zealand and Australia. The largest stood probably about 14 feet high, and they were wingless.

MOABITES, a Semitic people once inhabiting the country to the east of the lower Jordan and the Dead Sea.

MOABITE STONE. This stone contains the earliest inscription in Phœnician characters known to us. It belongs to the 9th century B.C., but was only recently discovered (1868) in the land of Moab. It is interesting as being an independent confirmation of the Scripture narrative, referring to the Wars of Mesha, king of Moab, against Israel.

MOCHA, population 5,000, an ancient seaport of Arabia, on the Red Sea, once celebrated for its export of excellent coffee.

MOCKING BIRD, a bird of the Thrush family, found in North America. Its natural song is most melodious, but it has in addition a marvellous imitative faculty, being capable of imitating almost any sound, so as to deceive even the most attentive hearer.

MO'DENA, once an independent duchy, now a province of Italy, lies south of the river Po. Its chief town, Modena, has suffered much at the hands of Italy's various conquerors.

MODULATION, in music, is a term for the transition from one key to another. The Modulation is effected and indicated by the introduction of the necessary sharp or flat.

MOFFAT, ROBERT, *b.* at Ormiston, East Lothian, *d.* 1883; one of Scotland's greatest missionaries. He became a missionary at the age of 21, and spent 54 years in active missionary labour in South Africa. It was probably he who finally decided Livingstone, who married his daughter, to choose Africa as his sphere of labour.

MOGULS, EMPIRE OF THE, the empire of Baber and his successors in India, which existed in some form or other from 1526 to 1757. In the later years the Moguls were simply puppets in the hands of their powerful viceroys. Delhi was the capital of India under the Moguls.

MOHAIR, the hair of a kind of goat. It is very white and soft. The best is obtained from Angora, in Asia Minor.

MOHAMMED, or **MAHOMET.** Refer to *Index.*

MOHAWKS, a tribe of North American Indians, forming part of the great Iroquois confederation. [See *Iroquois.*]

MOHOCKS, or **MOHAWKS,** a name assumed by a band of young roysterers in the early years of the 18th century. They delighted in annoying and assaulting wayfarers at night.

MOIRÉ, the silk stuff known as watered silk. The peculiar marks are caused by wetting the silk and then causing it to undergo immense pressure.

MOKANNA. See *Veiled Prophet.*

MOLASSES, the uncrystallized part of the cane juice which remains liquid after the juice has been boiled down. The solid, or crystallized part, is the "raw" sugar.

MOLDAU, a river of Bohemia on which stands Prague, the capital. It flows north almost right through the country, and joins the Elbe.

MOLDAVIA, the northern part of the kingdom of Roumania, (which see.)

MOLE, a small animal about five inches long, which spends nearly all its time underground in passages formed by burrowing. Its eyes are extremely minute. Its usual food consists of earthworms and grubs.

MOLECH, or **MOLOCH,** a god whose worship was common among all the Canaanitish tribes; the offering of children to Moloch, either by actually burning them alive, or by passing them through the fire kindled in his image, was an abomination of which the Israelites were guilty at various periods before the Captivity. The valley of Hinnom, south of Jerusalem, where this abomination was practised, was regarded in later times, under the name of "Gehenna," as typical of hell.

MOLECULE, the smallest portion of any substance which can have independent existence. The number of molecules in a cubic inch of gas is now under investigation; the answer runs into millions.

MOLIÈRE, *b.* 1622, *d.* 1673; the greatest of the French comic dramatists, was born at Paris, and in his youth served at the French Court, where he no doubt had ample opportunity of observing the foibles he so keenly portrays. "L'Ecole des Femmes," "Tartuffe," "Le Misanthrope," "Le Médecin Malgré lui," and "Le Malade Imaginaire," are some of his most admired plays.

MOLLUSCA, a very general term from *L. mollis,* soft, embracing all animals that have a shell but no jointed limbs, as the cockle and oyster, and many, as the slug, whose shell is either wanting, or so rudimentary that it escapes ordinary observation.

MOLLY MAGUIRES, a secret society which existed in Ireland in the early half of the 19th century. Its object was the intimidation of bailiffs and other officials of the law.

MOLOKAI, one of the islands forming the Sandwich Group, in the Pacific. It is set apart for the reception of lepers, and is noted as the place where Father Damien devoted his life to the care of those pitiable outcasts.

MOLTKE, COUNT VON, *b.* 1800, *d.* 1891, Field-Marshal of the German Empire, was the man to whom, from a military point of view, Prussia owed her successes in her wars against Denmark in 1864, Austria in 1866, and France in 1870–71. He was devoted to his profession, and spared no labour to make himself master both of its theory and practice.

MOLUCCAS, or **SPICE ISLANDS,** a number of islands in the East Indies, between Celebes and Borneo. They belong to Holland. Amboyna, the capital, is one of the oldest Dutch settlements in the East.

MOMBASA, the capital of British East Africa, population 27,000, stands on a small island 150 miles north of Zanzibar. The railway runs from here to Victoria Nyanza, a distance of 400 miles.

MOMMSEN, THEODOR, the great German historian, was born in Schleswig in 1817. He early devoted himself to the study of Roman and Italian antiquities. In 1849 he was exiled from Germany for his liberal opinions, and took up his abode at Zurich. His Roman history appeared between 1854 and 1856. It at once placed him on a pinnacle by himself. His other historical and antiquarian writings are numerous.

MON'ACO, the smallest independent State in Europe, on the Mediterranean coast of France, has an area of three square miles, and a population of 13,000. The Casino, or gambling hall, is known over the world. See *Monte Carlo.*

MONASTERIES. See *Abbeys.*

MOND, DR. LUDWIG, F.R.S., a famous chemist and scientist. *b.* Cassel, Germany, 1839, *d.* 1910. He settled in England, 1862, and was responsible for many important scientific inventions including a new method for producing gas for power and heating purposes. He founded and endowed the Davy Faraday Research Laboratory of the Royal Institution, in 1896.

MONGOLIA, a vast plateau between China Proper and Siberia, inhabited by a nomadic people, nominally subject to China. A great part of it is desert.

MONGOOS, a species of ichneumon found chiefly in India. It feeds upon rats, mice, and other vermin, and is the determined enemy of all reptiles. The mongoos fearlessly attacks the largest snakes and displays great agility in avoiding their fangs; it kills them by biting them through the back of the neck.

MONK, GEORGE, DUKE OF ALBEMARLE, *b.* at Potheridge, Devon, 1608, *d.* 1670; was the man who did most towards the settlement of the kingdom after Cromwell's death. He marched his army to London, caused the Convention Parliament to assemble, and went to Dover to receive Charles II. on his landing.

MONMOUTH, JAMES, DUKE OF, *b.* 1629, *d.* 1685; was an illegitimate son of Charles II. by Lucy Walters. His father openly received him at Court, and he became very popular. When James II. succeeded, in 1685, Monmouth thought all England would rise to aid him, and he headed an insurrection. Taken prisoner some days after the disastrous battle of Sedgmoor, he was beheaded on Tower Hill.

MONMOUTH, county town of Monmouthshire, population 5,000, is pleasantly situated on the river Wye.

MONOGRAM, a mark or sign composed of two or more letters, so disposed or arranged as to form one drawing. A

good monogram should show all the letters clearly, and yet not be inartistic.

MONOGRAPH, a treatise on some single subject or branch of a subject.

MONOLITH, a column formed of a single stone, as the obelisk familiarly known as Cleopatra's Needle, on the Thames Embankment. The several stones of a group like Stonehenge are monoliths.

MONOMANIA, a form of insanity in which the patient thinks and acts unreasonably on one subject only.

MONOPH'YSITES, a division of Christians who maintained that Christ had one nature only; that the divine and human were so blended in Him as to form one nature.

MONOPOLY, the sole right or privilege of trading in a certain article, or with a certain district or country. The East India Company long had the monopoly of trade with India; the Hudson Bay Company with a great part of North America. Monopolies in certain articles used often to be granted to individuals in earlier times, and Parliament struggled long and bitterly against them.

MONO-RAIL SYSTEM, a system of electric locomotion invented by Mr. F. B. Behr. A central rail, on which the carriage wheels run, is fixed at the top of an A frame, (so called from its shape), and other rails are fixed one on each side, at a lower level, on which small bearing wheels are able to play when rounding curves, etc. The carriage, the bottom of which is in the form of an inverted V, straddles the framework. The seats are placed from end to end down the centre of each compartment, and the passengers sit back to back. The advantages claimed for the system are the cheapness of construction as compared with the ordinary two rail system, and the high rate of speed, 100 to 110 miles an hour, attainable with safety.

MON'OTHEISM, a belief in one God, as opposed to Polytheism, or belief in numerous gods.

MONROE DOCTRINE, a convenient name for the statement made on behalf of the United States that they will not brook any interference from Europe with territory in America. It derives its name from James Monroe, President of the United States from 1817 to 1824, who enunciated it in a message to Congress in 1823.

MONSOON', the name given to a wind which blows pretty regularly in one direction for some months. In India the wind blows from the south-west from April to October, and from the north-east from October to April.

MONSTRANCE, a vessel employed in the Roman Catholic Church for exhibiting the consecrated wafer to the people on solemn occasions. It consists of a transparent watch-shaped box on a stand.

MONT DE PIÉTÉ, the continental substitute for the English pawn-shop, is a much more desirable institution. They are lending banks belonging as a rule to the municipality. The rate of interest is lower than with English pawnbrokers, and surplus profits are devoted to charity.

MONTAGU, CHARLES, EARL OF HALIFAX, *b.* 1661, *d.* 1715; was one of the few Englishmen whom William of Orange trusted, and was able to make real use of. By his financial ability he found money for William's wars. The National Debt, the Bank of England, and the use of Exchequer Bills we owe to his insight.

MONTAGU, LADY MARY WORTLEY, *b.* 1690, *d.* 1762, daughter of the Duke of Kingston, was a wit, beauty, and literary celebrity of the 18th century. From 1716 to 1718 her husband, Mr. Montagu, was ambassador at Constantinople. Lady Mary's letters home, containing descriptions of Turkish life and society, constitute her chief title to fame. On her return to England she introduced inoculation for small-pox.

MONTAIGNE, MICHEL DE, *b.* 1533, *d.* 1592, was the third son of a French seigneur of Périgord. He was brought up to the law, but took little interest in it. In 1571 he succeeded to the family estate, and lived thenceforth the life of a country gentleman, devoting his leisure to literature. His "Essays" have a charm and spontaneousness which may arise partly from the perfect leisure and independence to which they owe their being. They touch on and illumine nearly every topic which interests mankind.

MONT'ANISTS, a Christian sect which arose during the latter half of the second century. Montanus, its founder, was an illiterate enthusiast who maintained that Christians should return to the simplicity and severity of the early years of Christianity.

MONT BLANC, the highest mountain in Europe, 15,732 feet above sea level, is situated in the south-east of France, 40 miles south of Lake Geneva.

MONTCALM, GENERAL, one of the most efficient generals who have ever served France, distinguished himself against the British at Oswego, 1756, and Ticonderoga, 1758. In 1759 he defended Quebec when besieged by the British. At last, however, Wolfe gained the Heights of Abraham, and Montcalm was compelled to give battle. His defeat gave Canada to the British.

MONT CENIS, 11,000 feet high, a peak in the Alps, between France and Italy. The Mont Cenis Pass, 6,700 feet high, is one of the most used of Alpine passes. Napoleon constructed a road over it. Near Mont Cenis is the famous tunnel which has the same name. It is eight miles long, cost about £3,000,000, and took eight years to construct.

MONTE CARLO, a small town in the little principality of Monaco (which see). Here is the notorious gaming-hall, built on ground leased at an enormous rental from the Prince of Monaco by a joint stock company, which "runs" the establishment; population about 4000.

MONTE CRISTO, a small rocky island 26 miles south of Elba; gives its name to Alexandre Dumas' most famous work.

MONTEFIORE, SIR MOSES, *b.* 1784, d. 1885, an eminent Jew, was one of those who took a leading part in the attempt to gain full rights of citizenship for his race. Having early amassed a fortune as a stock-broker, he devoted the rest of his long life to improving the conditions of his Jewish brethren. He obtained concessions from the Czar and the Sultan. He made seven journeys to the Holy Land. He served as High Sheriff of Kent and Sheriff of London, and in 1846 he received a baronetcy from Queen Victoria in recognition of his services in the cause of humanity.

MONTENE'GRO, a small state between Herzegovina and Albania, in the mountainous region east of the Adriatic. Its area is about 3,500 square miles, and population 311,000. From the aspect of the country and the habits of the people, it may well be called the Switzerland of the East. Cettinje, population 3,200, is the capital.

MONTE ROSA, a peak, 15,200 feet high, in the Pennine Alps, and, next to Mont Blanc, the highest peak in Europe.

MONTEVIDEO, the capital of Uruguay, population 250,000, is situate on the northern shore of the La Plata, about 120 miles from Buenos Ayres. It is a well-built town, having modern requirements well supplied. It has a large export trade in hides, wool, tallow, and horns.

MONTEZU'MA, *b.* 1477, *d.* 1520, was Emperor of Mexico when Cortez landed in 1519. He at first tried to make friends with the strangers, but afterwards plotted against them. The Mexicans rose against the Spaniards, and in trying to pacify his subjects, Montezuma was saluted with a shower of stones, and died of his wounds soon afterwards.

MONTFORT, SIMON DE, *b.* about 1200, *d.* 1265, deserves to be called the founder of representative institutions. He led the barons in their struggle against Henry III., and in 1265 he summoned a Parliament which included for the first time representatives from towns. He was slain at the Battle of Evesham.

MONTGOLFIER, Joseph Michael, and Jacques Etienne, two Frenchmen who invented the balloon, in the latter part of the 18th century, using heated air for inflating it. The year 1783 may be fixed as the date when ballooning became practical, for they made a balloon 35 feet in diameter, which rose to a height of 1500 feet.

MONTGOMERY, JAMES, *b.* 1771, *d.* 1854; was a native of Ayrshire, in Scotland. He early took to literature, and became before long editor of the *Sheffield Register*. Imprisoned for his seditious articles, he began writing poetry. His hymns will probably outlast all his other writings. The best known are "For ever with the Lord" and "Songs of praise the angels sang."

MONTH. See *Calendar*.

MONTREAL, the largest and most important city in Canada, is situate on an island at the junction of the Ottawa and St. Lawrence. It has extensive canal communication with the principal towns on the great lakes, and is the head-quarters of all the important railways. Reached by ocean going vessels it is thus becoming the centre of trade for the Dominion. Its total trade, imports and exports, is about £25,000,000. The old French buildings of the town give it a very picturesque appearance; population, 430,000.

MONT SAINT MICHEL, a singular rocky islet off the coast of Normandy, in the Bay of St. Michel. A tapering circular rock, it rises about 240 feet above the surrounding sands, and was formerly accessible only at low water. Now it is reached by a firm causeway at all times. An old town and castle crown the summit.

MONUMENT, THE, OF LONDON, was erected to commemorate the Great Fire of London in 1666. Designed by Wren, it stands near the north end of London Bridge. The inscription ascribing the origin of the fire to the Roman Catholics was erased in the reign of William IV.

MOODY, DWIGHT LYMAN, *b.* in Massachusetts, 1837, *d.* 1899; a great American evangelist; was in early life a shopman in Boston, and afterwards in Chicago. Here the active religious work he began, at the age of eighteen, demanded all his time. In 1873 he made, with Ira D. Sankey, his first famous missionary tour in Great Britain and repeated it several times later. Simplicity and earnestness marked his discourses.

MOON, THE, the satellite or attendant of the earth in its journey round the sun, has a diameter of 2,160 miles, is about 240,000 miles distant from the earth, and travels round the earth in the time popularly called a month. The period from one full moon to another is 29 days, 12 hours, 44·4 minutes, and it is noteworthy that the moon always presents the same hemisphere to the earth. This latter phenomenon is due to the fact, that the

moon makes one complete revolution on its axis while it is making its monthly journey round the earth.

MOON, WILLIAM, *b.* 1818, *d.* 1894; invented the system of raised type for the blind, which goes under his name. Educated for the ministry, he lost his sight in 1840, and at once began to study how to remedy his own and others' misfortune. The great merit of his inventions is the simplicity of the letters, and the comparative cheapness of production.

MOORE, SIR JOHN, *b.* 1761, *d.* 1809; an English general who distinguished himself in the Peninsular War against the French, after gaining distinction in the West Indies and in Egypt. In 1808, the English expedition to aid the Spaniards was sent out under his command. His renown rests mainly on the masterly retreat of his army in mid-winter. He was killed at Corunna in the moment of victory.

MOORE, THOMAS, *b.* 1779, *d.* 1852; an Irish poet, was born and educated in Dublin. His early poems do not require much notice. His fame is assured by his songs, although he undertook and carried out much more ambitious work. His poetical romance of Lalla Rookh gained much approbation for the fidelity of its pictures and its sweetness of language.

MOORS (1) The native inhabitants of the north of Africa from Tripoli westwards. (2) A name applied loosely to the Arab conquerors of Spain, who held the country from the beginning of the eighth to about the end of the fifteenth century. For centuries these Arabs possessed almost a monopoly of scientific learning and refinement, as their still extant buildings in Spain and their achievements in mathematics bear witness.

MOOSE. See *Elk.*

MORAINES. See *Glaciers.*

MORAVIA, a small state of Austria-Hungary, between Austria and Bohemia. The people are mostly Slavonians. Brunn, the capital, is an important manufacturing town. Area, 8,500 square miles; population about 2,200,000.

MORAVIANS, a Protestant sect whose members are not numerous, but active and earnest. Avoiding dogma as much as possible, they make active piety their religion. In missionary work they are especially zealous. The sect had its origin in Bohemia, and the church government is still centred at Herrnhut, in Saxony.

MORDECAI, a Jew of the Captivity. On his niece, Esther, whom he had brought up, becoming the queen of Ahasuerus, or Xerxes, he was advanced to great honour. How Haman plotted against him and was hanged on his own gallows is told in the Book of Esther.

MORE, HANNAH, *b.* 1745, *d.* 1833; was the daughter of a schoolmaster of Bristol, and early showed literary talent. Her first important publication, "The Search after Happiness," had great success, and secured her the notice of Dr. Johnson and Garrick. In 1773 she came to London, and for some years wrote dramas. The latter part of her life was spent in producing the religious and moral writings by which she is now best known.

MORE, SIR THOMAS, *b.* 1480, *d.* 1535; one of the most upright men that ever lived, was Chancellor of England after Wolsey. His "Utopia," a well written sketch of an imaginary ideal government, is still admired. He was too honest to assent to the King's religious supremacy, and was tried and executed for treason.

MOREAU, JEAN VICTOR, *b.* 1763, *d.* 1813, one of the most famous generals of France, did much towards freeing his country from invaders in the first years of the revolution. In 1800, he gained the famous victory of Hohenlinden, annihilating the Austrian army. Later on he was banished, and went to America, whence he returned to fight against his country, and was mortally wounded at the Battle of Dresden.

MORGAN, JOHN PIERPOINT, *b.* 1837, at Hartford, Connecticut; was educated at Boston and Göttingen. His father was partner of the well-known George Peabody and the son ultimately succeeded to the headship of the business. His financial acuteness re-established the financial stability of many American railways, and later his formation of the great Steel Trust and the Atlantic Shipping Combine have given him a foremost place among the magnates of commerce.

MORGAN, SIR HENRY, the most distinguished of the men who, under the name of "Buccaneers," made war for England against Spain in the latter part of the 17th century, and did her immense damage. Having amassed great wealth, he settled in the West Indies, and was knighted by Charles II.

MORGANATIC MARRIAGE, a marriage once fairly common among the princes of the numerous royal and princely families of Germany, when they desired to wed one beneath them in rank. The marriage was accounted legal, and the children legitimate, but the wife did not share her husband's title nor the children his rank.

MORGARTEN, a mountain in Switzerland, where a few hundred Swiss patriots routed an Austrian army ten times as numerous, creating a panic by rushing down on them from the heights, 1315.

MORGUE, THE, a building at the back of Notre Dame, in Paris, where the bodies of unknown persons found dead are exposed to view, that they may be claimed by their friends. There are Morgues in many American cities.

MORIAH, MOUNT, the hill on which Solomon's Temple was built; sometimes said to be the hill on which Abraham sacrificed Isaac.

MORLAND, GEORGE, *b.* 1763, *d.* 1804, a painter of homely rustic scenes, was an unfortunate example of the power of low habits to keep a man from attaining his best. His life was one long alternation of drink and work. Many of his pictures are much admired.

MORLEY, JOHN, *b.* at Blackburn, 1838; was educated at Oxford, and adopted a literary career. But his interest in political questions proved too strong for his literary leanings. In 1883 he entered Parliament, and in 1886 became Secretary for Ireland. He is an ardent Home Ruler, and was Gladstone's chief lieutenant in his attempted Home Rule legislation. In 1905 he became Secretary for India. His "Life of Gladstone" is of surpassing excellence. He received the O.M., 1902, and was created Viscount, 1908.

MORMON, THE BOOK OF, a book said to have been found by Joseph Smith, the founder of the Mormons, or "Latter-day Saints," as they call themselves. It professes to be an account of America from the time of the Tower of Babel.

MORMONS, THE, a religious body founded by one Joseph Smith, who claimed to have a direct mission from God to prepare for Christ's second coming. Smith was the son of a farmer in the State of New York, and gave out, in 1820, when he was fifteen, that he had seen God in a vision. Other visions were said to have followed, and in 1827 he was directed to find the writings, which he afterwards published as the "Book of Mormon." In a few years his church was established, and after many vicissitudes it settled in Utah. Polygamy is an important feature of the Mormon religion. Brigham Young, the President who succeeded Smith, came on a mission to England, and made many converts, who went to join the church in America.

MOROCCO, a country, or rather tract of land in the north of Africa, stretching from about 2° to 13° W. Longitude. It has not yet been thoroughly surveyed, nor even entirely explored. It stretches back from the coast into the Sahara, and has a population estimated as low as three millions, and as high as thirteen millions. There exists a Sultan, but he has little authority. Among the tribes of the interior he has none; but in the more settled coast provinces he is obeyed when he chooses to enforce obedience. Total trade about £3,000,000 per annum, of which Great Britain has half.

MORPHOL'OGY, the study of form and structure, as distinguished from the study of function. Thus the fact that the human heart has four chambers comes under the cognisance of morphology, while the fact that it pumps the blood through the body belongs to physiology proper.

MORRIS-DANCE, or "Moorish Dance," an outdoor dance, formerly much in vogue at the May-day revels and other festive occasions. The name is derived from the Moors, from whom it was learnt by the English when at war in Spain.

MORRIS, SIR LEWIS, *b.* in Carmarthenshire, 1833, poet, educationist, and barrister; was educated at Sherborne and Oxford. He wrote little poetry till after 1870, but he soon gained a hearing. "Songs of Two Worlds" and "The Epic of Hades" are his most important works.

MORRIS, WILLIAM, *b.* 1834, *d.* 1896, poet and idealist; was educated at Marlborough and Oxford. He founded a business which led the way in the improvement of internal decoration in every form. His Socialist leanings made him decline the office of Poet Laureate. "The Life and Death of Jason" and "The Earthly Paradise" are two of his greatest works.

MORSE, SAMUEL, *b.* 1791, *d.* 1872; the American inventor who claimed to have preceded our Wheatstone in inventing the Electric Telegraph. The Morse, or dot and dash system, is now almost universally used.

MORTAR, a short cannon with a wide barrel and mouth, used for firing shells high up into the air, so that they fall almost vertically on the object. Their aim is not very accurate, unless they are rifled.

MORTARA, EDGAR, a Jewish boy of Bologna, who was baptized by his parents' maidservant and then delivered into the hands of the Roman Catholic church. His parents vainly tried to recover him, although the Pope was appealed to. When grown up he became a monk, refusing to return to the Jewish faith.

MORTE D'ARTHUR. (1) A romance of King Arthur, compiled by Sir Thomas Malory, and first printed by Caxton in 1485. It gives all the chief Arthurian legends. (2) A poem by the late Lord Tennyson, forming one of his "Idylls of the King."

MORTIMER, ROGER, the paramour of Queen Isabella, wife of Edward II. They raised an army against Edward, and forced him to resign the crown. When Edward III. came of age and assumed power, he had Mortimer executed, 1330.

MORTIMER'S CROSS, in Herefordshire, was the scene of a battle in which Edward of York, afterwards Edward IV., routed the Lancastrians in 1461.

MOSA'ICS, small pieces of marble, stone, or coloured glass set together on a surface so as to produce a pattern or

artistic design. It was a favourite decoration among the Greeks and Romans.

MOSCOW, on the Moskva, almost in the centre of Russia, is the second city of that Empire, and until the time of Peter the Great was the capital. The Kremlin (Citadel), is the most sacred spot in the country to a Russian. The city was burnt down in 1812 by the inhabitants to dislodge the French; population about 1,000,000.

MOSELEY, ALFRED, *b.* 1855, a wealthy merchant, who at his own expense sent two commissions to the United States to study (1) the methods of industry, 1902, and (2) the methods of Education, 1903.

MOSES, the great liberator of the Israelites from Egypt, their great lawgiver under God, and leader through the perils and hardships of the wilderness, between Egypt and Canaan. He died on Mount Nebo on the borders of Canaan.

MOSHEIM, JOHANN VON, *b.* 1694, *d.* 1755, an eminent German writer on theology and church history. His works have been translated into English and other languages.

MOSKVA, a river 300 miles long, in Russia, on which stands Moscow. It is a tributary of the Oka, and is usually frozen over from November to April.

MOSLEMS, a name by which Europeans in general designate all Mohammedans. It is our form of the Arabic word "muslim" (a true believer).

MOSQUE, a Mohammedan place of worship. The Mosque of St. Sophia at Constantinople is the finest in the world, whilst those of Jerusalem and Cairo are not much inferior.

MOSQUITO, a name given to various species of gnats, whose bite is very painful. It has lately been proved beyond doubt that the parasite which causes malarial fever is conveyed by the bite of the anopheles mosquito.

MOSS, the popular name for several kinds of small flowerless plants flourishing in damp places. In mountainous and wet districts tracts of moss are of great service in retaining the water and preventing sudden floods.

MOSS-TROOPERS, a name given to the thieves who, previous to the Union between England and Scotland, lived by plundering the border lands of the two countries. They had their retreats among the numerous mosses or bogs of the Borders.

MOSUL, a decayed town on the Tigris, opposite the ruins of Nineveh. The fabric muslin takes its name from this town, which, in the Middle Ages, was a considerable mart for the cotton stuffs manufactured in the neighbourhood; population about 30,000.

MOTHER CAREY'S CHICKENS, a name given by sailors to the Stormy Petrel and other small sea-birds which are very often seen before and during stormy weather.

MOTHER OF PEARL. See *Pearl.*

MOTIF, in music, is the principal theme of a musical composition. As the piece proceeds, it is heard again and again on one or other of the instruments, either entire or in part. A long composition may have one or more subordinate motifs.

MOTLEY, JOHN LOTHROP, *b.* 1814, *d.* 1877; will ever be known as the author of the "Rise of the Dutch Republic," and other works dealing with the history of the Low Countries. He was an American, and did good service to his country as minister at Vienna, and later on in London.

MOTOR CARS AND MOTOR CYCLES. See *Automobiles.*

MOTTO, a short sentence accompanying a crest or other heraldic device. It consists usually of a pious sentiment, as "Deo fidelis et regi," (faithful to God and king), or a sentence expressing the policy or principle of the bearer, as "Festina lente," (Hasten slowly).

MOULD, a name given to the growth which appears on decaying organic substances. The "mould" is really a fungus, and its appearance and nature depend on the substance it derives its life from.

MOUND BIRDS, a kind of bird about the size of our domestic fowl, found in Australasia and the East Indies. They build mounds of earth and leaves to hatch their eggs in, and add to them year after year till they are of immense size.

MOUNT-STEPHEN, (George Stephen), **LORD,** *b.* in Scotland, 1829; Canadian banker, railway director, and philanthropist; emigrated to Canada in 1850. A successful banker at Montreal, he turned his attention to railways, and the Canadian Pacific Railway owes its existence largely to him. His peerage is a recognition of his public services and his charitable gifts. (See *Strathcona.*)

MOUNT VERNON, the home and burial place of George Washington, is in Virginia, 15 miles from Washington. The mansion and grounds surrounding it were bought and presented to the nation in 1856.

MOUSE TOWER, a tower situate on a little island in the Rhine, near Bingen. Legend says that Hatto, Archbishop of Mainz, was here devoured by mice because he withheld corn from the poor in a time of scarcity.

MOUSQUETAIRES, musketeers, the old mounted bodyguard of the French kings, all of noble descent and mounted on grey or black horses, according to their company. Formed by Louis XIII., they existed till 1791. Dumas' "Three Musketeers" gives a fair idea of their mode of life.

MOZAMBIQUE CHANNEL, between Madagascar and the east coast of Africa, is about 1000 miles long and 400 wide. Beira, the port for Mashonaland, is near its southern end.

MOZART, WOLFGANG, *b.* 1756, *d.* 1791; an illustrious composer, son of the chapel-master of Salzburg, Austria. His genius was early displayed, for at the age of six he made a musical tour of Europe. At the age of fourteen he composed his first opera, "Mithridates," which was well received. In 1781 he went to Vienna, and soon entered the service of the Emperor Joseph, who requited him neither with fair words nor gold. His wife could do everything but manage a household, so they were always in trouble. A mysterious visit from an unknown person, commissioning him to write a Requiem Mass, made a deep impression on him, and its repetition some months after convinced him of its supernatural nature. Soon after this second visit he drooped and died. He was buried in the common ground of St. Mark's Churchyard, without a single friend to see the last of him, and no one can say where he lies. "Don Giovanni," "The Magic Flute," and the "Marriage of Figaro" are his best operas. His other musical works are numerous.

MUD VOLCANOES, small conical hillocks in volcanic regions, from a few feet to a hundred yards in height, from the centre of which mud is more or less constantly flowing, urged by gas pressure below. Sometimes they sink into entire repose, then again burst into violent eruption. They are found in Iceland, Sicily, and elsewhere.

MUDIE, CHARLES EDWARD, *b.* 1818, founder of the celebrated "Mudie's Library," set up in Southampton Row as a publisher and bookseller in 1840. In 1842 he inaugurated his lending library, and met with immediate success. He set a high standard in selecting his books, but was lavish in his purchase of those he did select, taking thousands of copies at once of promising new works.

MUEZZIN, an official belonging to a Mohammedan mosque, whose duty it is to proclaim the hour of prayer from the minaret of the mosque. This he does five times a day: at dawn, noon, 4 p.m., sunset, and nightfall.

MUFTI, a judge, or priest, or interpreter of the law among Mohammedans. Each locality has its mufti, who is both judge and director of religion. The "Grand Mufti" is the head of the Ulema (which see). The word "mufti" is used in the army to denote private dress.

MUGWUMPS, those who vote against their party in what they believe to be the interest of their country. The term was first applied in the States to those Republicans who voted for Cleveland, the Democratic candidate, in 1884.

MUKDEN, the capital of Manchuria, is surrounded with walls 60 feet high with eight noble gateways. It stands in a commanding position for trade, about 120 miles inland from Newchwang, its port; population about 250,000. It was from Mukden that the Manchu princes descended upon Pekin, about 1640, and founded the dynasty which still bears rule in China.

MULBERRY, a tree indigenous to the middle of Asia, but introduced into Europe about 1000 years ago. Its succulent fruit is only in its prime for a very short time. The Black Mulberry gives the best fruit, while the leaves of the White Mulberry are found suitable for rearing silkworms.

MULE, the offspring of the ass and the mare, is a most useful animal much employed in mountainous countries on account of its sure-footedness and endurance.

MULLAH, or **MOLLAH,** the head of a religious society in Mohammedan countries, or the founder of a sect or movement having religion as its nominal basis. In India and Africa, so-called religious wars against the "Infidel" (headed by "Mad Mullahs") have often given the English trouble.

MÜLLER, FRIEDRICH MAXIMILIAN, *b.* 1823, *d.* 1900 the great philologist, was born and educated in Germany. Coming to England in 1846 to study Oriental manuscripts, he was prevailed upon to make his home here. He was made Professor of Modern Languages at Oxford, and there he published the works on ancient and modern languages which have made his name famous.

MÜLLER, GEORGE, *b.* 1805, *d.* 1898, was a German who came early to England and settled down as minister of a chapel at Teignmouth, Devon. He had an aversion to asking for money. When he founded his well-known Orphan Homes at Bristol, in 1836, he made no public appeal for assistance, relying on prayer. His trust proved always well-founded, although he was at times on the brink of destitution. What a vast work he accomplished may be judged from the fact that in 1875 his Homes contained 2,000 children, and that they continued to flourish until his death. In fact, during his life, 11,400 orphans passed through his homes at an expenditure of £1,120,000.

MULLET, a fish found in most temperate and sub-tropical latitudes, varying in weight from one to ten or twelve pounds. The Red Mullet is chiefly found in the Mediterranean Sea; the Grey and Striped Mullet are common round our coasts. The mullet has a high value as a food.

MULREADY, WILLIAM, *b.* 1786, *d.* 1863; one of our great painters, was

born at Ennis, in Ireland. Incidents of every day life, such as "Horses Baiting" and "The Barber's Shop," were most to his liking, and in depicting these he is almost unequalled.

MULTAN, or MOOLTAN, an ancient city of India near the banks of the Chenab. It is the centre of trade for the Punjab, collecting agricultural produce, and sending it down to Haidarabad and Karachi. It has also great trade with Afghanistan; population about 80,000.

MUMBO-JUMBO, a bogie with which negroes in Africa terrify women and children; hence, an object of unreasoning fear.

MUMMY. See *Embalming.*

MÜNCHAUSEN, BARON VON, a German nobleman and soldier who used to tell marvellous stories of his adventures. A fellow-countryman published a selection of these, with additions of his own, under the Baron's name, which proved very popular.

MUNICH, (München), on the Isar, a tributary of the Danube, is the capital of Bavaria, and third greatest town in Germany. In 1800 its population was about 50,000; it is now 520,000. Its collection of paintings, sculpture, and other art treasures is of great value.

MUNICIPALITY, a town or borough whose citizens possess certain rights of self-government.

MUNKACSY, MICHAEL VON, *b.* 1844, *d.* 1900; a Hungarian painter of striking historical and sacred subjects, lived his last years in Paris, and there did his chief work. "Christ before Pilate" and "Golgotha" are perhaps his best paintings.

MUNSTER, the largest of Ireland's four provinces, occupies the south-west of the country. It contains the busy town of Cork; the picturesque bays, called Dingle, Kenmare, and Bantry Bays; the lovely lakes of Killarney; and the mouth of the Shannon, with the historic town of Limerick. Its population is a little over a million, almost all Roman Catholics of pure Irish origin.

MURAL CIRCLE, an astronomical instrument once used in large observatories. It consisted of a circle of metal revolving on an axis projecting from a wall, whence its name. Attached to the circle was a telescope for observing the meridian passage of stars.

MURAT, JOACHIM, *b.* 1771, *d.* 1815, was the son of an inn-keeper, but in the Napoleonic wars distinguished himself as a cavalry commander, and became a French Marshal. He married a sister of Napoleon, and became by his favour king of Naples. In 1814 he tried to attach himself to the allies, but Britain refused to acknowledge him as king. After the escape from Elba he declared for Napoleon, but was defeated, and later on was shot on attempting to assert his sovereignty.

MURATORIAN FRAGMENT, a catalogue of New Testament Scriptures, probably drawn up by Hippolytus about A.D. 230. The manuscript was discovered by an Italian historian named Muratori, and published by him in 1740.

MURCHISON, SIR RODERICK IMPEY, *b.* in Rosshire 1792, *d.* 1871; was one of the great scientists of the 19th century. He served till 1816 as an officer in the army. Then geology claimed him, and his reputation soon became world-wide. The Emperor Nicholas engaged him to make a geological survey of Russia, and he was repeatedly elected President of the Geological and Geographical Societies.

MURDOCH, WILLIAM, *b.* in Ayrshire, 1754, *d.* 1839; the inventor of coal gas as an illuminant, and of numerous improvements in machinery; worked for some years in Cornwall superintending the construction of mining machinery. He lit his house at Redruth with coal gas, and afterwards lit Messrs. Boulton and Watt's, Soho foundry, in the same way.

MURILLO, BARTOLOME, *b.* 1618, *d.* 1682; the most celebrated of Spanish painters, devoted himself almost entirely to sacred subjects. Seville, his native town, possesses many of his works. His many "Madonnas" and his well-known pictures of the "Immaculate Conception" are his best works.

MURRAIN, a term formerly applied to a contagious and fatal disease attacking cattle, now known as *Rinderpest.*

MURRAY, DR. JAMES AUGUSTUS, *b.* in Roxburghshire, 1837, was assistant master for some years at Mill Hill School. His works on Philology and Antiquities marked him out as editor of the great new English dictionary now in progress, and he moved to Oxford to devote himself to his great task.

MURRAY, LINDLEY, *b.* 1745, *d.* 1826, an American grammarian and writer of school books, settled in England in 1784. His grammar was published in 1795, and for over fifty years was practically the only book on the subject used in England and America.

MURRAY, THE, the only important river in Australia, rises in the Australian Alps, near the east coast, and flows westward for 1,100 miles to reach the sea in Encounter Bay. It is of little use for navigation, as, owing to the uncertain rains, its volume is very variable, and from Lake Alexandrina it makes its way to the sea by many shallow channels of shifting sand.

MÜRREN, a tourist resort in the Bernese Oberland, Switzerland, overlooking the Lauterbrünnen valley, with the Jungfrau and the other giants of the Oberland in full view.

MUSCAT, capital of Oman or Muscat, a small state in the east of Arabia, commanding the entrance to the Persian Gulf. It is a centre of trade between Arabia, Persia, India, and East Africa; population about 20,000.

MUSCATEL, the name of a very rich and sweet grape grown in France and Italy, and of the wine made from it. The grapes are also dried for table raisins.

MUSCOVY, an ancient name of Russia, derived from Moscow, the former capital.

MUSES, THE, in Greek mythology, the deities presiding over and cherishing various arts. They were nine in number, Clio, the muse of history; Euterpe, of lyric poetry; Thalia, of comedy; Melpomene, of tragedy; Terpsichore, of dancing; Erato, of love songs; Polyhymnia, of singing and harmony; Urania, of astronomy; and Calliope, of epic poetry. Mount Helicon in Bœotia, and Mount Parnassus, 80 miles north-west of Athens, were said to be their favourite haunts, whence poetry is often said to flow from Helicon's springs, and the road to learning is called the ascent of Parnassus.

MUSK DEER, a species of hornless deer with upper canine teeth projecting as tusks, widely distributed in Asia, and much sought for on account of the musk it yields. The latter is found in a pouch or bag at the back of the abdomen, and is one of the most pungent, powerful, and permanent of perfumes.

MUSKETRY, SCHOOL OF, at Hythe; was founded in 1853 for the training of officers and sergeants in the theory and practice of musketry, so that they might act as "musketry instructors" on returning to their regiments.

MUSK-OX, a small animal resembling both the ox and the sheep, and between them in size, found in the north of the Dominion of Canada. Its flesh has an odour of musk, but none is obtained from it.

MUSSULMANS, a corruption from Muslimin, the plural of muslim (moslem), "a true believer."

MUSTANG, the wild horse of America, the descendant of the original stock introduced by the Spanish conquerors.

MUSTARD, a condiment formed of the ground seeds of three plants grown in temperate and warm climates, called respectively white, black, and wild mustard. The latter is better known as Charlock.

MUTINY ACT, an act formerly passed annually, authorising the sovereign to enact rules for the government of the army. Without it a soldier would be subject to arrest and punishment, only under the same conditions as a private citizen, and discipline would be impossible. The same power is now conferred by the Army Annual Act, which also applies to marines on shore.

MYCE'NÆ, an ancient Greek city in the Peloponnesus, six miles north of Argos. In the time of the Trojan War it was the chief city of Greece. Agamemnon was its king. The study of Mycenæan remains has shed much light on the history of civilization and the arts.

MYRMIDONS, in Greek legend, the name of a people who lived in the south of Thessaly. Achilles was their king, and they followed him to Troy. Hence the devoted followers of any adventurous leader are often called "myrmidons."

MYRRH, gum or resin which exudes from a kind of myrtle that grows in Arabia and East Africa. It is highly aromatic, has a bitter taste, and is a very valuable tonic and stimulant.

MYSORE, a table-land in the south of India, about two-thirds the size of Scotland, forming a native state under British Protection. The gold-mines of Kolar, in the east of Mysore, have lately assumed importance, and are now turning out about £2,000,000 worth a year. Hyder Ali and his son Tippoo Sahib, sultans of Mysore, gained several successes in war with the British in the course of the latter half of the 18th century. Both, however, were ultimately defeated, Tippoo being slain at Seringapatam, and Mysore annexed.

MYTHOLOGY, a collection of fables and traditions referring to the forces of Nature, to national heroes, and to the gods. The nature-myths are primitive attempts to explain the processes of nature, and may be looked upon as the beginnings of natural science. The hero-myths are akin to sacred mythology. In India, *nature*-myths reached a high state of development; whilst in Greece, *personal* mythology flourished because it provided a better field for the artistic and dramatic temperament of the Greeks.

NAAMAN, the Syrian warrior and courtier who came to Elisha the prophet to get cured of his leprosy. The forgiveness assured him for bowing down in the House of Rimmon has often been quoted to support actions of a dubious character.

NABOB, (in Hindoo, "nawab"), a deputy or governor of a province or district under the Mogul emperors. From the lavishness and ostentation of many of the officials of the old East India Company, on their return home they were often contemptuously termed "Nabobs."

NABOPOLASSAR, father of Nebuchadnezzar, king of Babylon, was viceroy of Babylon under the Assyrians till about 620 B.C., when he revolted and made himself independent.

NABOTH, the native of Jezreel, whose vineyard was coveted by King Ahab. The story of how Ahab had Naboth done to death on false accusations has passed into a proverbial expression for the exercise of might over right.

NACRE, same as *Mother-of-Pearl*.

NAGASAKI, the western seaport of Japan, was long the only place where foreigners were allowed to resort, and until 1859, only Dutch were admitted. In that year it and four other ports were thrown open to British and Americans, and before long Japan removed all restrictions on entry. The total trade of Nagasaki amounts to over £1,000,000. It exports much coal; population exceeds 100,000.

NAIADS. In Greek mythology, deities of inferior order, called nymphs, inhabited various places on the earth. Of these, the Naiads were the nymphs inhabiting fountains, springs, and brooks.

NAKHON WAT, a temple near Nakhon or Angkor, the ancient capital of Cambodia, the finest specimen extant of Cambodian architecture, dating from the 13th century.

NANAIMO, a prosperous little town on the east side of Vancouver Island, connected by rail with Victoria, 74 miles to the south-east. Near Nanaimo are large mines of good coal.

NANA SAHIB, the son of a Brahmin, was adopted by the Peishwa of the Mahrattas, who had made peace with the English, and received a pension from them. When the Peishwa died, the pension was not continued to Nana, and he conceived a bitter hatred for the English. On the outbreak of the Mutiny in 1857 he besieged the English in Cawnpore, who surrendered on a promise of safe conduct, but all the men except four were massacred as they started down the river to Allahabad, and the women and children still more cruelly killed just before the capture of the town by General Havelock. The fate of Nana, who escaped capture, is not known.

NANCY, a town in the north-east of France, the ancient capital of Lorraine, has many beautiful buildings dating from the 16th century and earlier. It has grown much since 1871 owing to the large number of people settling there from the provinces then ceded to Germany. It has various manufactures, of which cambric and muslin are the chief; population about 100,000.

NANKEEN, a kind of buff coloured cotton stuff, originally manufactured at Nanking, in China. It is now largely manufactured in England and exported to China.

NANKING, a large town of China, formerly the capital, on the Yang-tse-Kiang, about 130 miles from its mouth. Here was signed the treaty of 1842, by which Hong Kong was ceded to Britain, and five Chinese ports were opened to foreign trade; population 150,000.

NANSEN, DR. FRIDTJOF, was born near Christiania in 1861. He made zoology his study, and undertook several voyages to the Polar Regions for the purpose of observation. He came to the conclusion that a current from Asia to America must pass pretty near the North Pole, and that a ship drifting with it should get near that desired spot. In 1892, in the *Fram*, he had an opportunity of testing his theory. His ship drifted within 6° of the Pole, and Nansen himself, with Johansen, got with the aid of sledges to lat. 86° 14′, or within 250 miles of the Pole, 200 miles nearer than any one before. Was first Norwegian Ambassador to England, 1906–1908.

NANTES, population 128,000, an important town of France, near the mouth of the Loire, has been almost entirely rebuilt within the last half century. It is a thriving port and manufacturing town. Here Henry IV. of France signed the famous Edict of Nantes, giving religious freedom to the Huguenots (1598).

NAOMI, wife of an Israelite who left Canaan in the days of the Judges to avoid famine. In the land of Moab Naomi was eventually left with a daughter-in-law, Ruth, whose story is told in the Book of Ruth.

NAPIER, ADMIRAL SIR CHARLES, *b.* near Falkirk, 1786, *d.* 1860: a distinguished naval commander, who rendered England good service through the Napoleonic wars, and afterwards in various expeditions. He was in command of the Baltic Fleet during the Crimean War, and was censured for not accomplishing any great exploit, but cleared himself completely. He did much, both officially and as an M.P., to improve the navy.

NAPIER, GENERAL SIR CHARLES JAMES, *b.* in London, 1782, *d.* 1853; cousin of the above, was a lieutenant in the army before he was thirteen. He served with distinction in the Peninsular War. His fame was won in India, where, in 1843, he gained against fearful odds the battles of Meeanee and Hyderabad, and made the English masters of Sind. He is said to have announced this event by the brief dispatch, *peccavi*, a Latin word meaning, *I have sinned* (Sind). He was afterwards made Commander-in-chief of the army in India.

NAPIER, JOHN, *b.* at Edinburgh, 1550, *d.* 1617; one of the most eminent mathematicians of all time, was a Scotch laird, whose seat was at Merchiston, near Edinburgh. His fame rests on the system of logarithms which we owe to him, by which the operations of division and multiplication, and of involution and evolution, are much shortened and simplified. He had many distinguished descendants.

NAPIER, ROBERT, LORD NAPIER OF MAGDALA, *b.* in Ceylon, 1810, *d.* 1890; entered the Indian army at the age of 18, and until he was nearly sixty years of age was hardly ever out of India. He did good service in the Sikh War, and in the Mutiny, and took part in the China expedition of 1860. His striking power of organisation was shown in the Abyssinian War of 1860, a war in which natural obstacles were more formidable than the enemy's troops. From 1870 to 1876 he was Commander-in-chief in India.

NAPIER, SIR WILLIAM, *b.* 1785, *d.* 1860, brother of Sir Charles James Napier, and cousin of Sir Charles Napier; distinguished himself in the Peninsular War, gaining seven decorations for his gallantry in the field. But he chiefly claims attention as a writer, his "History of the Peninsular War" ranking as a classic. His "Conquest of Scinde" and minor writings also show his mastery of details and graphic power.

NAPLES, on the bay of that name, 117 miles south-east of Rome, was founded by a colony of Greeks long before historical records begin. Under the Empire, it was a favourite seaside resort for the wealthy Romans. Its lovely situation and health-giving powers are now reinforced by the sanitary improvements long needed. The trade of Naples amounts, imports and exports together, to about seven millions per annum; population exceeds 560,000.

NAPOLEON, EUGENE LOUIS, *b.* 1856, *d.* 1879. The Prince Imperial, as he is often called, was son of Napoleon III., and on the latter's fall escaped to England. He studied at the Woolwich Academy, and in 1879 went to serve as a volunteer against the Zulus. He was slain in an ambush laid by the latter.

NAPOLEON I., EMPEROR OF THE FRENCH, *b.* 1769, *d.* 1821; a native of Ajaccio, in Corsica, first distinguished himself by defending Toulon against the English in 1793. In 1796 he was appointed to command the army of Italy, and all through this year, and into 1797, he gained renown by the masterly way in which he out-manœuvred the Austrians, his opponents, and gradually made himself master of the kingdom. The Treaty of Campo-Formio left France free from fear as far as Austria was concerned, and the Expedition to Egypt, as a step towards the conquest of India, was his next great move (1798). The destruction of his fleet in Aboukir Bay, by Nelson, convinced Bonaparte that he could not become master of the East while Britain "ruled the waves." His next aim, therefore, was to destroy Britain's sea-power. He returned to France, overthrew the Directory and got himself declared First Consul of the Republic (December, 1799), his two colleagues in the consulate being mere puppets in his hands.

The next seven years are the most splendid in the life of this brilliant adventurer. By his victory at Marengo, in 1800, and that of Moreau at Hohenlinden, French domination was restored in Italy. The treaties he made with the leading powers, in 1801 and 1802, left France mistress of the Continent, and for some time he devoted himself to those civil reforms in France which have made her, in some ways, an example to civilization. He declared himself Emperor in 1804, and in 1805 he hoped to effect his long planned invasion of England. Nelson's victory at Trafalgar diverted the scourge of war from England to Prussia, Austria, and Russia. The victories of Austerlitz, Jena, Auerstadt, Eylau, and Friedland, caused his Continental enemies to acknowledge his genius and fear his hostility. By the middle of 1807 he was practically master of the Continent, and then his evil genius caused him to turn his eyes on Spain.

The story of how England ruined his plans there gave the Continental powers renewed courage. The disastrous invasion of Russia, in 1812, broke the heart of his army, and though he still gained victories, his enemies were too numerous to be crushed. Through 1813 he kept his foes at bay, but the beginning of 1814 saw them marching on Paris from the north, while Wellington was preparing to do the same from the south. His abdication, retirement to Elba, return, the "Hundred Days," Waterloo, his second abdication, his enforced retirement to St. Helena; all these seem to have happened with the speed of enchantment. In 1821 he died, and his remains were brought to Paris in 1840.

NAPOLEON II., DUKE OF REICHSTADT, *b.* 1811, *d.* 1832, was the only son of Napoleon by Maria Louisa of Austria. After the fall of Napoleon, he remained in the care of his grandfather, Francis I. of Austria, till his death.

NAPOLEON III., *b.* 1808, *d.* 1873, was nephew to the great Napoleon. Educated in Switzerland and Germany, the death of his cousin, Napoleon II., directed his mind to France, and the possibilities awaiting him there. In 1836 he made a foolish attempt to gain the army over, but was detected and allowed to go into exile. Soon after he made England his home. In 1840 he made another fruitless attempt on the French throne, which resulted in his imprisonment in the fortress of Ham. The revolution of 1848 proved his chance. Returning to France as a simple citizen, he got elected as deputy to the Assembly, and soon a plebiscite made him President of the Republic. He took the oath of

allegiance to the republic, and kept it for nearly two years. In December, 1851, he got himself elected President for ten years, and a year later, by his favourite method of the plebiscite, was made Emperor. His share in the Crimean War as an ally of England, strengthened his position, but the unfortunate war with Germany, 1870–71, brought his reign to an end. In March, 1871, he came to England, and lived at Chiselhurst till his death.

NARCISSUS, in Greek mythology, a beautiful youth, was insensible to love, and the nymph Echo, who vainly loved him, died of grief. Nemesis, to punish him, caused him to fall in love with his own image reflected in a fountain, whereupon he gradually pined away and was changed into the flower that bears his name.

NARES, SIR GEORGE STRONG, Vice-Admiral and Arctic explorer, was born in 1831, and early entered the Royal Navy. He took a leading part in the Arctic Expedition of 1852–54. He was placed in command of the Challenger expedition in 1872, but was called away to command the *Alert* in the Arctic expedition of 1875, when he reached a higher latitude with his ship than any one ever had before. Besides recording his explorations, he has also written some standard works on naval affairs.

NARWHAL, a genus of whale, the male of which is provided with a long spiral tusk, which may attain a length of 8 or 10 feet, while the animal itself hardly ever exceeds 16. It is hunted both for its oil and ivory.

NASEBY, a village in Northamptonshire, near which was fought, in 1645, the battle which practically brought the Civil War to an end.

NASH, JOHN, *b.* 1752, *d.* 1835; a celebrated London architect, planned Regent's Park, and designed the handsome terraces surrounding it. Regent Street, Waterloo Place, Buckingham Palace, and many other West End buildings are his, besides many country mansions.

NASH, RICHARD ("Beau Nash"), living in a state of society which we are incapable of realising, was for some years the autocrat of Bath. Born in 1674, and educated for the law, he came to London, and became a man of fashion. In 1704 he was made master of the ceremonies at Bath, and for fifteen years he ruled the people of fashion who thronged that city. Later his sway declined, and he died in comparative poverty.

NASMYTH, JAMES, *b.* at Edinburgh, 1808, *d.* 1890, was the inventor of the steam-hammer, and many other engineering appliances. Mechanics was evidently his bent, and he early got employment at Maudsley's, then the leading engineers, whence he migrated to Manchester to set up for himself. In a few years, by his inventiveness and application, he made a fortune, and retired.

NASSAU, HOUSE OF. The family of Nassau dates from the tenth century. They ruled Nassau, now Wiesbaden, in Germany, until 1866, when the reigning duke sided with Austria in her conflict with Prussia, and his duchy was annexed by Prussia in consequence. A younger branch obtained by marriage the principality of Orange, in the south of France, and from them our own William of Orange (William III.) was descended.

NATAL. Refer to *Index.*

NATIONAL ANTHEMS. The English National Anthem is now undoubtedly "God save the King," though "Rule Britannia" ran it close for a long while. The "Marseillaise," the French National Anthem, was composed in the early days of the Revolution, and is of an exciting character worthy of its origin. The Russian National Hymn, "God the All-terrible," is a grand composition, while the "Watch on the Rhine," the German National Air, and the Austrian National Hymn, are very effective. "The Wearing o' the Green," and "Scots Wha Hae," delight Irish and Scots respectively.

NATIONAL COVENANT, a declaration and oath taken by Scotsmen, by which the subscribers bound themselves to maintain the Presbyterian religion. It was first drawn up in 1580, but the most celebrated occasion of its administration was in 1638, in resistance to Charles's attempt to force Episcopacy and a Liturgy on Scotland.

NATIONAL DEBT, an arrangement by which money lent to the Government is not bound to be paid back, but interest on it is guaranteed in perpetuity. The English National Debt dates from the days of William III., who found this a ready way of paying for his wars, which cost £16,000 000. Marlborough's campaigns cost £38,000,000 more, and so it went on till in 1816 the national debt amounted to £900,000,000. By 1899 this had been brought down to 635 millions, but the Boer War added 150 millions, so the debt now stands over 700 millions.

NATIONAL PORTRAIT GALLERY, a collection founded in 1856, and now housed in St. Martin's Place, of portraits of the most notable people in British history, in literature, art, or science. It also contains some interesting medals, autographs, etc.

NATIONAL GALLERY, the chief building for the reception of pictures belonging to the nation, is on the north side of Trafalgar Square, London. The collection was commenced in 1824 by the purchase of the Angerstein collection of pictures, and the present building was finished in 1838. Some of the pictures have been presented or bequeathed by private individuals, and others bought, so that the total number amounts to nearly 1400, representing all the great "Schools."

NATIONAL RIFLE ASSOCIATION, an association founded in 1860 to promote the practice of rifle shooting. Lord Elcho was the prime mover in the movement, and Queen Victoria warmly supported it. The annual prize meetings, once held on Wimbledon Common, now are held at Bisley.

NATIONAL SERVICE LEAGUE, an association founded in 1902 to promote legislation securing compulsory military training for all males within certain ages capable of bearing arms. Lord Raglan is the president, and the members are of both political parties.

NATURALISATION is the form or process a person has to go through in order to obtain the rights of a native in a land not his own. The conditions vary in different countries, but in Great Britain a certificate of naturalization may be obtained after five years' residence, the fees amounting to £6.

NATURAL SELECTION, a convenient phrase to express the theory that of two given individuals of the same species, the one possessing qualities or characteristics of any kind in excess of the other, that enable it either to obtain food more easily, or to escape its enemies more surely, will be the one to survive, and to transmit its qualities and characteristics to posterity. This is what is meant by "the survival of the fittest."

NATURAL THEOLOGY is the science that treats of the existence, nature, and character of the Creator based on the study of Nature, and the ends it is apparently designed to serve.

NAUTCH GIRLS, native Indian dancing girls. Dressed in bright coloured robes and wearing gold and silver bells around their ankles, they dance to the strains of voluptuous music.

NAUTILUS. The Nautilus so often referred to by poets is really not a nautilus at all. Its proper name is *Argonaut,* a mollusc chiefly found in tropical seas. Only the female ever possesses a shell, and even she does not raise her arms to catch the wind. The so-called sails are reproductive expansions on two of the tentacles. The nautilus proper is a shell-fish which haunts the bottom of tropical seas.

NAVAL COLLEGE. Refer to *Index.*

NAVAL EDUCATION. Refer to *Index.*

NAVAL RESERVE, THE, differs from the Army Reserve in the fact that its members need not have served in the Navy. Practically every able seaman, or man with equivalent qualifications, can join the Naval Reserve, on specified conditions.

NAVARINO (Pylos), a small town in the south-west of Greece, has the best harbour in the country. This bay, then called Sphacteria, saw the Spartans defeated by the Athenians in the great Peloponnesian War (425 B.C.), and it also saw the Turkish fleet annihilated by a combined English, Russian and French fleet in the War of Greek Independence (1827).

NAVARRE, the name of a province (now Basses Pyrenees), in the south of France, and of a province in the north of Spain. In mediæval times the two formed one kingdom of Navarre, which played a prominent part for so small a state. The inhabitants, Basques in Spain and Gascons in France, have marked peculiarities of language and customs.

NAVIGATION ACT. The Act generally meant, when this term is used, is the one passed in 1651, which aimed specially at the Dutch. It enacted that no goods should be imported into England save in English ships, or in ships of the country that produced the commodity. Similar ordinances have been made both before and since, but the whole system is now swept away in England, and any ship is allowed to enter any harbour with any goods from anywhere.

NAZARENES, a sect of Jewish Christians which arose about the end of the first century. They are often confounded with the Ebionites, as, like them, they still regarded the Mosaic Law as obligatory; but the Nazarenes believed in the divinity of Christ, while the Ebionites did not.

NAZARETH, now en-Nasirah, a flourishing little town of Palestine, 21 miles south-east of Acre. Here our Lord was brought up, and sites are shown where some of His doings are said to have taken place.

NAZARITES, a term used in the Bible to denote persons who had taken a vow to abstain from doing certain acts for a time, as a mark of special consecration or devotion to God. The law concerning such vows, laid down in Numbers vi., contemplates a limited period of such observance, but Samuel and others were Nazarites for life.

NEANDER, JOHANN, *b.* 1789, *d.* 1850; a great ecclesiastical historian, critic, and teacher, was born at Gottingen, of Jewish parents named Mendel. He became a Christian in 1806, taking at his baptism a new surname as well as Christian names. His works went through many editions, and even his lectures have been extensively printed.

NEBO, MOUNT. Eastward of the Dead Sea is a range of hills rising higher and higher as we proceed northward, till they culminate in a high peak near the northern extremity of the sea. This is Mount Nebo

(Pisgah), from which Moses had a view of the Promised Land.

NEBUCHADNEZZAR, king of Babylon (604–561 B.C.), was one of the greatest of the monarchs who ruled over that great empire. He restored Babylon to its ancient supremacy. He it was who removed the bulk of the people of Judah to Chaldea, thus completing the desolation of the Holy Land. The discoveries still being made in that interesting land prove what a vast influence he exerted on his country's destiny.

NEBULA, a patch of light in the heavens which cannot be resolved into a cluster of stars. These true nebulæ, as distinguished from the patches of light which do resolve into clusters of stars with a telescope of higher power, consist of gases in an incandescent state.

NEBULAR THEORY. The Nebular Theory maintains that our sun, with its attendant planets, as well as all similar systems, was once a mass of incandescent gas like the nebulæ we see now. By gravitation, the particles began to collect towards a centre, and thus rotation was set up, while by radiation contraction was caused, and thus masses were loosed from the central body, which became satellites revolving in the same direction as the original mass.

NECKAR, the principal river of Wurtemburg, in Germany, 250 miles long, rises on the eastern side of the Schwartz Wald (Black Forest), and joins the Rhine at Mannheim. Heidelberg, with its celebrated university, lies in its course.

NECROMANCY. The question of holding communication with the dead has always been a subject of fascinating interest to mankind. Whether the Witch of Endor did or did not cause the spirit of Samuel to appear and answer Saul need not be discussed; the point is that a man of his standing believed that such could be done, so that we need not be surprised that savages hold a similar belief. Even here in England, in the 20th century, not a few people believe that one can communicate with deceased friends by the latter tapping on a table.

NECTAR, in classical mythology, is the name given to the drink of the gods; hence it is applied to any drink that gives particular pleasure.

NEGRO (L. *niger*, "black"), a name of rather uncertain application, but which may roughly be said to apply to the inhabitants of that belt of Africa south of the Barbary States, and north of the Congo, and of course to their kinsmen elsewhere. The main characteristics of the race are thick lips, short flat nose, woolly hair, and black skin. They are undoubtedly capable of great culture, and may yet, under favourable circumstances, have a high destiny in front of them.

NEHEMIAH, a pious Jew, whose life for the most part was spent in captivity among the Persians, but who made at least two journeys to Jerusalem, and took a great part in the restoration of the city, its defence against enemies, and its purification from various evils. He was a favourite with the Persian king, Artaxerxes Longimanus.

NELSON, HORATIO, VISCOUNT, *b.* 1758, *d.* 1805; was son of the rector of Burnham Thorpe, Norfolk. He joined the Navy at an early age, and by the year 1787 had earned his captaincy, married, and retired to live at Burnham Thorpe, his native place. The outbreak of war with France, 1793, gave him the chance he longed for; he was appointed to the "*Agamemnon*," and for some years took an active part in the operations about Toulon. Towards the end of 1796 Spain joined France, and it became imperative to prevent their fleets from combining to operate against England. The victory of St. Vincent, February, 1797, which shattered the Spanish fleet on its way to join the French at Brest, was largely due to Nelson's gallantry and foresight. In 1798 the French fleet from Toulon, with the army for Egypt, evaded Nelson, but he came up with it in Aboukir Bay, and took or destroyed all the ships but two. This exploit ended Napoleon's dreams of a great Eastern empire. In 1801, under Sir Hyde Parker, Nelson commanded the operations against Copenhagen and the Danish fleet, which resulted in the surrender of the fleet to England. In 1805 Napoleon made his last great effort to gain command of the sea, and bring his army of invasion to our shores. But Nelson's vigilance never failed. On the 21st October he came up with the combined French and Spanish fleet of 33 sail, near Cape Trafalgar, and although inferior in numbers, gave the signal for battle. The victory was decisive; the combined fleet was annihilated; but the price was great. In the heat of the fight, Nelson received a mortal wound, and died in a few hours. His body lies in St. Paul's Cathedral, and a splendid monument inadequately expresses the admiration all Englishmen feel for his gallantry and devotion to duty.

NELSON MONUMENT, THE, is a lofty column in Trafalgar Square, 145 feet high. It was erected in 1843, at a cost of £45,000. The bronze reliefs at the base represent the Battle of the Nile, Bombardment of Copenhagen, Battle of St. Vincent, and the Death of Nelson. The four lions at the base are the work of Sir Edwin Landseer.

NELSON RIVER issues from Lake Winnipeg, in Canada, and flows north-east into Hudson's Bay, after a course of 400 miles. Numerous rapids and falls render it useless for navigation.

NEM'ESIS, in mythology, the goddess whose part it was, by bringing misfortune and calamity, to humble those who had, in the tide of success and prosperity, forgotten their duty to the gods; hence, we use the term to express the punishment which in some form or other awaits those whose devotion to worldly success is excessive.

NEOPHYTE (lit. "newly-born,"), a term applied in the early church to one just baptised; hence used to denote one who is a beginner in anything.

NEOPTOL'EMUS, in classical mythology, one of the great heroes of the Trojan War. He was one of the warriors concealed in the wooden horse, and killed Priam on the capture of the city.

NEPAL, an independent state of India, lying along the southern slope of the Himalayas. Its area is 54,000 square miles, and population about 3,000,000. The Ghoorkas, who are the ruling race, provide some of the most reliable soldiers in our Indian army.

NEPTUNE. (1) Name of the Romans' god of the sea. When a Roman commander set sail, he would offer to Neptune a sacrifice, which was thrown into the sea. Later, all the attributes of the Greek god Poseidon were transferred to Neptune. (2) Also the most distant of the planets from the sun. Its diameter is about 35,000 miles, and it revolves round the sun in 164½ years. Its existence was proved, and its position indicated, by mathematical calculation, and the use of the telescope was only required to confirm what pure reason had demonstrated.

NE'REIDS, in mythology, sea-nymphs, haunting especially the Mediterranean Sea, as the Naiads did fresh water, and the Oceanides the Ocean.

NERI, PHILIP, *b.* 1515, *d.* 1595: the "Apostle of Rome," was an example of what pure goodness, unallied with intellectual greatness, missionary fervour, or prophetic fire, can accomplish. He founded a monastic order with no perpetual vows, and with charity as the bond of union. Its members are known as the "Fathers of the Oratory."

NERO, CLAUDIUS CÆSAR, the last of the Cæsars, ruled as Emperor of Rome from 54 to 68 A.D. To give a list of his crimes would be tedious and unprofitable. Among those he murdered were his own mother and two of his wives. He invented specially cruel deaths for the Christians, whom he accused of burning the city. Nero's extravagance and oppression caused numerous conspiracies, and at last he committed suicide to escape Galba's victorious army.

NERVA, Emperor of Rome from 96 to 98 A.D., was a man of great wisdom and moderation. Being aged when he obtained the throne, he adopted as his son the energetic Trajan, by whose aid he accomplished the great reforms he had at heart.

NESSUS, in classical mythology, one of the Centaurs, who tried to carry off Deianira, the wife of Hercules. Hercules shot him with a poisoned arrow, and Nessus in his last moments implored Deianira to preserve his blood, as a sure means of keeping her husband's love. Later on Deianira, having dipped a shirt in the blood, presented it to Hercules, and the poison in it killed him.

NESTOR, in Greek legend, king of Pylos, in Greece, was distinguished in youth for valour, and in age for wisdom. At an advanced age he took part in the war against Troy, and his counsels were much sought by the Grecian leaders.

NESTORIANS, a sect of Christians that arose in the 5th century, and rapidly grew in the east until the 13th century, when their numbers began to decrease, and now there are but a few left, who inhabit the mountains of Kurdistan. See *Nestorius*.

NESTORIUS, patriarch of Constantinople, in the early part of the 5th century, maintained that the Virgin Mary could in no sense be called the "Mother of God," although she was the mother of Christ. He was therefore accused of maintaining the two-fold personality of Christ, instead of his two-fold nature (human and divine). He was accordingly deposed, but he had many followers, and the sect is even now not extinct.

NETHERLANDS, THE, a name denoting the tract of country forming the kingdoms of Holland and Belgium. It is the north-western portion of the Great European Plain, and much of it, especially in Holland, lies below the level of the sea. In the Middle Ages it was divided into a number of duchies, counties, and marquisates, all owing a more or less rigid allegiance to the head of the German Empire, but independent of one another. In 1572, owing to the cruelties inflicted on Protestants by the Inquisition, the northern provinces, Holland and Zealand, taking the lead, revolted against Philip II. of Spain. Thus arose the republic of the United Netherlands, now the Kingdom of Holland. The southern provinces remained attached to the Empire till the time of Napoleon. After Waterloo, Holland and Belgium were made one kingdom, but were never comfortable together, and in 1831 the Belgians set up a kingdom of their own, under Leopold of Saxe-Coburg.

NETLEY, a small Hampshire village 3 miles south-east from Southampton. The ruins of the abbey, founded in the 13th century, are imposing, and the Hospital for soldiers, founded after the Crimean War, worth a visit.

NETS. See *Fishing.*

NEVA, a short but deep river in Russia, conveying the water of Lakes Ladoga and Onega to the Gulf of Finland. It is frozen from November to April. St. Petersburg stands on it.

NEVILLE'S CROSS, an old cross on a hill near the city of Durham. Here David of Scotland was routed by the troops of Queen Philippa, wife of Edward III., when he invaded England to aid his friends the French, in the absence of the English king, then in France (1346).

NEWARK, an interesting town of Nottinghamshire, on the right bank of the river Trent, is an important agricultural centre. Its history begins with the Romans, who found here a British town, which they improved into an important station. King John came here to die after being caught in the Wash. The castle, now in ruins, stood three sieges in the Civil Wars; population 15,000.

NEW BRUNSWICK, a small, but exceedingly flourishing province of the Dominion of Canada. With an area of 27,000 square miles, nearly equal to that of Ireland, it has a population of only 330,000. The soil is fertile; the rivers are numerous and navigable; harbours are good; coal and iron abound; everything is there to tempt the industrious settler. St. John, population 40,000, on the Bay of Fundy, is the chief town, but Fredericton, 90 miles up the St. John river, is the capital.

NEWBURY, a town of Berkshire, on the Kennet, 17 miles west of Reading, is a thriving and interesting place. Two battles, in 1643 and 1644, neither very decisive, were fought here in the Civil War; population 11,000.

NEW CALEDONIA, an island belonging to France, lies just about half-way between Australia and the Fiji Islands. Its area is about 8,000 square miles, and its value to France is chiefly as a station for convicts. Many communists were sent there after the anarchy that prevailed in Paris when it had surrendered to the Germans, 1871.

NEWCASTLE-ON-TYNE, the principal city of Northumberland, situated 8 miles from the mouth of the river, a busy port and a thriving manufacturing town. As a port it depends mostly on the export of coal, and, as a manufacturing town, on the manufacture of iron and on shipbuilding. The Elswick works, founded by Messrs. Armstrong, turn out guns and ships for our own and foreign navies. As a shipbuilding town, Newcastle comes close to Glasgow. Newcastle has seen something of nearly all the struggles that have taken place between England and Scotland. Its history dates back to the Roman period. Its chief magistrate is now styled Lord Mayor. (For population, etc., see p. 902.)

NEWCHWANG, the principal port of Manchuria, is situated near the mouth of the river Liao, flowing into the Gulf of Pechili. Opened as a port to foreign trade by the Chinese in accordance with the treaty of Tien Tsin, in 1858, it has grown in importance until in 1899 its total trade was £7,000,000.

NEWCOMEN, THOMAS, a locksmith of Dartmouth, in Devonshire, may fairly be said to have been the first to put the steam-engine to practical use. The steam-engine, for which he took out a patent in 1705, remained the type in use for pumping water out of the Cornish mines till towards the end of the century, when Watt added the condenser.

NEW ENGLAND, the district in the U.S.A., comprising the States of Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, and Connecticut. Here settled the bulk of the English Puritans and Scotch Presbyterians who, in the time of the Stuarts, crossed the Atlantic to enjoy religious freedom. The inhabitants are enterprising and industrious, and to them properly belongs the name of "Yankees."

NEW FOREST, THE, a district in Hampshire, lying west of Southampton Water, and extending westward about sixteen miles to the Southern Avon. About two-thirds of it is Crown property, and is preserved as open woodland or heath. Oaks and beech trees abound, and the whole district is one of singular sylvan beauty. Lyndhurst, population 2,000, nearly in the centre, is the chief village; Brockenhurst, Lymington, and Beaulieu are next in importance. The town of Ringwood is on its western border.

NEWFOUNDLAND, an island and British Colony on the east of Canada, at the entrance to the Gulf of St. Lawrence. Its area is 40,000 square miles, much of it is productive, but the inhabitants, 216,000 in number, depend almost wholly on the fisheries, and their attendant industries. The total value of codfish caught and exported, in some form, is near £2,000,000. The fishing "rights," so long possessed by the French to the serious detriment of Newfoundlanders, were extinguished by the treaty with France of April, 1904, which settled so many risky questions between that country and our own. St. John's, in the east, is the capital.

NEWGATE, long the chief prison of London, was a gloomy stone building east of Holborn Viaduct. Its history goes back to 1218. It was destroyed in the Great Fire of 1666, and again partially in the Gordon Riot of 1780. The last public hanging was in 1868, and in 1902 Newgate was pulled down. On its site will stand the Central Criminal Court.

NEWGATE CALENDAR, a list of the prisoners who have been confined in Newgate prison, with an account of their lives and crimes so far as could be ascertained. The famous prison, one of the oldest in the country, is now pulled down.

NEW GUINEA, OR PAPUA, the largest island in the world except Australia, has an area of 305,000 square miles, of which 90,000 are now definitely acknowledged as British territory, forming a Crown colony in association with Queensland. The Dutch claim the western half of the island and the Germans the portion north of our territory. The inhabitants are not numerous, but they vary surprisingly in habits and language, the people of one part being sometimes unable to comprehend the language spoken only a few miles away. The development of Papua is a matter for the future.

NEWHAVEN, a seaport in Sussex, eight miles east of Brighton, derives its importance from its steamboat communication with Dieppe, and also with Normandy and the Channel Isles; population 7,000.

NEW HOLLAND, a name formerly given to Australia by the Dutch, who first explored its north-west coasts.

NEWMAN (John Henry), **CARDINAL,** *b.* 1801, *d.* 1890, one of the most remarkable Englishmen of the 19th century, was the son of a London merchant. At the age of fifteen he felt a distinct "call" to prepare himself for the ministry. He had a brilliant career at Oxford, where in 1822 he became fellow of Oriel, and where he resided till 1843, exercising an extraordinary influence by his preaching and his personality. In 1833 he joined the "Oxford Movement," and wrote many of the "Tracts for the Times." He was for some years the friend and associate of Dr. Pusey, both striving to mould the Church of England on "Catholic principles;" but, in 1843, Newman's religious views compelled him to resign his living in that Church, and in 1845 to join the Roman Catholic Church. His writings, both in prose and verse, are marked by clearness of thought and purity of style. They include the "Dream of Gerontius," the "Apologia pro suâ vitâ," and the beautiful hymn, "Lead, kindly Light." He was made cardinal in 1879.

NEWMARKET, a town on the borders of Cambridgeshire and Suffolk, owes its prosperity almost entirely to the races held on its heath, and to the training of horses carried on in the neighbourhood. The race-ground on the heath is one of the finest in the world.

NEW MODEL, THE, a standing force raised in 1645 by the Parliament, to act against Charles I. Well paid, trained, and disciplined, it proved too much for the irregular forces it had to encounter, and justified the confidence of Parliament.

NEWNES, SIR GEORGE, *b.* 1851, educated at the City of London School; was the originator of that form of literature of which his own "Tit-Bits" is a type. Starting in a small way in 1881, "Tit-Bits" grew until its circulation and the number of its imitators seemed endless. The paper is now in the hands of a company owning the "Strand Magazine" and many other publications; *d.* 1910.

NEWNHAM COLLEGE. Refer to *Index.*

NEW ORLEANS, population 317,000, the most considerable city in the south of the United States, stands on low ground at the mouth of the Mississippi river. It can never, from its situation, be a healthy city, but all is being done that is possible to improve its sanitary state. It is the great outlet for the productions of the Southern States, its exports amounting annually to about £30,000,000. New Orleans saw, in the war of 1812–14, the English general, Pakenham, killed and 2,600 of his men placed *hors de combat,* while the Americans under Jackson lost but 8 killed and 13 wounded.

NEWPORT, in Monmouthshire, 4 miles from the mouth of the river Usk. It is a rapidly rising town. It has important iron and chemical manufactures, and exports large quantities of coal and iron. (For population, etc., see p. 902.)

NEW RIVER, an artificial channel cut (1609-20) to convey water from Chadswell Springs, in Hertfordshire, to London, a distance of 38 miles. Sir Hugh Myddleton, the designer, nearly ruined himself over the work; but the original shares, which in the reign of Charles I. would barely fetch £5 each, could not be purchased in 1900 for less than £100,000 a share. When, in 1904, the undertaking was transferred to the Metropolitan Water Board, the New River Company was awarded 6½ millions of its water stock bearing interest at 3 per cent.

NEW SOUTH WALES, the oldest colony of Australia, has now an area of 310,000 square miles. The parent state of Australia, its earliest English inhabitants were the convicts who were landed in Botany Bay in 1788. Free settlers soon followed, and by 1800, Sydney, the capital, had a population of 5,000, which has now grown to 500,000. Refer to "New South Wales" in *Index.*

NEWSTEAD ABBEY, the home of Lord Byron, the poet, is in Nottinghamshire, about 10 miles north of Nottingham. It dates from 1170, and was given to an ancestor of the poet in 1540.

NEW STYLE, a name given to the present mode of regulating the calendar, when it was adopted in 1752. Russia is the only European country that still clings to the "Old Style," which is now thirteen days behind. (See *Calendar.*)

NEWTON, SIR ISAAC, *b.* 1642, *d.* 1727, a great mathematician and philosopher, was born—the house still exists—at Woolsthorpe, in Lincolnshire. Whether the fall of an apple suggested the investigation or not, undoubtedly the discovery by him of the law of gravitation marked an epoch in science. He made great researches into the nature and phenomena of light. In practical life also his services were great, for as Master of the Mint he made many improvements in the coinage.

NEW YORK CITY, population 3,800,000, the largest city in the United States, and second only in size and importance to London, is situated near the mouth of the Hudson River. About half its adult male population were born outside the United States. Its "sky-scraper" buildings, some of them over 20 storeys in height, are a feature of the city. About half the commerce of the United States, to the value of £100,000,000 annually, passes through New York, and its prosperity seems to be still increasing.

NEW ZEALAND. Refer to *Index.*

NEY, MARSHAL, one of Napoleon's most famous marshals, took the oath of allegiance to Louis XVIII. after Napoleon's abdication, and became one of his favourite subjects. On Napoleon's return from Elba he deserted to his old chief, and being taken prisoner after Waterloo, was shot as a traitor.

NIAGARA FALLS, between Lakes Erie and Ontario, are formed by the river Niagara, which drops about 150 feet in sheer descent. About 100,000,000 tons of water fall each hour, developing, it is said, horse-power enough to drive all the machinery in the world. Goat Island, at the top of the falls, divides them into two nearly equal parts; that on the Canadian side is known, from its shape, as the "Horse Shoe Fall."

NIBELUNGENLIED, a German epic poem, whose origin and history, like that of the Iliad, is very doubtful. It was cast into its present form somewhere about 1,200 A.D., but its elements existed long before.

NICÆA, an ancient city of Asia Minor, the chief residence of the kings of Bithynia, and of many of the Roman governors. It is famed in Church history for the Council held in 325 A.D., the outcome of which was the Nicene Creed.

NICARA'GUA, an independent state of Central America, stretching from sea to sea. It has an area of 50,000 square miles.

NICE, an important French town on the Mediterranean Sea near the Italian border. It is a favourite winter residence with those whose inclination urges, and money enables, them to escape the English winter; population, 125,000.

NICENE CREED, THE, (see *Nicœa*) was adopted to declare the Church's belief in the Divinity of Christ, as against the teaching of the Arians, who maintained that He was not equal with God.

NICHOLAS, SAINT, the patron saint of Russia, is supposed to have been bishop of Myra, in Lycia, about 300 A.D. He is the patron of children, and especially of scholars. The name Santa Claus is simply a corruption of his name.

NICHOLAS I., Emperor of Russia, *b.* 1796, *d.* 1855; was one of the most able and vigorous rulers Russia has ever had. Coming to the throne in 1825, he devoted all his energies to the Russianising of all his subjects, and their conversion to the Greek Church. The refusal of the English to join in the spoliation of Turkey, and his subsequent losses in the Crimean War, caused him great grief. He died in the course of the war.

NICHOLAS II., "Emperor of All the Russias," *b.* 1868, succeeded his father Alexander III. in 1894. His mother is a sister of Queen Alexandra, and his wife is a daughter of our Princess Alice, Duchess of Hesse-Darmstadt. The famous peace proposals which the Czar made to the Powers, in 1898, has resulted in the establishment, at The Hague, of a permanent Arbitration Court for the settlement of international disputes. In 1905 the Czar decreed the formation of a representative body called the Duma (which see). His son, Alexis, was born in 1894, four daughters coming first.

NICHOLSON, JOHN, *b.* at Dublin, 1822, *d.* 1857, one of the most distinguished of the many English soldiers who have gained distinction in India, had an extraordinary influence over the natives. He is said to have done more than any one man to check the spread of the Mutiny. He was killed in the storming of Delhi.

NICKEL, a white metal whose ore is found in many countries, but abounds in Canada. It is especially valuable for covering other metals, as it is not much injured by damp, or by acids, except nitric.

NIEBUHR, BARTHOLD, *b.* 1776, *d.* 1831, a great German historian and critic, was born in Denmark. His History of Rome and other works show great originality, and the theories he advanced gave a great impulse to the spirit of inquiry.

NIEDERWALD, a hill overlooking the Rhine, opposite the town of Bingen. Here is the statue erected in 1883 as a national memorial of the Franco-German War of 1870–71.

NIGER, THE, the third in importance of African rivers, rises 150 miles from the West Coast and flows in a semi-circular course of 2,600 miles into the Gulf of Guinea. Timbuktu lies near its course. The Benue, its chief tributary, joins it on the left about 250 miles from the sea, which it enters by numerous mouths known as the "Oil Rivers," from the traffic in palm-oil, etc.

NIGHTINGALE, THE, a species of song-bird common in England in the summer, but departing in winter to warmer climes. It sings well into the night, commencing at dusk, and is considered the finest singing bird in the world. Its Persian name, the bulbul, is familiar in oriental fables.

NIGHTINGALE, FLORENCE, the heroine, in one sense, of the Crimean War, was not moved by a sudden impulse to her work there. Born in 1820, she had already spent years in investigating hospital methods and nursing practice. She was thus fitted to take supreme command of the nursing arrangements, and to suggest the various improvements that have helped materially to ameliorate the lot of the sick or wounded soldier on campaign, whilst setting a noble example of self-devotion in the service of suffering humanity. Received the O.M., 1907.

NIHILISTS are the direct product of the stern repressive rule of Nicholas I. of Russia, and its bureaucratic system of government. They aim at the overthrow of existing institutions, and the reconstitution of society on a socialistic basis. The assassination of the Czar Alexander II., in 1881, was due to the anarchist element among the Nihilists.

NIJNI-NOV'GOROD. See *Novgorod.*

NILE, THE, flows out of Victoria Nyanza and receives the overflow of Albert Nyanza. Thence, under the name of the *White Nile*, it flows north to Khartoum, where it is joined by the *Blue Nile* from Abyssinia. After that it receives the Atbara or *Black Nile*, also from Abyssinia, and flows on for 1,500 miles without another tributary. Its entire length is at least 3,500 miles. Below Khartoum its course is broken by six cataracts, and a few miles below Cairo it begins to form a delta of great fertility. Its principal mouths are the Rosetta and Damietta branches. The fertility of Egypt depends on the annual overflow of the Nile, which is brought about chiefly by the yearly rains of Abyssinia, the flood-water coming to the Nile by the Atbara. The supply of water for irrigation purposes has been greatly increased by the building of a gigantic dam at the First Cataract. (See *Assouan.*) The source of the Nile was a great mystery until recent times. In 1858 the Victoria Nyanza was discovered by Speke, and in 1864 the Albert Nyanza by Baker.

NILE, BATTLE OF THE, fought in 1798, between the English (under Nelson), and the French, in Aboukir Bay, near the mouth of the Nile. The French fleet of 13 ships was anchored in a single line at the mouth of the Bay. Nelson contrived to place half his ships between the enemy's ships and the shore, thus placing the French ships between two fires. The battle began at sunset and raged through the night. During the action the *Orient*, the French flag ship, took fire, and was blown to pieces. Only two of the French ships escaped capture or destruction.

NINEVEH, once the capital of Assyria, was situate on the left bank of the Tigris, opposite the modern Mosul. Its ruins have been carefully explored since Sir A. H. Layard began searching for them in 1843. Numerous sculptures and thousands of tablets have been discovered, enabling us to reconstruct Assyrian history for more than a thousand years B.C. The city had a circumference of more than 7 miles, and its walls were in parts 50 feet high.

NINGPO, a port of China, situated on the river Ningpo. It was one of the "Treaty Ports" thrown open in 1842. It exports tea, silk goods, and raw cotton, receiving opium, and cotton and woollen goods; population 255,000.

NINIAN, SAINT, a great and successful missionary preacher in the south of Scotland about the end of the fourth century. Many churches in Scotland are dedicated to him.

NI'OBE, (o-be) in Greek mythology, wife of Amphion, king of Thebes. Proud of her beautiful children, she exalted herself above the goddess Leto, who induced Apollo and Diana to slay all the children with their arrows. Niobe herself was changed into stone through her grief, and even then continued to weep for her misfortunes.

NIRVA'NA, "extinction," the Buddhist expression, imperfect though it be, for the change which, according to Buddhist doctrine, shall end our existence as individuals, and merge us in the being of the Eternal Creator.

NITHSDALE, (William Maxwell,) **EARL OF,** *b.* 1676, *d.* 1744; a Catholic and Jacobite Scotch lord who joined in the rising of 1715. Taken prisoner at Preston, and condemned to death, he escaped from the Tower in woman's clothes through the devotion of his wife. He died at Rome.

NITRIA, a district south-west of the delta of the Nile. Here are the Natron Lakes, around whose dreary waters the monks in the fourth and following centuries settled in great numbers.

NITRIC ACID, an acid with very definite properties, is obtained from nitre, or Chile saltpetre, by treatment with strong sulphuric acid. It acts very readily on metals and organic substances, whence the importance of great care in handling it.

NITROGEN. The remarkable fact about Nitrogen is its inertness, as compared with the activity of nearly all its compounds. Forming about four-fifths of our air, oxygen making nearly the other fifth, it serves

to dilute the oxygen in the atmosphere, and render it fit for us to breathe. It undergoes no change in our lungs, and seems to take no *active* share in the various processes of nature that go on around us.

NITRO-GLYCERINE is an exceedingly dangerous compound of nitric acid and glycerine. Unless most carefully prepared it is liable to explode spontaneously, and in any case will explode with a smart blow. United with cotton, or some such absorbent, it becomes less sensitive, and can be handled with comparative safety. Mixed with an absorbent earth named *kieselguhr*, it forms dynamite.

NITROUS OXIDE, a compound of nitrogen and oxygen, discovered by Priestley in 1772. Producing insensibility for a short time without any bad effects, it is much used as an anæsthetic in minor surgical operations.

NOBEL, ALFRED, *b.* at Stockholm, 1833, *d.* 1896; the inventor of dynamite and other explosives in which nitro-glycerine forms a prominent part. He made a large fortune out of his inventions, the bulk of which, about 1¾ millions, was left in trust to provide five prizes annually, one each for the greatest discovery in physics, chemistry, and medicine; one for the best literary work, and one for the man adjudged to have done the most in the year for the cause of universal brotherhood. Each prize is worth about £8,300. Among distinguished Englishmen who have gained these prizes are Lord Rayleigh, for Physics; Sir William Ramsay, for Chemistry; and Mr. William Cremer, for services in promoting International Arbitration.

NOBLE, a gold coin first minted for Edward III., and so named from being made of "noble" metal, i.e., gold. Its nominal value was half a mark, or 6s. 8d.

NOCTES AMBROSIA'NÆ, a series of papers mostly by John Wilson, better known under his "*nom de plume*" of "Christopher North." They purport to be records of evenings spent at a tavern kept by one Ambrose—hence the name—to which resorted the wits and literary celebrities of Edinburgh, in the early years of the last century.

NODES, two points at which the path of a planet cuts the plane of the ecliptic. The point at which the planet passes to the south of the plane of the ecliptic is called the descending node, and the other the ascending node.

NON-COMMISSIONED OFFICERS are subordinate officers who form a class between the commissioned officers and the rank and file. They are selected from among the private soldiers for their knowledge of military duties, and for their general qualifications, such as conduct, tact, and personal fitness.

NONCONFORMISTS, a name generally used to denote the religious sects that have separated themselves from the organization and communion of the English Church. Strictly, it denotes those sects that refused to submit to the terms of the Act of Uniformity (1662), and left the English Church. Refer to "Nonconformists" in *Index*.

NON-JURORS, holders of public offices who declined to take the oath of allegiance to William III. and Mary, because they held that James II. was king, by lawful and divine right. Among their numbers were Archbishop Sancroft, six bishops, and over 400 clergy.

NORE, THE, a sandbank 3 miles from Sheerness, guarded by a lightship. In 1797 British sailors on board the fleet mutinied here on account of their ill-treatment. Their pay was poor, and, in case of sickness or incapacity from wounds, it was stopped; their food was bad, and flogging was allowed. The leader, Richard Parker, was hanged with seventeen others.

NORFOLK, DUCAL HOUSE OF. The Howard family was settled in Norfolk as far back as the 10th century. In the 15th century Sir Robert Howard married the daughter of Mowbray, Duke of Norfolk, and his son, Sir John Howard, was created in 1483 Duke of Norfolk and Earl Marshal of England, an office hereditary in the family ever since. The present duke (1906) is the 15th to bear the title, and holds the proud position of "Premier Duke" of England. He served in the Boer War, and has done other good service, both in political and municipal affairs.

NORFOLK ISLAND, a small island about 900 miles east of Brisbane, belonging to Great Britain. The inhabitants are descendants of the mutineers of the British ship *Bounty*, who first settled in Pitcairn Island and removed here in 1855. It was formerly a station for the worst kind of convicts.

NORMAN ARCHITECTURE is the name applied to the style of building that flourished under the Norman kings of England (1066-1189). It is exemplified in almost all our cathedrals and in many of our old parish churches and castles. As a rule, it is characterised by the massiveness of its walls and columns, and by the exclusive use of the semicircular arch for doors, windows, arcades, and groining. Generally the windows are small and placed at a considerable height. One of the most pleasing features of later Norman work is the great wealth of intricate and even grotesque ornamentation with which the mouldings of doorways and arches were adorned. The general resemblance between Norman work and late Roman architecture has led to the use of the term *Romanesque*, to distinguish the Norman from the Gothic style that followed it.

NORMAN CONQUEST, THE, of England began in 1066, when Duke William of Normandy defeated the Saxon king Harold, at the battle of Hastings. William was elected to the throne by the Witenagemote, and crowned on Christmas Day, 1066. The chief posts in the Church, and the best lands in the country were given to Normans, but the English laws were not set aside, and the English language still held its ground, but was enriched by many words of French origin. In order to protect themselves from the power of the Norman nobility, the kings had to seek the support of the people and of the Church, and thus constitutional government began to develop. Through the chivalrous spirit of the Norman knights, the learning of the Norman clergy, and the refinement of the Norman ladies, a higher kind of civilisation in England was the result of the Norman Conquest.

NORMANDY, a province on the seaboard of Northern France. It took its name from the Norsemen or Danes, who settled there in the 9th century, and it was a duchy of the Kings of England from 1066 to 1204. Its chief city is Rouen, and Havre is its leading port. Its watering places along the coast, and its historic towns and handsome Norman churches have made it a resort of tourists. It is a country of well managed farm-lands, fruit farms, and orchards.

NORMANS, or **NORSEMEN,** the people of Denmark, Norway, and Sweden, who raided the shores of Western Europe, and effected permanent settlements in England and the Continent during the 9th and 10th centuries. They settled in Normandy and in the north and east of England; they invaded Russia, and they ventured as far as Constantinople, where they took service under the Emperor, and formed his Varangian Guard. As a rule, they attacked coast towns, and ran up the estuaries of the rivers in their long boats. Their popular name, *Vik-ings*, denotes that they were "dwellers in the creeks," a seafaring folk whose home was by the sea.

NORTHCOTE, SIR STAFFORD. See *Iddesleigh*.

NORTH, LORD, *b.* 1732, *d.* 1792; the chief minister of George III. from 1770 until 1782, the period during which the American Colonies won their independence and became the United States. He was a man of ability, resource, and good-humour, but his power was more nominal than real, the king keeping all real power in his own hands.

NORTHALLERTON, the chief town of the North Riding of Yorkshire, is an important junction on the North-East Railway, and a busy market town. Near it was fought the battle of the Standard in 1138.

NORTH AMERICA. See *America, North*.

NORTHAMPTON, the county town of Northamptonshire, stands on the river Nen. It is the centre of the English trade in boots, shoes, and leather. It has an interesting Norman Church, built by the Knights Templars in the 12th century. A battle in the Wars of the Roses was fought near this town, when Henry VI. fell into the hands of the Yorkists, 1460. (For population, etc., see p. 902.)

NORTH CAPE, a striking promontory forming the most northerly point in Europe, being about 6 miles further north than Cape Nordkyn, the most northerly point on the mainland. As the North Cape lies within the Arctic Circle, during each summer the sun remains continuously above the horizon for a few days. Hence tourists come here to see the "Midnight Sun."

NORTH SEA, THE, or **GERMAN OCEAN,** is a shallow sea with a maximum depth of 600 feet, situated east of Great Britain. It contains many sandbanks, one of which, the Dogger Bank, is a famous fishing ground, where large fleets of fishing-boats assemble during the summer months. The shallowness of the sea, with its variety and wealth of marine life, make it a great feeding-ground for shoal fish. This sea is one of the great commercial highways of the world. Many lines of passenger and cargo boats ply between the British ports of London, Harwich, Hull, Hartlepool, Newcastle, Leith, and Aberdeen, and the continental ports of Ostend, Antwerp, and Hamburg, together with the ports of the Baltic. Fog and stormy weather render the North Sea treacherous, the fog being particularly dangerous owing to the many in-shore sand-banks, and because of the large number of boats that are constantly crossing or coasting from port to port by well defined routes.

NORTHUMBERLAND, the most northerly county of England, has rich deposits of coal in the south, where the Tyne forms an excellent waterway for the development of the coaling and kindred industries. Between Newcastle and North Shields the river is lined with ship-building yards, chemical works, and coal wharves. Alnwick, the county town, is the centre of a district rich in historical associations. The Roman Wall, much of which is in an excellent state of preservation, crosses the moorlands west of Hexham.

NORTHUMBRIA, an old Anglian kingdom founded in the 7th century, and extending from the Humber to the Forth. Edwin, the first king of Northumbria, gave to Edinburgh its name.

NORTH-WEST PASSAGE, THE, was a route across the North Atlantic and the Arctic Seas, by which many navigators, from Hawkins to Franklin, vainly sought

to reach the Pacific. The names of the straits and bays of the Arctic coast of America stand as a record of the unavailing gallantry of these men. The passage has been discovered, but owing to the ice, is quite impracticable.

NORTH-WEST PROVINCES, THE, form a province of British India under the rule of a Lieutenant-Governor. It comprises the fertile and densely populated district of the upper waters of the Ganges and Jumna, and includes the towns of Meerut, Agra, Lucknow, Cawnpore, Allahabad and Benares; area 83,000 square miles, population about 36,000,000.

NORTHWICH, a town of Cheshire on the river Weaver, the centre of the salt-mining industry; population 15,000.

NORTON, THE HON. MRS., *b.* 1808, *d.* 1878; a novelist and poet, was a granddaughter of Richard Brinsley Sheridan.

NORWAY, the western part of the Scandinavian peninsula, is a mountainous country whose coast is indented into most beautiful fiords. From 1814 to 1905 it was united with Sweden under one king, but it now forms a separate kingdom. The capital is Christiania, and Bergen is the chief port. Hammerfest is the most northerly town in Europe. The population of Norway is 2,353,000.

NORWICH, on the river Wensum, is the county town of Norfolk, and the seat of a bishopric. Its cathedral has a fine Norman nave and an elegant spire. Formerly Norwich was the centre of a great woollen industry; now it manufactures crape, boots, and small textile goods. (For population, etc., see p. 902.)

NOSTALGIA, a word of Greek origin, meaning home-sickness. The Swiss are said to be particularly affected by it when long absent from their native land.

NOTATION OF NUMBERS is the art of expressing numbers in symbols, and of arranging them so as to simplify calculations. The Arabic notation employs the symbols 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, and we have retained these symbols in developing our common or *decimal system* of notation. The Roman notation is still retained by us in a few cases, such as the numbering of the Psalms and in dates on the title pages of some books, but it is awkward for calculations, and may be considered to be merely an interesting survival.

NOT PROVEN, a verdict allowed in criminal cases in Scotland when the evidence is insufficient for a conviction, but strong enough to give probability to the charge. The prisoner cannot be tried again for the offence, even though fresh evidence should be produced. A moral stigma, however, remains on him for life.

NOTRE DAME (Fr. "Our Lady"), a title of the Virgin Mary much used in France. Of the many churches dedicated to "Notre Dame," the great cathedral of Paris is the most noteworthy. This was founded in the 12th century, and thoroughly restored in the 19th. It suffered greatly during the Revolution of 1789 and the Commune of 1871. The façade and the flanking towers are considered very fine.

NOTTINGHAM, a handsome, well-built city on the Trent, largely employed in lace, hosiery, and leather industries. Its castle, magnificently placed on a limestone rock, commands a wide view of the Trent valley. In 1642 Charles I. raised his standard at Nottingham, and commenced his struggle against the parliamentary forces. (For population, etc., see p. 902.)

NOVARA, a town near Milan, where the Sardinians were completely defeated by the Austrians in 1849.

NOVA SCOTIA, a province of the Dominion of Canada, forming a peninsula, connected by a low isthmus with New Brunswick. Its western part is very fertile, and its apples are said to be the best in the world. Halifax, the terminus of the Inter-colonial Railway, has an excellent harbour and naval dockyard. Being free from ice in the winter, Halifax is the great winter port of the Dominion. The population is about 500,000.

NOVATIANS, THE, a Christian sect, followers of a priest named Novatian, who, in the 3rd century, taught that those who had fallen away in idolatry or grievous sin might not be received back as members of the Church.

NOVA ZEMBLA, an island off the north coast of Russia, forming, as it were, a broken continuation of the Ural Mountains. It was visited by Sir Hugh Willoughby in 1553, and is now an occasional resort of seal-hunters, fowlers, and fishermen.

NOVELS. The name *novel* is of Italian origin, and was used at first to denote short stories such as were written or collected by Boccaccio. The modern novel, however, is as far removed, in development and variety, from the mediæval story as the garden rose from the hedge-row briar. It covers the whole range of prose fiction under the general aim of delineating real life and character. It began to assume its present form in England after the Restoration (1660) under Defoe, Richardson, Fielding, Sterne, and Smollett, and one of its earliest features was that it brought women into the ranks of literary workers.

NOVGOROD, or **NIJNI-NOVGOROD,** a town on the Volga in Russia, 200 miles east of Moscow, and the seat of a great annual fair which lasts from July to September. Here the traders of the west meet the caravans of the east, and goods to the value of £18,000,000 are sold. Nijni-Novgorod (Lower Novgorod) is to be distinguished from Novgorod proper, which is about 100 miles south of St. Petersburg. Like all the great fairs of Europe, the annual fair of Nijni is declining under the extension of railways.

NOVUM ORGANUM, THE, "or Indications respecting the Interpretations of Nature," was part of a greater work which Bacon contemplated but did not complete. It deals with methods of scientific observation, and served to re-instate that system of minute observation and experiment which characterized the research work of the Ancient Greeks. The *Novum Organum*, which means "the new instrument," was published in 1620.

NOYADES, LES. (Fr. *noyade*, "drowning."), a series of public drownings committed by order of Jean Baptiste Carrier at Nantes during the Revolution. The prisons were full of Vendean captives (See *Vendée, La*), and to lessen the number he caused whole barge loads to be drowned in the Loire, whose water was so poisoned that its use for drinking and cooking was forbidden.

NUBIA, an ill-defined district to the south of Egypt proper, now included under the name *Egyptian Soudan.*

NUMIDIA, a Roman province of Northern Africa, corresponding with the northern part of modern Algeria.

NUMISMATICS, or the study of coins and coinage, is of great use as an aid to the study of history, and is interesting as a means of tracing the development and decline of art in different ages and different lands. The earliest coins were stamped on one side with the head or emblem of a deity, the other being at first left blank, but afterwards some local figure or emblematic group was added. The side bearing the head is called the *obverse* side, and the other the *reverse* side. Alexander the Great (300 B.C.) substituted his own portrait for the figure of the deity, and this practice has been followed since. The earliest English coins are the silver pennies of the Saxon kings. Edward III. introduced the gold *noble*, or half-mark (6s. 8d.), and the silver *groat* (4d.). The *mark* was a continental coin rather than an English one. He also struck *florins*, coins which took their name, and perhaps their value, from the banks of Florence. Edward IV. struck a coin bearing the figure of *St. Michael and the Dragon*, and, therefore, called an *angel*. *Sovereigns* and *crowns* were introduced by the Tudors, and the gold brought from the Guinea coast gave its name to the *guinea*, first struck in the reign of Charles II. The portraits on the obverse of English coins may be considered authentic from the time of the Tudors.

NUNC DIMITTIS, the name of the Song of the aged Simeon, who sang it in thanksgiving for having been allowed to see the infant Saviour (St. Luke ii. 29). The words *Nunc Dimittis*, "now thou art letting depart," are the two first words of the Latin version of the canticle, which forms part of the Evening Service in the English Prayer Book.

NUNCIO (Italian *nuncio*, "a messenger,") a papal ambassador who is not a cardinal. In the latter case the ambassador is called a *legate*.

NUNS, members of religious orders of women bound by their vows to a life of celibacy and seclusion. Like monks, they are separated from the world, and the act of initiation is known as "taking the veil." The Mother Superior, or Abbess, possesses extensive powers over the sisters or nuns of her Convent; but as the priestly offices cannot be performed by a woman, each community is under the jurisdiction of a bishop.

NUREMBERG or **NURNBERG,** in Bavaria, the most quaint and fascinating of mediæval German towns, is the centre of an industry in wooden toys and in watches. It is a city of quaint-gabled houses, of beautiful bridges, and handsome fountains, of narrow overhanging streets, and of old-world courtyards; population, including the suburbs, 265,000.

NUTATION. (1) The point in the heavens to which the earth's axis points, and which is known as the *celestial pole*, is not fixed, but describes a circle among the stars, the circumference of which is a sinuous line. The backward and forward motion of the pole which produces the sinuosities is known as Nutation (L. *nutare*, to nod), and is due to a similar motion of the earth's axis, which arises from the fact that, from time to time the moon exerts a greater attractive force on one pole than on the other. (2) In Botany, the turning of plants and flowers towards the light. The movements are produced by unequal growth. Cases of *simple* nutation are seen in plants grown in windows. The growth is more vigorous in the parts removed from the direct light, and the plants bend towards the window. In some cases there is a more vigorous growth of each side in succession, and the nutation is said to be *revolving*. This is conspicuously exhibited by climbing plants, such as the hop, bean, etc.

NUTMEG is the kernel of the stone inside a pear-shaped fruit that grows on trees about 25 ft. high, in Madagascar, Brazil, the Moluccas, and the West Indies.

NYANZA. See *Albert Nyanza* and *Victoria Nyanza*.

NYASSA, LAKE, discovered by Livingstone in 1859, is the southernmost of the Central African Lakes. It lies 400 miles from the coast, and its waters are carried by the Shiré river into the Zambesi. It has an average width of 40 miles, and is 400 miles long.

NYMPHS were the female divinities who, according to Greek mythology, in-

habited the ocean, the streams, the woods, meadows, hills, and fountains. The dwellers in the ocean and seas were called *Oceanides* and *Nereids;* those of the fountains and inland waters were known as *Naiads;* and those whose home was in the woods were named *Dryads.*

OAK, the most durable, the darkest and toughest of European timbers, is grown in all temperate climates as far north as latitude 64°. It is one of the longest-lived trees, and for that reason individual specimens have often served as landmarks as well known in their way as villages or buildings. As a material for building, the oak was formerly largely used for roof-beams and supports, but it was for the building of ships that the English oak was in greatest demand. From the reign of Charles II. until iron was used for ships, the Government kept a strict hold on the oak forests of the country. The bark of the tree is used for tanning. The gall or oak-apple is used in the manufacture of ink and also in tanning. Of recent years the timber has been extensively used for household furniture and cabinet work.

OAK-GALLS. See *Galls.*

OAKS, THE, a race for three-year-old fillies over the Derby course, run at Epsom on the Friday after the Derby.

OAKUM, the material produced by tearing asunder the strands of old hempen ropes. It is employed for caulking the seams between the planks of vessels to prevent leaking.

OASES are spots in the desert rendered fertile by the presence of water. The wells are usually surrounded by palm-trees, which offer a refreshing shade to the caravans that use the oases as resting places on their route. By sinking artesian wells, the French have created oases in the deserts of Northern Africa.

OATES, TITUS, the originator of the infamous "Titus Oates Plot," was an adventurer who, after disgracing himself whilst a naval chaplain, entered a Jesuit establishment in Spain, and was dismissed for misconduct. On his return to England, he alleged that the Roman Catholics were conspiring to kill the king and to overturn the government. The result of this and other false evidence was that eighteen prominent Romanists were put to death. Oates was himself imprisoned for perjury, but was released subsequently and granted a pension.

OATS, a grain crop that flourishes in latitudes too cold for wheat. They are brought to great perfection in Scotland, the North of England and Canada. They form an invaluable food for horses, and yield the well-known oatmeal.

OBELISKS, (1) are four-sided monuments of stone with pointed tops. Their proper position is on either side of the doorway of an Egyptian temple, and like Cleopatra's Needle, a well-known obelisk on the Thames Embankment, they were usually engraved with hieroglyphics. (2) are reference marks, thus (†)

OBER-AMMERGAU, a small town of 1,400 inhabitants, near the southern border of Bavaria, and 45 miles from Munich. Here the well-known Passion-Play is reverently acted by the inhabitants every tenth year. The last representation took place in the summer of 1910.

OBERON. In Shakespeare's "Midsummer Night's Dream," Oberon is the King of the Fairies, and husband of Titania. The story of his quarrel with Titania is also the subject of a poem by Wieland and of an opera by Weber.

OBLIVION, THE ACT OF INDEMNITY AND, passed in 1660, was an act of general pardon passed on the restoration of Charles II. With the exception of the regicides, who had sat in judgment on the late king, pardon was granted to all who had had a share in the troubles of the Civil War.

OBOE, or HAUTBOY, is a treble instrument to which the bassoon is the natural bass. Each is a reed instrument with considerable power of crescendo. The oboe has the privilege of giving the pitch to the stringed instruments in an orchestra.

OBOLUS, an ancient Greek coin of silver or copper, the sixth part of a drachma. It was the custom to place the coin in the mouth of a corpse as a payment to Charon for ferrying the spirit across the Styx.

O'BRIEN, JAMES FRANCIS, *b.* 1831, *d.* 1905. In 1867 he was condemned to death for taking part in a Fenian rising. The sentence was commuted to imprisonment for life, but after a few years' imprisonment he was released. He entered Parliament in 1885, and was a staunch supporter of Mr. Parnell until that leader's fall in 1890. He also held important offices in the Irish National League and the United Irish League.

O'BRIEN, WILLIAM, *b.* 1852, a journalist, author, and Nationalist M.P. He began life as a reporter, and in 1880 became editor of "United Ireland," which he had been instrumental in starting as the organ of the Land League. The part he took in the Irish agitation of 1887-91 led to his being prosecuted nine times and imprisoned for upwards of two years. He is also the founder of the United Irish League and of its organ, "The Irish People." His published works include "When we were Boys," "Irish Ideas," and "Recollections."

O'BRIEN, WILLIAM SMITH, *b.* 1803, *d.* 1864; an Irish patriot who entered Parliament in 1826, and was shortly afterwards imprisoned for resisting the authority of the Speaker. In 1841 he joined O'Connell in the agitation for the repeal of the Union, but separated from him on the question of the employment of physical force, and became the leader of the Young Ireland Party. An attempt at an insurrection in 1848 was easily suppressed; O'Brien was captured, tried, and sentenced to death. The sentence was commuted to transportation for life, and a pardon was granted in 1856. In the same year he published "Principles of Government" or "Meditations in Exile."

OBSCURANTISTS are those who wilfully hinder the advance of knowledge, progress, or reformation, or who look with distrust and prejudice upon a departure from old lines of thought.

OBSERVATORY, an institution furnished with the necessary means and appliances for making astronomical observations. Modern astronomical work dates from the discoveries of the astronomical clock, and of the use of the telescope by Galileo. National observatories, such as that at Greenwich, act as a central time-keeping authority, and undertake the important work of rating naval chronometers. The American observatory of Lick is one of the best appointed observatories of the present day.

OCCULTATIONS. When the moon intercepts and hides a star or planet from the view of observers on the earth, the star is said to undergo occultation, or hiding.

OCEANIA, a name applied to the islands and archipelagoes of the Pacific Ocean. It includes Australasia, the Malay Archipelago, and the innumerable islands and reefs that lie in the South Pacific Ocean.

OCE'ANUS. The ancients believed that the world was a flat plane, with an inner sea, the Mediterranean, surrounded by land. The Mediterranean communicated by the Straits of Gibraltar with an outer ocean, which they believed encircled the land, and to this they gave the name Oceanus.

OCHRES are natural earths used as colouring matter or pigments. They are found chiefly in Anglesey and Devonshire. The colouring matter in the earth is an oxide of iron, and although ochres can be prepared, the natural earths are much more permanent and reliable than the artificial colours.

O'CONNELL, DANIEL, *b.* 1775, *d.* 1847; an Irish orator and politician surnamed "The Liberator." He became famous as an advocate, was the leader of the agitation that ended in the Catholic Emancipation Act, 1828, and afterwards the leader of the agitation for the Repeal of the Union. Monster meetings were held (1840-43). At length these were proclaimed, and O'Connell was arrested and convicted for seditious conspiracy, but the sentence was reversed on appeal. The "Young Ireland" party arose in his old age urging the use of physical force, but O'Connell was opposed to their methods, and retired from public life in 1846.

O'CONNOR, FEARGUS, *b.* 1796, *d.* 1855. He was elected to the reformed Parliament of 1832 as a member for Cork, but subsequently was unable to secure a seat until 1847, when he was returned for Nottingham. He obtained considerable influence over advanced politicians, took an active part in the Chartist movement, and voiced the opinions of the Chartists in Parliament. In 1852 he developed symptoms of insanity, and was removed to an asylum.

O'CONNOR, THOMAS POWER, *b.* at Athlone, 1848. He has been a prominent member of the Irish Nationalist party since 1880, and has represented a division of Liverpool since 1885. A brilliant journalist, with a keen insight into the public taste, he excels in the writing of personal paragraphs and descriptive reviews. The latter, under the heading "A Book of the Week," he made a special feature of the *Weekly Sun* and *T. P's. Weekly.* He successfully launched the *Star*, the *Sun*, and *M.A.P.*, and founded another gossipy journal similar to the last with the title *P.T.O.*, in the first number of which he remarked, "Three times in succession I succeeded in making a paper into a property of value on the day it was started." He is the author of "The Parnell Movement," "Napoleon," and "In the Days of my Youth."

OCTAVIA, (1) the wife of Mark Antony, whom he deserted for Cleopatra. (2) the wife of Nero, who was divorced and executed by him.

OCTAVIUS, CAIUS. See *Augustus, Cæsar.*

OCTOPUS, an eight-limbed cuttle-fish found usually inshore, among the rocks, where it feeds on shell-fish and molluscs. They are timid creatures, but it is doubtful if the descriptions of the dangers of a meeting with the larger specimens are altogether fanciful. The giant octopus is certainly dreaded in Eastern seas. They have been known to reach the extraordinary length of 70 feet from the end of one limb to that of another, but few measure more than 20 feet. The majority of British species are quite small. The tentacles or suckers on the under side of the limbs enable them to cling to the rocks, and to bind down crabs and lobsters while the octopus crushes them with his parrot-like beak.

ODDFELLOWS are members of a Friendly Society for mutual assistance and insurance in case of sickness or death. "The Independent Order of Oddfellows" is a secret society whose lodges were united in 1813 as the *Manchester Unity.* The financial administration and the organiza-

tion of this pioneer society were admirable, and the Royal Commission of 1871–4 relied largely on the excellent tables and statistics provided by its officers in making the report that was embodied in the Friendly Societies Act of 1875. Besides the Manchester Unity, there is a smaller union known as the "*United Order of Oddfellows.*" The combined membership amounts to about one million. Refer to "Friendly Societies" in *Index.*

ODE, a lyrical poem originally intended to be chanted or recited to the accompaniment of a stringed instrument. Milton's "Ode on the Morning of Christ's Nativity," and Dryden's Odes, "For St. Cecilia's Day," and "Alexander's Feast," are among the greatest we possess.

ODER, THE, rises in Moravia, and flows through Silesia and Prussia to the Baltic Sea. Ratisbon, Breslau and Frankfort stand on its banks, and Stettin at the head of the Haff or estuary at its mouth. Its lower waters are sluggish, and navigation is impeded by accumulated silt.

ODESSA, the chief port of Russia on the Black Sea, exports sugar, wool, corn and flour. It is the fourth city of Russia in point of population. It is frequently visited by cholera, and it is regarded as one of the centres of Russian disaffection.

ODIN, or **WODEN,** the Scandinavian god of war, held his court in Valhalla, surrounded by the fallen heroes of the battlefield, and here two ravens brought him tidings of the outer world. His name is preserved in *Wednesday* or Woden's day, and in such place-names as *Wednesbury.*

ODYSSEUS or **ULYSSES,** the famous Greek adventurer, whose deeds are sung by Homer in the *Odyssey.* He was a man of great ability and cunning devices, and a great traveller. He gained the armour of Achilles in a struggle with Ajax, and was one of the heroes of the Trojan war. His wife Penelope, the ideal of wifely constancy, refused to listen to the temptation of the suitors who beset her during her lord's long absence.

ODYSSEY, THE, is a great epic poem written by Homer, recounting the doings and wanderings of Ulysses.

ŒRSTED, HANS CHRISTIAN, *b.* 1777, *d.* 1851, a Danish physicist and chemist, was one of the pioneers in the field of electro-magnetic research.

OFFA'S DYKE, an earthwork reaching from the mouth of the Dee to that of the Wye. It was probably a British boundary dyke, fortified, and utilised for defence by Offa, King of Mercia (758–796).

OGLETHORPE, GENERAL, *b.* 1698, *d.* 1785, founded the colony of Georgia in the reign of George II., who granted him the land for the purpose. His object was to provide a refuge for English debtors and for the persecuted Protestants of Germany.

OHIO RIVER rises in New York State, and joins the Mississippi 200 miles south of St. Louis. It passes Pittsburg, Cincinnati, and Louisville, and is navigable for 800 miles.

OHM, the unit of electrical resistance. All substances offer a certain amount of resistance to the passage of an electrical current, silver and copper resisting the least. An Ohm is the amount of resistance in a wire of pure copper, 485 metres long and one millimetre in diameter, at 0° centigrade.

OHM, GEORGE SIMON, *b.* in Bavaria, 1787, *d.* 1854; a celebrated mathematician and physicist, and the discoverer of Ohm's law. This law, that the strength of an electric current varies directly with the electromotive force causing the flow, and inversely with the resistance in the circuit, he first deduced mathematically, and afterwards proved by experiments.

OIL CAKE, the husk of certain seeds with the residual oil. It is made by pressing rape-seed, linseed or cotton-seed, so as to squeeze out most of the oil. It is used as a food for sheep and cattle.

OIL GAS, combustible gas produced by the decomposition of petroleum or other oil. The oil is passed from an air-tight reservoir, in regulated quantities, into retorts which are maintained at a red heat. In the retorts the oil is decomposed into a mixture of gases, which, after purification, may be conveyed through pipes to any desired point, or may be rendered easily portable by compression. The gas burns with a brilliant white light, and it is claimed for it, that, since it is entirely free from sulphur compounds, it contaminates the air less than coal gas, besides being more economical. It has been employed for lighting railway carriages, lighthouses, buoys, etc.

OIL WELLS are found principally in Pennsylvania and New York State in America, and near Baku on the Caspian. In the natural state they occur oozing from cracks in the rocks, but they are worked by boring into the rock. In the American petroleum area, the crude oil is transferred under pressure by pipes to the refining works.

OKU, BARON, *b.* 1847, a great Japanese soldier. He first proved his abilities as a soldier during the Satsuma Rebellion of 1877, in which he held the castle of Kumamoto four months while besieged by the insurgents, then forced a passage through their lines, and joined the imperial forces. He added to his reputation during the Chino-Japanese War, and in the great war of 1904-5 he played an important part. After gaining the victory of Kinchau, he took command of the left wing of the Japanese army in Manchuria, and assisted in the great battles of Liao-Yang, the Shaho, and Mukden.

OLAF, SAINT, *b.* 995, King of Norway, 1015, was a stern opponent of Norwegian paganism. He was deposed and the crown offered to Canute, against whom Olaf fell fighting. He was buried in Trondheim Cathedral, and became the national Saint of Norway.

OLBERS, HEINRICH, *b.* 1758, *d.* 1840, a German physician and astronomer, who discovered the minor planets Pallas and Vesta, and re-discovered the planet Uranus. He also invented a method for calculating the velocity of "falling stars."

OLD BAILEY, THE, was for many centuries the central Criminal Court of London. It has now been replaced by a new Court, built on the site of the famous Newgate Prison, and is often referred to as the "New Old Bailey." The Lord Mayor is nominally the presiding judge, but the Recorder of London, the Common Sergeant, or the Judge of the Sheriff's Court usually presides.

OLDCASTLE, SIR JOHN, Lord Cobham, a prominent Lollard in the reign of Henry IV. and Henry V., was instrumental in distributing the translations of the Scriptures made by Wyclif, and in maintaining travelling preachers. He was a gallant soldier and did excellent service in France. He was examined and condemned for heresy on the accession of Henry V. It is thought that his escape from the Tower was winked at, but he was recaptured in 1418, and burnt. Lollardy was considered a serious menace both to the Church, to the royal house, and to social order.

OLD CATHOLICS, THE, were at first a party established within the Roman Church, in 1870, by Dr. Döllinger and other professors at Munich, as a protest against the doctrine of the infallibility of the Pope. Afterwards they became a separate sect, and assumed their own organization, but they have declined in influence of late years.

OLD GROG, a nick-name of Admiral John Vernon, *b.* 1684, *d.* 1757, who used to wear grogram breeches and who aroused the angry feelings of his sailors by insisting that they should mix water with their spirits. Hence the name "grog" came to be applied to the rum and water served out to sailors.

OLDHAM, one of the leading cotton towns of Lancashire, lies about 6 miles north-east of Manchester. It owes its rapid growth to the rich coal beds in the immediate neighbourhood. In addition to the staple manufacture, silks, velvet, hats, machinery, and leather are produced. (For population, etc., see p. 902.)

OLD MORTALITY, the title of one of Sir Walter Scott's novels, published in 1816. As the introduction to the novel shows, "Old Mortality" was an eccentric stone-mason, named Paterson, who deserted his home, and spent his days in repairing the tomb-stones and inscriptions to Covenanters buried in out-of-the-way churchyards in Scotland.

OLD SARUM, the old town of Salisbury, 2 miles from the present city, now exists only as a grassy mound. Bishop Poore removed the seat of his bishopric to the new site in 1220, because it was more conveniently situated. The liturgy or *use* of Old Sarum was largely used by Cranmer in forming the Book of Common Prayer. Until 1832 Old Sarum continued to send members to Parliament.

OLD STYLE. See *Calendar.*

OLIPHANT, LAURENCE, *b.* 1829, *d.* 1888, a traveller, diplomatist and writer, who retired after a busy career in various parts of the world, to live as a religious recluse in Palestine.

OLIPHANT, MRS. MARGARET, *b.* in Midlothian, 1828, *d.* 1897, a prolific writer of fiction, biography, and history. She had the rare power of making details interesting, and the womanly gift of sympathetically portraying the gentler emotions. Her "Makers of Florence" Lives of "Edward Irving," "Jeanne d'Arc," and "Saint Francis of Assisi" represent a side of her work far removed from fiction, but demanding scholarliness and sympathy of treatment.

OLIVE, THE, is cultivated in southern Europe for the oil which is extracted from its fruit. It grows to a height of 20 to 30 feet, and has peculiar grey-green leaves, which give a characteristic colour to Italian landscapes.

OLIVER TWIST, the hero of a novel by Charles Dickens, is a gentle lad thrown among London thieves after an early workhouse life.

OLIVES, MOUNT OF, a ridge 700 feet high lying to the east of Jerusalem. At its foot, on the side of the city, lay the Garden of Gethsemane, and there our Lord used to retire in the evening after the turmoil of the day in Jerusalem.

OLLA PODRI'DA, a common dish in Spain, consisting of a stew of meats and vegetables. Hence it has come to mean a mixture or conglomeration.

OLNEY HYMNS, a collection of hymns composed at Olney, in Bucks, by the poet Cowper and the minister of Olney.

OLYMPIAD, the period of four years that intervened between the celebrations of the Olympic Games. It became common among Greek writers to reckon in Olympiads from the year 776 B.C.

OLYMPIC GAMES, THE, were held every four years amongst the Greeks in the pleasant valley of Olympia, and formed a grand national festival. None but Greeks might compete, and no women or slaves might be present. Competitors trained for ten months, and the victors

received as their reward a garland of wild olive.

OLYMPUS, MOUNT, a chain of mountains between Thessaly and Macedonia, fronting the Ægean Sea, with steep precipices. Its highest peak (9,750 feet), was considered in Greek mythology to be the abode of Zeus and the gods.

OMAR, THE MOSQUE OF, was erected on the site of the temple at Jerusalem, by the Mohammedan Caliph, Omar, who took the city in 636, A.D.

OMDURMAN, a small Soudanese town near Khartoum, the scene of the victory of Lord Kitchener over the Dervish forces on September 2, 1898.

OMAR KHAYYAM, a Persian poet and astronomer of the 11th and 12th centuries. His chief poem "Rubaiyat" has been translated into English verse by Fitzgerald. He took a leading part in reforming the Persian calendar, which approaches in accuracy the Gregorian style.

OMNIBUS, a four-wheeled public conveyance, so named because intended for the public in general, the word *omnibus* in Latin meaning "for all." (See *Shillibeer.*)

ON'EGA, one of the largest of European lakes, drains into Lake Ladoga, whose waters are carried by the Neva through St. Petersburg into the Gulf of Finland.

O'NEIL, HUGH, Earl of Tyrone, rebelled against the English in Ireland in 1597. The Earl of Essex failed to subdue him, but Lord Mountjoy, his successor, utterly defeated him and his Spanish allies, at Kinsale. Tyrone was pardoned, and died in 1616.

ONTARIO, the richest and most populous province of Canada, separated from Quebec by the Ottawa River, and extending along the northern shores of the Great Lakes, and beyond Lake Superior to the Lake of the Woods. From Toronto, its capital and chief town, large quantities of corn, fruit, petroleum, and timber are exported. The province is rich in minerals, the nickel supply being the greatest in the world; population about 2,200,000.

ONYX, a precious stone, largely used for cameos. It is marked by alternating stripes of black and white, and the best varieties are found in India.

OOLITE (o'-olite), a kind of limestone built up of round granules. The name means literally, the egg-stone, and it is so named from its markings having a general resemblance to the roe or eggs of fish; e.g. Portland stone and Bathstone.

OPERA, a dramatic composition set to music. It aims at combining the effects of vocal and orchestral music with the scenic and dramatic effects of the stage.

OPIE, JOHN, R.A., *b.* 1761, *d.* 1807, the son of a Cornish carpenter, became Professor of painting to the Royal Academy. His historical paintings "The Slaughter of Rizzio" and "Arthur and Hubert," are well known examples of the school of art in which he excelled.

OPIUM, a most valuable medicine obtained from the dried juice of the heads of poppies, gathered before they are ripe. The two central opium factories in India are at Patna and Ghazipur, on the Ganges. When used habitually as a narcotic, opium produces disastrous after-effects. In minute doses it blunts the nerves and allows the imagination to have freer play. Hence arises the terrible "opium habit" to which brain-workers have so often become victims. See *Med. Dict.*

OPIUM WAR, THE, 1840–2, had its immediate cause in the destruction of a large quantity of opium brought by British merchant vessels into China against the wishes of the Chinese government. The result of the war was that the Chinese paid an indemnity, opened Tientsin, Chifu, Chinkiang, Shanghai, Ningpo, Amoy, and other towns as "Treaty Ports," and ceded Hong Kong.

OPORTO, a seaport at the mouth of the Douro, in Portugal. It exports cattle, oranges and fruits, cork and copper, and it is the chief place of export for port wine, which takes its name from that of the town; population 140,000.

OPOSSUM, a marsupial about the size of a large cat, found in the United States. It is very timid and lives chiefly among the branches of trees. In the abdominal pouch, the young (ten to fifteen at a time) are nourished, and in it they take refuge when alarmed. Its prehensile tail greatly assists its movements. The appearance of death assumed by this animal when caught is probably due to temporary paralysis caused by fear. The fur is used for cloaks, muffs and trimmings.

OPTICS, the science which deals with the nature and properties of light. Of all the phenomena connected with light, none are more important than reflection and refraction, and to understand these it must be borne in mind that rays of light travel *from* an object *to* the eye, and that the image of the object or the object itself is seen in the direction in which the rays enter the eye; thus an image seen in a plane mirror appears opposite the object and equi-distant to it from the reflecting surface. *Refraction* takes place when a ray of light passes from one medium into another of different density, provided the ray does not strike the surface of the refracting medium at right angles. A close investigation of refraction has led to remarkable perfection in the construction of lenses for spectacles, telescopes, microscopes, etc., and to this phenomenon, through the agency of the spectroscope, is due the knowledge we have acquired of the constituents of most of the visible heavenly bodies.

ORACLE. Among ancient peoples, especially the Egyptians and the Greeks, it was customary, before embarking upon some important step, to resort to a temple and question a priest or priestess, or even, through one of them, a god or goddess, as to the success of the undertaking. The answer given was usually so ambiguously worded that it was rarely wrong. The name oracle was equally applied to the individual consulted, to the reply, and to the temple. The best-known oracles were those at Thebes and Ammonium in Egypt, and that at Delphi, in Greece.

ORANGE, a well-known fruit grown largely in most of the fertile parts of the world enjoying a sub-tropical climate. England's chief source of supply is Spain. The orange-tree is an evergreen, about 20 feet high when full grown. Of sweet oranges, the St. Michael from the Azores, the Maltese with its blood-red pulp, the large, juicy Jaffa, the Mandarin with its loose rind, the seedless Majorca and the tiny Tangerine are most esteemed. The bitter Seville orange is used for making marmalade. The leaves and flowers yield a volatile oil used in the manufacture of perfumes, especially Eau-de-Cologne.

ORANGE, a small town near Avignon, in the South of France, once the capital of a small independent principality of the same name. In 1531 the principality passed by marriage to the younger branch of the ducal house of Nassau. The Counts of Nassau, the leaders of this younger branch, became known thenceforth as Princes of Orange, and one of them became King of England as William III., in 1688. By the Treaty of Utrecht in 1713, the principality was annexed to France.

ORANGEMEN, a political society formed in 1688, to support the succession of William, Prince of Orange, to the English throne. It languished for many years, but was revived in 1795 to counteract the influence of numerous secret Roman Catholic Societies. Ireland is the head-quarters of this association, and it possesses many thousands of members in the colonies. In its organisation it resembles free-masonry, and its existence has been marked by opposition to Roman Catholicism and warm support of Protestantism.

ORANGE RIVER, THE, rises in the mountains of eastern Basuto Land, and flows for 1,000 miles in a general westerly direction into the Atlantic Ocean. The greater part of its course forms the northern boundary of Cape Colony. The Vaal is its chief tributary. It is of little use for navigation, owing to its shallowness in the dry season, and to the strength of its current after heavy rains. There is also a bar at the mouth.

ORANGE RIVER COLONY, a British colony acquired by conquest in the course of the Boer War (1899-1902). It was originally founded in 1836 by emigrant Boers from Cape Colony, and from 1854 to its annexation by Britain, existed as an independent republic under the name of the Orange Free State. The name Orange Free State, was resumed when it was incorporated as a province of the Union of South Africa, 1910 (see page 875).

ORANG-OUTANG, an anthropoid ape found in the forests of Borneo, Sumatra and Malacca. Its body and limbs are covered with reddish-brown hair, and, when standing, its arms extend nearly to the ankles. When full grown it attains a height of from 4 to 5 feet. Fruit forms its principal food, and in inclement weather it builds a rough nest or hut among the branches of trees. When taken young it is almost as docile as the chimpanzee.

ORATORIO, a sacred subject put to music, so called because musical compositions of this kind were first given in an *oratorio* or small mission-hall in Rome in the 16th century. Handel, Haydn, and Mendelssohn have produced the finest oratorios. Of Handel's oratorios the most celebrated are "The Messiah" and "Israel in Egypt." On an equality with these is Mendelssohn's "Elijah," and at a lower level, Haydn's "Creation."

ORBIT, the path followed by a heavenly body in its journey round any other heavenly body, e.g., the path of the moon round the earth, or of the earth round the sun. These orbits are usually of elliptical form, the centre of the larger and governing body occupying one of the foci of the ellipse. The orbits of many of the comets are parabolic.

ORCHARDSON, WILLIAM QUILLER, *b.* at Edinburgh, 1835, an eminent British portrait and subject painter. His first academy picture was hung in 1864. He became an associate in 1868, and 9 years later was elected an academician. His pictures, "Napoleon on the Bellerophon," "Her First Dance," and "Her Mother's Voice," are in the Tate Gallery. Other important pictures by the artist are the "First Cloud," and a "Mariage de Convenance"; *d.* 1910.

ORDEAL, a crude method of trial adopted by primitive peoples to settle disputes or to establish the guilt or innocence of one accused of crime. Ordeal by fire and ordeal by water were the two methods most commonly practised in the Middle Ages. The former consisted in grasping with the bare hand a red-hot iron, or in walking barefoot and blindfolded over nine red-hot ploughshares. The latter consisted in plunging the hand to the wrist or elbow into a vessel of boiling water and extracting a stone. In both

cases the degree of injury suffered was taken as a proof of guilt or innocence. The method was open to the practice of trickery by the judges, but may have been satisfactory in a period when ignorance and superstition were more likely to lead to an avowal of guilt.

ORDERLIES are soldiers detailed to perform certain routine duties connected with barrack life, or to act as messengers, etc., to commanding officers. It is the business of the orderly officer to pay visits of inspection to every barrack room, and to receive reports on defaulters or complaints concerning the rations. An orderly man in every barrack room is responsible during one week for the cleanliness of the furniture, etc., used in common by all the men.

ORDERS, HOLY. Refer to *Index*.

ORDERS IN COUNCIL are orders issued by the Sovereign with the advice of the Privy Council. Refer to "Privy Council" in *Index*.

ORDERS OF KNIGHTHOOD, ETC. In modern times these are associations whose members possess an honorary distinction conferred on them by the Sovereign or other ruling authority. The name "order" is also applied to the rank or title so bestowed. Of foreign orders the most important are:—Austria-Hungary, the Golden Fleece (1429); the Annunziata (1362); Prussia, the Black Eagle (1701); Russia, St. Andrew (1698); Japan, the Chrysanthemum (1876); France, the Legion of Honour (1802). Refer to "Orders of Knighthood" in *Index*.

ORDNANCE COLLEGE. Refer to *Index*.

ORDNANCE SURVEY, the survey of the British Islands undertaken by the Government for the purpose of map construction. The scheme was the outcome of the difficulties met with by the English troops in the Jacobite rebellion of 1745, and soon after that date the survey of northern Scotland was entrusted to the Master-general of the Ordnance. This led to a general survey of the British Isles, a task which occupied civilian surveyors and selected men from the Royal Engineers nearly a century, the work being completed in 1852. This survey was considered unsatisfactory, owing to the vagaries of different parliaments in the matter of scales, and in 1863 the survey was begun again on more systematic lines. The scales adopted were as follows:—towns over 4,000 inhabitants, 1-500th, and parishes in cultivated and populous districts, 1-2,500th of the linear measurement; counties, 6 inches to the mile; kingdom, 1 inch to the mile. The maps are extremely accurate, and in the case of towns and districts, show the most minute details. Apart from their scientific and military uses, they are valuable for railway and road construction and for various land improvements.

O'RELL, MAX. See *Max O'Rell*.

ORES. In nature very few metals are found in a pure state, and then only in small quantities. They are generally combined with other chemical elements. These compounds of the metals—oxides, carbonates, silicates, sulphides, etc., are known as *ores*, and are the sources from which the metals are derived. They occasionally occur in layers between the various rock strata, but more frequently as "veins" or "lodes," filling fissures in the masses of rock, where it is supposed the metallic matter has been deposited by the infiltration of water containing the salts of the metal in solution. In the "banket" reefs of the Transvaal and in other porous rocks, the ore is found distributed fairly evenly throughout the whole rocky mass, and has probably originated from the deposits from percolating water. The heavier ores are occasionally found in alluvial deposits or "placers," having been deposited by running water which has conveyed the lighter substances to a greater distance.

ORES'TES, a hero of Greek tragedy, who slew his mother Clytemnestra for the cruel murder of his father Agamemnon. Pursued by the avenging Furies, he fled to Athens, where, aided by Apollo, he was purged of his crime. His sister Electra married Pylades, the faithful friend of Orestes.

ORGAN. The principal parts of this musical instrument are (1) a wind-chest, in which air is compressed by means of bellows worked by manual labour, hydraulic power, an oil or gas engine, or an electric motor; (2) pipes of varying length, in which the musical notes are produced by the vibrations of columns of air; (3) a number of tubes and other mechanical contrivances for conveying air from the wind-chest to any particular pipe; and (4) the key-board, each key of which controls a valve which opens or closes the air passage connecting a pipe or set of pipes with the wind-chest. The largest instruments, such as the one in the Sydney Town Hall, that in the Albert Hall, London, and the organs of Notre Dame and St. Sulpice, Paris, have as many as five wind-chests and key-boards, each combination of a wind-chest with its key-board representing a distinct organ. Thus we have the *great organ*, a very powerful instrument; a smaller *choir-organ*; the *swell-organ*, enclosed in a case which may be opened or closed at the will of the performer, and thus produce effects of light and shade in the fulness of tone; the *solo-organ*; and the *pedal-organ*, the key-board of which is manipulated by the feet.

ORGIES, originally the secret rites observed at the festivals of certain mythological deities, especially Bacchus. The wild license which accompanied many such festivals has caused the word "orgies" to be applied to any gathering marked by drunken debauchery.

ORIEL WINDOW, an upper-story window with two or more sides, which stands out from the face of the wall, leaving a recess or "oriel" in the room within. It is supported by brackets or corbels, and such windows add much to the grace of buildings of the Elizabethan type. The name is seldom applied to windows constructed on the ground floor.

ORIENTATION, the act of turning, when engaged in religious devotions, towards the East. Applied to churches, it refers to constructing them so that an observer directly facing the chancel looks eastwards. This architectural detail, however, is by no means universal.

ORIFLAMME, a royal standard of France, so called because the staff was covered with gold and the outer edge of the red silk of which the flag was made was cut in the shape of flames. It was originally the banner of the abbey of St. Denis. Louis VI. (1108–1137), as protector of the abbey, adopted it as his standard, and until the reign of Charles VII. (1422–1461), it was the national emblem of France. "Mont-joie and St. Denis" was for centuries the French battle-cry.

ORIGEN, *b.* at Alexandria, 185, *d.* 254 A.D., one of the most famous of the Fathers of the Church, was the son of a Christian martyr. He became the leading lecturer in Alexandria on Christianity. His ordination as a presbyter by the bishops of Jerusalem and Cæsarea during his visits to Palestine, led to friction with the bishop of his native town, and he was expelled from Egypt. For twenty years he lived at Cæsarea, where his literary and theological lectures were largely attended. He died at Tyre worn out by tortures undergone during the Decian persecution. He was a prolific author of theological and other works, among which was his famous "Hexapla" (which see).

ORIGIN OF SPECIES, See *Darwinism*.

ORINOCO, THE, one of the great rivers of South America, rises in the Sierra del Parima in Venezuela, and after a circuitous course of 1,500 miles through magnificent tropical forests and extensive llanos, flows, by means of several channels, into the Atlantic. A natural canal, the Cassiquiare, joins it to the Rio Negro, a tributary of the Amazon. Numerous affluents make the volume of water in this river enormous, and for nearly half its course its width is over three miles, while during floods the width even at places far from the sea is often 100 miles. Navigation begins below the fine cataract of Atures, 900 miles from the sea.

ORKNEY ISLANDS, THE a group of islands off the north coast of Scotland, twenty-eight of which are inhabited, the largest being Pomona or Mainland, Hoy and Sanday. For many centuries they were held by the Norsemen and their descendants, but Denmark, in 1590, ceded them to James III. of Scotland. The islands are neither beautiful nor fertile, but great improvements have been made in the last fifty years in agriculture and the breeding of horses, sheep, and cattle. Kirkwall, the capital, is the centre of a cod and herring fishery; population less than 30,000, and decreasing, according to the census of 1901.

ORLANDO FURIOSO, "Orlando mad," the name of an epic poem by the great Italian writer, Ariosto, produced in the 16th century. It deals with the deeds of the famous knights of the court of Charlemagne.

ORLEANS, a city and important railway junction on the Loire, France. It lies in the centre of a fertile plain, and has figured prominently in history. The Huns besieged it in 451; the English invested the town in 1430, but failed to prevent Jeanne d'Arc from bringing effectual relief. During the Franco-Prussian war, in 1870, it was the scene of important operations. Its industries are inconsiderable, but its transit trade by rail, road, and canal is very large; population nearly 70,000.

ORLEANISTS, the name given to the adherents of the House of Orleans, one of the members of which, Louis Philippe, replaced Charles X. on the throne of France, as a result of the revolution of 1830. A revolution in 1848 led to his abdication and flight. His grandson, Prince Louis Philippe Robert, Duke of Orleans, still entertains hopes of recovering the French crown. In 1890 he entered Paris and offered to perform his term of military service as a Frenchman, but was forthwith conducted to the frontier. In 1896 he married an Austrian princess, and receives his adherents chiefly at Brussels.

ORMOLU, an alloy of copper and zinc closely resembling gold in colour and appearance. In France the term *or moulu* is applied to a paste composed of gold and mercury used for gilding.

ORNITHORHYNCHUS, a small aquatic quadruped found in parts of Australia and Tasmania, where it burrows in river banks. It has a soft thick fur of a dark-brown colour, a beaver-like tail, a broad flat bill like a duck, webbed feet, the hind ones possessing palms like the mole and spurs like the game-cock, pouched cheeks like the squirrel, and four horny teeth with which it chews the worms and water-insects that form its chief food. The

young are hatched from eggs, two in number, and afterwards suckled. The animal is very timid, and when full grown measures about 18 inches in length. Mallangong (the native name), duck-mole, platypus, water-mole, duck-bill, are variant names for the composite creature.

ORPHEUS, a legendary poet and musician of Greece, famed for his mastery of the lyre, which he received from Apollo. Dionysius (Bacchus) chose to regard him as a dangerous rival. He accompanied the Argonauts in their search for the Golden Fleece. He also descended into Hades to recover his wife, Eurydice, and by his marvellous music obtained her release, only to lose her again through disobeying the injunctions of Pluto. [See *Eurydice.*]

ORRERY, a mechanical model of the Solar System, which when set in motion illustrates approximately the movements of the planets and their satellites. It was first constructed in 1715 at the expense of Charles Boyle, Earl of Orrery, and though popular for nearly a century, is now regarded as a rather superior toy.

ORRIS ROOT, the dried underground stem of a species of iris, a native of the south of Europe. It was formerly largely employed in medicine, but is now chiefly valued for its perfume, which closely resembles that of violets. It is also used in the preparation of various tooth-powders.

ORSINI, FELICE, COUNT DI, *b.* 1819, *d.* 1858 ; an Italian revolutionist, a member of the society of Young Italy, and an ardent supporter of Mazzini. He took an active part in several abortive attempts at insurrection, was sentenced to the galleys for life in 1844, amnestied 2 years later, and condemned to death in 1855, but escaped from prison early in the following year. In 1858, by means of a bomb, he attempted to assassinate Napoleon III. and the Empress Eugénie as they were leaving the opera. He was condemned to death and executed.

ORTON, ARTHUR. See *Tichborne Trial.*

OSAKA, an important city and open port of central Japan. During the last ten years its trade has increased enormously, and it is now the chief centre of the tea and rice trade of Japan. It possesses a fine citadel and numerous canals; population exceeds 800,000.

OSBORNE HOUSE, a building in the Italian style standing in beautiful grounds on the crest of a gentle slope facing the Solent, about one mile west of Cowes. It was bought by Queen Victoria in 1845, and for many years it was her favourite winter residence. Here she died, January 22nd, 1901. Edward VII., in 1903, presented it as a gift to the nation, stipulating that it should be used as a convalescent home for military and naval officers. The rooms occupied by Queen Victoria are preserved and are open to the public. At Osborne, also, has been established a naval school, at which all cadets receive their first training.

OSCAR II., *b.* 1829, succeeded his brother in 1872 as King of Sweden and Norway. On several occasions during his reign the two countries have been on the brink of civil war, peace being maintained only by concessions on the part of the king. The union of the two countries was finally dissolved by a commission of the two parliaments in 1905, and Oscar II. now governs Sweden only. He has distinguished himself in literature, has translated poetical works into Swedish, and has published a volume of poems. His "Carl XII." is a valuable contribution to history.

OSIER, the name of several species of willow. In England, Holland, Belgium and France they are often planted in damp, alluvial soils, especially on or near river-banks, and cultivated for the sake of their long, tough and slender branches, which are employed in basket making. In appearance they are low and bushy with no pronounced trunk.

OSIRIS, the chief of the deities of Ancient Egypt, who probably represented Light and embodied all good agencies. After conquering Egypt, he was killed in a struggle with his brother Set, who was exactly opposite him in nature. Osiris was to the Egyptians, above all things, the beneficent God of the dead. He appears under many forms, particularly as the Sun and the Nile. The worship of Osiris continued up to the rise of Christianity.

OSMAN DIGNA, *b.* 1836, was the son of a slave dealer of mixed Arab and Turkish descent. He followed his father's profession in the Soudan, and helped to foment the rebellion of the Soudanese against the Egyptian government in 1881. He had great influence with the tribes and became the principal adviser and military commander of the Mahdi. He made two unsuccessful attacks on Suakim, 1883 and 1888. After the Mahdi's death he seems to have lost his influence, and shortly after the battle of Omdurman, in 1898, a body identified as his was found in the bush.

OSMAN I., *b.* in Bithynia, 1259, *d.* 1326 ; the founder of the Ottoman Empire. In 1299, with a band of Tartars, he forced the passes of the mountains in the north-west of Asia Minor, and, reinforced by robbers, escaped slaves, and prisoners, wrested several provinces from the Eastern Roman Empire. The territory thus acquired formed the nucleus upon which his successors built the Ottoman Empire, and in the course of a couple of centuries made themselves the first military power of Europe.

OSTEND, a busy port and watering place of Belgium. Its sea-wall, 3 miles long, makes a fine promenade, and the town contains ample accommodation for the 20,000 summer visitors who seek Ostend for health and pleasure. It has a considerable fishing trade, and exports dairy-produce, rabbits and oysters. From 1601 to 1604 it held out against the Spaniards in the great struggle for Dutch independence ; population about 20,000.

OSTRACISM, a method employed by the ancient Athenians of banishing citizens whose influence was considered prejudicial to the State. The right of pronouncing sentence of banishment was vested in the people, who, if there was a general desire expressed to exercise this right, deposited on a fixed day, in a sort of polling-station, a small earthen tablet called an *ostrakon*, on which was written the name of the individual that each voter considered deserving of banishment. Six thousand votes were necessary to drive a man into exile, and some of the most famous of Greek leaders underwent this punishment. No forfeiture of property or civil rights was entailed, and after five or ten years the exiles were allowed to return. Ostracism effectually checked the centralisation of power in one individual.

OSTRICH FEATHERS. England's chief source of supply in these feathers is South Africa, where, since 1867, the ostrich has been domesticated and is reared on farms specially devoted to the industry. Such farms also exist in Algeria, Egypt, Australia and California. The valuable white feathers with their graceful droop are obtained from the wings of the male bird, the feathers from the female being spotted and inferior in quality. Clipping begins when the birds are about nine months old, and is repeated every eight months, twenty to forty feathers being taken from each bird at a time. The plumes are most perfect in birds three years old. They are sold by the pound, the price varying from 30s. to £40.

OSTROGOTHS. See *Goths.*

OSWALD, SAINT, king of Northumbria, 625 to 642. During his reign he established Christianity in his kingdom, and laboured with the help of Saint Aidan to raise the condition of his subjects. He fell in battle against Penda, King of Mercia, the champion of the pagan element in England.

OTAHEITE, same as *Tahiti*, which see.

OTAGO, a large province occupying the southernmost portion of South Island, New Zealand. The name still exists, although the provincial system was abolished in 1876. It was first colonised, chiefly by Scotsmen, in 1848. The greater part of the province is mountainous, but in the east and south are many fertile plains and valleys. Rich gold fields extending over two and a half million acres exist, coal is abundant, and the output of wheat and oats is yearly increasing. Dunedin, the capital, is the chief port.

OTHELLO, one of Shakespeare's great tragedies, named from its chief character, a Moor of high spirit and generous nature in the military service of Venice.

OTTAWA, (1) a large and important tributary of the St. Lawrence which flows through valuable timber forests, and after a course of about 700 miles enters the St. Lawrence by two channels that enclose the island on which stands Montreal. (2) a very progressive town on the above river, and the capital of the Dominion of Canada. It has an enormous timber trade, the logs being brought down by the Ottawa and its tributaries. The Chaudiere Falls supply the motive power for numerous saw, flour and paper mills that line the river banks. The Canadian Pacific Railway passes through the city, and so does the Rideau Canal, which joins the Ottawa River to Lake Ontario ; population over 60,000.

OTTER, an aquatic fish-feeding mammal found in many rivers of Europe and Asia. Its feet are webbed and it is an expert swimmer and diver. The thick, soft fur is highly prized, but the English species is chiefly hunted for the sport it affords.

OTTERBURN, a village at the foot of the Cheviot Hills in Northumberland. Here, in 1388, an English army under Harry Hotspur was defeated by a much smaller Scottish force under the Earl of Douglas. Accounts of the battle are given in Froissart's "Chronicles," the Scotch ballad "Otterburn" and the English ballad of "Chevy Chase."

OTTO, or ATTAR, OF ROSES, a volatile aromatic oil prepared from the petals of various species of roses, particularly the damask and the musk rose. Roses are especially cultivated for this purpose in the Balkan Peninsula, North India, Persia and Syria. Otto is obtained by distilling rose leaves which have first been well mixed with water. Over 3,000 lbs. of petals are required to prepare 1 lb. of otto. Alone, it has too powerful an odour to be pleasant, and it is chiefly used in the manufacture of other perfumes, of soaps, and of dentifrices. Otto varies in price from 25s. to 40s. per ounce.

OTTOMANS, the name given to the Turks inhabiting the territories under the rule of the Sultan of Turkey. The Turks are of Tartar origin, and in the 6th century A.D. they occupied the banks of the Irtish. In the 11th century a powerful Turkish empire, including Persia, Media and Syria was founded in Western Asia. In 1299, on the fall of this empire, a Turkish chieftain, named Othman or Osman

descended, with his tribe, on the west of Asia Minor, wrested several provinces from the Eastern Empire of the Romans, and founded a sultanate which later developed into the Ottoman Empire, so called from its first founder. The Ottomans invaded Europe in 1355, conquered Macedonia, Albania, and Servia, captured Adrianople and fixed there their capital, and cut off the Eastern Empire from the west of Europe by a broad band of conquered territory. Constantinople fell before them in 1453, and has been ever since the centre of the Ottoman government. Under Suliman I. (1502–1556), the Ottomans reached the height of their power. Belgrade, the great bulwark of the West, fell to him, Rhodes was captured, Buda in Hungary taken, Persia subdued, and the finest islands of the Archipelago wrested from the Venetians. After his death, luxury, vice and official corruption crept in, and little now remains in Europe of a power that once threatened to overwhelm Christendom.

OUDENARDE, a small town of East Flanders, on the Scheldt, Belgium. Here, in 1708, the French under Marshal Villars were defeated by an allied army under the Duke of Marlborough and Prince Eugene.

OUDH, a province of British India enclosed by Nepal and the North-West Provinces. It consists principally of a gently sloping, fertile plain, watered by the Ganges, Gumti, Gogra and Rapti Rivers. It was under Mogul rule from 1194 to 1819, when the Vizier assumed the title of king. Its annexation by Britain in 1856 was one of the causes of the Mutiny, the Oudh sepoys turning against Britain almost to a man. It is administered by the lieutenant-governor of the North-West Provinces. Wheat, barley, rice, indigo, and opium are its chief products. Capital, Lucknow. Area, 23,966 square miles; population about 13,000,000.

OUIDA, pseudonymn of Louise de la Ramée, a popular English novelist, *b.* at Bury St. Edmunds, 1840. Among the best of her numerous books are "Strathmore," "Under Two Flags," "Puck," and "Moths"; *d.* 1908.

OUTRAM, SIR JAMES, *b.* 1803, *d.* 1863, a distinguished English general. Entering the army of the East India Company in 1819 as a cadet, he early showed great ability. He took part in the Afghan War, 1839, and in disguise rode in eight days from Khelat, through the enemy's country, to Karachi, a distance of 355 miles. In 1843 he successfully held Haiderabad in Sind against 8,000 Beluchis. In 1857 he led a brilliantly successful expedition against Persia to prevent the occupation of Herat by that country. During the Mutiny he aided General Havelock in relieving the Residency at Lucknow, and gallantly held it against overwhelming odds till it was finally relieved by Sir Colin Campbell. His tact on various missions, his chivalrous spirit in serving under Havelock, his junior officer, his skill as an administrator, and his fearless denunciation of official venality entitle him to the admiration and gratitude of his fellow-countrymen.

OUTRIGGER. 1. An iron bracket with a rowlock at the extremity, fixed to the side of a boat in order to increase the leverage of the oar without widening the boat. 2. A framework projecting from the side of certain sailing boats and canoes to prevent the vessel from heeling over.

OVATION, a lesser triumph granted to a Roman general whose conquests were not deemed worthy of the regular triumph. The general, crowned with a garland of myrtle instead of laurel, and preceded by a band of flutes in the place of trumpeters, entered the city on foot. The senate took no part in the procession to the Capitol, nor was the general necessarily accompanied by his army. The sacrifice offered consisted of a sheep.

OVERBECK, FREDERICK JOHANN, *b.* at Lubeck, 1789, *d.* 1869, a German painter who, with four fellow-artists, founded a new school of art by returning to Scriptural subjects as treated by Italian artists previous to the Renaissance. Though scoffed at and ignored for many years, his works at last brought him into prominence. His frescoes are much admired, notably those illustrating the history of Joseph. Of his oil-paintings, "The Influence of Christianity on Art," at Frankfort, and "Christ's Entry into Jerusalem," at Lubeck, are the best known.

OVERBURY, SIR THOMAS, a knight of considerable culture in the reign of James I., who was an intimate friend of Robert Carr, the unworthy favourite of that king. Overbury tried to dissuade Carr from his avowed intention of procuring a divorce between the infamous Countess of Essex and her husband, and then marrying that lady. Overbury's action coming to the ears of the Countess, she procured his arrest, and with the connivance of Carr, now her husband, had him poisoned in prison. In the resulting trial, the infamous pair were found guilty, but received the royal pardon, though banished from Court.

OVERLAND ROUTE, the route to India and the East across the continent of Europe. The quickest journey is made by taking train from Calais to Brindisi, whence a steamer leaves for Port Said, where the Indian steamer may be joined. Another favourite route, taking about two days longer, is to cross France by rail from Calais to Marseilles, and then take the boat which proceeds direct via the Suez Canal. The name was first applied to the route across the Isthmus of Suez (from Alexandria to Suez) before the canal was cut.

OVID, (P. Ovidius Naso,) *b.* 43 B.C., *d.* 17 A.D., a great Roman poet, who wrote the "Metamorphoses" and the "Fasti." For his licentiousness he was banished by Augustus to the shores of the Black Sea, where he died.

OWEN GLENDOWER. See *Glendower.*

OWEN MEREDITH, the nom-de-plume under which the second Earl Lytton published several volumes of poems. His chief productions are "Clytemnestra and other Poems" (1855), "Lucile" (1860), and "King Poppy" (1875).

OWEN, ROBERT, *b.* at Newtown, Montgomeryshire, 1771, *d.* 1858, a zealous social reformer. Born of humble parents, he rose by industry and ability to be partner in a cotton-mill at New Lanark, the other partners being, like himself, earnest reformers. All but 5 per cent of the profits were devoted to the social improvement of the employés. After thirteen years he severed his connection with this undertaking, and began setting up social communities on his own plans. Failure and loss of money resulted. In his later years he devoted much time to spiritualism. His "Book of the New Moral World" insists on social equality.

OWEN, SIR RICHARD, *b.* at Lancaster, 1804, *d.* 1892, one of the greatest of modern zoologists. From 1830 to 1856 he was engaged in producing valuable descriptive catalogues of the Hunter Collections in the Royal College of Surgeons, and in lecturing on Comparative Anatomy. From 1856 to his resignation in 1883 he superintended the Natural History Department of the British Museum. His patience, his wonderful knowledge and the wide range of his researches put him almost on the same level with Cuvier.

OWL, the name of a group of nocturnal birds, species of which are found in almost all parts of the world. Its head is large, the ears often provided with a kind of lid, and the eyes, which are directed to the front, have irises which expand under the influence of light, so as to reduce the pupil almost to a point during the day. The English variety, the barn-owl, feeds on insects and small mammals, such as mice. From its nocturnal habits and its uncanny screech, the owl has from very early times been regarded by the superstitious as a bird of ill omen.

OXFORD is situated between the rivers Isis and Cherwell, near the point where they unite to form the Thames. Its university is much celebrated. Parliaments were frequently held here, and during the greater part of the Civil War it was the head-quarters of Charles I. Its antique buildings, its beautiful surroundings and its numerous historical associations, make this one of the most interesting towns in the world; population 50,000. For "Oxford University" refer to *Index.*

OXFORD, EARL OF. See *Harley.*

OXFORD MOVEMENT, THE. The name of a famous religious movement in the Church of England, originating or finding its main support in the University of Oxford. Among its chief promoters were Keble, Newman, and Pusey. These and other earnest Churchmen wrote a series of Tracts, from 1828 to 1841, giving prominence to the sacramental system and corporate life of the Church. Hence the movement received the name of *Tractarianism.* The last tract of the series, "Remarks on certain passages in the Thirty-nine Articles," produced a crisis, which led eventually, 1845, to Newman and many others "going over to Rome," while Dr. Pusey remained as the leader of the High Church party.

OXYGEN, a widely-distributed, gaseous element which enters largely into many compounds, and is necessary for all animal life. It was first isolated from the air by Priestley in 1774. The commercial process of obtaining oxygen follows that of Priestley in principle. Barium oxide on being heated to a dull redness extracts oxygen from the air. On further heating, or by a reduction of the gaseous pressure, this additional oxygen is given up by the new compound and can be collected. Oxygen is odourless, colourless, a supporter of combustion and of life, and combines readily with other elements and compounds to form new compounds. The latter process is known as oxidation.

OYAMA, MARQUIS, *b.* 1844, chief commander of the Japanese army during the Russo-Japanese War. As Japanese military *attaché* to the French army during the war of 1870 he was able to observe the military methods and organisation of two European powers, and on his return to Japan he assisted in reorganising and modernising the Japanese army. He was employed in suppressing the Satsuma rebellion of 1877, and in the Chino-Japanese War he captured Talienwan, Port Arthur, and Wei-hai-wei. Under his supreme command the Japanese army was everywhere successful throughout the war with Russia. In 1906 King Edward conferred upon him the British Order of Merit.

OYSTER, a marine, bivalvular mollusc, much esteemed as an article of food. Before assuming its adult form it moves freely about. Oysters occupy beds varying in depth from 3 to 20 fathoms, but are often cultivated in shallow ponds of brackish water near the sea-shore. From May to

September, the breeding season, English oysters are not obtainable. It is calculated that each oyster produces about 400,000 eggs annually, of which only about 400 reach maturity. Unless grown in pure water, oysters are apt to contain germs of typhoid fever. The beds of Whitstable in England, Marennes in France, and Long Island Sound and Chesapeake Bay in the United States, produce the best-known varieties.

OZONE, a form of oxygen which occurs in small quantities in pure air and in the vicinity of electrical machines when working. Each molecule contains 3 atoms, while molecules of oxygen have but 2 atoms. Hence its density is to that of oxygen as 3 : 2. It has greater oxidising power than oxygen, bleaches some vegetable colours, and possesses a pungent odour. It is very unstable and decomposes rapidly into oxygen. Its deodorising power accounts for its absence in the air of crowded towns.

PAARDEBERG, a small place on the Modder River, in Orange River Colony, 30 miles south-east of Kimberley. Here Cronje, the Boer leader, surrendered to Lord Roberts, on February 27, 1900, with over 4000 men.

PACIFIC OCEAN, THE, separates America from Asia, and extends southward from Behring Strait, where it narrows to a width of 40 miles, to latitude 40° S. Its greatest breadth is 10,000 miles, greatest depth 5,269 fathoms, average depth 2,500 fathoms, and area 70 million square miles. The largest islands are found along the western shore, and include Japan, Borneo, the Philippines and New Guinea. Vast numbers of small islands of coral or volcanic origin occupy the tropical regions of the eastern half of this ocean.

PACTO'LUS, THE, in ancient geography, was a small stream in Lydia, Asia Minor, tributary to the Hermus. From its mud and sand was extracted much of the gold which made Crœsus, King of Lydia, proverbial for wealth. The river is identical with the modern Sarabat in Anatolia.

PADEREWSKI, IGNACE JAN, *b.* in Poland, 1860; a celebrated pianist. He studied at Warsaw and Berlin, but made his début at Vienna, in 1887. He attributes his success to strenuous and continual practice.

PADUA, a city of Northern Italy, about 25 miles west of Venice. It was of great importance in Roman times and during the Gothic occupation of Italy. Its University, founded in 1238, had a European reputation in the Middle Ages. Silk fabrics are largely manufactured, and its trade in grain, wine and oil is extensive; population 94,000.

PÆAN, in classical mythology, one of the names of Apollo, as the healer and deliverer of man. From the frequent recurrence of the word in hymns to Apollo, the hymns themselves were called *pæans*, whether they were hymns of prayer or praise; but the latter meaning alone remains now.

PAGANINI, NICOLO, *b.* at Genoa, 1784, *d.* 1840, a violinist of marvellous skill. At his first concert in 1793, when only nine years old, he gave proof of remarkable talent, and in later years he developed a wonderful power of execution.

PAGE. In Feudal times, pages were boys of noble birth who were attached to the households of sovereigns, noblemen, or distinguished knights, and there acquired a training in courtesy and arms. Usually they were the personal attendants of the ladies of the household, and on leaving boyhood, became esquires and finally knights. The system died out towards the end of the 15th century, but such pages are still employed on state occasions at many European Courts.

PAGET, SIR JAMES, *b.* at Yarmouth, 1814, *d.* 1899; a great surgeon of the 19th century. He had a hard struggle at first, but eventually got known as the first physiologist and pathologist in England, and perhaps in Europe. The Queen and the Prince of Wales had great reliance on him, and his works on "Surgical Pathology" and kindred subjects established his fame.

PAGODA, a name given to temples in India, China, and south-eastern Asia generally. Their chief characteristic is the enormous height to which they rise, sometimes thirteen stories in pyramidal form resting on the main building.

PAINE, THOMAS, *b.* Norfolk, 1736, *d.* 1809, a plausible writer on social and religious problems. Emigrating to America in 1774, he fought under Washington against England, and by his vigorous writings spurred the colonists to secure their independence. His "Rights of Man," a defence of the French Revolution, and a reply to Burke's famous essay, was produced by him in 1791, while on a visit to England. The pernicious influence of this work forced him to flee to France to escape prosecution. He became a member of the National Convention, but was imprisoned by Robespierre. During confinement, he began his "Age of Reason," a work which alienated many of his friends. Leaving France in 1802, he spent the remainder of his life in America.

PAISLEY, a manufacturing and shipbuilding town of Scotland on the Cart, near its junction with the Clyde, about 7 miles south-west of Glasgow. In the manufacture of cotton-thread Paisley is the principal centre among the industrial cities of the world. Shipbuilding, owing to the widening and deepening of the Cart, is progressing, and vessels up to 9,000 tons are now built there; population 83,000.

PALATINE (Lat. *palatinus*, "belonging to a palace."). The use of the word "palatine," as applied to a count, dates from the Roman Empire, and denoted an officer with special privileges and responsibilities. In England the "counties palatine" were Cheshire, Durham, and Lancashire; the first two by prescription, or immemorial custom, the last-named by creation by Edward III. The Earl of Chester, the Bishop of Durham, and the Duke of Lancashire had full "*jura regalia*" in their respective districts, that is, they exercised royal rights therein. The duchy of Lancaster has still its own Chancellor, in whose name a chancery court is held.

PALE, THE ENGLISH, the name given to that portion of Ireland under the actual government of the English from the nominal conquest of Ireland in 1170 to the completion of the conquest in 1603. The extent of the Pale varied considerably from time to time, according to the relative strength of the English and Irish, but the strip of coast-land between Dublin and Wexford was the part most firmly held by the conquerors.

PALERMO, an important port of north-west Sicily, and the administrative centre of the island. From 1071 to 1860 it was the capital of the Kingdom of Sicily. Silk goods, gloves and straw hats are manufactured, and fruit and agricultural produce exported; population 310,000.

PALESTINE, or the Holy Land, the birthplace of Christ, and the scene of most of the events of Old Testament history, is now the southern portion of Syria, which is itself a part of the Ottoman Empire. Lying between 31° and 33° 21′ N., Palestine is washed on the west by the Mediterranean, and on the east merges into the Syrian desert without any clearly defined boundary. Turkish misrule and the consequent industrial depression have rendered it no longer "a land flowing with milk and honey," but the slow though persistent immigration of steady hard-working Jews in recent years, a better irrigation system, and improved agricultural methods, promise a revival of prosperity. Olive oil, maize, oranges, citrons and a little cotton are exported. A railway connects the port of Jaffa—the ancient Joppa—with the capital, Jerusalem. Area, about 11,000 square miles; population 700,000, of which 14 per cent. are Jews and 80 per cent. Mohammedans.

Conquered in 332 B.C. by Alexander the Great, Palestine passed on his death to the Ptolemies of Egypt, and later, in 63 B.C., to Rome. An insurrection, 66–70 A.D., was crushed by Titus, who destroyed the temple at Jerusalem. The Saracens obtained possession of it in 636 A.D., the Seljuk Turks in the 11th century, and the Ottoman Turks, by whom it has since been held, in the early part of the 16th century.

PALESTRINA, GIOVANNI, *b.* 1524, *d.* 1594, a well-known Italian composer of sacred music. In 1562 he was engaged to reform the existing music of the Church, which had been severely condemned by the Council of Trent. To this end he wrote several masses, the finest being that of "Pope Marcellus," and by a happy combination of artistic and sacred feeling raised church music to a high level.

PALEY, WILLIAM, *b.* at Peterborough, 1743, *d.* 1805, a celebrated English divine and theological writer. He studied at Cambridge, was Senior Wrangler in 1763, and for many years lectured on Mental and Moral Philosophy. In 1776 he became vicar of Appleby, where he produced his "Evidences of Christianity," a work regarded long as a most conclusive defence of Christianity. His other great works were his "Horæ Paulinæ" and "Natural Theology."

PALI, an ancient dialect of India, current in Northern India when Buddhism arose. The Buddhist sacred books were written in Pali, as well as treatises on general learning, morals, etc. Many copies of these have been obtained in Ceylon, Burma, and Siam.

PALISSY, BERNARD, a famous French potter and scientist of the 16th century. After serving an apprenticeship in glass-work, he travelled through France and Germany, supporting himself by painting on glass and land surveying, and finally settled down with the determination of discovering the secret of enamelling pottery. In this he succeeded in 1557, after sixteen years of patient and expensive experiments, which frequently brought him to the verge of ruin. In 1572 he was called to Paris and appointed to the management of a royal pottery there. Imprisoned in the Bastille in 1585 as a Huguenot, he died there in 1589 at a ripe old age.

PALLADIUM, a great wooden image of Pallas, preserved at Troy, on which it was believed the safety and good fortune of the city depended. It was stolen by Ulysses in the Trojan war. Several ancient cities, including Athens, Argos and Rome claimed to have acquired possession of it. Used metaphorically, the word means a protection; thus, "trial by jury" is said to be the "palladium" of British liberty.

PALLAS, or **ATHENE.** (which see.)

PALLIUM, an ecclesiastical ornament of white wool sent by the Pope to archbishops on their application as a mark of his approval of their appointment, and a

recognition of their authority to consecrate bishops. It takes the form of a narrow band worn round the shoulders, with two strips, also of white wool, depending from it, one down the breast the other down the back. Black crosses are worked into the material. The pallium worn by patriarchs and metropolitans in the Greek Church is a scarf whose ends reach the ground.

PALL MALL, a well-known thoroughfare of London, whose name is derived from *paille-maille*, a game resembling croquet, which was played in grounds adjoining during the Stuart period.

PALM, an order of plants, the species of which figure largely in the vegetation of most tropical countries. The greater proportion of them are distinguished by tall, straight and slender trunks (without branches), crowned by large drooping leaves. Nearly all of them yield products useful to man. Dates, cocoa-nuts, sago, oil, a kind of wine, building timber, materials for thatching, basket and hat-making, and a fibre used in sail and rope making, are a few of the commodities obtained from the many varieties of palms.

PALMAS, LAS, an important port and health resort of the Canary Islands. It stands on the island of Great Canary, has a considerable harbour, and is a coaling station and port of call for the Union-Castle Line. Cochineal and fruit are exported; population 45,000.

PALMER, EDWARD HENRY, *b.* at Cambridge, 1840, *d.* 1882; had a marvellous gift of acquiring languages. His proficiency in Oriental languages brought him a fellowship at Cambridge in 1867, and employment by the Palestine Exploration Fund in 1868-70. During the Egyptian troubles of 1882 he was employed by the British government to conciliate the tribes of the Sinai Peninsula, and here he was murdered.

PALMER, JOHN, *b.* 1742, *d.* 1818; the "Rowland Hill" of the 18th century, was at first a theatrical manager at Bath and Bristol. In 1782 he conceived the idea of the mail-coach, i.e., a coach primarily for the conveyance of letters, though passengers might be taken. From 1784 to 1793 he was the autocrat of the post-office, introducing reforms innumerable; he then received a pension of £3000 a year, to which was afterwards added a grant of £50,000.

PALMER, ROUNDELL. See *Selborne*.

PALMERSTON, VISCOUNT, *b.* 1784, *d.* 1865, a distinguished English statesman. After graduating at Cambridge, he entered Parliament in 1807, and as Secretary for War from 1809 to 1828 made many judicious reforms and showed great business capacity. As Foreign Secretary under Whig Ministers during the periods 1830–4, 1835–41, 1846–51, he made a great name by his vigorous conduct of affairs, especially in safe-guarding the interests of Britons abroad. He succeeded Lord Aberdeen as Prime Minister in 1855, and carried on the war with Russia in the Crimea with renewed vigour and ultimate success. He was chiefly concerned during his parliamentary career with England's foreign relations, and his general policy as Premier was, during his later years, acceptable to the nation in general.

PALMISTRY, the art which claims to tell a person's future and past by studying the lines on the palm of the hand. This art is of great antiquity, and its practice is now chiefly confined to charlatans and gipsies, who still find clients among the credulous and curious.

PALM SUNDAY, the Sunday before Easter, commemorates Christ's triumphal entry into Jerusalem, when palm leaves were strewn in His path.

PALMYRA, the Tadmor of the Bible, is a ruined city lying in a small oasis about 140 miles north-east of Damascus, in the Syrian desert. It was fortified—perhaps founded—by King Solomon, and for many years guarded the northern frontier of the kingdom of Israel against the desert tribes. In 130 A.D. it fell under the suzerainty of Rome. Palmyra reached its highest prosperity under Zenobia, who, in 266, asserted her independence and styled herself "Queen of the East." By this foolish ambition she lost both her kingdom and her liberty. She was defeated and brought to Rome by the Emperor Aurelian, who later, in 273 A.D., reduced the city to its present ruined condition. Palmyra is still a favourite spot for the labours of archæologists.

PAMIR, THE, an extensive table-land in Central Asia, often styled "the roof of the world." It is the most lofty plateau in the world, its average height exceeding 13,000 feet. It lies at the junction of the Himalaya, Thian-shan, Kuen-Lun, and Hindu-Kush systems. In summer, a few wandering Kirghiz seek its scanty pastures for their sheep. Here, in 1895, a boundary was fixed, by agreement between England and Russia, separating the spheres of political influence of the contracting parties.

PAMPAS, THE, extensive treeless plains covered with grass (except during drought) in Argentina, Paraguay and Uruguay, South America. They support various Indian tribes and great herds of wild horses and cattle. These plains are gradually being turned into cattle-ranches; and sheep rearing—especially in Argentina—is increasing rapidly, and is already a profitable industry.

PAN, in Greek mythology, a rural deity, the protector of flocks and herds, wild beasts, fishes and bees. He is represented with the body and head of a man, and with a goat's hind-quarters, horns and beard. His worship spread from Arcadia through the other Greek States, and he was made to figure in the war of the Titans and in a musical contest with Apollo. Sudden fear without assignable reason was attributed to his influence, and hence called *panic*. He was credited with the invention of the syrinx or Pan's pipes.

PAN'AMA, a republic which includes the narrow isthmus of Panama or Darien, between Central and South America. It seceded from Colombia in October, 1903, and was immediately recognised by the United States. Its total length is about 480 miles, and a ridge about 300 feet high runs through it parallel to the coast.

PANAMA CANAL, THE. This great undertaking was begun in 1881, under Ferdinand de Lesseps, and after only 12 miles out of 54 had been completed, at the enormous expenditure of about fifty million pounds, abandoned in 1889. The United States in 1902 negotiated unsuccessfully with the government of Colombia for permission to resume the work. The secession of Panama in 1903 has smoothed away all difficulties, and it is expected that the canal, which is to have a depth of 30 feet, will be completed in ten years. Forming a short cut between the Atlantic and Pacific Oceans, it will doubtless become one of the world's great commercial highways.

PANCRAS, SAINT, a Roman youth of noble birth, who at the age of fourteen suffered martyrdom in Britain as a Christian during the Diocletian persecution, about 304 A.D. He has since been regarded as the patron saint of children.

PANDECTS OF JUSTINIAN, a collection of laws—contained in fifty books—drawn from the works of the leading Roman writers on jurisprudence. The work was carried out by order of the Emperor Justinian, in the middle of the 6th century A.D. By an imperial decree these laws were put in force to the annulment of all previously existing laws not included in them.

PANDO'RA, the Eve of Greek mythology, the first woman on earth, was created by Zeus to punish Prometheus for stealing the divine fire from heaven. She was loaded with gifts—hence her name, meaning "All gifts"—by the gods and goddesses, and sent as a wife to Prometheus. Suspecting treachery, he refused her and she wedded his brother Epimetheus. The latter, overcome by curiosity, persuaded her to open a box given her by Zeus, when from it escaped all mortal ills to overspread the earth, hope alone remaining.

PANJANDRUM, THE GRAND, a name invented by the actor-dramatist, Foote, and used by him in a passage of connected nonsense which he set as a test to the actor, Macklin, who was boasting, in company, of his memory. Foote never vouchsafed any information as to the character's antecedents, but the name is occasionally used humorously for imaginary Eastern potentates with vast powers.

PANKHURST. Mrs. Pankhurst, founder of the Women's Social and Political Union and leader of the aggressive Suffragists; sentenced to three months' imprisonment, 1908, for inciting to riot. Her daughter, Christabel, LL.B., of Manchester University, a Suffragist orator, and Secretary of the W. S. P. U.

PANORAMA, an "all-round view," is the name applied to paintings of extended scenes, which are slowly unrolled and rolled at opposite ends so that some part of the picture is always before the observer. In a *diorama*, the spectator stands in a darkened room and views the pictures through a small aperture. In these, both sides of the material used are painted, and by changing the colour of the light thrown on the picture the paintings blend, and a previously deserted street may be made to appear full of life. The *cyclorama*, which in its appearance of reality surpasses all previous forms of panorama, is a continuous picture painted on the wall of a circular room, and viewed from a platform in the centre. All these panoramic views are disappearing before pictures of the biograph type.

PANTAGRUEL, the hero of the second of Rabelais' satires. His exploits were on a par with his marvellous origin and infancy. Born when his father Gargantua was over 500 years old, he had to be fastened in his cradle with iron chains. His tongue was large enough to cover an army, and he was master of all earthly knowledge and wisdom.

PANTOGRAPH, a mechanical device for copying exactly the main outlines of drawings on a reduced or enlarged scale. Enlargement by photography has now rendered it practically obsolete.

PANTHEISM. Refer to *Index*.

PANTHE'ON, THE, a name specially applied to a splendid temple in Rome, erected about 25 B.C. and dedicated to all the gods. It is now a Christian Church known as Santa Maria della Rotunda. The Panthéon at Paris, whose dome is modelled on that of St. Peter's, Rome, was begun in 1764. It served both as a church and burial place for great Frenchmen till 1885, but is now used solely as a mausoleum.

PANTOMIME, originally a dumb-show actor, then a play acted in dumb-show, and now a theatrical display given usually at Christmas-time, for children and laughter-loving adults. In its present form it consists of two parts; the first, a burlesque of a nursery tale or popular fable, in which amusing songs and dialogues occur; the

second, a harlequinade in which figure the clown, the pantaloon, harlequin and columbine.

PAOLO VERONESE. See *Veronese.*

PAPAL STATES, territories in Italy, varying in extent from time to time, which for nearly 1,000 years were directly under the rule of the Pope. By various bequests, beginning in 755 A.D., and by the voluntary grants of many nobles in Italy, a temporal Papal State grew up, which at length had an area of over 17,000 square miles, with Rome as its centre of government. After the Austro-Italian war of 1859 nearly two-thirds of this area was added to the kingdom of Italy. Rome and its environs, however, were preserved for the Pope by the French until 1870, when their defeat by the Germans led to the withdrawal of their troops from Rome, which then became the seat of government of a united Italy.

PAPER. In the manufacture of this well-known commodity, fibrous substances are used, which, on being reduced to a pulp, still retain innumerable filaments. To meet the enormous demands of the press and commerce generally, over 400 varieties of woods and grasses have been called into requisition, linen and cotton rags being now used only in the manufacture of the very best writing paper. Nearly 200,000 tons of Esparto grass from Spain and North Africa, and over two million pounds worth of wood-pulp—chiefly from Norway and Sweden—are imported annually into England. Paper to the value of 4½ million pounds per year is imported into this country, Holland being the leading source of supply. In paper-making by hand the materials are reduced by machinery to a pulp, which, when ready, is poured into square frames with fine wire bottoms, where the pulp settles in a thin sheet. When sufficient water has drained off, this sheet is removed, pressed between sheets of felt, sized, and, if necessary, glazed. Of the paper now manufactured, about 99 per cent. is machine-made.

PAPIAS, a Christian writer who died about 162 A.D. From the few surviving fragments of his five books on "The Sayings of our Lord," information as to the authorship of the new Testament has been gathered. Among other statements he mentions Saint Mark as writing from Saint Peter's dictation. He is said to have been Bishop of Hierapolis, in Phrygia, but nothing definite is known of his life.

PAPIER-MACHÉ, a hard substance of woody appearance made from white or brown paper, with the addition of other materials to vary the quality. The ingredients are boiled and reduced to a kind of dough, which can be readily moulded, and serves as a good substitute for the softer kinds of wood. The name is also given to layers of coarse paper pasted together to form trays, etc., which are usually ornamented with mother-of-pearl or painted designs.

PAPUA. See *New Guinea.*

PAPY'RUS, a kind of rush reaching sometimes to a height of 10 feet, found in marshy districts of Abyssinia, Palestine and Sicily. In Egypt, where it is now rare, it supplied the "hieratica" used for priestly writing. The stems, after the removal of the outer coat, seem to have been sliced longitudinally, woven together by hand, moistened with Nile water to bring out the gum and form a united surface, then pressed flat, dried and finally smoothed. Up to the 10th century A.D. Egypt was the main source of the European paper supply.

PARABLE, the term applied specially to a short tale or story, the incidents in which are intended to suggest a moral or spiritual meaning. The Parable of the Sower, Matt. xiii. 3–8 and 18–23, with its close parallel explanation, is the type and key of this kind of narrative, and the most touching of all parables is that of the Prodigal Son, Luke xv. 11–32.

PARACHUTE, a contrivance attached to a balloon, by means of which the aeronaut may descend in safety from a great height. It is usually made of silk, and when opened out resembles a large umbrella. A hole at the top prevents the formation of a cushion of air during the descent, and thus secures steadiness.

PARADISE, a word of Persian origin, meaning a park. Xenophon, the Greek historian, introduced the word into Europe, and it was employed by the Greek translators of the Old Testament to represent the Garden of Eden. By extension it was applied to any abode of happiness, particularly to that part of Hades in which the saints departed are at rest and in peace. Milton in his great epic, "Paradise Lost," often uses the word in its narrower sense, "the Garden of Eden"; but in "Paradise Regained" the word is used in its highest sense.

PARADOX, literally, that which is "against opinion," is a statement or proposition contrary to commonly received opinion. It also means a statement that seems on the surface contrary to common sense, but in reality is perfectly true, the words being used in a special sense.

PARAFFIN, the name given to a white waxy solid, obtained by distilling coal-tar, wood-tar, but especially crude petroleum. It has neither taste nor smell, and is used largely in the manufacture of candles, and as a lining for metal tanks containing acids, for most of which it has no affinity. The name is also applied to liquid products of the distillation of the above-mentioned substances.

PARAGUAY, (1) a republic of South America, enclosed on all sides by Brazil, Argentina and Bolivia. It produces maize, rice, coffee and tobacco. Extensive forests yield over 60 varieties of timber. *Maté,* a good substitute for tea, consumed largely in South America, is obtained from shrubs which here grow wild. Great herds of cattle yield considerable quantities of hides and tallow, which are exported. Area, 145,000 square miles; population, 636,000. (2) a river of South America, rising in Brazil, in which country lies more than half its course. It flows southward through Paraguay and from Asuncion to its junction with the Parana separates Paraguay from Argentina. It was declared open to the trade of all nations in 1852, and is of great commercial value to Brazil and Paraguay. Length, about 1,600 miles.

PARASITES. (1) In botany the term is used for plants which attach themselves to another plant and nourish themselves upon its juices. This class includes many fungi. The mistletoe grows originally from seed and becomes gradually parasitical. The parasites which produce ring-worm and thrush are examples of vegetable parasites attacking animals. (2) In zoology the term is applied to animals that live on, and at the expense of, other animals. In contrast to this, see *Commensalism.*

PARCÆ, the name for three sisters in Greek mythology, to whom future events were known, and who spun out man's destiny in the form of threads. *Clotho* is represented as working the distaff, *Lachesis* as drawing out the thread, and *Atropos* as waiting with scissors ready to snip it off.

PARIAHS, natives of the lowest class in India, who perform the most menial offices. The name is also applied to ownerless mongrels which infest many eastern cities and act as scavengers.

PARIS, in Homer's "Iliad," was the son of Priam, King of Troy. Prophecy having declared that he would cause the destruction of Troy, he was abandoned, soon after birth, on Mount Ida. He was found and reared by a shepherd, and on growing up proved a valiant defender of shepherds and their flocks. He succeeded in discovering his real origin, and was received by Priam as his son. To Paris was entrusted by Zeus the decision as to which of the three goddesses—Hera, Athena, or Aphrodite—was the fairest. Having decided in favour of Aphrodite (Venus), she assisted him in abducting Helen, the beautiful wife of Menelaus, King of Sparta. The Siege of Troy was the attempt of the Greeks to regain Helen and avenge the wrong to Menelaus. During the fighting Paris died from a wound given by one of the poisoned arrows of Philoctetes.

PARIS, the capital of France and the second city in Europe in point of population, stands on the Seine, about 180 miles from the sea. It occupies both banks of the river, and the Ile de la Cité, an island connected by five bridges with the mainland. Few cities equal it in the beauty of its broad thoroughfares and fine public buildings, and it ranks as one of the great centres of fashion, literature and arts. It has considerable manufactures of clothing, articles of personal and household adornment, watches, clocks, jewellery, and gloves. It is closely bound up with the great historic movements of France, and has suffered many sieges, the chief being that from September, 19, 1870, to January, 28, 1871, when, after undergoing a heavy bombardment and terrible privations, the city surrendered to the Germans; population exceeds 2,700,000.

PARKER, JOSEPH, *b.* 1830, *d.* 1902; a popular and influential Nonconformist minister, began preaching as a youth. After studying at University College, he became a congregational minister at Banbury, whence he migrated to Manchester, and afterwards to the Poultry Chapel, London, which was replaced by the City Temple. Here his originality of thought and striking language attracted large congregations.

PARK, MUNGO, *b.* near Selkirk, 1771, *d.* 1806, an intrepid African traveller. He was by profession a doctor, and led two expeditions with the object of tracing the course of the Niger. In the first, 1795–97, he reached the Niger from Senegal after many hardships, and traced a small part of the course. In the second, 1805, he again reached the river, but of the thirty-eight Europeans who formed the expedition not one returned. His journal, which he had with great forethought sent back to Gambia when dangers thickened, was afterwards published.

PARKER, MATTHEW, *b.* at Norwich, 1504, *d.* 1575, a famous English churchman and writer. Elizabeth, on her accession, made him Archbishop of Canterbury, and this difficult position he filled with great wisdom and discretion for sixteen years. The thirty-nine articles were revised and the Bishop's Bible (a revision of Cranmer's translation) produced under his direction.

PARKMAN, FRANCIS, *b.* at Boston, Massachusetts, 1823, *d.* 1893, a Canadian historian of high reputation. His works include "Pioneers of France in the New World," "The Old Régime in Canada," and "Montcalm and Wolfe." He lived for considerable periods among Indians, studying their life and collecting historical information.

PARLIAMENT. Refer to *Index.*

PARLIAMENT, THE HOUSES OF, a palatial structure at Westminster built in

the Gothic style from the plans of Sir Charles Barry. It was begun in 1840 and finished in 1857. The building occupies 8 acres and has a façade stretching 940 feet along the bank of the Thames. Three towers, one of which is 340 feet high, add to the imposing effect of the palace. Besides the richly decorated House of Lords and the less ornamented House of Commons, there are some 500 apartments within its walls.

PARNASSUS, a mountain 8,000 feet high, in Central Greece, north of the Gulf of Corinth. In Greek mythology it is represented as the abode of the Muses. On its lower slopes was the oracle of Delphi, and near the summit was the Castalian Spring, the drinking of whose waters was reputed to give poetic inspiration.

PARNELL, CHARLES STUART, *b.* in Wicklow, 1846, *d.* 1891, a prominent Irish politician. Entering parliament in 1875 as a Home Ruler, he became the ruling spirit of a system of obstruction to parliamentary business with the object of forcing a recognition of Irish grievances. He was first president of the Land League in 1879, and directed its counsels with consummate skill and sagacity, doing more than any other man to promote the cause of Home Rule. But he alienated his Liberal allies in Parliament by his guilty connection with the O'Shea divorce case.

PARODY, an imitation of a serious poem or prose passage which follows the original in structure and expression, but evokes laughter by the subject chosen and the way in which it is elaborated. A witty and tasteful parody demands ability of no mean order.

PAROLE, specifically, is a promise given by a prisoner of war to his captors. A prisoner released on parole agrees to keep within defined limits and not to attempt to escape; if set at entire liberty he engages to return to his captors if called upon to do so during hostilities, and also to refrain from taking any active part in the war. To break parole is deemed a serious breach of honour by both friend and foe.

PAROS, an island of the Cyclades in the Grecian Archipelago. In ancient times its now deserted quarries supplied the famous Parian marble employed in the construction of sacred buildings, and in the statuary of Greece.

PARQUETRY, flooring composed of rectangular blocks of wood about an inch thick, laid so as to form a geometrical pattern. It is cleaner and more economical in the long run than ordinary flooring, but expensive at the outset.

PARR, OLD, the appellation of Thomas Parr, a native of Shropshire, who died in 1635, at the reputed age of 152. He was buried in Westminster Abbey.

PARROTS, the name of a group of birds very widely distributed throughout the tropical and sub-tropical regions of the earth. The bill is large and powerful, the upper maxilla being much arched and overlapping the lower. The foot has four toes, two directed forwards and two backwards, an arrangement which enables it to cling and climb. Several hundred species exist, the best known being the Gray Parrot of West Africa and the Green Parrot of the Orinoco basin. These birds can imitate the human voice, but it is doubtful if they are capable of reasoning.

PARRY, SIR WILLIAM, *b.* at Bath, 1790, *d.* 1855, a famous Arctic voyager. As an officer of the English navy, he commanded three expeditions to discover the North-West Passage, reaching 113° 46′ W., and discovering Barrow Strait and Melville Island; he also made an unsuccessful attempt to reach the Pole in 1827. The accounts of these voyages are extremely interesting.

PARSEES, a people of Persian origin now confined chiefly to the province of Bombay, India. They are the descendants of Zoroaster's fire-worshipping disciples, who fled from Mohammedan persecution in Persia about 800 A.D. The moral code of Zoroaster is still observed by the Parsees, who number among them many prosperous merchants, and are much respected for their probity and high moral character.

PARSONS, HON. CHAS. ALGERNON, *b.* 1854; the inventor of the marine steam turbine. The *Turbinia*, the first steam turbine vessel, was launched in 1898, and already a revolution in steam propulsion seems at hand. See *Turbine* and *Turbine Engines*.

PAR'THENON, a splendid temple at Athens, begun in 450 B.C., under the direction of the great artist, Phidias, and dedicated to the goddess Athene. Authorities are agreed that in beauty of design and in sculptural and decorative effects the Parthenon has never been equalled. Its present ruinous condition is due partly to the lapse of time, partly to the havoc wrought by a shell fired by the Venetians during a siege in 1687, and more especially to the removal of its ancient pieces of sculpture, some of which, under the name of the Elgin marbles, may be seen in the British Museum.

PARTINGTON, DAME, a lady of Sidmouth, the lower rooms of whose house were flooded by the sea during a severe storm in November, 1824. The dame strove heroically to conquer the flood with a mop. Sydney Smith, speaking on the Reform Bill in 1832, revived the story to illustrate the futility of resistance to the national movement for reform.

PARTRIDGE, a genus of birds common to the temperate regions of the Old World. Two species are found in Britain, the common partridge, distinguished by its short, blunt-tipped bill and the red stripe which takes the place of eyebrow, and the so-called Guernsey partridge, introduced in recent times from France, and distinguished by its red legs. The flesh, especially that of the common partridge, is much esteemed, but in England these birds are reared in large numbers chiefly for the sport they afford.

PASCAL, BLAISE, *b.* 1623, *d.* 1662, a famous French mathematician and philosopher. At the age of seventeen he produced his "Treatise on Conic Sections," a work of great originality and genius. From 1655 to his death he lived an ascetic life and identified himself with the Port-Royalists. His "Pensées," containing reflections on life and religion, have a great reputation in France.

PAS-DE-CALAIS, the French name for the Strait of Dover.

PASQUINADE, a lampoon, so called from a mutilated statue in Rome, on which, until quite recently, lampoons were often pasted. This statue had been dug up in the 15th century opposite the shop of a witty Roman barber, and by popular consent his name, *Pasquin*, was applied to it and afterwards retained.

PASSION-PLAY. See *Ober-Ammergau*.

PASSMORE-EDWARDS. See *Edwards, Passmore*.

PASSOVER, a great Jewish festival which commemorates the exodus of the Israelites from Egypt. It is held on the evening of the 14th day of Abib, or Nisan, the first month of the ecclesiastical year.

PASSPORT. See *Commercial Dictionary*.

PASTEL, a kind of coloured crayon made of ground pipe-clay, very thin gum-water, and the required colour, and used to execute drawings on paper or parchment. It is a favourite material for executing hasty portraits with, and is used with fair success for landscapes. The drawings themselves are often called pastels.

PASTEUR, LOUIS, *b.* 1822, *d.* 1895, a famous French chemist and pathologist. His research work in organic chemistry led to his appointment as professor of chemistry at the Sorbonne in 1867. His studies of the fermentation of liquids, his successful inoculation of fowls against cholera and of cattle against anthrax, brought him great fame; he also discovered a method of inoculation with the virus of rabid animals as a cure for hydrophobia in man. From 1886 to his death he worked mainly at the Pasteur Institute in Paris.

PASTILLE, a paste or mixture whose foundation is powdered charcoal, containing aromatic substances, as benzoin, sandal-wood, etc. It is formed into little cones which, when dried, are lit at the apex and burn with an agreeable odour. The name is also given to aromatic lozenges.

PASTON LETTERS, a collection of letters written and received by members of the Paston family of Norfolk during the latter half of the 15th century. They have proved a valuable source of information on the social and political history of the period.

PATAGONIA, an extensive territory occupying the extreme south of South America. Since 1881 it has been divided between Argentina and Chile, the line of division being approximately the chain of the Andes. The surface of Eastern Patagonia consists generally of boulder-strewn plains, covered sparsely with coarse grass, which support the guanaco, the rhea and a species of deer. The natives, numbering about 20,000, are tall—varying from 5 ft. 10 in. to 6 ft. 4 in.—and well proportioned. They are expert horsemen and live chiefly by hunting. Western Patagonia is extremely damp and contains much timber. The fossil remains of the whole region are highly interesting, and are now under investigation; area 322,250 square miles.

PATEN, a shallow circular dish to hold the consecrated bread or wafers in the Eucharistic service. In ancient times it was of wood or glass; later always of gold, silver, or fine bronze. Some of the mediæval patens are richly chased and ornamented with gems.

PATENTS. Refer to *Index*.

PATERSON, WILLIAM, *b.* 1665, *d.* 1719, a famous Scotch financier. He was one of the first directors of the Bank of England, which institution was founded chiefly by his labours. In 1695 he embarked on a scheme for colonising the isthmus of Darien with Scottish settlers. The disastrous failure of the movement caused widespread ruin amongst Scottish speculators. He received a pension from government in George I.'s reign to compensate him for his losses.

PATMORE, COVENTRY, *b.* 1823, *d.* 1896; one of the most important of the poets of second rank in the 19th century. An assistant librarian at the British Museum, he had much leisure for writing. "Tamerton Church Tower," "The Angel in the House," and the "Unknown Eros," are his best known works.

PATMOS, a small mountainous island belonging to Turkey, in the Grecian Archipelago. Here, according to tradition, St. John the Apostle lived in exile about 94 A.D., and saw the visions set down in the Book of Revelation.

PATNA, a city of Bengal, India, stretching for 9 miles along the right bank of the Ganges. It is the centre of a rich agricultural

district. Here the produce of the poppy is prepared as opium, and sent to Calcutta for exportation to China; population 135,000.

PATON, SIR NOEL, *b.* at Dunfermline, 1821, *d.* 1901, a British painter well known for his tasteful and charming treatment of allegorical, religious and legendary subjects. His pictures include "The Pursuit of Pleasure," "Mors Janua Vitæ," and "The Man of Sorrows." He also won fame by his sculpture and poetry.

PATRICIANS, the descendants of the Roman "patres," or "fathers" who founded the city. For long the patricians usurped all powers and privileges in the state, but at length the "plebs," or commons, forced the patricians to admit them to at least a share in political power. The internal history of Rome is mainly the story of the struggle between patricians and plebeians.

PATRICK, SAINT, the patron saint of Ireland. The events of his life are lost in legend. He is said to have been born near Dumbarton in 373, and to have died near Downpatrick in 493. He was consecrated Bishop by Pope Celestine, and sent to evangelise the Irish. Saint Patrick's Day is the 17th March, the anniversary of his death.

PATROCLUS, the kinsman and great friend of Achilles, accompanied the latter to the Trojan War. When Achilles remained inactive in his tent, nursing his anger against Agamemnon, Patroclus borrowed his armour, and rallied the despairing Greeks, but he was slain by Hector. The news of his friend's death roused Achilles again to action, and he soon avenged his death on Hector.

PATRON, a protector or guardian. In early Roman times, when the people were divided into patricians and plebeians, and all political and judicial power lay with the former, every plebeian found it wise to profess attachment to, and beg the protection of a patrician. Thus a patrician, as *patron*, would have many plebeians attached to him, who were called his *clients*, and so the use of the word patron to express one who guards in any way, and of client as one who is guarded, has continued.

PATTESON, JOHN COLERIDGE, *b.* 1827, *d.* 1871; was admitted to Holy Orders after a distinguished career at Oxford. In 1855 he sailed with Bishop Selwyn for the South Seas, and in 1861 was consecrated Bishop of Melanesia. He spent a life of devoted work among the natives, by whom he was much beloved, but he was murdered on one of the Santa Cruz Islands in revenge, it is thought, for the misdeeds of certain white kidnappers.

PATTI, ADELINA, Baroness Cederström, *b.* at Madrid, 1843, of Italian parents; a great prima-donna, was trained in America, and made her début in New York in 1859, taking the world by storm. She possesses an unusually high, clear, rich, flexible voice, and is equally successful in rendering the most difficult opera music and the simplest ballad.

PATTISON, DOROTHY WINDLOW, *b.* at Hauxwell, Yorkshire, 1832, *d.* 1878; a sister of Mark Pattison, known as "Sister Dora," a noble woman who spent her life, from 1865, as a hospital nurse at Walsall, where a monument, erected to her memory by the working men of that town, is a witness of her devoted labours and of the devotion of the rough men and women for whom she spent her strength and exercised her skill.

PATTISON, MARK, *b.* at Hornby, Yorkshire, 1813, *d.* 1884; a distinguished scholar. He became a fellow of Lincoln College, Oxford, 1839, and rector, 1861. His essays, sermons, and other literary works were marked by original thought and great earnestness.

PAUL, THE APOSTLE. Few characters in Holy Writ are so well known to us as Saint Paul. The story of his travels alone, when we take into account the circumstances of the time, shows how deep must have been the convictions that bore him onward. Asia Minor, Macedonia and Greece were the chief fields of his missionary labours, but Rome was the goal of his zealous work for Christ. Thirteen of his Epistles are extant and form part of the New Testament. That he was imprisoned in Rome a second time in the year 66 A.D. seems pretty certain, but whether he suffered martyrdom there or not is really unknown.

PAWNBROKER. Refer to *Index*.

PAXTON, SIR JOSEPH, *b.* 1803, *d.* 1865, a famous horticulturist, who rose from a very humble origin. Beginning as a working gardener, he obtained employment in the grounds of the Royal Horticultural Society at Chiswick. He then entered the Duke of Devonshire's service, for whom he entirely replanned the lovely grounds at Chatsworth. His suggestion of a building of glass and iron for the Exhibition of 1851, and the admirable way he carried it out, set the seal on his fame, and procured him the honour of knighthood.

PEABODY, GEORGE, *b.* 1795, *d.* 1869, an American merchant who devoted himself to benefiting mankind by means of his wealth in his lifetime. Besides large benefactions in the United States, he gave altogether no less a sum than £500,000 to be used in the erection of modern dwellings for the poor of London, to be let at moderate rentals. Queen Victoria wished to make him a baronet, but he declined the honour. The "Peabody Buildings" are a well-known feature in many parts of London.

PEACOCK, a kind of game-bird whose native home is India, but which has long been domesticated in most European countries. In India, large flocks of peacocks are common in the lowlands, and afford good sport. The beauty of the male early made the possession of these birds an object of desire, and we read that Solomon's ships brought him peacocks. The bird was not known much in Europe till after the campaigns of Alexander. The Romans accounted its flesh a dainty, and it continued to be served up at banquets through the Middle Ages.

PEAK, THE, a district in the north-west of Derbyshire, generally considered as the end of the Pennine chain of mountains or hills which extend southward from the Cheviots. It is a wild and rugged region, abounding in abrupt hills and natural caves in the limestone. The Peak Cavern, near Castleton, is the most famous cavern, but several more are well worth a visit. Above Castleton is Peveril Castle, the scene of Scott's well-known novel.

PEARL, a round body found inside the shells of many marine animals. A particle of some foreign substance having found its way inside the shell, the inhabitant forthwith surrounds it with a layer of the lustrous and smooth material which lines the shell. The longer this process goes on, of course, the larger the pearl produced. The largest pearl known is two inches long and four round, and is said to be worth £50,000. The best pearls are produced by oysters, but those from mussels are also valuable. The most valuable pearl fishery is that of Ceylon; others are in the Persian Gulf, among the Sulu Islands and off New Guinea. False pearls are made by blowing a thin globe of glass and filling it with a solution of ammonia and fish scales. Mother-of-pearl, or nacre, is the inner coating of shells. It is largely used for making buttons, fans, and little boxes, and for inlaying.

PEARSON, CYRIL ARTHUR, *b.* in 1866, the founder of a series of periodicals, magazines, and newspapers that have an enormous circulation. He received his business education in the "Newnes" office as sub-editor of *Tit-Bits*. On leaving Newnes he started *Pearson's Weekly*; in 1900 launched the *Daily Express*, and in 1905 bought the *Standard*, giving up his interest in that paper in 1910.

PEARSON, JOHN LOUGHBOROUGH, *b.* 1817, *d.* 1897; a distinguished ecclesiastical architect, received his technical training in London. He designed Truro Cathedral, and was entrusted with the restoration of many other cathedrals, including Lincoln, Peterboro' and Canterbury, besides that of the north transept of Westminster Abbey. His domestic architecture was also highly approved.

PEARY ROBERT EDWIN, *b.* in Pennsylvania, 1855, a daring and persistent Arctic Explorer. He entered the U.S. Navy in 1881, and soon gained notice by the thoroughness of his work. He has been engaged in Arctic exploration almost continually from 1891 to 1909. At last, all his efforts were crowned by his success in being the first to reach the North Pole (April 6th, 1909). He had previously proved that Greenland is an island, having its most northerly point in 84° 17′ N. L. He has written many interesting books on his Arctic experiences.

PEAT, vegetable substances partly decomposed, and more or less compressed. It is formed always in moist situations, where the roots of mosses and other moisture-loving plants begin to decay, while the uppermost part throws up fresh shoots, so that what was once only a shallow pool becomes a bog many feet thick. Peat-bogs are found in many parts of England, are more common in Scotland, and still more numerous in Ireland. Various efforts have been made to compress peat, and so make it *commercially* available as fuel, but no satisfactory system has yet been produced. It is, however, used as fuel by the peasants. Chat Moss, in Lancashire, and the Bog of Allen, in the centre of Ireland, are well known.

PE-CHI-LI, GULF OF, a branch of the Yellow Sea, off the north of China, about 150 miles wide. It is silting up through the great mass of earth brought down by the Hoang-Ho. Niu-Chwang, the chief port of Manchuria, is near its northern corner. It is entered by the Strait of Pe-chi-li, on the northern side of which is Port Arthur, and on the southern, Wei-hai-Wei.

PECULIAR PEOPLE, a sect of Christians who refuse to avail themselves of the services of a doctor in cases of disease, relying on the injunction given by Saint James about prayer and the laying on of the elder's hands. They have their own form of service and ministers, and believe that they are the one true Church of Christ. They are mostly of the poorer class.

PEDOMETER, an instrument for measuring distances walked. It is sometimes worked by the movement of a heavy pendulum, which falls when it is shaken by the foot striking the ground, and is restored to its place by a spring, which may be attached to the foot. But in all cases it simply records the number of steps taken, without regard to the length of the steps.

PEEL, SIR ROBERT, *b.* 1788, *d.* 1850, a great statesman of Queen Victoria's reign, was the son of the Sir Robert Peel who did so much for the cotton manufacture. Educated for a political life at Harrow and Oxford, he entered parliament

in 1809, and soon proved the greatness of his ability. Bred a Tory, he repeatedly was forced by his convictions to help on progressive measures which he had long resisted, and thus the name of "turncoat," so freely applied to him, had some show of justification. The passage of the "Catholic Emancipation Bill" in 1829 damaged him in the eyes of the more bigoted Tories, and the repeal of the Corn Laws in 1846 made the majority of his party absolutely irreconcilable. From that time there was no room for Peel in the Tory ranks, and he passed the rest of his political life in independent support of the Liberal Government. His earlier services in reducing and simplifying the import duties on many articles should not be forgotten. To him belongs, too, the credit of reorganising the London police, and introducing the present splendid system; hence the names of "Peeler" and "Bobby" were applied to policemen. The income-tax was also first imposed by him. His death was due to an accident; while he was riding near Hyde Park his horse stumbled and threw him, and then fell heavily on him, inflicting internal injuries from which he never recovered.

PEEP O'DAY BOYS, lawless bands of Ulster Presbyterians who, between 1780 and 1795, used to prowl about at daybreak, searching the houses of their Catholic enemies for arms and plunder. They became merged later in the various societies of "Orangemen."

PEG'ASUS, in Greek mythology, the winged horse which sprang from the blood of the Gorgon Medusa when Perseus slew her. When Bellerophon was preparing to combat the Chimæra, the goddess Athene showed him how to catch Pegasus, by whose aid he overcame that fire-breathing monster. Afterwards, Bellerophon tried to make his way to heaven upon Pegasus, but in mid-air the steed shook him off, and continued its way alone.

PEI-HO, a river of Northern China, having Pekin and Tien-tsin on its banks. It rises near the great Wall and the Mongolian border, and flows in a general south-easterly direction into the Gulf of Pe-chi-li. Near its mouth are the celebrated Taku forts, by means of which the Chinese thought in 1860 to prevent the approach of the "barbarians" to their sacred city of Peking. Length about 350 miles.

PEKING, the capital of China, is situated on the Peiho, about 80 miles in a straight line from the sea. It is one of the ancient cities of the world, its history going back to the 12th century B.C. As the traveller from Tien-Tsin approaches, suddenly a wall 30 feet high, with towers a hundred feet in height, bursts upon his gaze. At the bottom of these towers are the gateways, passing which he enters the outer or Chinese city. The inner or Manchu city, which lies not inside but to the north of the Chinese city, is surrounded by a wall 50 feet in height, with similar towers and gateways. In the heart of the Manchu city is the "Forbidden City," which is really the Imperial Palace with its grounds, and which was occupied by the Allies in 1900. Peking has no manufactures of importance. It is joined to Tien-Tsin by a railway opened in 1897. The sanitary arrangements of the city are of the crudest description. The population is probably under a million.

PELAGIUS, a celebrated British monk who settled in Rome about the year 400, and attracted attention by denying the doctrine of original sin. He maintained that each infant born into the world was born in a state of innocence, and his perseverance in virtue depended on himself. For twenty years the conflict raged, until Pope Zosimus definitely declared against the Pelagian doctrines. Pelagius was then banished from Rome, and subsequently from Jerusalem. His fate is unknown.

PELÉE, MONT. See *Martinique.*

PELICAN, a common aquatic bird, haunting the shores of seas, lakes, and rivers. Pelicans are as large as swans, with a capacious pouch of naked skin under the bill, which is terminated by a red hook. As they feed their young from this pouch with their red-tipped beak, the story arose that they fed them with their own blood.

PELOPONNESIAN WAR, a struggle between Athens and Sparta for supremacy in Greece. Pericles, the Athenian leader, had long seen the struggle coming and prepared for it. As long as he lived the Athenians held their own, but after his death, in 429 B.C., the Athenians engaged in rash undertakings, which exhausted their resources, and for a time they fell under the dominion of Sparta. The war lasted, with intervals, from 436 to 405 B.C., and its ultimate result was to lay Greece at the feet of Philip of Macedon.

PELOPONNE'SUS, the ancient name for the southern part of Greece. It included the Athenian State of Achaia, the Spartan State of Laconia, besides Elis, Arcadia, and Messenia.

PEMMICAN, the lean of venison cut into thin slices and dried in the sun, then pounded and squeezed into cakes. This was the method of preserving meat adopted by the North American Indians. For Arctic explorations a similar preparation of beef is made in the naval victualling yards, and mixed with its own weight of the purest melted fat or dried fruit, and put up in airtight bags.

PENANCE, a punishment either imposed by another or self-inflicted as an outward expression of sorrow for sin. The use of public penance has much declined; no one expects now-a-days to see a king, like Henry II., kneeling at the tomb of an Archbishop. In the Roman Catholic Church, penance is still imposed by the priest at confession, its severity being proportioned to the supposed greatness of the sin. In the Protestant Church penance is not officially recognised, although there are instances of confession of sin publicly made, followed by the performance of penance prescribed by a priest.

PENANG, or Prince of Wales Island, at the northern entrance of the Straits of Malacca, and near the Malay Peninsula, has an area of about 106 square miles. It is connected for Governmental purposes with Wellesley Province, on the opposite mainland. The climate is hot, but healthy, sea breezes abounding. Penang is the centre for the trade of the whole Malay Peninsula, the total year's trade amounting, imports and exports together, to about £30,000,000. Tin, pepper, rice and sugar are the chief exports; manufactured goods the chief imports. Georgetown, the capital, has a population of about 130,000.

PENA'TES (a-tes), the household or domestic gods of the Romans, both those belonging to the family and to the State. Jupiter and Juno, as the guardians of peace and happiness, and Vesta, as the guardian of domestic union and comfort, were the chief Penates. The state Penates were said to have been brought from Troy by Æneas.

PENCILS. The name pencil is generally understood to mean a pointed instrument for drawing or writing without ink, but artists also use the name to denote a fine brush for laying on colour. The ordinary lead pencil consists of a thin stick of graphite or plumbago encased in wood. The graphite is ground to a fine powder and mixed with more or less clay, according as the pencils are desired to be more or less black. The whole is then made with water into a thick paste, or dough, and then squeezed through holes of the desired size. The wooden case is made of Florida or Virginian cedar, this wood being so straight grained and easily cut. Coloured pencils are made in a similar way, with coloured chalk instead of graphite.

PENDA, a king of Mercia from about 630 to 655 A.D. He was bitterly opposed to Christianity, and gave its champions no peace during his long reign. At different times he met and defeated nearly all the other Saxon kings, slaying Edwin and Oswald of Northumbria in battle, as well as Anna of East Anglia, but he was himself at last defeated and slain by Oswi, king of Northumbria, 655.

PENDULUM, a small heavy weight suspended by a slight thread or wire so as to be free to swing from side to side. The theoretical pendulum would swing for ever, and a close approximation may be made to this with a very fine thread and a leaden or golden bullet. A pendulum 39·144 inches long beats seconds at London. A shorter one beats faster, and a longer one more slowly; hence in regulating a clock, shorten the pendulum to make it go faster, and *vice versâ*. If the suspending string or wire kept always the same length, the clock would go regularly, but in summer an ordinary pendulum wire lengthens, making the clock go more slowly, and in winter it shortens, and makes the clock go faster. Hence the use of "compensation" pendulums, which do away to a certain extent with this variation. The uses of the pendulum to ascertain the force of gravity at different places, to prove the rotation of the earth, and to establish its density, can only be mentioned here.

PENEL'OPE (o-pe), in Grecian legend, the wife of Ulysses. Through his long absence at Troy, and in his after wanderings, Ulysses was regarded as dead, and numerous suitors came to claim Penelope's hand. Her steadfastness in rejecting them, and the arts she had recourse to in order to defer an answer, make a very interesting story, and we rejoice when her constancy is rewarded by her husband's return.

PENINSULAR WAR, that part of the long European struggle against Napoleon, which was waged in the Peninsula of Spain and Portugal, 1808 to 1813. Napoleon, having placed his brother Joseph on the Spanish throne, found that he had thrust his hand into a hornet's nest. England saw her opportunity of hampering him, and devoted her attention to keeping the Spanish resistance alive. The English met with no brilliant successes till towards the end of the period, but she achieved her end. One French army after another marched into the Peninsula and returned to France shorn of half its numbers without strengthening the French position there one jot. On the English side, Sir John Moore at Corunna (1809), and Wellington at Vimiera (1808), Talavera (1809), Albuera (1811), Salamanca (1812), and Vittoria (1813), gained great renown. The masterly way in which Wellington hustled the French across the Pyrenees at the end was a splendid exhibition of tactical skill. The successful storming of Badajoz and Ciudad Rodrigo in 1812 by the British troops is famous in our military annals.

PENITENTIAL PSALMS. Psalms vi., xxxii., xxxviii., li., cii., cxxx., and cxliii. So called because they express sorrow for

sin committed, they also express the writers' sense of the goodness of God in pardoning sin, and of the certainty that a real penitent may feel of being ultimately forgiven. The one most commonly used is the fifty-first.

PENNANT, THOMAS, *b.* near Holywell, Flintshire, naturalist and traveller, who did much to make Britons acquainted with their own country. He visited Cornwall in 1746, Ireland in 1754, and Scotland in 1769 and 1772. "Scotland was then," he truly says, "almost as unknown as Kamchatka." He also rambled through Wales and published his observations in two volumes. But to-day he is chiefly remembered by his "Tours in Scotland" (3 vols. 1771–75).

PENN, WILLIAM, *b.* 1644, *d.* 1718, the founder of the colony of Pennsylvania, and a strict "Quaker," was the son of an English admiral. No one was so grieved and mortified as his father when Penn, then a student at Oxford, became a disciple and follower of George Fox. But no paternal severity could cool the young man's enthusiasm (for several times Penn was imprisoned and fined), and his father at last resolved to endure what he could not cure. In 1681, in return for some claims his father had had against the Crown, Penn obtained a grant of land in North America, where he founded his celebrated colony of Pennsylvania. The favour he enjoyed under James II. rendered him an object of suspicion in the reign of William, but no treasonable act was ever proved against him.

PENNSYLVANIA, one of the original thirteen States which revolted from England in 1776, was founded by William Penn. The story of his going over and founding this State, and of the treaty he made with the Indians, is one of the most interesting in history. Such was the hold that Penn gained on their affections that the whites in Pennsylvania were undisturbed for fifty years. Having an area of 45,000 square miles, or half as big again as Scotland, Pennsylvania is one of the most favoured districts in the world. Its soil is fertile, its climate favourable, and its mineral products abundant. Coal, iron, petroleum, and natural gas are widely distributed, and Pittsburg (population 650,000), the leading manufacturing town, reaps full advantage thereof. Philadelphia, the capital, on the Delaware river, is surrounded by a rich agricultural country, and is conspicuous for its fine public buildings; population 1,300,000.

PENNY POST, THE, was established in England, 1840, mainly owing to the efforts of Rowland Hill. Previous to that date letters had been charged for according to the distance carried; thus the charge for 300 miles for a single sheet was one shilling, double sheets being treated as two letters. This was, in 1840, reduced to a uniform charge of one penny for a maximum weight of half-an-ounce. Refer to "Post Office" in *Index.*

PENNY WEDDINGS, a form of wedding once common in Scotland, where each guest contributed a small sum, usually not exceeding a shilling, to defray the cost of the entertainment, and leave a small balance to enable the young pair to set up housekeeping. Scott mentions the practice in the "Fortunes of Nigel."

PENS. The ancestor of our modern pen is the reed pen of the Egyptians and other ancient nations, specimens of which still exist. The Chinese and Japanese write with a small brush. Quill pens were known as early as the 7th century. Steel pens were in use in the 18th century, but only became common in the 19th. The ordinary steel pen has to go through some sixteen processes before the steel, of which it is formed, is ready for use in writing. Birmingham is the great manufacturing town for pens, and turns them out at the rate of three or four millions a day.

PENTATEUCH ("five books,") is the name under which the first five books of the Bible are often grouped together. They are named Genesis, Exodus, Leviticus, Numbers, and Deuteronomy. The Hebrew title, signifying "five-fifths of the Law" shows the importance of the Pentateuch in the eyes of a Jew. It relates the formation and history of the Hebrew nation up to their invasion of Canaan, and contains the Mosaic laws and their development.

PENTECOST, "fiftieth," is the name given by the Jews to a feast held on the fiftieth day after the Feast of the Passover. Coinciding as it did with the day on which the Holy Ghost descended on the Apostles assembled in Jerusalem, this Jewish festival corresponds with that of Whitsuntide in the Christian Church.

PENZANCE, an interesting town in the west of Cornwall, on Mount's Bay. It has a very mild climate, and the scenery around is picturesque. The mackerel and pilchard fisheries are valuable, and market-gardening is an important industry; population 13,000.

PEPPER, the dried berry of a plant growing freely in tropical countries. The flower is in the form of a spike, and when the berries are fully grown, as soon as they show signs of turning red, the spike is picked and placed to dry. When dry, the berries are rubbed off by hand and form Black Pepper. To get White Pepper, the dried berries are soaked, and the skin and fleshy part removed, the seed alone remaining.

PEPYS, SAMUEL, *b.* 1632, *d.* 1703, secretary to the Admiralty in the reigns of Charles II. and James II., was educated at St. Paul's School and at Cambridge. His kinsman, the Earl of Sandwich, gave him a helping hand, and he soon found employment as clerk in the Admiralty. He took a great interest in the fashionable London life of his day, and wrote in shorthand a most quaint diary recording his daily experiences. This diary, deciphered at Cambridge, was published by Lord Braybrook in 1825. Pepys was the only Admiralty official who remained at his post through the Great Plague, and his account of this calamity is supremely interesting. The diary treats of the ten years, 1659–69.

PERCY, HENRY (HOTSPUR), was the son of the Earl of Northumberland, who lived in the reigns of Edward III., Richard II., and Henry IV. Hotspur gained great renown in the border fighting against the Scots, although he was defeated by Douglas at the fight of Otterburn (Chevy Chase). When the Earl revolted against Henry IV., Hotspur sided with his father, and was slain in the battle of Shrewsbury (1403).

PERFUMES. The use of perfumes is as old as civilisation itself. The ancient Assyrians and Persians are known to have favoured them, and their use among the Greeks and Romans amounted to a passion. There are three chief kinds of perfumes:—(1) those of a resinous nature, as camphor, myrrh, etc.; (2) those derived from the leaves, flowers, or wood of plants; and (3) those of animal origin, as musk and civet. From these sources are obtained about eighteen chief perfumes, and the rest are compounds of these in varying proportions. Many perfumes are now-a-days prepared chemically from spirit.

PERICLES, the great statesman of Athens, and one of the greatest the world has ever seen, lived from about 494 to 429 B.C. During his administration Athens rose to the pinnacle of her glory. He adorned the city with such buildings as the Parthenon, Erechtheum, etc.

PERIPATETICS, the disciples and followers of Aristotle, the great Greek philosopher (384–322 B.C.). They were so called from his habit of walking up and down (Gr. *peripateo*) as he held his discourses. (See *Aristotle.*)

PERKIN, WILLIAM HENRY, *b.* in London, 1838, a celebrated chemist who at the age of eighteen discovered a mauve dye formed by the oxidation of aniline. Sir William Perkin was thus the founder of the industry of aniline or coal-tar colours.

PERPETUA, SAINT, a celebrated African martyr, who was put to death at Carthage in 203. The narrative of her martyrdom bears the impress of truth. The greatest trial of her constancy was caused by the entreaties of her heathen father, who appeared in court with Perpetua's infant in his arms, and tried to prevail on her to deny Christ for the sake of himself and her babe. The gladiator who was to kill her was an inexperienced youth, and misdirected his sword, which she with her own hand guided to a mortal part.

PERPETUAL MOTION. As long as friction and gravity exist, so long, as far as present scientific knowledge goes, will the search for "perpetual motion" be vain. Any machine, however constructed, must be subject to friction in some of its parts, and to the attractive influence of gravity in all, so that a constant drag is always acting on its movements. But even now men go on seeking the impossible in this branch of research, just as years ago men spent their time in seeking an "elixir of life," and the means of turning the baser metals into gold.

PERSEPHONE. See *Proserpina.*

PERSEUS, in Greek mythology, son of Zeus and Danaë, and grandson of Acrisius king of Argos. An oracle had told Acrisius that he was doomed to perish by a son of Danaë, and Perseus was accordingly banished from Argos. After numerous adventures, including the slaying of the Gorgon, Medusa, he went to visit his grandfather, but on the way accidentally slew the latter, and thus fulfilled the oracle that had preceded his birth. Finally he became king of Tiryns, and founded Mycenae.

PERSIA, or Iran, as its inhabitants call it, is a large kingdom in the south-west of Asia. Its openness to Russia on the north, and its neighbourhood to Afghanistan on the east, render Persia an object of special interest to Englishmen. Of its area of 628,000 square miles, a large part is barren and another large part neglected. Where, however, systematic cultivation does exist, the natural fertility gives a rich reward; wheat, barley, cotton, sugar and rice grow well; silk could be produced in great abundance, and the wines of Persia were once famous. Manufactures are almost non-existent. The products of the country are exchanged against such trifling manufactured goods as the average Persian requires, chiefly through caravans. The principal towns are Teheran, the capital; Ispahan, the ancient capital; and Tabriz. Bushire, the only important port, is on the Persian Gulf. At one time (about 500 B.C.) Persia swayed all western Asia, and appeared about to conquer Europe. Under Cyrus, about 537 B.C., the Persians made themselves masters of the Median and Babylonian Empires, and then proceeded to the conquest of Asia Minor. This brought them into hostility with the Greeks, and the result was the futile attempt of Darius in 490 B.C., and of Xerxes, a few years later, to conquer Greece. The modern history of Persia

comprises her struggles with Russia and England. The oft-repeated conflict with Russia has cost her a large slice of territory in the north-west, but England has consistently tried to preserve the integrity of Persia while maintaining her own rights.

PERSPECTIVE, the art of representing objects on a plane surface. It is divided into Linear Perspective and Aerial Perspective. Linear Perspective may be reduced to geometrical rules, so that in our drawing we can make the straight lines appear just as they do when we gaze at the original, the horizontal lines running up or down according as they are below or above our eye, and the perpendicular ones getting less and less as the distance increases. Aerial Perspective is the art of adding to a picture the required lights and shades and the gradations of colour according to distance and condition of the air.

PERTH, (1) a city of Scotland finely situated on the river Tay, just above where it expands into the Firth. Its importance has diminished of late years, as the traffic to north-east Scotland goes now by the Tay Bridge, but its dyeing and bleaching works are still noted; population 33,000. Perth has been associated with most of the important historical events of Scottish History. Two miles from it was Scone Abbey, where the Scottish kings were crowned. (2) the capital of West Australia, on the Swan River, about 12 miles from the sea. Fremantle, its port, at the mouth of the river, is connected with it by a good road, and there is also railway and water communication. The climate is rather warm, the temperature never going down to freezing point; population 35,000.

PERU, one of the western republics of South America, stretches between Ecuador on the north and Chile on the south, and extends inland to Bolivia and Brazil. Its boundaries are ill-defined, and difficulties are therefore constantly arising with its neighbours. The region between the sea and the Andes, never more than 100 miles wide, is a sandy desert with here and there a smiling river valley. The mountainous portion of the country has massive mountain-chains, with large plateaus and fertile valleys interspersed. Eastern Peru contains the wooded valleys of the upper Amazon and its tributaries. Lake Titicaca lies partly in Peru and partly in Bolivia. Gold is extensively found in the river valleys, but its production is left to the Indians and their primitive methods. The silver industry is more developed, and large quantities are produced. Other minerals are abundant, but found in places difficult of access. The chief vegetable productions exported are cinchona bark, the source of quinine; coca leaves, tobacco and cotton. Of the population of Peru, estimated at 4,600,000, perhaps one-fourth are whites, a half native Indians, and the rest chiefly of mixed race. Lima, the capital (population 105,000), is situated 6 miles inland from Callao, its port (population 48,000). The story of the conquest of Peru by Pizarro, in 1532, is most interesting (see *Pizarro*).

PERUVIAN BARK. See *Cinchona.*

PESHAW'AR, an important military centre of the Punjab, near the mouth of the Khyber Pass. It thus dominates the shortest route between Afghanistan and India, so its importance both in peace and war is great. The cantonments, two miles from the city, always contain a strong force; population 95,000.

PESTALOZZI, JOHANN HEINRICH, *b.* 1746, *d.* 1827, was a native of Zurich, in Switzerland. He benefited mankind by pointing out the true method of education, but died almost a pauper through inability to manage the practical affairs of life. His novel, "Leonard and Gertrude," followed later by "How Gertrude Educates her Children," contain the gist of his teaching, although he wrote numerous other works on the same theme. The keynote of his preaching was that we should base all educational processes on the active exercise of the child's senses and mental powers, rather than cram him with facts, the value of which he has no means of estimating.

PESTER LLOYD, the leading newspaper of Hungary, is published at Buda-Pest, whence its name. Its political articles are highly esteemed for their fairness and insight, and are often quoted by those who value honest and intelligent opinion.

PETARD, a contrivance for blowing up gates of a fortress, etc. It consisted of a hollow case filled with about a dozen pounds of gunpowder, and provided with a slow match, which having been lit, was left to do its work.

PETER, SAINT, one of the most prominent of our Lord's apostles, and after His ascension one of the chief actors in the doings of the early Church. He was the first to admit Gentiles into the Christian Church in the person of Cornelius. He was imprisoned in Jerusalem by Herod Agrippa, in 44 A.D. Later he went to Antioch, where he had a dispute with Saint Paul respecting the terms on which the Gentiles should be received into the Church (Gal. ii. 11–21). Two epistles are usually attributed to Saint Peter, but there has always been some uncertainty as to whether the second epistle was really from his pen. According to tradition, he founded the Church at Rome, and suffered martyrdom there in the reign of Nero.

PETER THE GREAT, *b.* 1672, *d.* 1725, the founder of modern Russia, son of the Czar Alexis, succeeded to the throne in 1682. The Russia of those days had no access to the Black Sea or the Baltic, and Peter early determined to gain access to both; hence his wars with Turkey and Sweden. In the Swedish wars he was almost uniformly unsuccessful until the defeat of Charles XII. at Pultowa gave him, at one blow almost, the Baltic territory he had so long desired. Meanwhile he had paid long visits to Holland and England, and laboured in the dockyards of both countries to gain an insight into naval construction; he had enlisted many skilled foreign workmen and professors; and had done much to promote education and civilisation among his subjects. He founded St. Petersburg, and soon had it populated by means of lavish promises and privileges. His zeal for reform did not extend to himself; for to the last he was passionate, cruel, and brutal. His own son, Alexis, was cast into prison, and died there, for opposing some of his reforms. In his last years he made war on Persia for the sake of gaining access to the Caspian Sea.

PETER THE HERMIT, a monk of Amiens who, towards the end of the 11th century, roused Europe to frenzy by his recital of the indignities heaped upon pilgrims to Jerusalem by the Mohammedans, and the difficulties placed in their way. He besought the princes of Europe to rescue Jerusalem from the Mohammedans by force, and, although they agreed, he would not wait for the assembling of a regular military force, but started off himself on foot through Europe at the head of a hastily-raised and ill-equipped body of volunteers, most of whom perished on the way. After seeing Jerusalem taken by the regular army, Peter returned, and became prior of Huy, near Liège, where he died, 1115.

PETERBOROUGH, a city of Northamptonshire, on the north bank of the river Nen. Its chief interest is centred in its noble cathedral, and its importance depends on its great corn market. It is also an important railway centre. The present cathedral dates back to 1143, but its site was occupied by an abbey as early as 655. Its finest feature is its magnificent west front.

PETERHOF, a village in Russia, about 12 miles west of St. Petersburg. Here is situated the Peterhof Palace, erected by Peter the Great as a summer residence, and still used by the imperial family; population 14,000.

PETERLOO MASSACRE. On August 10th, 1819, a meeting was being held on St. Peter's Field, Manchester to discuss the question of Parliamentary reform. The magistrates called upon the assemblage to disperse, and on their failing to do so, ordered the military to fire and then charge. A number of persons were in consequence killed and wounded. The name "Peterloo" is, of course, a play upon "Waterloo."

PETER'S PENCE, an offering of money formerly made every year to the Pope by England and other Roman Catholic countries. It originated with one of the Saxon kings, either Ina of Wessex or Alfred the Great, and consisted of a silver penny, paid by each family of standing or wealth. After the Reformation its payment ceased, but of late years it has been revived.

PETITION OF RIGHT, a document presented to Charles I. by the Parliament of 1628. It protested against illegal taxation, illegal imprisonment, the billeting of soldiers on private persons, and the application of martial law to ordinary citizens. Charles, on promising to redress these grievances, received a liberal grant of money from Parliament, and then proceeded to govern as before.

PETITIO PRINCIPII, a faulty form of argument, in which the conclusion desired is really assumed in one of the premises.

PETRARCH, FRANCISCO, *b.* 1304, *d.* 1374, a celebrated Italian poet, often looked upon as the first *modern* poet, being the leader in that self-analytical strain that marks much of the poetry of the last few centuries. His life was passed in courts, either in the *entourage* of the Pope at Avignon, or of some great prince of the time. His passion for Laura, a French lady at Avignon, gave birth to the poetry that has immortalised him, but he prided himself more upon his Latin poetry, of which he wrote a large amount.

PETREL, THE STORMY. This little bird, scarcely larger than a lark, is called by the sailors "Mother Carey's Chicken." They regard it as a bird of evil omen, because it is most frequently seen in stormy weather, when it flies just above the waves, feasting on the molluscs that are then driven to the surface. It is the smallest web-footed bird known.

PETROL, a light and very inflammable oil, largely used as the source of power in automobiles. It is one of the first of the light oils derived from crude petroleum on distillation. To produce each stroke of the piston a small quantity of petrol is vaporized and mixed with air, when it is ready to be ignited by the electric spark. See *Automobile.*

PETROLEUM, "rock-oil," a highly inflammable oil obtained from the interior of the earth. Petroleum has been known as far back as history goes. Herodotus and other classical writers mention it, and it is alluded to in some of the earliest Chinese writings. But not till after 1850 was any serious attempt to extract from it an illuminating oil by means of refining.

Soon after that date a company was formed to sink wells near Titusville, in Pennsylvania, and this was so successful that numerous others soon followed. Petroleum is also found in some of the other States, but the bulk is produced in Pennsylvania. At first refineries were erected near the wells, but as these multiplied, the advantage of large central refineries was seen, and pipes were laid to conduct the crude oil to the refinery. The principal refineries, however, are now situated near the sea-board, at New York, Philadelphia, Cleveland, etc., and to convey the crude oil to these places hundreds and even thousands of miles of pipe have been laid. The Standard Oil Company now controls the greater part of the American trade. About 1,500 million gallons of petroleum are produced in the United States every year.

Petroleum is also found in great plenty near Baku, on the Caspian Sea, but the oil found here is of a grosser nature than that of the States. Oil-fields of a remunerative nature are also found in the East Indies, Burma, Assam, Austria, and other places. The most important production of petroleum is the illuminant called paraffin, and the more highly refined petrol, but the naphthas and heavy oils produced in distillation are very valuable. Vaseline, or petroleum jelly, is a valuable unguent obtained from petroleum.

PETTY OFFICERS, NAVAL, are a most important class of men. Corresponding to the non-commissioned officers in the army, they are constantly with the men, though no longer of them. Chosen from the steadiest and most intelligent of the men, they have corresponding pay and privileges, the former ranging as high as 7s. 6d. per day.

PEWTER, an alloy of tin and lead, or of tin, antimony, and copper. The former is the cheaper, and was once extensively employed in making drinking vessels and measures, but the lead caused great danger of poisoning. The latter alloy produces a very useful metal, the one called Britannia metal being much used.

PHA'ETHON, in Greek mythology the son of Helios (sun), who one day was permitted to drive the chariot of the sun across the heavens. Being unable to control his fiery steeds, he came so near the earth as almost to set it on fire, and for his presumption in daring to drive was slain by Jove with a thunderbolt.

PHALANX, a formation of troops for battle much favoured by the ancient Greeks, more especially by Sparta, Thebes, and Macedon. The Macedonian phalanx had a front of five hundred men and a depth of sixteen. The onset of such a dense body of men was generally irresistible; even the Romans dreaded it.

PHARISEES, a religious party among the Jews, distinguished by their devotion to the letter of the Law. Proceeding at first from a laudable principle, namely, that the salvation of their nation depended more upon their obedience to God's laws than on political expediency or military measures, they gradually lost sight of the end in their devotion to the means, and thus sank into the self-righteousness our Lord had so often to condemn.

PHARMACY, the art of preparing and compounding medicines. It is sometimes termed *Pharmaceutical Chemistry*.

PHEASANT, a family of half-domesticated birds, first introduced into Britain about the end of the 12th century. There are numerous species found in the warm and temperate parts of Asia, some of which, as the Golden Pheasant and the Silver Pheasant, have most beautiful markings. The pheasant is highly prized as a game-bird, and is carefully reared for sport, great care being required to bring the young birds to maturity. The close time for pheasants is from February 1st to September 30th.

PHELPS, SAMUEL, *b.* 1804, *d.* 1878, an actor, noted chiefly as a tragedian. He made his début in London, 1837, as Shylock, with great success. His great achievement in life was his successful management (1844–1862), of Sadler's Wells, Islington, which in spite of its unfavourable situation became famous for the excellence of its plays, and drew lovers of "legitimate" drama from all parts of the metropolis. Lovers of Shakespeare had the opportunity of seeing more than thirty of his plays during Phelps's management.

PHIDIAS, *b.* about 500 B.C., the greatest sculptor of Greece, and therefore of the world. He was employed by Pericles to aid in the transformation of Athens, above all in the adornment of the temple of Athene on the Acropolis, called the *Parthenon*. The colossal statue of Athene, made of ivory and gold, was the work of the artist's own hands. The statue of the Olympian Zeus, however, is considered his masterpiece. An example of the exquisite workmanship of Phidias may be seen in the well-known fragments of the frieze of the Parthenon now preserved in the British Museum.

PHILADELPHIA, the chief city in Pennsylvania, U.S.A., on the Delaware River, about 100 miles from the sea. Founded and planned by Penn, the city has a stone marking the site of the elm-tree under which Penn is said to have made his famous treaty with the Indians. The old "State House," where the Declaration of Independence was adopted in 1776, is carefully preserved. Philadelphia is now the third city in the United States; population exceeds 1,400,000.

PHILANDER, a virtuous youth in Ariosto's "Orlando Furioso," between whom and a certain married lady there was much love-making. The word is now used to express a sentimental admiration for a lady without any real attachment.

PHILIPHAUGH, an interesting country seat in Scotland, 3 miles west from Selkirk. Here, in 1645, Montrose was defeated by General Leslie, and the Stuart cause was ruined in Scotland.

PHILIP II. OF MACEDON, king of Macedonia from 360 to 336 B.C., was brought up as a boy amongst the Thebans, then the best warriors of Greece. He soon introduced among his subjects the military improvements he had learnt at Thebes, and the Macedonian phalanx carried his arms successfully on all sides. His insidious designs were seen through by Demosthenes, who, in the celebrated "Philippics," tried to rouse the Athenians to resist him. When they did so, it was too late, and Philip was declared the head of Greece. This position enabled him to prepare for war with Persia, but he was assassinated on the eve of starting, and had to leave the great design to his son Alexander.

PHILIP II. OF FRANCE, reigned 1180–1223, and was thus contemporary with Richard *Cœur de Lion*, and his brother John. He joined Richard in the third Crusade, but soon returned to intrigue with John against his absent brother. On John's accession, Philip espoused the cause of Arthur, and succeeded in detaching from England all her French possessions except Guienne and the Channel Islands.

PHILIP II. OF SPAIN, son of the Emperor Charles VI., reigned over the Spanish dominions, 1556–1598. His second wife was Queen Mary of England, by whose death, in 1558, England escaped his tyranny. The great object of his policy throughout his reign was to establish a despotic form of government in all parts of his empire, and to restore the Roman Catholic religion in the Protestant countries of Europe, and especially in the Netherlands, which formed part of his dominions. With a like end in view, he fitted out the "Invincible Armada," for the subjugation of England. The cruelties perpetrated in the name of religion by the Inquisition in his reign had his full sanction and approval.

PHILIPPI, an ancient city of Macedonia, founded by Philip of Macedon, with a view to working the neighbouring gold mines. Here was gained the famous victory of 42 B.C., by Octavius and Antony, when with the fall of Brutus and Cassius perished the great Roman republic. Here, too, Saint Paul was scourged and imprisoned, and to the Philippians he addressed one of the most touching of his epistles.

PHILIPPICS, three orations of Demosthenes against Philip of Macedon. The name is also applied to the speeches in which Cicero denounced Antony, and is now used to denote any speech in which a particular person is violently attacked.

PHILIPPINES, a large group of islands in the Pacific Ocean, to the north-east of Borneo. They have an area of about 115,000 square miles, nearly the size of the British Isles. Fertile in the extreme, the islands produce all kinds of tropical vegetation in abundance. Metals abound, and coal is worked to some extent. Hemp, sugar, cotton, tobacco, gold dust and ornamental woods are largely exported, chiefly to Britain, in return for manufactured goods of various kinds. Since the outbreak of the Spanish-American War in 1898, trade has been much interrupted, and since the end of the war, when the Philippines were ceded to the United States, the natives have fought, but without success, for their independence. The inhabitants, some 8 to 10 millions in number, are of very diverse origin and degrees of civilisation. The trades and industries of the island are almost entirely in the hands of Chinese and half-castes. Manila, the capital and chief port, stands on a large bay in the south-east of Luzon, the largest island.

PHILO, a Jewish philosopher who flourished during the first fifty years of the Christian era. We know that he was of a wealthy Jewish family of Alexandria, and that he had been well educated. He seems to have read most of the extant Greek authors, and studied the various systems of philosophy. Thus equipped, he strove to reconcile Jewish theology with Pagan philosophy, so as to make the doctrines of the former acceptable to professors of the latter. His numerous works are still highly valued as showing the line upon which religion can be treated logically and rationally.

PHILOL'OGY, a term which, at the present day, signifies the science of language, a science that involves the searching comparison of various languages with a view to their classification and the ascertainment, if possible, of some common origin.

PHILOSOPHER'S STONE. The chemistry of to-day is the child of the ancient alchemy, as surely as astronomy is the successor of astrology. One aim of the alchemists in all their researches was to discover the unknown substance which, they believed, would drive off the impurities from baser metals, and leave behind only the gold on which, as it were, they were built. This substance was usually spoken of as the "Philosopher's Stone."

PHILTRE, a draught whose effect was supposed to be that of exciting, in the drinker, love for a particular person. Among the ancients, belief in the efficacy of philtres was very common, both the Greeks and Romans, as well as Eastern nations, using them to a considerable extent. Even now their power is believed in by semi-civilised peoples. Shakespeare and other poets allude to the belief.

PHŒBE, a name often applied to Diana (Artemis) as the goddess of the moon, and so often used by poets to denote the moon herself. Similarly Phœbus, one of the names of Apollo, came to denote the sun, Apollo being the sun-god.

PHŒNICIA, a district along the eastern shore of the Mediterranean for about 200 miles to the north of Palestine, and about 10 to 30 miles in width. In its narrower acceptation, the name denotes only the land immediately around the great cities of Tyre and Sidon. The Phœnicians were a trading and colonising people. Their dealings with Solomon show that their friendship was not despised, and their voyages to Britain for tin prove their adventurous daring. Their independence ended with their conquest by Alexander in 333 B.C. Henceforth their lot is identified with that of Syria.

PHŒNIX, THE, a fabulous Egyptian bird, supposed to visit the temple dedicated to it at Heliopolis every 500 years. When about to die, the bird built itself a funeral pile of aromatic wood, which it kindled by swiftly fanning its wings, and after it was consumed a new phœnix arose from its ashes.

PHŒNIX PARK, a handsome stretch of ground just outside Dublin. It is 7 miles in circuit, and has an area of about 1,800 acres. The Park has a melancholy notoriety from the murder there of Lord Frederick Cavendish in 1882.

PHONOGRAPH, an instrument for recording sounds by transferring the vibrations of an elastic membrane to a needle which presses on the surface of a drum of wax or tinfoil. The membrane receives the sound-waves of the voice or musical instrument, whose tones are to be reproduced, and causes the needle to make more or less deep and frequent impressions according to the loudness and pitch of the sound. If now the needle be brought back to the starting point and made to go over the depressions and elevations again, the membrane will be set vibrating as at first, thus producing sounds similar to the original ones, but of less intensity. The phonograph has been produced in somewhat different forms, under various names, such as *gramophone* and *graphophone.*

PHOSPHATES, a compound of phosphoric acid with a metal. The phosphates enter largely into man's economy, forming the greater part of the earthy matter in his bones, as well as being present in the less solid part of his body. All organic substances contain phosphates, hence the value of manures containing them to enrich exhausted land.

PHOSPHORESCENCE, the power possessed by certain substances, mineral, vegetable, and animal, of emitting a more or less feeble light in the absence of any other light-giving body. It is very noticeable in the case of decaying fish; jelly-fish often "shine" in the dark; the glow-worm and the firefly are well known, and even some mosses and funguses are phosphorescent.

PHOSPHORUS, (1) "the light bringer," a name often applied by Greek writers to the planet Venus when it is a morning star, as it does not come into view till just before sunrise, and may thus be said to usher in the day. The name was also applied to certain deities, notably to Venus and Hecate. (2) A chemical element with very marked characteristics. It is not met with in nature, but is easily obtained from bone ash, of which it forms about one-fifth by weight. It unites very readily indeed with oxygen; hence the necessity for keeping the air away from it. Phosphorus is largely used in various arts, especially in the manufacture of matches, but great care is necessary to avoid inhaling its noxious fumes, unless red or amorphous phosphorus (which produces no fumes) is the substance used.

PHOTOGRAPHY. The art of photography depends on the principle that nitrate of silver, and a few other chemical compounds, are decomposed by the action of light, thus causing any surface they may cover to vary in appearance according to the amount of decomposition that has occurred. If, therefore, a thin sheet of glass or other transparent substance is coated with one of these chemicals, placed in a tube, and then light from a group of objects is allowed to pass through the tube, the surface is thus affected, and a photographic *negative* is produced. The fixing of the negative and the transference of the picture to prepared paper complete the process, and we then have a photograph. The beginnings of photography may be placed early in the 19th century.

PHOTOGRAVURE, a method of reproducing drawings or photographs from a plate prepared with the aid of photography. The plate is covered with a prepared gelatine, on which the subject is photographed; the gelatine is removed where not wanted, and the plate is then treated with iron perchloride, which eats it away in the desired places, and thus creates a depression for the ink to settle in after the manner of the old steel engraving plate.

PHOTOPHONE, an apparatus for transmitting sound by means of a beam of light and the metal, selenium. Professor Graham Bell, an American scientist, had noticed that selenium offered a high resistance to the passage of electricity, which was greatly diminished when the selenium was exposed to light. Acting on these data, he constructed an apparatus by which a beam of light from a flexible mirror was centred on a selenium cell connected with a telephone. The voice of a speaker set the mirror in vibrations, which were transmitted to the beam of light, acted on the selenium cell, and thus reproduced in the telephone the tones of the speaker.

PHRENOLOGY, "the science of the mind," professes to lay down rules whereby the disposition, capacity, and mental faculties of a person can be diagnosed by observing the shape and configuration of the skull or brain case. This so-called science was started in Germany by Drs. Gall and Spurzheim, about 1800, and they soon gained many converts, but careful investigation into their system, whenever made, has not tended to convince scientific men of its truth.

PHYLACTERY, a slip of parchment on which are written certain texts of Scripture. These parchment slips had straps attached by which they were fastened on the arm or head while the wearer was engaged in prayer. Some of the Pharisees used to have them extra large, and put them on in the street to attract attention to the fact that they were performing their devotions. Certain Jews at the present time wear their phylacteries all day long.

PHYLLOXERA, a kind of insect somewhat similar to the aphides, or green fly so common on rose-trees and other plants. It is a parasite of the vine, and has caused great damage in France since its appearance in 1863. It makes its home in the roots as well as the leaves, so the difficulty is to destroy it without harming the plant itself.

PHYSICS, that branch of science which includes mechanics, light, heat, sound, magnetism and electricity. It excludes all those phenomena which properly belong only to chemistry, i.e., the phenomena attendant on changes in the composition of matter. Thus the fact that water expands with heat belongs to both branches of science, but its proper place is under "Physics," because no change is made in its composition.

PHYSIOLOGY, that branch of science which investigates the structure and functions of living beings. Properly the name morphology is given to the study of structure, but inasmuch as the functions of the various organs cannot be considered without a knowledge of their position and shape, a certain amount of morphology must always be included in physiology.

PIASTRE, a silver coin once used in Spain and Italy, of the value of about 4s. Now-a-days there is a piastre current in Turkey and Egypt of the nominal value of about 2d., and another current in Tunis of the nominal value of 6d.

PIBROCH, "pipe music," the name given to warlike music adapted to the bagpipes. Among the Highlanders, each clan has its own pibroch, and its stirring effect on the clansmen is said to have been wonderful. Generally speaking, the pibroch is a descriptive piece of military music, and persons with delicate musical ears accustomed to the bagpipes say they can distinguish the advance, the charge, the retreat, and the flight, as it is played.

PICTON, SIR THOMAS, one of the heroes of the Peninsular War, was born in Pembrokeshire, 1758. He entered the army at 14, and soon gained the rank of captain. In 1794 he went to the West Indies, where he did much service. When Wellington was appointed to command in Spain, he specially asked for the services of Picton, who took a foremost part in nearly every engagement that took place in the Peninsula, and seven times received the thanks of the House of Commons for his services. He fell at Waterloo in repelling a desperate charge of the French.

PICTS, "the painted people," a name given to the Celts of Northern Britain by the Romans and Romanized Britons. The Celts who acquired this name settled in Britain before the later comers, who called themselves Britons. Whether they landed in the south, and were driven northward by the later bands, or whether they landed originally in Scotland, we do not know. Undoubtedly they were akin to the Britons, but were on a lower plane of civilisation. In their struggles with the Romans, and later with the Saxons, they were always aided by the Scots, who came from Ireland and afterwards became the ruling race in Scotland. After the 9th century the Picts practically disappear as a separate race.

PIERS PLOWMAN. See *Langland.*

PIETERMARITZBURG, the capital of Natal, is situated about 50 miles above Durban, the chief port of the Colony. It is healthily situated, being about 2,000 feet above the sea, and its broad streets and handsome buildings give it a prosperous appearance. It takes its name from two of its Boer founders, Pieter Retief and Gert Maritz; population 31,000.

PIGEON. The pigeon is found in almost every part of the globe. Many varieties are recognised, and of these the commonest in Britain are the wood-pigeon and rock-dove. From the latter most of the domesticated varieties have been derived. In a wild state the pigeon usually builds its nest in lofty trees,

and feeds upon grain. Its song consists of a rather mournful coo. The pigeon possesses remarkable powers of flight, and in certain of the domesticated varieties these powers have been increased by attention to breeding. The best known of the domesticated varieties are the tumbler, pouter, fantail, and carrier. It is worth remarking that the "carrier" so-called is useless for letter-carrying and "homing" competitions.

PIGEON ENGLISH, a dialect or jargon which forms the ordinary means of communication between the Chinese and the English traders. The words are either Chinese or English, and the sentence is constructed on the Chinese plan. The name is said to be derived from "Business English," "pigeon" or "pidgin," representing the Chinese pronunciation of the word "business."

PILATE, PONTIUS, a Roman soldier who was procurator of Judæa from 26 until 36 A.D. He tried and condemned Christ, although convinced of his innocence. Many legends are told concerning Pilate. He is said to have committed suicide.

PILATUS, MOUNT, is situated in the centre of the tourist district of Switzerland, near Lucerne. It is about 7,000 feet high, and from its summit a magnificent view may be obtained. Tourists may ascend the mountain by means of a railway.

PILCHARD, a fish which much resembles the herring, though it is usually somewhat smaller. Pilchards are found in enormous numbers off the coasts of Cornwall, North-western France, and Portugal, and in the Mediterranean Sea. They are caught either with a drift or seine-net. The fishing season in Cornwall falls during the summer months, and large quantities are salted and exported to the Mediterranean countries. In France, the smaller varieties are preserved in oil, and sold as sardines.

PILGRIMAGE OF GRACE, the name given to an insurrection in favour of the "old religion," which occurred in the northern counties of England, 1536. It was caused by the religious changes which had been made by Henry VIII. The rebels dispersed upon a promise of a general pardon, but the ringleaders were subsequently taken and executed.

PILGRIM FATHERS, the name given to those Puritans who, failing to obtain religious liberty in England, sailed for America in the ship *Mayflower*, and established a settlement at New Plymouth (Mass.), 1620. They numbered about 120.

PILLAR SAINTS, or *Stylites*, a class of ascetics who were met with not unfrequently in Syria and Greece during the 5th and 6th centuries of Christianity. They spent their lives upon the top of high pillars. The best known is one named Symeon, who in the 5th century is said to have lived for thirty years on the summit of a pillar about a yard in diameter. He removed successively from one pillar to another, always increasing the height, which in the last of them was 72 feet.

PILLARS OF HERCULES, the name given by the ancients to the two promontories which are situated at the entrance to the Mediterranean Sea, one on either side of the Straits of Gibraltar. Their modern names are the "Rock of Gibraltar" and "Mount Hacho." According to tradition, they were torn asunder by Hercules.

PILLORY, an instrument of punishment formerly in use in England and some continental countries. It consisted of a horizontal plank, supported upon a vertical post, the whole arrangement being placed upon a raised platform. Into holes cut in the plank the criminal's head and wrists were fixed, and he was then exposed for some hours to the insults of the mob. The use of the pillory was discontinued in England in 1837.

PILOT, a person taken on board a vessel to navigate it into a port or harbour, or through a dangerous channel. In England, pilots are under the control of the Trinity House Commissioners, who hold examinations and grant licences to suitable persons. The pilot is in sole charge of the vessel during the time he is on board, and is responsible for its safety. In general, it is a punishable offence to take a vessel into a harbour, unless there is on board a pilot licensed for that harbour. Small vessels, such as coasters, are, however, exempt in this respect.

PIMENTO, or allspice, is obtained from the berries of a species of myrtle which grows in Jamaica. The berries are gathered in September and dried in the sun. Pimento is used in cookery, and is said to possess the combined flavours of cinnamon, cloves, and nutmegs. It is sometimes called "Jamaica pepper."

PINCHBECK, CHRISTOPHER, a watchmaker who lived during the 18th century, is remembered as the inventor of an alloy of copper and zinc, which is known as "Pinchbeck." It is yellow in colour, and bears some resemblance to gold, and is in consequence used in the manufacture of cheap jewellery. From this fact the term "pinchbeck" has come to be used in the sense of *spurious* or *inferior*.

PINDAR, *b.* near Thebes, Greece, 522, *d.* 443 B.C., the greatest of the Greek lyrical poets. When Alexander the Great sacked Thebes, he ordered the house of Pindar to be spared.

PINDAR, PETER. See *Wolcot John*.

PINE, a cone-bearing tree which is found in all parts of the northern hemisphere. It flourishes in a poor soil and in the most exposed positions. The pine, in common with other conifers, sheds only a portion of its leaves each year. The best known species are the Scotch fir, as it is incorrectly called, the Red Canadian or Yellow Pine, and the Pitch Pine. The "Scotch fir" is the only species of pine indigenous to Britain. The timber of the pine is very valuable; it is used for all manner of purposes, and, in addition, the timber of most of the species yields turpentine and tar. (See *Fir*.)

PINE-APPLE, the fruit of a plant which is a native of tropical America. The plant is now cultivated in many other parts of the globe, and is a common hothouse plant in England. The fruit, which weighs from three to about ten pounds, is of a golden yellow colour inside and is exported in large quantities from the Azores and Bahamas.

PINERO, ARTHUR WING, *b.* in London, 1855, became an actor in 1874, and a dramatic author in 1877. In 1893, departing from purely humorous comedy, he struck a new vein in "The Second Mrs. Tanqueray," which he followed up with "The Notorious Mrs. Ebbsmith." "The Gay Lord Quex," and others, which in spite of much adverse criticism, have given the author a foremost place among the dramatists of to-day; knighted 1909.

PINK-EYE, a complaint which affects horses. Its symptoms resemble those of fever, and it is usually accompanied by an inflammation of the eye-lids; hence its name.

PINKIE, a village situated a few miles east of Edinburgh. It was the scene of a battle in which the Duke of Somerset, acting as regent for Edward VI., defeated the Scots, 1547. The war was caused by Somerset trying to force the Scots to carry out the terms of a treaty, by which Edward VI. was to marry Mary, Queen of Scots.

PINS. It is estimated that about 80 millions of common pins are made each day in England, the greater part at Birmingham. More than half that number is made every day in the United States, and other countries do their share. The first pins were probably of wood or small fish bones. Pins of bone and bronze are found in the lake dwellings of the continent, and even the safety-pin was anticipated, in form at least, by their prehistoric inhabitants.

PIONEERS, a military term, applied to those soldiers who precede a regiment on the line of march, and perform rough engineering work, such as mending roads, or building temporary bridges. Ten pioneers and one sergeant are attached to each regiment of infantry.

PIPECLAY, a kind of clay found mostly in Dorset and Devon, and largely used on account of its whiteness and fineness for the manufacture of tobacco pipes. It is also sold in dried cakes and used by soldiers for whitening belts, gloves, etc.

PIRACY. Among the ancients piracy was recognised as an almost lawful calling. The Phœnicians and Greeks frequently combined trading and piracy. The Vikings of Scandinavia in the 9th and 10th centuries also scoured the seas for plunder. Piracy throughout the Middle Ages seems to have been common among all nations. In the 13th and 14th centuries, Hallam tells us, a rich vessel was never secure from attack, and neither restitution nor the punishment of the criminals could be obtained from any government. In the reign of Elizabeth we find her "sea-dogs" always ready to rifle a Spanish treasure-ship, even when the two nations were at peace. In the 17th century the most noted pirates were the *Buccaneers* of the West Indies, who preyed upon the Spanish. The latter denied the right of either France or England to establish settlements upon the mainland of South America or upon the adjacent islands, and for a considerable time the buccaneers had the unofficial support of both the French and English governments. The most famous of the buccaneers was a Welshman named Morgan, who eventually became Governor of Jamaica. Another great centre of piracy in modern times was Algiers. Not only were merchant ships rifled by the bands of pirates that infested the Mediterranean, but the seamen were captured and treated as slaves. It was at one time the practice of philanthropists to raise funds for the ransom of Christian slaves in the Barbary States. In the time of the Commonwealth, Admiral Blake read the pirates of Algiers a severe lesson, but the evil continued, more or less, until 1816, when Lord Exmouth bombarded Algiers and set free 1,200 prisoners. Even now, pirates are not unfrequently met with in the Indian and Chinese Seas.

PIRÆUS, the harbour and port of Athens, is distant from that city about 6 miles. The harbour was commenced about 450 B.C., and was for some time connected with Athens by two walls, each 60 feet in height, enclosing a road between them.

PISA, a town of Italy, situated on the Arno, about 6 miles from the sea. It possesses a university, a magnificent cathedral, and the famous campanile known as "the leaning tower." In the Middle Ages, Pisa was a great seaport and republic, and was finally conquered by Florence. Its commercial importance has disappeared, owing to the silting up of the Arno; population, 62,000.

PISCI'NA, the name given to a shallow basin which is seen in ancient churches, built into the wall near an altar. It is usually provided with a canopy, and

was intended to receive the water in which the chalice is washed after the celebration of the Mass. It is still in use in Roman Catholic churches.

PISGAH, a mountain situated in Palestine, a few miles to the east of the Dead Sea. From one of its summits, Mount Nebo, Moses viewed the Promised Land.

PISTOLE, a gold coin once current in France, Spain, and Italy, worth fifteen or sixteen shillings.

PITCAIRN ISLAND is situated in the Southern Pacific Ocean, 130° west longitude. It was discovered in 1769, and in 1790 was peopled by the mutineers of the *Bounty*. The present population, which numbers about 120, is descended from the mutineers, who intermarried with Tahitian women. Owing to constant intermarriage, the great majority of the present inhabitants are little better than imbeciles.

PITCH, a glossy, black and very brittle substance, which is obtained by distilling wood, tar, coal-tar, etc. As a result of distillation a spirit is given off, and the solid substance known as pitch remains. It is used in caulking the seams of ships, as fuel, and in the manufacture of asphalt and lamp black. Burgundy pitch is really a resin, and is obtained from the spruce-fir.

PITCHBLENDE, an oxide of the rare metal, uranium. It is an opaque, brittle mineral, usually greyish-black. It occurs but sparingly in nature, and generally in veins accompanied by ores of silver and lead. Austria is the principal source of supply, but recently considerable quantities in association with other uranium compounds have been found at St. Stephen's, Cornwall. It was while experimenting with pitchblende that Professor and Madame Curie discovered radium.

PITMAN, SIR ISAAC, *b.* at Trowbridge, 1813, *d.* 1879, was the originator of a well-known Phonic system of shorthand. He was originally a school teacher, and published a treatise upon shorthand in 1836. Later he abandoned teaching and became the head of the firm of Pitman and Sons. The publications of this firm are mainly connected with the Pitman Method, and the present popularity of the system is largely due to this fact. Several other systems are much simpler in character.

PITT, WILLIAM, Earl of Chatham, *b.* in Cornwall, 1708, *d.* 1778, a brilliant statesman and orator, is often spoken of as the "Great Commoner." He made his reputation by his opposition to Walpole. In 1757 he became Secretary of State in the ministry of the Duke of Newcastle, and practically controlled the affairs of this country during the progress of the Seven Years' War. In the dispute with the American Colonies he supported the claims of the Colonists. His last speech in the House of Lords was made on this subject, and during the course of it, he fell in a swoon and had to be carried from the House. His death occurred a few days later.

PITT, WILLIAM (the younger), *b.* near Bromley, 1759, *d.* 1806, the second son of the Earl of Chatham, was one of the most brilliant of English statesmen. He became Premier at the age of twenty-five, and remained in office until 1801. He returned to power in 1804, and remained until his death. It fell to his lot to govern England during the dangerous times of the French Revolution, and later he became the great opponent of Napoleon. His home policy was firm almost to severity. The wars which he was compelled to wage with France and her allies led to heavy taxation. In 1800 Pitt succeeded in securing the union of the English and Irish Parliaments. He managed this by wholesale bribery, but whatever his methods with others, he was himself perfectly honest, and he died a comparatively poor man. It is said that his death was hastened by his failure to counteract the successes of Napoleon. "Roll up the map of Europe," he remarked after hearing of Napoleon's victory at Austerlitz.

PITTSBURG, the "Iron City," is one of the largest manufacturing towns in the United States. It is situated on the Alleghany River in the state of Pennsylvania, in a district exceptionally rich in coal, iron, oil, and natural gas. Pittsburg specialises in the manufacture of hardware and glass. Amongst many famous firms which have their head-quarters there, may be mentioned the Carnegie and Westinghouse firms; population 330,000.

PIUS IX., *b.* 1792, *d.* 1879, became Pope in 1846. His period of office was marked by his unsuccessful efforts to bring about a union of the Italian States under papal supremacy. In 1870, on the withdrawal of the French garrison from Rome, he was deprived of all temporal power. To his influence was due the assembling of the Vatican Council in 1870, which adopted the doctrine of the Infallibility of the Pope.

PIUS X., *b.* near Venice, 1835, succeeded Leo XIII., 1903. He was born in humble circumstances, and was for many years an obscure parish priest. He eventually became bishop of Mantua and, later, Patriarch of Venice, but his election to the papal chair came as a surprise to most people.

PIZARRO, FRANCISCO, *b.* about 1476, *d.* 1541, a celebrated Spanish adventurer and the conqueror of Peru, spent the early years of his life as a swineherd. He was with Bilbao when the Pacific Ocean was first seen by European eyes, and in 1524 set sail from Panama and discovered Peru. Having obtained assistance from Spain he conquered that country, and in 1531 treacherously murdered the reigning Inca. Owing to a disagreement among the Spaniards, a sort of civil war arose and he was murdered. He was an exceedingly illiterate man, though possessed of considerable natural ability, and his dealings with the native population of Peru were characterised by extreme barbarity.

PLANCHETTE, a small heart-shaped piece of wood, mounted upon three legs, one of which is a lead pencil, and the other two ordinary supports provided with castors. It is used in spiritualistic séances, the operator placing his hand upon the wood and guiding it across a sheet of paper. Its movements have not been explained, but spiritualists claim that the words which are traced out by the lead pencil are messages from the spirit world.

PLANE-TREE, a tree which grows in the temperate regions of the northern hemisphere. It flourishes in the smoke of large towns, and may readily be distinguished by its bark which peels off during the autumn months. The Thames Embankment is lined with plane-trees, and many fine specimens may be seen in other parts of London. The timber of the older trees is used in cabinet work.

PLANETS, the name given to those bodies which revolve round the sun. The "Major" planets are eight in number, Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, and Neptune. The first mentioned six were known to the ancients; Uranus was discovered in 1781 and Neptune in 1846. The planets are more or less spherical bodies, which revolve round the sun in elliptical orbits, and in addition possess a movement of rotation. They are non-luminous bodies and shine by reflected light. The "Minor" planets are much smaller bodies which have their orbits between those of Mars and Jupiter. The word planet literally means "a wanderer," and the name was given to the bodies because of their apparently erratic wanderings in the heavens. The cause of this wandering was made apparent when it was understood that the planets revolve round the sun, and not, as the ancients believed, round the earth. (See *Solar System.*)

PLANTAGENET, GEORGE. See *Clarence, Duke of.*

PLANTAGENET, HOUSE OF, the name given to a line of kings who ruled over England from 1154 until 1399. The first of the line was Henry II., the son of Matilda, daughter of Henry I. and Geoffrey of Anjou. The word "plantagenet" is derived from "planta genista," (the broom-plant), a sprig of broom being the badge of the House of Anjou, which Henry II. adopted. The last of the line, Richard II., was deposed by Henry IV., the first of the Lancastrian line, and subsequently murdered. The Plantagenet kings are often called Angevin kings, as they derive their descent from Geoffrey of *Anjou.*

PLANTAIN. See *Banana.*

PLASSY, a town situated in India, on a branch of the Ganges, about 100 miles north of Calcutta. It is famous as the scene of a battle fought in 1757, in which Clive defeated Surajah Dowlah, the Nabob of Bengal. As a result of the battle, Bengal passed into the possession of the English, and the foundation of our Indian Empire was laid.

PLASTER OF PARIS. See *Gypsum.*

PLATINOTYPE, a photographic process by which very permanent prints are secured. The paper used is sensitised with a chemical containing platinum, and after printing is treated with a solution that causes the platinum to be deposited, and thus build up the picture.

PLATINUM, a rare and valuable metal which is obtained principally from the Ural Mountains and California. In its pure state it is a soft, whitish metal, much resembling silver. It melts only at a very high temperature, does not oxidise when exposed to the atmosphere, and is not affected by the strongest acids. The crucibles and stills used in the manufacture of sulphuric acid are made of platinum, and it is also of considerable use in laboratory work and in making electrical connections.

PLATO, *b.* 429, *d.* 347 B.C., one of the greatest of the Greek philosophers, was the founder of the Platonic School of Philosophy. Of his life but little is known; he was a pupil of Socrates, and taught in the grove of Academus, at Athens. He spent some time in Sicily, and there incurred the displeasure of Dionysius of Syracuse, who sold him as a slave. He was, however, set at liberty, and returned to Athens. The greater part of his works are expositions of the views of Socrates, and they are written in dialogue form. The finest translation of his works is by the late Professor Jowett.

PLATONIC LOVE, the name given to the friendship or love existing between a man and a woman, when that love is unaccompanied by any sensual desire. It was advocated by Plato, hence its name.

PLATYPUS. See *Ornithorhyncus.*

PLAYFAIR (LYON), BARON, *b.* in India, 1818, *d.* 1898; a great chemist and prominent politician of the 19th century. He was a favourite pupil of the great Liebig, and enjoyed the confidence of the Prince Consort, who gave him a large share in managing the Great Exhibition of 1851. The present system of managing

the Civil Service is largely the outcome of his inception.

PLEBISCITE, literally a decree of the people, is the name given to the taking of a general vote of the whole nation to decide some particular point in dispute. It is most commonly used in reference to certain elections held in France, notably that by which Napoleon III. was elected Emperor.

PLEBS, OR PLEBEIANS, the free-born commons of Rome in its early days, as opposed to the Patricians, who possessed all political privileges. They probably arose from immigrants allowed to enter and settle in the city after its foundation and organisation, but excluded from political rights, although compelled to render military service.

PLEDGE. See *Commercial Dictionary.*

PLEI'ADES (a-des), in classical mythology, the name given to the seven daughters of Atlas, who died of grief and were placed as stars in the heavens. The group of stars known as the Pleiades is a cluster of six small stars situated in the constellation Taurus.

PLEVNA, a town of Bulgaria, situated about 90 miles north-east of Sofia. It occupies an important strategic position, and is famous for the heroic defence made there by the Turks under Osman Pasha, 1877. The Russians unsuccessfully tried to take the town from July until December, and then Osman Pasha, after making a fruitless sortie, was compelled to surrender.

PLIMSOLL, SAMUEL, *b.* at Bristol, 1824. *d.* 1898; did much to improve the lot of our sailors. He got the Merchant Shipping Act passed in 1876, by which a ship is prevented from sailing if deemed unsafe by the Board of Trade, and a mark (known as the Plimsoll mark) is affixed to every British ship below which she must not sink in the water when loaded.

PLINY (1) "The Elder," *b.* in Italy, 23, *d.* 79 A.D., a celebrated Latin writer. His principal work is a Natural History, in which he treats of many subjects, including Geography, Medicine, Astronomy and Botany. Pliny lost his life during the eruption of Vesuvius. He ventured too far up the mountain in his desire to observe more closely the phenomena, and was destroyed. (2) "The Younger," *b.* 62, *d.* 113 A.D., the nephew and adopted son of the elder Pliny, was a distinguished Latin writer. The only works extant are a number of epistles, which throw considerable light upon the history of the period.

PLOUGH MONDAY, the Monday after Twelfth Day, and the end of the Christmas holidays. On this day, in old times, the labourers would get out their ploughs, with which they went from door to door soliciting contributions for their merry-making.

PLUMBAGO. See *Blacklead.*

PLUSH, a kind of cloth which resembles velvet, but possesses a longer pile or nap. Silk plush is made in large quantities at Lyons. In addition to silk, cotton, wool, goat's hair and eider-down are often used in the manufacture of plush. It is used for hats, various ornamental articles of wearing apparel for ladies, and for breeches.

PLUTARCH, *b.* about 46 A.D., was a celebrated Greek historian. His best known work is his Lives of Famous Greeks and Romans. These are forty-six in number, and are arranged for the sake of comparison in pairs, one Greek and one Roman. They form a most valuable addition to the historical literature of the world, since most of the writings from which Plutarch obtained his facts have since been lost.

PLUTO, HADES, or **DIS,** in classical mythology, the brother of Jupiter and Neptune, and the overlord of the abode of the dead. He is represented as a venerable old man, carrying a two-pronged fork, and having a three-headed dog (Cerberus) at his feet.

PLUTUS, in classical mythology, the god of riches. He was struck blind by Zeus in order that he might distribute his gifts blindly, to good and bad alike.

PLYMOUTH, a seaport and important naval station, is situated upon Plymouth Sound, at the mouth of the Plym. With the adjoining towns of Devonport and Stonehouse it forms "The Three Towns." The naval dockyard is situated at Devonport; at Stonehouse the Victualling Yard and Naval Hospital, and at Plymouth the Citadel. Plymouth Sound is protected by a breakwater which is nearly a mile long. (For population, etc., see p. 902.)

PLYMOUTH BRETHREN, a religious sect founded at Plymouth, about 1830, by John Darby and others. Their beliefs are similar in some respects to those of the Calvinists. They do not possess salaried ministers, they baptise all their members, partake of the Lord's Supper every Sunday, and in their meetings any member of the congregation is permitted to speak or offer prayer. There are at least three distinct branches of the *Brethren*, as they call themselves. The sect possesses followers in most of the British Colonies, in the United States, and in France and Switzerland.

PNEUMATIC DESPATCH, the name given to the transmission of telegraph forms, etc., by means of compressed air. It is used in London to despatch forms from the central to the suburban offices. The conveying pipe is of lead, and possesses a diameter of 2½ inches. When the "carrier" or case has been placed in the tube, compressed air is admitted behind it, whilst the air is exhausted at the other end, and thus a velocity of over 25 miles an hour is obtained. There are about 60 miles of these tubes in England, 40 miles of which are in London. The system has been used to transmit mailbags from the General Post Office, London, to Euston Station. The system is also in use in various places of business to despatch bills, change, etc., from one part of a building to another.

PNEUMATIC TYRES are in general use for the wheels of bicycles, motor cars, and other vehicles. Their advantage lies in the fact that the motion of a vehicle fitted with these tyres is much smoother than that resulting from any other method. This is due to the perfect elasticity of the air with which the tyres are filled. The tyre consists generally of two separate tubes. The inner tube, composed of very flexible rubber, acts as the air chamber. The outer tube is of rubber applied to a strong canvas backing. It is really a circular band of the material with recurved edges. When the inner tube has been fitted to the wheel this outer band is placed over it, and the curved edges fit into the inwardly curving edges of the rim. The filling of the inner tube with air causes it to press on the outer tube, brings the edges of the tyre and rim in close contact, and retains the whole in position.

PO, the longest river of Italy, rises in the Alps and, after a course of about 400 miles through the fertile plain of Lombardy, enters the Adriatic Sea. Owing to the quantity of mud brought down, the level of the bed is generally above that of the surrounding plain, and artificial embankments have been constructed. The principal tributary is the Ticino, and the chief towns on the Po are Cremona and Turin.

POCAHONTAS, an Indian maiden, the daughter of a chieftain of Virginia. She displayed great friendliness towards the early English settlers, and eventually married one named Rolfe. She afterwards came to England and died at Gravesend, 1617. (See *Smith, Captain.*)

POE, EDGAR ALLAN, *b.* at Boston, Massachusetts, 1809, *d.* 1849, a celebrated American poet and writer. His writings are characterised by wonderful imagination, but his life was completely spoiled by his vices. He was addicted to gambling and drinking, and he died from the results of a drunken carouse. His best known poem is "The Raven." "The Fall of the House of Usher," and "The Murders in the Rue Morgue," are characteristic examples of his prose works.

POETRY. It is almost impossible to obtain a satisfactory definition of poetry, but the principal differences between it and prose are as follows:—It employs figurative language far more frequently, and makes use of archaic words, grammatical constructions, and inversions in the order of words which are not permissible in good prose. It is metrical, each verse or line containing a definite number of "feet," in which the accented syllables occur in a particular order. It is frequently rhymed, but rhymes are not an essential characteristic. Poetry is of the following kinds:—Dramatic, Epic, Lyric, Satirical, Didactic, Pastoral, and Elegiac.

POETS' CORNER is situated on the eastern side of the south transept of Westminster Abbey. It contains memorial tablets to many of our greatest poets, including Chaucer, Shakespeare, Jonson, Spenser, Milton, Burns, Browning, and Tennyson. There are also buried in the Poets' Corner, in addition to some of the above, the following writers:—Macaulay, Samuel Johnson, Dickens, and also the musician Handel.

POGROM, a Russian word meaning "desolation, devastation," applied to a massacre by the mob, such as those recently perpetrated on the Jews in certain Russian cities, apparently at the instigation of public officials.

POISONOUS PLANTS. See *Med. Dict.*

POITIERS, a town in the south-west of France, was formerly the capital of Poitou. It was the scene of a battle, 1356, in which the Black Prince defeated King John II. of France. It afterwards became a stronghold of the Huguenots; population 40,000.

POLA, the principal naval station of Austria, is situated on the coast of the Adriatic Sea, in the province of Istria; population 45,000.

POLAND, the name now given to a province of Russia, was during the Middle Ages one of the most powerful states of Central Europe. It then included a large portion of what is now Russia, a portion of Eastern Prussia, and the province of Galicia in Austria. Poland appears as an important state about the 10th century, and reached the height of its power in the 13th and 14th centuries. The capital was Cracow and afterwards Warsaw. Its destruction was caused largely by internal political and religious dissensions. The partition of Poland occurred at the end of the 18th century, its territory being divided between Russia, Prussia, and Austria. This was not accomplished without strenuous opposition on the part of the Poles, under the leadership of Kosciusko. Russian Poland, although in a chronic state of political dissension and discontent, is one of the most prosperous provinces of the Empire. The chief towns are Warsaw, the capital, and Lodz, a town of one street, six miles in length, on each side of which are hundreds of cotton-mills. Area 9,000 square miles; population about 9½ millions.

POLAR EXPLORATION. Refer to *Index.*

POLAR LIGHTS. See *Aurora Borealis.*

POLDER, the name given in Holland and Belgium to a piece of reclaimed marsh land, which lies below the level of the sea. A polder is surrounded by a stone dyke and the water is pumped from it by machinery, which is driven by a windmill.

POLECAT, an animal of the weasel family, found in the temperate parts of Europe. During the day it sleeps in its hiding-place, sallying forth at night to plunder dove-cots or hen-houses, or to seek its prey in a rabbit warren. It destroys all the small animals that come in its way. Should it enter a hen-house not a hen would be left alive in the morning. It is notorious for its fetid smell. See *Ferret.*

POLE STAR, the nearest prominent star to the north pole of the heavens, a point vertically above the north pole of the earth. The pole star is the brightest star in the constellation *Ursa Minor* (Little Bear), and its mean distance from the actual pole is at present about 1½ degrees. Owing to the precession of the equinoxes this distance varies, though the change is very slow.

POLICE. The modern police force in England was established by Sir Robert Peel, 1829. The arrangement for maintaining order previous to that date was in the hands of the sheriffs, and was of a most inadequate character. The police of the various counties of England are under the control of a joint committee, elected partly from the members of the County Council and partly from the justices of the peace of the county. The Metropolitan Force is under the direct control of the Home Office. Ireland possesses two distinct forces, the Dublin Metropolitan Force and the Royal Irish Constabulary, the latter being a semi-military organisation. The total number of police in England and Wales is about 40,000. In 1909 was instituted "The King's Police Medal," to be awarded to officers of the constabulary force and fire brigades, for acts of exceptional courage and skill. Refer to "Police" in *Index.*

POLITICAL ECONOMY. This science has been defined in various ways. According to John Stuart Mill it is the science which treats of the nature of wealth, and the laws which govern its production and distribution. Notable works written on the subject, are: Adam Smith's "Wealth of Nations," and John Stuart Mill's "Principles of Political Economy."

POLITICS, the science of national government, which treats of the principles that should underlie the regulations for securing order, individual liberty, and the general interests of the commonwealth. It may be divided into Home or Domestic politics and Foreign politics. The latter concerns itself with the "Balance of Power" amongst the important states of the world with a view to the maintenance of peace and national independence. The word is also used to denote the opinions of an individual upon the various prominent questions affecting the welfare of the nation.

POLLARDING, the name given to the operation of lopping off the poll or top from a tree. The trees most commonly treated in this way are the willow and the poplar, and when so treated they are known as *pollards.*

POLLUX. See *Castor* and *Pollux.*

POLO, MARCO. See *Marco Polo.*

POLYANDRY, the state of marriage in which a woman possesses more than one husband. Cæsar tells us that it was a common practice among the Britons, and travellers in uncivilised countries in all ages have observed the same thing.

POLYCARP, *b.* in Asia Minor, 69, *d.* 155, one of the most famous of the early Christian Fathers. Polycarp was a disciple of the apostle John, and suffered martyrdom at Smyrna, at which place he had been head of the Church for many years. An "Epistle to the Philippians" written by him is still in existence.

POLYGAMY, the state of marriage in which a man possesses more than one wife. It is commonly practised in eastern countries, and is recognised by the Mohammedan religion. The Old Testament does not prohibit polygamy, and both the patriarchs and the kings of Judah and Israel practised it. In the time of Christ it seems, however, to have disappeared amongst the Jews. The laws of all European countries treat polygamy as a crime, and the only sect which has advocated it of recent years is that known as the Mormons, who have their headquarters at Salt Lake City, Utah. In 1890 the Government of the United States intervened, and made the practice illegal.

POLYNESIA, the name given to the whole of the islands of the Pacific Ocean which lie between the meridians 110° W and 180° W. There are many groups, of which the most important are the Samoan, Tonga, Sandwich or Hawaiian, Ladrone, Caroline, and Marquesas groups. The total area of Polynesia is about 11,000 square miles, and the population, which is mainly of Malay extraction, 265,000. The islands are, generally speaking, under the protection either of Germany, France, or Great Britain.

POLYPHE'MUS, in classical mythology, the son of Poseidon (Neptune), and the chief of the Cyclops. He was of great size and possessed but one eye, which was placed in the middle of his forehead. Ulysses, when wrecked upon the coast of Sicily, in which island Polyphemus dwelt, was confined in a cave by the monster, from whom he contrived to escape by making him drunk and burning out his single eye while he was in profound sleep.

POMEGRANATE, the fruit of a tree which grows in northern Africa and southern Europe. The fruit, which is about the size of an orange, contains a large number of reddish seeds, each contained in a separate cell. It has never become a popular fruit in this country. The rind contains tannin, which is used in the manufacture of Morocco leather.

POMPADOUR, *b.* in Paris, 1721, *d.* 1764, was the most celebrated of the mistresses of Louis XV. She was of humble birth, but possessed remarkable beauty. From 1745 until her death she exercised in French politics enormous influence, the evil effects of which can scarcely be overrated.

POMPEII, a town of Italy, which was overwhelmed by volcanic ashes during an eruption of Vesuvius, 79 A.D. It is situated at the foot of Mount Vesuvius, on the shore of the Bay of Naples. Excavations were commenced at Pompeii, 1748, and since 1870 have been carried on with great regularity, so that now a large portion of the town has been exposed to view.

POMPEY, surnamed "The Great," *b.* 106, *d.* 48 B.C., was one of the greatest Roman soldiers. He saw much service in Italy, Greece, and Asia Minor, and met with almost uninterrupted success. In 62 B.C. he formed, with Cæsar and Crassus, the first triumvirate. Whilst Cæsar was engaged in Gaul, Pompey, as the leader of the aristocratic party, was almost absolute ruler of Rome. On the outbreak of the civil war between the two rivals, Pompey fled to Brundisium, and thence to Greece. He was defeated at Pharsalia, 48 B.C., by Cæsar, and fled to Egypt, where he was foully murdered by order of Ptolemy XII.

PONDICHERRY, the capital of the French possessions in India, is situated on the east coast of that country, about 90 miles south of Madras. It was acquired by the French in 1672, and has been captured by the British on three occasions; it was finally restored in 1816; population about 50,000.

PONTIFICAL, a book which contains the various services of the Roman Catholic Church. In addition to the prayers to be recited, there is also in the pontifical a minute description of the ceremonies to be observed. The present pontifical was drawn up by Pope Clement VIII., 1596.

PONTINE MARSHES, a marshy district forming part of the Campagna di Roma, which is situated between Rome and the coast. Efforts have been made without success to drain the district, and at the present time it is used almost entirely as a grazing ground for cattle.

PONTIUS PILATE, Roman governor ("procurator") of Judæa from 26 to 36 A.D. His official residence was at Cæsarea, but he generally visited Jerusalem at the great feasts. He had little scruple about offending the Jews' religious susceptibilities, and this, together with his exactions, caused many outbreaks, the last of which brought about his recall. In all probability he committed suicide.

PONTOON, a sort of boat, which is used to support a temporary military bridge. In the British army the pontoon used is a flat-bottomed boat, which is made in two or three sections to facilitate transportation.

POONA, the capital of a district of India of the same name, is situated on the western Ghats, about 80 miles south-east of Bombay, at an altitude of 2,000 feet. It is the seat of the Bombay government during the hot season, and an important military centre; population 110,000.

POPE, ALEXANDER, *b.* in London, 1688, *d.* 1744, a celebrated English poet. He spent many years of his life at Twickenham. Pope was a master in the construction of the heroic couplet, and his poems are written in this metre. For example—

Honour and shame from no condition rise,
Act well your part, there all the honour lies.

His works include "The Dunciad," "Essay on Criticism," "The Rape of the Lock," "Essay on Man," and translations of the "Iliad" and "Odyssey."

POPE JOAN. (See *Joan, Pope.*)

POPE, THE, is the title bestowed upon the Bishop of Rome, the Head of the Roman Catholic Church. The members of this Church regard the Pope as the successor of Saint Peter, and as Christ's Vicar on earth. In 1870 the Vatican Council, composed of Roman Catholic bishops from all parts of the world, decreed the "Infallibility of the Pope," whereby his definition of a doctrine of faith or morals is held to be necessarily true and binding on all Christians. Since the 11th century, the election of Pope has been in the hands of the cardinals, who used to assemble in the town at which the death of the Pope has occurred, and proceed to elect his successor. The election now takes place at the Vatican, the Pope's official residence. When the election occurs, all persons but the cardinals and a few officials are excluded from the building; the cardinals are isolated in small compartments and a ballot is taken daily, in absolute silence, until some one person obtains a two-thirds majority of the votes cast. The elections are occasionally very protracted; that which ended in the elec-

tion of Pius VII., 1799, was spread over six months. The Pope in the Middle Ages exercised considerable temporal power in Italy, but in 1870, when that country was united under one king, he was deprived of his temporal kingdom. Since that date the Popes have refused to recognise the king of Italy, and of their own free will have remained within the Vatican walls from their election until death.

POPINJAY, the name originally of a parrot, but commonly used in England during the Middle Ages, as the name of the mark or target set up in archery contests, and consisting of a piece of wood ornamented with feathers, wool, etc.

POPISH PLOT. See *Oates.*

POPLIN, a fabric made with threads of silk one way, and worsted the other, cotton or flax replacing the silk in the cheaper kinds. Introduced into Ireland by French refugees, the manufacture took root in Dublin, but the demand for poplin is very fluctuating. Figured poplins are very effective for decorative purposes.

PORCELAIN. See *Pottery.*

PORPOISE, a mammal belonging to the same family as the dolphin, and often seen off our coasts. It is about 5 or 6 feet long, and when present is visible at intervals, being obliged to come to the surface to breathe. Porpoises are often seen in pursuit of shoals of herring, pilchard, or mackerel, among which they commit great havoc.

PORT ARTHUR is situated at the southern extremity of Liao-Yang Peninsula, upon a harbour which is free from ice the whole year round. It was taken from the Chinese by the Japanese in 1894, but they were compelled to relinquish the prize by a coalition of Russia, Germany, and France. In 1898 Russia took possession of the place and made it one of the strongest fortresses in the world. It was besieged by the Japanese in 1904, and taken after a terrible struggle January 1st, 1905. (See *War, Russo-Japanese*).

PORTCULLIS, a heavy iron grating, which was formerly used as a gate to a castle. It was so constructed that it could be raised or lowered, and it was provided along its lower edge with spikes, which penetrated the ground when it was dropped.

PORTE, SUBLIME, the name applied to the Government of the Ottoman Empire, or to the Empire itself. It is a French translation of the official Turkish name, "Babi Ali," literally "the high gate." The name derives its origin from the fact that in former times justice was administered at the gates of the palace.

PORTLAND CEMENT, an artificial product so called because it resembles Portland stone in colour. See *Cement.*

PORTLAND, ISLE OF, a peninsula which is situated on the coast of Dorset. It contains enormous quantities of excellent building stone, and is the site of a convict prison. The breakwater, which is the largest of its kind in England, is in two portions, the inner being about 650 yards in length and the outer over 2,000 yards; population 15,000.

PORTLAND VASE, a famous vase which was discovered in Rome, 1630. It is of blue cut glass and stands ten inches in height, and it derives its name from the fact that it was purchased by the Portland family and presented to the British Museum. In 1845 it was smashed by a madman, but it has since been cleverly repaired.

PORT MAHON, a naval seaport of the island of Minorca. It is situated upon a magnificent harbour, and is used by the Spanish authorities as a quarantine station; population 18,000.

PORTO RICO, the most easterly of the group of West Indian Islands known as the Greater Antilles, has been, since 1898, under the protection of the United States. Previous to that date it was a Spanish possession, and during the 19th century the scene of almost continual rebellion. The productions include coffee, sugar, and tobacco. Area 3,500 square miles; population nearly a million.

PORT ROYAL, a well-fortified naval station in Jamaica, on the end of the spit of land which, jutting out to the west, forms the harbour of Kingston. A great earthquake in 1692, and hurricanes and conflagrations since, have reduced it to a mean place of 1200 inhabitants.

PORT SAID is situated at the northern end of the Suez Canal. It is a port of call for steamers, and an important coaling station; population 37,000.

PORTSMOUTH, the principal naval station, and the strongest fortress in the British Isles, is situated on an island off the coast of Hampshire. It possesses a naval dockyard and a good harbour. Spithead, which lies between the town and the Isle of Wight, forms a magnificent anchorage for the ships of the navy. (For population, etc., see p. 902.)

PORTUGAL occupies the western portion of the Iberian Peninsula. The country is generally mountainous, the only considerable tracts of plain being towards the south. Portugal was, during the 15th and 16th centuries, one of the greatest maritime countries of Europe; but since then, owing to the indolence of its inhabitants, it has fallen from its high position. It exports wine, sardines, cork, fruits and copper. The government, which is a limited monarchy, has its head quarters at Lisbon, and the only other town of importance is Oporto. Area 35,000 square miles; population about 5½ millions.

PORT WINE, a rich, heavy wine, is exported from Portugal. Its colour varies according to its age, from red to a tawny brown. In the 18th century, when the supplies of French wine were shut off from this country, port was the fashionable drink, but its popularity has declined of recent years. It is still the wine commonly prescribed for invalids. Much of the cheap port is merely crude spirit coloured with the juice of elder-berries.

POSEIDON, in Greek mythology, the lord of the seas, corresponding to the Roman god Neptune. He was the son of Saturn and the brother of Zeus and Pluto. He is represented as a venerable old man carrying a trident, and usually accompanied by a dolphin or a horse. His palace was in the depth of the sea, over which his chariot was drawn by horses with brazen hoofs and golden manes. The waves became calm at his approach, and around his chariot gambolled the denizens of the sea.

POSITIVISM, or **POSITIVE PHILOSOPHY,** the system of Auguste Comte, a French philosopher. He may be said to have prepared the way for the reconstruction of society after the great upheaval of the French Revolution. Any one comparing the lot of a workman in 1906 with that of his fellow of 1806 cannot fail to observe the immense superiority of the former. The teaching of Comte prepared the way for the recognition of the fact that capital must do its duty by labour, and labour must acknowledge a duty to the society which provides it with work. His attempted religious system was a failure from the first, but it made the way clearer for a right conception of man's duty to man. See *Comte, Auguste.*

POSSE COMITATUS, the "power" or "force of the county." It consists of all men between the age of fifteen and seventy, who may be called on by the sheriff to aid in putting down riot, or in assisting him to execute a writ.

POSSET, a hot drink taken on going to bed, generally for colds. It is composed of hot milk curdled with wine, strong ale, or vinegar, spiced and sweetened.

POSTAL UNION, an association embracing all the chief countries of the world, whose aim it is to consider and simplify postal tariffs and regulations as between the different countries. Its first meeting was in 1874, and it has done good work in unifying charges and facilitating the carriage of postal matter.

POST-OBIT BOND. See *Commercial Dictionary.*

POSTULATE, an assumption which must be admitted before argument is possible, e.g., that the human will is free, before arguing on the claims of duty.

POTATO, a valuable tuber-bearing plant which is a native of America. It was introduced into Europe during the 16th century, and is now very extensively cultivated. It is used as a foodstuff, and from it starch and alcohol are obtained. The extraction of alcohol from the potato is an important industry in Germany. Potatoes repeatedly grown on the same ground from their own buds develop disease. Enormous prices are often paid for new sorts obtained directly from the seed of an old plant.

POT-POURRI, a mixture of sweet-smelling herbs, placed in a vase or box, and intended to diffuse a pleasant aroma through a room. It is also the name given to a sort of stew in which meat and vegetables are cooked together; and lastly to a medley of musical tunes.

POTSDAM, a town of Prussia, is situated some 16 miles south-west of Berlin. It contains several palaces, including the Sans-Souci and Marble Palaces, all of which are the property of the reigning family of Prussia; population 60,000.

POTTER, PAUL, *b.* in Holland, 1625, *d.* 1654, a famous Dutch animal painter. The Royal Gallery at the Hague contains several of his works, notably that known as "Paul Potter's Bull."

POTTERIES, a district of North Staffordshire, known as "The Five Towns," in which the pottery industry is carried on. These towns are Stoke, Hanley, Burslem, Longton and Newcastle.

POTTERY. The term pottery is applied both to articles made chiefly of clay and to the processes of manufacture. The actual substances used vary according to the kind of ware to be made, but they are generally a mixture of clay and sand flint or felspar. In the manufacture of porcelain, kaolin or china-clay is the chief ingredient. The required mixture having been made, it is then turned into the right shape either by moulding or by working on a lathe. The shaped article is then dried and baked into a sort of "biscuit-ware," which is hard but porous. Upon this ware the pattern is now printed or painted, and the ware thus decorated is again placed in the furnace to fix the colours. It has yet to be glazed or enamelled. Common pottery is often glazed whilst it is being baked. Salt is thrown into the vessel holding the pottery and is decomposed, the sodium combining with the silica and forming a fairly satisfactory glaze. In the case of porcelain, the glazing is done by dipping the article into a mixture of water and ground felspar. The chief centres of the porcelain industry in England are Worcester and Derby. Coalport is also still engaged in the manufacture.

POTWALLOPERS, a certain class of voters in certain English boroughs before

the Reform Act of 1832. The term is derived from *pot* and *wallop*, "to boil," the right to vote being restricted to such as cooked their own food in a fireplace of their own.

POUNDS, JOHN, a shoemaker, who may be considered the founder of the ragged-school. He lived at Portsmouth, and for twenty years (1820–1840) taught the slum children, as he worked. His example led to the opening of other similar schools, and eventually to the formation of the Ragged School Union.

POUND STERLING. The word "sterling" is said to be derived from "Easterling," a name for the Germans who traded so much with England in the 12th and 13th centuries. Their money was of great purity; hence it was usual for the seller to stipulate for a payment in pence or pounds "sterling," and the word has survived as the epithet for standard money.

POUSSIN, NICHOLAS, *b.* in Normandy, 1594, *d.* 1665, a celebrated French artist. He spent the greater part of his life in Rome, but during a short time spent in Paris as court painter he decorated the gallery at the Louvre.

POWELL, BADEN. See *Baden-Powell.*

POYNINGS' LAW, or Statute of Drogheda, an Act of the Irish Parliament passed in 1495, when Sir Edward Poynings was king's deputy of Ireland. The law enacted that all laws in force in England should also be in force in Ireland; that the Irish parliament should not sit without the consent of the King of England and his council; and that it should take no bill into consideration before it had been approved by the English council.

POYNTER, SIR EDWARD JOHN, *b.* at Paris, 1836; president of the Royal Academy and Director of the National Gallery. He first exhibited in 1861. "Israel in Egypt," "The Catapult," "The Ibis Girl," and "Atalanta's Race," are some of his chief pictures. He has worked largely in water-colours.

PRAGMATIC SANCTION, an agreement made by a sovereign with the neighbouring states regarding the succession after his death. It is used with particular reference to an agreement made between Charles VI. of Austria and the various European powers, by the terms of which his daughter Maria Theresa was to succeed him. On his death, the Elector of Bavaria and Frederick II. of Prussia attempted to obtain possession of some of the Austrian territory, and the Seven Years' War ensued.

PRAGUE, the capital of Bohemia, is situated upon the Moldau, a tributary of the Elbe. It is the centre of a large manufacturing district, in which are produced sugar, beer, brandy, porcelain, glass and all kinds of textiles; population 385,000.

PRAXIT'ELES (el-es), one of the greatest of Greek sculptors, probably flourished about 400 B.C. Examples of his work may still be seen at the Louvre, at the Vatican, and in Florence, but his most celebrated work, "Aphrodite of Cnidus," was destroyed in a fire at Constantinople during the 6th century.

PRAYING-WHEEL, a mechanical contrivance to which prayers or religious writings are attached. It takes the form of a revolving wheel or of a cylinder which rotates horizontally on a pivot. Among Buddhists, especially those of Tibet, each revolution of the praying-wheel is considered equivalent to an uttered prayer and is counted to the credit of the person who turns the wheel.

PRECEDENCE. Refer to *Index.*

PRECESSION, a going forward, or before something. It is usually applied in astronomy to the occurrence of the equinoxes each year a little *before* the point on the ecliptic where they fell the previous year. The entire revolution of the equinoxes takes about 25,000 years.

PRECIOUS STONES. See *Gems.*

PREDESTINATION. "The doctrine of Calvin and the Calvinists is that from all eternity God predestinated a certain fixed number of individuals, irrespective of anything in them, to final salvation and glory; and that all others are either predestined to damnation, or, at least, so left out of God's decree to glory, that they must inevitably perish." (Dr. Harold Browne on Art. xvii. in the Prayer Book.)

PRESBYTERIANISM. Refer to *Index.*

PRESCOTT, WILLIAM HICKLING, *b.* at Salem, Mass., 1796, *d.* 1859, a famous American historian. His works on "The Reign of Ferdinand and Isabella," "The Conquest of Mexico," and "The Conquest of Peru," based largely on original documents obtained from Spain, are lucidly written, and frequently attain a lofty grandeur of style. During the whole of his literary career he was forced to employ a reader to assist him, owing to partial blindness from an accident received while an undergraduate at Harvard.

PRESIDENT OF U.S.A., THE, is elected for a term of four years by presidential electors, who are themselves elected by the people of the various States, the number of presidential electors from each State coinciding with the number of Senators and Congressmen representing that State. The president is commander-in-chief of the army and navy; he is empowered to grant reprieves and pardons, to make, with the concurrence of a two-thirds majority in the Senate, foreign treaties, and to suggest new laws; he has, moreover, in his hands the appointment to numerous state offices. (For list of "Presidents" refer to *Index*).

PRESS-GANG. From King John's reign to that of William IV. it was customary, during war-time, to press men by force into the army or navy in order to increase the fighting strength. Bodies of men, known as press-gangs, each under the command of a lieutenant, were empowered to seize and enlist suitable men, *nolens volens.* From 1688 onwards this system was chiefly employed on behalf of the navy. Often the press-gang went down to some great seaport and boarded all the merchant ships lying at anchor, in order to collect sailors for the royal navy. It was not unusual for the sailors of some merchant vessel, just returning home after a long voyage, to be forced on board a man-of-war waiting in harbour to make up its complement.

PRESS, LIBERTY OF. Refer to *Index.*

PRESTER JOHN. During the Middle Ages there was a belief current in Europe that a Christian king who had styled himself Presbyter or Prester John, governed vast possessions in Central Asia. About 1165, a letter reputed to have been sent by him to Manuel Commenus, emperor of the East, circulated through Europe. Wonderful tales were told of his wisdom and the splendours of his court, but his identity has never been established. In the 14th century, the Christian king of Abyssinia became confounded with this fabulous potentate.

PRESTON, a town at the mouth of the Ribble, Lancashire. It is an important railway centre, and the dredging of the river has given a strong impetus to its growing shipping-trade. Cotton goods are manufactured and coal exported. Here, in 1648, the Scottish royalists were crushed by Cromwell; the town gave its support to the Old Pretender in 1715, and to the Young Pretender in 1745. (For population, etc., see p. 902.)

PRESTONPANS, a small town near Edinburgh, where, in 1745, Prince Charles Edward, the Young Pretender, defeated a British force under General Cope.

PRESUMPTIVE HEIR, the person who, should the existing holder of property die, would at once succeed, but whose title may be nullified by the birth of a child to the existing possessor. Thus a brother may lose his rights by the birth of a child to his elder brother, or a daughter by the birth of a son to her parents.

PRETENDER, THE OLD, James Francis Edward, *b.* at St. James's Palace, 1688, *d.* 1766, son of James II. and Mary of Modena. When James II. fled from England his son was sent to France, and there brought up under the protection of Louis XIV., by whom he was proclaimed king of England on the death of his father. His adherents, known as Jacobites, called him James III., but he is usually styled *The Old Pretender*, a word meaning "Claimant." In 1715 a rebellion was raised in Scotland and the north of England on his behalf, but it was easily suppressed.

PRETENDER, THE YOUNG, Charles Edward Stuart, *b.* at Rome, 1720, *d.* 1788, son of "the Old Pretender" and grandson of James II. of England. In 1745 he raised a rebellion in Scotland and claimed the English throne on behalf of his father. His genial personality gained him many adherents in Scotland. He defeated a royal army under General Cope at Prestonpans, and marched his forces into England. He got as far south as Derby, and then finding himself unsupported by the English he reluctantly retraced his steps. He was followed by an army under the Duke of Cumberland, and totally defeated at Culloden Moor in 1746. After exciting adventures he escaped to the Continent and settled at Rome, where he died prematurely from the effects of alcohol.

PRETORIA, the seat of the government of the Union of South Africa. It was founded by the Boers in 1855, and named after Pretorius, the first president of the Transvaal Republic. It was entered by the British troops under Lord Roberts, 5th June, 1900, and was the head-quarters of the invading army till the close of the war. It is built on the rectangular system, and has fine government buildings.

PRETORIAN GUARD, a powerful force of picked Roman soldiers, formed by the Emperor Augustus Cæsar for his personal protection and for the maintenance of his power. In time this body became so powerful in the State as to depose and set up emperors almost at will. It was suppressed by the Emperor Constantine about 312 A.D.

PRIAM, in Greek legend, was the last king of Troy. By his wife, Hecuba, he had numerous children, of whom Hector, Paris, and Cassandra were the most famous. In the great siege of Troy by the Greeks under Agamemnon, Priam fell with the city.

PRIBYLOV ISLANDS, a group of four small volcanic islands in Behring Sea. Their area is only 50 square miles, but their importance lies in the fact that they are the breeding ground of the fur-seals, thousands of which are here killed annually.

PRIDE'S PURGE. Colonel Pride was commissioned by a council of officers of the Parliamentary army to station himself outside the Houses of Parliament and prevent the entrance of all Presbyterian members opposed to taking extreme measures with Charles I. By this means the appointment of a council to try the king was successfully passed, 1648.

PRIESTLEY, JOSEPH, *b.* near Leeds, 1733. *d.* 1804, an English scientist best known for his production of oxygen from

the red oxide of mercury in 1774. For many years he acted as a Nonconformist minister. In 1791 his openly expressed sympathy with the French Revolution led to his house being wrecked by a mob. From 1794 to his death he resided in the United States.

PRIMARY COLOURS, the name given to the colours produced by passing sunlight through a refracting and dispersing medium such as a prism. If the refracted rays are allowed to fall on a screen, a band of seven colours—violet, indigo, blue, green, yellow, orange and red—is seen. Red, green, and violet-blue, are regarded by some authorities as the primary colours, because from them the others may be obtained. But in painting the primary colours are red, blue, and yellow, as the other colours can be obtained from them. It is strange that colours due to mixture of coloured lights are different from those due to mixture of the corresponding paints; thus, blue and yellow light produce a dirty white, whereas blue and yellow paints produce green.

PRIMOGENITURE, in law, is the name specially applied to the principle by which the real estate of the parent descends, in the absence of a will, to the eldest son, to the exclusion of other members of the family. In feudal times this system served its purpose in keeping up the wealth and power of noble families, and facilitated the operation of feudal laws.

PRIMROSE, ARCHIBALD PHILIP, Earl of Rosebery, *b.* 1847, a prominent British statesman. He gained a name in the House of Lords as a skilful and polished debater, and was first Commissioner of Works in Gladstone's ministry, 1884–5. He served under Gladstone as Foreign Secretary in 1886 and 1892–4, and succeeded him as Premier, 1894–5.

PRIMROSE DAY, April 19th, the anniversary of Lord Beaconsfield's death, when his statue in Parliament Square, Westminster, is decorated profusely with primroses, his favourite flowers, in commemoration of his services to the empire. (See *Disraeli.*)

PRIMROSE LEAGUE, a political organisation, in which ladies play an important part, for the furtherance of the imperial policy which formed so prominent a feature in the statesmanship of Benjamin Disraeli, Earl of Beaconsfield; it was founded in 1884.

PRINCE EDWARD ISLAND, a province of the Dominion of Canada, lying in the Gulf of St. Lawrence, and separated from New Brunswick by Northumberland Strait. Its surface is undulating and very fertile, plentiful crops of wheat, barley, oats, and vegetables being produced. Fruit, especially apples, is successfully grown. The lobster, mackerel, cod, and hake fisheries are very productive. Area 2,184 square miles; population 104,000; capital Charlottetown.

PRINCE IMPERIAL. See *Napoleon, Eugène Louis.*

PRINTING, THE INVENTION OF. Printing from fixed type, which is really a species of engraving, seems to have been used to a limited extent in very ancient times. The invention of printing from movable metal types is claimed for two printers—Laurence Coster, of Haarlem, and John Gutenberg, of Mainz. The latter set up a printing press at Mainz about 1450. Printing was practically confined to Mainz till the sack of the town in 1462, dispersed the printers and led to the more general adoption of the art. William Caxton, the first English printer, learnt the secret while resident in the Low Countries, and set up a printing press at Westminster in 1476. Gothic type was used by English printers till 1518, when it was superseded by the more readable Roman type now employed. The Germans, however, still use the Gothic type.

PRIOR, MATTHEW, *b.* 1664, *d.* 1721, one of the foremost of English minor poets. In conjunction with Charles Montague, afterwards Earl of Halifax, he produced, in 1687, "The Town Mouse and The Country Mouse," a parody of Dryden's "Hind and Panther." In 1690 he began a diplomatic career, serving as Secretary to the English Embassy at the Hague, and later in a similar position at Paris. For his share in negotiating the unpopular treaty of Utrecht, he was sentenced, in 1714, to two years' imprisonment. His numerous short poems, on which his reputation chiefly rests, are light and graceful in style, and display much polished wit.

PRIVATEER. See *Marque, Letters of.*

PRIZE COURT. A court appointed by a country at war to adjudicate on questions relating to the capture of vessels carrying what is alleged to be "contraband of war." In England, the Judge of the Court of Admiralty is appointed president of the prize court.

PRIZE-FIGHTING, or **BOXING.** "P.R." was known to every one as *Prize Ring*, when prize fighting was in vogue and a fight for the championship was patronised by the highest in the land. The ring, so-called, was really a square of 24 feet, enclosed by two ropes, 2 and 4 feet from the ground. Each combatant had his own corner of the square, to which he retired between the bouts, and where he was attended by his seconds with sponge and bottle. The battle ended when one of the combatants failed to come to scratch after half-a-minute's rest. The scratch was a line drawn in the middle of the ring which the combatants had to toe before beginning or renewing the fight, and where they shook hands prior to the first round. Every endeavour was made to secure good temper and fair play; in other words, a strict observance of the rules of the ring, one of which forbade hitting below the belt, represented by a coloured handkerchief round the waist. The common expressions "to throw up the sponge" and "to come up to scratch" witness to the influence of the ring in times past. The sport first came into prominence about 1715, and attained its highest popularity a century later, when Jack Shaw, the mighty life-guardsman, was the hero of the day. After the retirement of Tom Spring, in 1824, among the most famous champions were "Gentleman" Jackson and Cribb, whose monumental tombs attest their former greatness: Jackson's, in Brompton Cemetery, London, and Cribb's in a churchyard at Woolwich; and last, not least, Tom Sayers, whose fight with Heenan was regarded as a national event, 1860. Sayers was a light Sussex man, 5 feet 8 inches in height; Heenan, a huge American, 5 or 6 inches taller. It was a fight between skill and strength. It lasted over 2 hours, and the later rounds were fought with the American practically blind and the English champion one-handed. Eventually the fight was interrupted. Sayers died 5 years later, and was followed to the grave in Highgate Cemetery by a countless throng of admirers. After the match between King and Heenan, in which the latter was nearly killed, prize fights, that is, contests with the naked fists, were declared illegal (1863).

PROCRUS'TES, in Greek legend, a robber of plausible tongue who waylaid travellers and invited them to his stronghold to share his hospitality. The guest on retiring to slumber was placed on a bed, which he was made to fit by having his limbs stretched or lopped according as they were too short or too long. He was slain by the Greek hero, Theseus. "Procrustean bed" and "Procrustean process" have become metaphorical expressions.

PROCTOR (shortened from L. *procurator*), one who acts for another. In the Law Courts the proctors have almost disappeared, their places being taken by solicitors. The King's Proctor acts in divorce cases to prevent a decree being made absolute that has been obtained by collusion or concealment of facts. At the universities the proctors are officials appointed by the authorities to see that the regulations are adhered to.

PROLETARIAT, the lowest class of the community, taken as a whole. Servius Tullius, sixth king of Rome, took the census of his subjects on a wealth basis, and to the poorest class, whose offspring or *proles* were their chief contribution to the State, he applied the name *proletarii.*

PROME'THEUS, in Greek mythology, one of the Titans. For stealing the sacred fire from heaven he was chained by command of Zeus to a rock in the Caucasus, where an eagle during the day consumed his liver, which grew again each night. He was finally freed by Hercules.

PROPAGANDA. In 1622 a committee of cardinals, known as the *congregatio de propaganda fide*, i.e., "the congregation for propagating the faith," was established at Rome, and still exists as the "Roman Propaganda." Its chief function is to support and extend foreign missions.

PROROGATION OF PARLIAMENT, the act by royal authority of closing one session of parliament with a view to its continuance in another session. As an *adjournment* is from day to day, so a *prorogation* is from session to session.

PROSECUTOR, PUBLIC. See *Public Prosecutor.*

PROSER'PINA, in Greek mythology, the daughter of Zeus and Demeter (Ceres). Abducted by Pluto, ruler of the nether world, she became his bride, but was allowed to spend two-thirds of each year in the upper world (the earth). Her re-appearance each year coincided with the return of Spring, and with her mother she was worshipped at Athens as the goddess of nature's bounty; but in works of art she generally appears as the queen of the lower world.

PROTECTION, the term used in political economy for the system adopted by a Government of imposing tariffs on imported articles, with a view to developing the home production of such articles, or of fostering certain home industries by handicapping foreign competitors.

PROTECTORATE, BRITISH, a country not under British rule, but whose foreign relations are absolutely under the control of the British government. Many of the states of India are in the position of protectorates, though not so designated. There are also the Protectorates of British Central Africa, East Africa, Zanzibar, Somaliland, the Malay States, British North Borneo and Sarawak.

PROTESTANT, one who has adopted the principles of the Reformation and, in consequence, protests against the errors of Roman Catholicism. For the original application of the term see under *Spires.*

PRO'TEUS, in Greek mythology, is a deified mortal, who had the care of the seals of Poseidon (Neptune). He had the gift of prophecy, but being reluctant to exercise his power, he eluded enquirers by changing his shape—animals, plants, fire, and water being his favourite transformations. On being seized he usually revealed the information sought.

PROTOCOL, originally a leaf pasted on scrolls, containing legal or legislative

matter, on which the date, names of witnesses, a brief summary of the contents, etc., were given. Later the name was given to the original copy of any despatch, treaty, or diplomatic document. It is also applied to a document signed by representatives of friendly powers, containing minutes of their discussions and resolutions on some subject of international import.

PROTOZOA. See *Zoology*.

PROVERBS, expressions which contain in a brief form worldly wisdom or moral precept. A proverb has been defined as "the experience of many expressed by the wit of one." Eastern sages were particularly fond of epitomising the results of their observations of human actions, in the form of a proverb. Short, pithy sentences from the works of great writers frequently come into current use as proverbs.

PROVERBS, THE BOOK OF, in the Old Testament of the Bible, is one of the wisest and best-known collections in literature. Their authorship has been much discussed, but it is believed that the majority are utterances of various Hebrew sages, including Solomon.

PRUNES, the dried fruit of the plum tree. Nearly all varieties of plums are converted into prunes, but the finest are produced in the Loire valley of France; the fruit-farms of California, Spain, Portugal, and the Balkan States are our other chief sources of supply.

PRUSSIA, the leading state of the German Empire, of whose area it occupies nearly one-half, extending, with few breaks, along the whole northern coast of the Empire. Its area is 134,622 square miles, and population upwards of 35 millions. Agriculture is flourishing, large crops of cereals, flax, hemp, beet-root, hops, and tobacco being produced. Minerals, especially coal, iron, and zinc are plentiful, and in the manufacture of cotton, woollen, and iron goods, Prussia ranks among the leading countries of the world. Berlin, the capital, is the great railway centre of Germany, and has very extensive manufactures. Other important towns are:—Hamburg, Breslau, Cologne, Frankfurt-on-Main, Dusseldorf, and Kiel. The present kingdom of Prussia has grown out of the Mark of Brandenberg, acquired by the Hohenzollern family in 1415. With the addition of the duchy of Prussia, the state developed under the military regime of Frederick William, the "Great Elector," (1640–1688), whose son assumed the title of Frederick I., king of Prussia, in 1688. Frederick the Great (1740–86) made Prussia prominent among the Great Powers, and added Silesia to his kingdom. More territories were added by the partitions of Poland in 1772, 1793, and 1795. The crushing defeat at the hands of Napoleon at Jena, 1806, brought Prussia to the rank of a second-rate power with considerable reductions of territory, but she recovered her position in 1815. War with Denmark, in 1864, added Schleswig-Holstein to Prussia, and the successful campaigns against Austria in 1866 increased her territory and her prestige. The war with France, 1870–1, led to the formation of the present German Empire, the imperial crown being vested in the king of Prussia and his heirs.

PRYNNE, WILLIAM, *b.* 1600, *d.* 1669, an English lawyer, prominent in the struggle between king and parliament in the reign of Charles I. His "Histriomastix," a virulent attack on theatres, and containing veiled references to the evil influence of the king and queen, led to his punishment in 1633, by the Star Chamber. He was fined £5,000, expelled from his profession, placed in the pillory, deprived of both ears, and imprisoned. Freed by the Long Parliament in 1640, he entered Parliament, and as a Presbyterian sided with the king in 1648. He suffered imprisonment during the Commonwealth, and at the Restoration became keeper of the Records in the Tower.

PSALMS. The name is especially applied to a collection, numbering 150, contained in one of the books of the Old Testament. Many of these are traditionally ascribed to King David, while others were undoubtedly composed after the return of the Jews from exile in Babylon. They form a treasury of prayer and praise suited to all circumstances and to all sorts and conditions of men of every age and country.

PSY'CHE, in Greek mythology, the personification of the human soul. In works of art she is represented as a beautiful maiden with the wings of a butterfly. Her love for Cupid is the theme of one of the most beautiful of classical allegories.

PTARMIGAN, a member of the grouse family; is common in Norway, and is found in the mountains of Scotland. It changes colour with the seasons, being mottled grey, like the lichen-clad rocks, in summer; and white, like the snow, in winter. It thus finds protection from hawks.

PTERODACTYL, an extinct reptile with wings like those of a bat, and a beak like that of a bird. It is only found in the rocks of the secondary period. The name means a wing formed by the fingers.

PTOLEMY I., *d.* 283 B.C. He was probably a natural son of Philip of Macedon, but the date of his birth is unknown. He was one of the bravest and most skilful of the generals who accompanied Alexander the Great in his campaigns, and on Alexander's death, in 323 B.C., he became regent of Egypt. In the wars that followed between the various Macedonian provinces, he successfully held Egypt, and in 306 B.C. assumed the title of king. After a wise and firm rule, he abdicated, in 285 B.C., in favour of his son.

PTOLEMY, L. CLAUDIUS, born early in the 2nd century A.D., probably at Alexandria, was the most famous geographer and astronomer of antiquity. His "geography" and terrestrial maps were regarded as authoritative up to the 15th century, when Columbus and Bartholomew Diaz made their discoveries. His "Syntaxis," in which he set forth his system of the universe, represented the earth as the fixed centre of the universe, with the heavenly bodies revolving round it. This system, known as the *Ptolemaic*, held its ground till Copernicus propounded his system in 1543.

PUBLIC PROSECUTOR. In State matters the Attorney-General is the official to prosecute. In other cases the duty was formerly left to private individuals, but in 1879 a public prosecutor was appointed, and for some years the office fell to the Solicitor to the Treasury. In 1908 the two offices were separated. Prosecutions, where the public interest is concerned, are now usually undertaken by the Public Prosecutor or by Local Authorities. In Scotland such prosecutions by private persons are almost unknown.

PUCK, a lively, mischief-loving little fairy, whose existence was taken for granted in superstitious times. The name, which means "a little devil," was introduced into English folk-lore by the Danes. He is the mischievous attendant of Oberon in Shakespeare's "Midsummer-Night's Dream," and is the same as "Robin Goodfellow."

PUGILISM. See *Prize-fighting*.

PULLEY, a mechanical device for raising weights, or transmitting power through ropes passing round them.

PULTOWA, or POLTAVA, a town of S.W. Russia, on the railway from Odessa to Moscow. It contains several woollen-cloth mills, and its annual wool fair attracts many merchants. Near it, in 1709, the long struggle between Peter the Great of Russia and Charles XII. of Sweden culminated in the defeat of the latter, and the gradual acquisition by Russia of the Swedish territories along the east of the Baltic; population 54,000.

PUMICE STONE, a light spongy stone formed out of the froth-like part of lava. Its lightness is due to the fact that gases escaping form cavities and passages just as it is on the point of solidifying. It floats for a long time after ejection from the volcano, but ultimately gets saturated with water and sinks. It occurs abundantly in the Lipari Islands, the Auvergne Mountains, Iceland, and the Canary Islands.

PUMP. The common "suction-pump" for raising water from a depth, consists of a barrel fitted with a spout near its upper end for the discharge of the water, and a pipe, or suction-tube, of smaller diameter, whose lower end dips into the water to be raised. At the junction of the barrel and the suction tube is a valve which opens upwards. The barrel contains a piston which can be raised and lowered vertically in the barrel by means of a rod attached to the handle. This piston is fitted with a valve which opens upwards. When the piston is raised from its lowest position in the barrel, the valve of the suction-tube opens and the water rises in the barrel. The descent of the piston closes the suction-tube valve, and the water collected in the barrel passes through the piston-valve. On raising the piston again, this water is forced through the discharge spout.

PUN, a humorous expression, in which there is a play upon a word which has different meanings. The teacher who was correcting a child for calling Abraham and Isaac "partridges," made a pun in telling the offender not to make "game" of the patriarchs.

PUNCH, the short, hump-backed, hooked-nosed exponent of tragi-comic humour, who takes the leading part in the familiar street-play, "Punch and Judy." The word is an abbreviation of "punchinello," itself a corruption of the Italian "polichinello." The play is said to have originated at Naples in the 16th century, and from that city to have gradually spread over Europe. The drink called "punch" derives its name from the Hindu *punj*, five, the Hindus using five ingredients to make it.

PUNCHESTOWN, a famous racecourse near Naas, 20 miles south-west of Dublin. Here, in April, are held the steeplechases which form the racing event of the year for Dublin folk.

PUNDIT, or **PANDIT,** a learned Brahman, skilled in Sanscrit, and in the religion, literature, and laws of India.

PUNJAB, a province of north-west India, drained by the Indus and its four main tributaries:—Sutlej, Ravi, Chenab and Jhelum—from which fact it gets its name, *punjab* being the Hindu for "five rivers." It is ruled by a lieutenant-governor, and inhabited chiefly by Sikhs, who were brought under British rule after two wars, 1846 and 1848–9. The climate is dry and not unhealthy. Immense quantities of wheat and barley are produced. The chief towns are Delhi; Lahore, the capital; Multan, an important railway junction; Amritsar, the headquarters of the Sikh religion; and Peshawar, a military station at the head of the Khyber Pass. In 1859 the division of Delhi was transferred to the Punjab

from the North-west Provinces. Area 110,000 square miles; population exceeds 21 millions.

PUNKAH, a large fan used in tropical countries, particularly India, to keep the air in rooms cool. It takes the form of a rectangular frame, over which cloth is stretched. The punkah hangs from the ceiling, and is kept oscillating by a servant or by machinery.

PUPA, one of the forms assumed by most insects which undergo various metamorphoses in passing from the egg stage to that of the perfect insect. In the case of moths and butterflies, the pupa stage succeeds that of the caterpillar, the pupa being known as the chrysalis.

PURBECK, ISLE OF, a peninsula about 9 miles long on the coast of Dorset. Much of the gray marble used in mediæval churches in the south of England was obtained from the limestone quarries here. Purbeck marble is the general name for lime-stone of a similar type quarried in other parts of Dorset. It is used largely for ornamental building purposes.

PURCELL, HENRY, *b.* at Westminster, about 1658, *d.* 1695, one of the best English musical composers. In 1680 he was appointed organist of Westminster Abbey. His setting of some of Dryden's poems, his glees and cantatas, his chants and anthems, are much admired. He is chiefly remembered as a writer of church music.

PURGATORY, the place in which, according to the doctrine of the Roman Catholic Church, the souls of the truly penitent are purged of sins unexpiated during their lifetime. The doctrine was first formulated in express terms by Gregory the Great. Prayers and masses are considered by Roman Catholics to be efficacious in shortening the soul's sojourn in Purgatory.

PURIM, a Jewish festival, celebrated with much mirth on the 14th and 15th of the month Adar (March). It commemorates Esther's frustration of the schemes of Haman, as described in the Book of Esther.

PURITANS, a religious party that arose in England in the latter half of the 16th century, as a result of the spirit of religious enquiry engendered by the Reformation. They aimed at reproducing a form of worship as simple as that observed in Apostolic times, and desired to remove from public worship all forms and ceremonies that seemed to them opposed to the spirit of true religion. Under the name of Brownists, they suffered a mild persecution in Elizabeth's reign, and inability to secure fair treatment led many to emigrate to America in the reign of James I. They formed the chief element in the opposition to Charles I., and gained the ascendancy in England under the Commonwealth. The religious reaction at the Restoration, followed by the passing and enforcement of the Act of Uniformity, made their lot a trying one; but their share in the Revolution of 1688 led to the passing of the Toleration Act in 1689, and the subsequent removal of all the religious and political disabilities under which they suffered.

PUSEY, EDWARD BOUVERIE, *b.* near Oxford, 1800, *d.* 1882, a celebrated English theologian. In 1824 he was elected a Fellow of Oriel College, Oxford, and from 1829 to his death he was Regius Professor of Hebrew at Oxford. He took a prominent part with Newman and Keble in the "Oxford Movement," and contributed two tracts on Fasting and Baptism to the series of tracts, which gave the name of "Tractarians" to those in favour of "High Church" principles. In 1843, in consequence of a sermon on the "Holy Eucharist," Dr. Pusey was suspended for three years from preaching. The only effect of this prohibition was to make Pusey for some years the most influential man in the Church of England. The Oxford or Tractarian Movement now took the name of Puseyism, and its adherents were called Puseyites. Of his larger works, the most important are his two books on the Eucharist, his "Commentary on the Minor Prophets," and his "Lectures on the Prophet Daniel." He also took part in editing a series of translations from the "Fathers of the Holy Catholic Church."

PYGMALION, a king of Cyprus, who carved an image of a maiden in ivory, and became so enamoured of his work that he begged Aphrodite (Venus) to give it life. The goddess granted his request, and the transformed statue became his wife. The story is introduced into William Morris's "Earthly Paradise."

PYGMIES, a race of tiny human beings mentioned by Homer, Herodotus and other classical writers, and regarded as fabulous until Stanley's encounter with the dwarf tribes of the Congo Forest in 1888.

PYM, JOHN, *b.* in Somersetshire, 1584, *d.* 1643, an English statesman, who took a prominent part in the struggle against Charles I. He took part in the impeachment of Buckingham, helped to frame the Petition of Right and the Grand Remonstrance, and was one of the five members whose attempted arrest by Charles led to the outbreak of the Civil War. His great work, the successful arrangement of the "Solemn League and Covenant" between the Scots and Parliament, in 1643, led to such issues as he did not live to see realised.

PYRAMIDS, structures of stone or brickwork, standing on a square base and tapering upwards to an apex. In ancient times, such structures were commonly erected to the memory of a departed king or personage of importance. The Egyptians were especially noted as pyramid builders, and about forty, constructed between 4000 B.C. and 2000 B.C., still exist. In most cases they are built over a chamber containing the sarcophagus of a king. Limestone was the chief material used, but huge blocks of granite formed the outer casing. In all cases, the four triangular sides were so placed as to face the four points of the compass. An intricate passage was left during the raising of each pyramid, leading to the central chamber. The best known group of pyramids is that of Gizeh, a few miles north of Cairo. This group contains eleven pyramids, that of Cheops, 450 feet in height, being the largest and most imposing. It contains over 80 million cubic feet of masonry, and encloses several chambers. All these monuments suffered considerably from spoliation by the Arabs in the 7th century A.D.

PYR'AMUS AND THISBE, two Babylonian lovers, whose story occurs in Ovid's "Metamorphoses," and is humorously employed by Shakespeare in "Midsummer-Night's Dream."

PYRENEES, a lofty range of mountains stretching for about 240 miles between the coasts of the Bay of Biscay and the Mediterranean Sea, and forming a natural frontier to France and Spain. Maladetta (11,165 feet) and Perdu (10,994 feet) are the chief peaks. Of the many passes, five admit of the passage of carriages, whilst railways from France to Spain pass round the eastern and western extremities of the range.

PYRI'TES, (i-tes) the name given to sulphides of iron, copper, and other metals. They are principally mined for the sake of the sulphur that is obtained from them. The name originates from the fact that sulphide of iron yields sparks of fire (Gr. *pur*), on being struck with flint.

PYRRHIC DANCE, a favourite war-dance in the Dorian States of Ancient Greece. It was intended as a gymnastic training for war.

PYRRHUS, *b.* 318, *d.* 272 B.C., king of Epirus, in Greece, and the most famous warrior of his day. He invaded Italy, and with the help of his elephants gained two brilliant victories, but reaped no fruits from his successes. Hence the meaning of a "Pyrrhic victory." In a second invasion of Italy, his troops were totally defeated at Beneventum, 275 B.C. Pyrrhus afterwards conquered Macedonia, but in a war against Sparta he was killed by a woman at Argos, with a tile hurled from a roof.

PYTCHLEY, a Northamptonshire village, 3 miles from Kettering, one of the most famous hunting centres in England. The hunt was established in 1773, and the "Chase Books" at Althorpe give detailed accounts of each day's hunting for some years. In Domesday Book the owner of Pytchley (Pightesley) is recorded as a hunter of wolves, foxes, and other vermin.

PYTHIAN GAMES, one of the four great national festivals of Greece, held every fourth year on a plain near Delphi. The games were held in honour of Apollo, the slayer of the celebrated serpent, *Python*, at Delphi.

PYTHIAS. See *Damon*.

PYTHON, a genus of serpent found in Eastern Asia, Africa, and Australasia. It is not poisonous, but kills its prey by crushing it within its folds. The largest attain a length of about twenty feet.

PYX, TRIAL OF THE, the annual test of the quality and weight of gold and silver coins, issued during the preceding year, which is conducted by a jury of goldsmiths chosen by the Lord-Chancellor. It is usually held at Goldsmiths' Hall, London. The coins tested are specimens taken at random from each day's minting, and kept in a *pyx*, or strong-box, at the Mint, until the day of trial arrives.

QUACKERY. Medical practitioners, whether qualified or unqualified, who make boastful pretence to a surgical or medical skill which they do not possess, are called quacks, and their self-assertion quackery.

QUACKS. See *Med. Dict.*

QUADRAGESIMA (Latin, *fortieth*) includes the season of Lent—forty days. The name is, however, generally applied to the first Sunday in Lent, the three preceding Sundays being Septuagesima, Sexagesima, and Quinquagesima.

QUADRILATERAL, a four-sided figure (Latin *quatuor*, four, and *latus*, *lateris*, a side). The name is given in history to the four great fortresses of Northern Italy which stretch from the foot of the Alps to the river Po. They are Peschiera, Mantua, Verona and Legnago. They checked Napoleon III. after his victories of Magenta and Solferino in 1860, and caused him to sign the treaty of Villafranca. Russia has her quadrilateral, on her western frontier, and Bulgaria also boasts her quadruple fortifications.

QUADROON, the child of a white person and a mulatto, or half-breed. Thus the quadroon is a person who is in respect to parentage one-fourth black and three, fourths white.

QUADRU'MANA, meaning "four handed," is the name given to a section of mammals made up of the apes, monkeys, and lemurs. Each of the four hands has a thumb, which can be

opposed to the remaining fingers. In this it differs from a foot, in which the great toe is not thus opposable.

QUADRUPLE ALLIANCE, a league formed in 1718, between England, France, Austria, and Holland, to counteract the schemes of Cardinal Alberoni, the Spanish Minister. It was really the Triple alliance of the preceding year extended by the admission of Austria to the league of the other three Powers.

QUAESTOR, a Roman magistrate. In the early history of the Republic, the Quaestors, two in number, united the office of our coroners with that of public executioners. In later times their duties were those of public treasurers, and they were always patricians. In 421 B.C. two more quaestors were appointed, and the office was thrown open to plebeians. In the last days of the Republic, when its dominions had vastly extended, the number of quaestors increased to forty, since at least one quaestor accompanied each army on foreign service.

QUAGGA, an animal allied to the Zebra, formerly found in great herds in South Africa, but now much reduced in number owing to the slaughter by European sportsmen. It owes its name to its shrill cry.

QUAI D'ORSAY, the quay on the south bank of the Seine, in Paris, on which is situated the building of the Corps Législatif. Hence the name is given to the French Government, much as the English Government is spoken of as the Court of St. James's and the Turkish Government as the Sublime Porte.

QUAIL. This bird is allied to the partridge and the grouse, and like them it ranks high as an article of diet. It is, fortunately, a very prolific bird, or it would have been exterminated long ago. Its migrations cover a wide area. In the East, these birds are pitted against each other after the manner of game cocks.

QUAIN, SIR RICHARD, *b.* at Mallow, in Ireland, 1816, *d.* 1898; an eminent physician and pathologist. His professional writings are numerous and important, and he has always taken a strong interest in public affairs touching his profession. He edited the "Dictionary of Medicine," and was largely responsible for much in the British Pharmacopœia.

QUAKERS, a popular name for the "Society of Friends" founded by George Fox about 1670. The Society now comprises about 20,000 members in the United Kingdom. It has 400 recorded ministers, including 160 women, and 400 places of worship.

QUARANTINE (French *quarantaine*—40 days). When a vessel arrives from a port where typhus, plague, smallpox, or any other infectious disease is prevalent, she is not permitted to land her cargo, nor is any one on board allowed ashore except at appointed places, and under special regulations. She is "in quarantine" and may be thus secluded for 40 days. If she has no sick aboard, she flies a yellow flag, but should she have sick, a yellow flag with a black spot. Quarantine is practically abolished in England.

QUARITCH, BERNARD, *b.* 1819. *d.* 1899; a famous collector of, and dealer in, rare books. He was a German by birth, but was naturalised as a British subject in 1847. He set up at first as a small second-hand bookseller in Leicester Square; after his removal to Piccadilly, his place of business became the resort of all book-lovers.

QUARLES, FRANCIS, *b.* 1592, *d.* 1644; poet and essayist. His numerous writings are all of a moral or religious nature, and among the serious they were highly valued. Of his poetry the "Divine Emblems," and in prose the "Enchiridion," a collection of essays and meditations, hold the first place.

QUARTAN FEVER, L. *quartus*, fourth, so called because the paroxysms recur every fourth day, counting both those on which they occur, thus giving two days' intermission. See "Ague" in *Med. Dict.*

QUARTER-DECK, the part of the upper deck abaft the main-mast. On a man-of-war it is pre-eminently the place of honour. Here the ship's crew assemble when addressed by the captain, and here visitors of distinction are received. On ordinary occasions it is the promenade of the senior officers.

QUARTERMASTER, in the army, an officer of a regiment or battalion who is responsible for the feeding, clothing, and lodging of his force. The post, which carries with it the rank of a lieutenant, is usually given to an experienced sergeant, and is much sought after. In the navy the quartermaster is a first-class petty officer, whose duty is to assist the navigating officer, and generally to keep watch and convey orders for the working of the ship.

QUARTERN, a quarter of something. In liquid measure it signifies a quarter of a pint; in dry measure a quarter of a stone, that is, 3½ lbs. A quartern loaf, however should weigh 4 lbs.

QUARTERSTAFF, a favourite weapon of the English peasant in the Middle Ages. It was a stout, heavy pole about 7 feet long, often bound at the ends with iron. It played an important part in the encounters with Robin Hood's "merry men."

QUARTODECIMANS (Latin *quartus decimus*—fourteenth). In the second century the Eastern and Western Christians fell out as to the exact time of keeping Easter. The Easterns kept it on the 14th of the first Jewish month, assuming that to be the day of the Jewish Passover. The Westerns kept it on the Sunday following the 14th. A council held at Nice in 325 decided in favour of the Westerns, who from that time called the Easterns "quartodecimans."

QUARTZ is the most widely distributed of all minerals. Pure quartz is an oxide of silicon. It crystallises in six sided prisms, in which form it is often called rock crystal. Cairngorms, cat's eye, chalcedony, jasper, cornelian, agate, and flint are all forms of quartz. Gold is mostly found in quartz reefs.

QUATERNARY DEPOSITS, also known as Post Tertiary, are the fourth and last divisions of the stratified rocks forming the earth's crust. The strata comprise the Glacial, Post Glacial, and Recent systems. Thus the lands recently formed by the sea, or deposited as alluvium by rivers, are late Quaternary.

QUATRE BRAS, a village a few miles south of Waterloo. A fierce battle was fought here on June 15th, 1815, the French cavalry, under Marshal Ney, making attack after attack on the British infantry squares, but being each time repulsed with heavy loss. The British fell back on Waterloo, to renew the fight on June 18th.

QUEBEC (State). This is the oldest State of the Dominion of Canada. It lies along the lower course of the river St. Lawrence. Its surface is covered with immense forests, wide stretches of agricultural land, and innumerable large lakes. Its climate is one of the most healthy and bracing in the world, and the dry cold of winter is pleasant and invigorating. The soil is most productive: cereals, grass, and root crops are raised in abundance. Tobacco, flax, hemp, and maize are grown, and grapes ripen in the open air. Apples, pears and apricots are grown in immense quantities for exportation. Cattle rearing is an important industry; frozen beef is being largely exported to England; Canadian Cheddar (cheese) is sent over to us in vast quantities. The French language and French laws are recognised by the legislature. A rebellion in 1837–8 led to the union of Upper and Lower Canada, and after-troubles resulted in the confederation of Canada with the other provinces of British North America (except Newfoundland) in 1867. This group of States is known as the Dominion of Canada.

QUEBEC (City) was founded in 1608 by the French geographer, Samuel Champlain, who settled there with twenty-eight followers. The commanding position of Quebec is exceedingly fine. The city is divided into the Upper and Lower Town, connected by a steep, winding street. The Upper town includes the walled city, with two suburbs, St. John and St. Louis, between the walls and the Plains of Abraham. A monument marks the spot where General Wolfe fell at the capture of the city in 1759. The Upper town is a conglomeration of quaint mediæval streets, while the Lower town, on the banks of the St. Lawrence, is devoted to commerce.

QUEEN ANNE'S BOUNTY. Page 516.

QUEEN OF SHEBA. The celebrated visit of this queen to King Solomon is recorded in 1 Kings x. She had heard of his wisdom, and came "to prove him with hard questions." When he had solved all her difficulties she made him many valuable presents, and congratulated his subjects on their good fortune in having so wise a monarch. The Sabaeans were the inhabitants of the South-West of Arabia, now called Yemen, and the Queen of Sheba was probably their sovereign.

QUEENSFERRY, a town of Linlithgow, 9 miles from Edinburgh, on the south bank of the Forth. It is here that the famous Forth Bridge crosses the river. Near the town are the seats of the Earls of Rosebery and Hopetown, Dalmeny Park and Hopetown House. Rosyth, near Queensferry, has been chosen as a new naval station of the British Navy in the Forth. The site is 7 miles west of the Forth Bridge.

QUEENSLAND is the second largest of our Australian colonies, but the last to be colonised. It measures 1200 miles from North to South, and 800 from East to West, and lies mostly within the tropics. Little was known of this portion of Australia till it was partially explored by Surveyor-General Oxley in 1823. He discovered and named the river Brisbane. The Dividing Range, a continuation of the mountains of New South Wales, divides Queensland into three belts, viz., the coast regions between the mountains and the Pacific, the mountains and tableland themselves, and the well-watered slopes to the west of the plateau. No Australian colony has such extensive grass lands as Queensland. Near the towns, the country is divided into farms; farther inland it is occupied by squatters, with vast herds of cattle and horses, or flocks of sheep. Refer to "Queensland" in *Index*.

QUEENSTOWN, a port on an island in Cork Harbour, and so named in honour of Queen Victoria, who landed there in 1849. It is a place of call for vessels plying between Europe and America. The Anglo-American mails are received and despatched from Queenstown, being carried to and from London via Holyhead and Dublin.

QUERN, the hand mill formerly used by the peasantry for grinding corn. It consisted of two flat circular stones, of which the upper was pierced with a central conical hole, through which the corn was poured. The upper stone was rotated on

the lower by turning a wooden handle fixed in the stone, near its edge.

QUETTA, a town in Beluchistan, of great strategic importance, which has virtually been British since 1857. It guards the exit from India through the Bolan Pass (51 miles long), and dominates the Pishin Valley and the road to Kandahar. It is the terminus of a military railway from Sikkur on the Indus.

QUIBERON. a long narrow peninsula on the North-west coast of France. The fishing village of Quiberon stands at its extremity. In 1795 an English fleet landed there a party of French Royalists who sought to rouse the Bretons and Vendeans against the government. They were defeated by the Republican General Hoche, and the prisoners were nearly all shot by the order of the Convention. In Quiberon Bay, in 1759, an English fleet under Hawke defeated a French fleet under Conflans.

QUICKSANDS (*quick*=lively) are so called from their movements, as they are seemingly quick or living. They usually occur on flat shores, where the upper sand rests on a bed of rock impermeable to water. If, therefore, the tide comes in fast, and the lower stratum does not absorb water, the upper sand becomes saturated and moves with each influx of the waves. The Goodwin sands are quicksands at the rise of the tide.

QUICKSILVER, or **MERCURY,** is a metal which is fluid at ordinary temperatures. It is mostly obtained from its sulphide, which is called cinnabar, and is a crude vermilion. The chief mines for quicksilver are at Almaden, in Spain, and Idria, in Austria. The metal is largely used in the construction of barometers and thermometers, and in the extraction of gold from the quartz in which it is found.

QUIETISM is a kind of mysticism common to many forms of religion. The quietist attempts to enjoy actual communion with the Highest, by a kind of rapture in which all earthly surroundings are forgotten. The great objection urged against quietism is, that it leads to the ignoring of all responsibilities.

QUINCEY, DE. See *De Quincey.*

QUININE. See *Med. Dict.*

QUIN, JAMES, *b.* 1693, *d.* 1766; a famous actor, who from 1716 was the chief English actor till Garrick appeared (1741). The two acted together in the *Fair Penitent,* 1746, each contending for the first place in popular favour. In 1751 Quin left the stage, feeling bitter at his rival's acknowledged pre-eminence.

QUINTAIN, a piece of apparatus much used in the Middle Ages to train young gentlemen in the use of the lance and the management of the horse. It consisted of a figure with two long horizontal arms balanced on a pivot. The young aspirant had to ride and strike a flat board at the end of one arm with his lance, then pass on and get clear of a bag of sand at the end of the other, which swung round when his blow was delivered.

QUIR'INAL, one of the seven hills on which ancient Rome was built. The Capitoline hill was accounted the first, the Palatine the second, and the Quirinal the third of these famous hills.

QUIRI'TES (i-tes). This was the name of the citizens of Rome in their civil capacity; the name by which political orators always addressed them. The word was probably derived from Quirinus (Mars), who was supposed to have Rome under his especial care.

QUITO, the capital of Ecuador, though situated nearly on the Equator, enjoys a temperate climate, being built at a height of 9,000 feet above the sea level. The city is intersected by ravines. Water carriers bring water into the city in jars, as there is no regular supply. The streets are lighted at night by kerosene lamps. The population of 5,000 consists mostly of Indians and half breeds.

QUIT RENT, a corruption of the old Anglo-Saxon, *hwit-rent,* or white rent, so called because paid in silver. It was an annual charge paid by a tenant to the lord of the manor in lieu of certain services which otherwise he had to render, such as ploughing his lord's fields, etc.

QUORN or **QUORNDON,** a Leicestershire village about 2½ miles from Loughborough. It gives its name to a celebrated kennel of foxhounds. The hunt is called "The Quorn."

QUORUM. See *Commercial Dictionary.*

RABBIT. The harm the rabbit does in a populous country like England, where he is easily kept under, is probably counterbalanced by the good derived from the change of food he affords us. But in Australia and New Zealand, where his natural enemies are few, the rabbit has proved a serious pest to the farmer, and determined war is waged against him. From a single pair it is calculated that about a million descendants might be looked for under the most favourable conditions at the end of four years, so we see the serious nature of the problem to be faced in those countries. On the other hand, that breeding of the rabbit as an article of commerce can be made profitable under certain conditions is shown by the Belgians, who send every week in the winter close on 200 tons of rabbits to the English markets.

RABELAIS, FRANCOIS, *b.* 1483, *d.* 1533, was a native of Touraine, and became famous as a writer. His great work is the History of Gargantua and Pantagruel, a satirical romance, which, though soiled by the coarseness and obscenity of the times, abounds in original ideas, learning, and good sense, mixed with wild and extravagant nonsense. Under the mask of fiction, Rabelais spoke his mind concerning kings, priests, and scholars.

RABIES. See *Med. Dict.*

RACE OF ALDERNEY, a passage about 10 miles wide, between Alderney and the French coast. It is so called from the fierce sweep of the tides through the channel.

RACES OF MANKIND. Mankind is generally classed in five races. The most advanced is the Caucasian or White race, and the next the Mongolian or Yellow race. The Negro or Black race is peculiar to Africa, and the Red Indians to America. The Malay or Brown race is limited to south-east Asia. The inhabitants of New Guinea and Australasia are of the Papuan race, thought to be a mixture of the Malay and Negro races.

RACHEL, ELIZA, was a great tragic actress. She was born at Aargau, in Switzerland, 1821, and began her career by singing in the streets of Paris. The excellence of her voice being recognised, she received lessons in singing, elocution, and acting from the best masters, and in 1838 she took Paris by storm when she appeared at the Théatre Français as Camille in *Les Horaces.* She excelled in the portrayal of evil or malignant passion. Her popularity brought her immense wealth, which she lavished on her family. She died in 1858.

RACINE, JEAN BAPTISTE, *b.* 1639, *d.* 1699; was the favourite tragic poet of the court of Louis XIV. In delineating the passion of love, he excels in tenderness, softness, and elegance all other French dramatists. His best tragedies are Phédre and Athelie. The latter was composed for a private performance by the ladies of St. Cyr.

RACK, an instrument of torture consisting of an oblong frame work, having a roller at each end. The victim was stretched upon the frame; his hands and feet were tied to the rollers with cords, and the rollers were turned by levers, so as to tighten the cords, and dislocate his joints. The rack was a common instrument of torture in England during Tudor and early Stuart times.

RADCLIFFE, JOHN, *b.* at Wakefield, 1650, d. 1714. He studied medicine at Oxford, and became the leading London physician. He attended Queen Mary and several members of the Royal family. In 1714, when Queen Anne was taken ill Radcliffe was summoned, but, pleading illness, did not attend. This roused the populace against him, and he was forced to leave London. He died of gout in 1714, leaving £40,000 for the erection of the Radcliffe Library at Oxford. In 1861 the books were taken to the University Museum, and the building of the Radcliffe Library is now the Reading Room of the Bodleian Library. Out of the residue of his estate the Radcliffe Observatory was established in 1772.

RADIAN. The angle suspended at the centre of a circle by an arc equal in length to the radius is called a "radian." It is also the unit of circular measure. It is approximately equal to 180°÷3½ or, more accurately, the radian is an angle of 57° 17′ 44″.

RADIA'TA, the name given by Cuvier to one of his four divisions of the animal kingdom. The Radiata included star-fishes, worms, jelly-fishes, sea anemones, and rotifers,—creatures now classified in widely different groups.

RADIATION. See *Heat.*

RADICAL, the name given to the more advanced wing of the Liberal party in England. It came into use about 1816, to denote those who, like Hunt, Cobbett, and Cartwright, were demanding *radical* reforms in the constitution.

RADIUM, a metal discovered by Madame Sklodowska Curie and her husband, while investigating in Paris the Becqueral rays of uranium, and for which the Davy medal for the most important discovery in chemistry made during the year was awarded to them by the Royal Society of England in December, 1903. The chloride or bromide of the metal is obtained in very minute quantities, as a whitish or greyish powder, from *pitch-blende,* an ore of uranium found in the Erzgebirge Mountains in Germany, and at Redruth in Cornwall. As a result of two years' labour by M. and Madame Curie, eight tons of the mineral produced about a gram of radium chloride, and it has been calculated that in the whole world scarcely more than one-fifth of an ounce is available. On December 31st the price quoted was twelve shillings per milligramme, and tubes containing $\frac{1}{2}$ of a grain have been recently sold at £10 each. Traces of the substances have also been detected in the deposits from the waters of the mineral springs of Bath and Buxton, and, lecturing in May, 1904, Professor Rutherford, who has been one of the principal investigators in England of the properties of the new element, expressed the opinion that radium is an ubiquitous constituent of the earth's crust, which tends to become more abundant as we descend deeper.

Radium is found to be a perpetual source of light and heat. The chloride and bromide emit a light that resembles that of the glow-worm. A diamond placed close to a small quantity enclosed in a pill box in a dark room scintillates as if a lighted candle were brought near it. It gives out sufficient heat to melt its own

weight of ice in an hour, or to raise the temperature of the same weight of water from that of a warm room to boiling-point, and yet there is no apparent diminution of its store of energy.

Radium constantly gives off a something which acts precisely as a heavy gas. This has been collected by Sir W. Ramsay, and enclosed in sealed tubes. Examined by means of the spectroscope, this at first gave the characteristic lines of the metal, but after a couple of days the spectrum of the same gas began to show the lines corresponding to helium, and in about a week, according to the same authority, the characteristic yellow lines of helium were "positively blazing." The intensely active element, radium, the atom of which is 250 times as dense as the atom of hydrogen, seems to have changed into the inert element helium, the atomic weight of which is 2.

Besides this gaseous emanation three kinds of invisible rays, which are known as the alpha, beta, and gamma rays, are constantly given off by radium. The gamma rays seem to correspond with the Röntgen rays. The other two classes are extremely minute particles of electrified matter. A screen, coated with zinc sulphide, as devised by Sir W. Ramsay, when brought near a small quantity of radium, shows by its brilliant flashes and scintillations that it is receiving a perfect bombardment of these corpuscles. The alpha rays, though travelling at an enormous speed, are stopped by a thin plate of metal, but the beta rays, the corpuscles of which are a thousand times smaller, pass through most metals.

If a tube containing a small quantity of a radium salt is held in the hand for a short time, a burning sensation is produced; and a similar tube placed in a cardboard box, and fastened to the sleeve of M. Curie for an hour and a half, resulted in an intense inflammation, which was followed by a sore, which took over three months to heal. Attempts have been made to utilise radium in the treatment of cases of superficial cancer, and with apparently no little success. See page 394.

RAE, HENRIETTA (Mrs. Normand), *b.* 1859, a distinguished lady artist. First exhibited in the Royal Academy, 1880. She has painted "Ophelia," "Psyche at the Throne of Venus," "Vashti Dethroned," and "Sir Richard Whittington," a fresco in the Royal Exchange. Of her many portraits the most striking is "The Marquis of Dufferin."

RAE, JOHN, *b.* in the Orkneys, 1813, *d.* 1893, was a celebrated Arctic traveller. In 1848 he joined in the unsuccessful search for Sir J. Franklin. Six years later he explored King William's Land, and proved it to be an island. Later he surveyed lines for a telegraph between England and America, via Iceland and Greenland, and for another across the Rockies westward from Winnipeg.

RAEBURN, SIR HENRY, *b.* near Edinburgh, 1756, *d.* 1823. He was apprenticed to a goldsmith, but turned miniature painter. He studied in Italy, returned to Edinburgh, and became celebrated as a portrait painter. Nearly all the great Scotsmen of his time sat to him.

RAFFLES, SIR STAMFORD, *b.* 1781, *d.* 1826, began his career as clerk in the India House. In 1805 he was sent as Assistant-Secretary to Penang, and later became Chief Secretary. He became Lieutenant-Governor of Java in 1811, when it was taken by the English. His efforts to civilise the natives, and to give them a just government, won their affection and respect. To him we owe the settlement of Singapore, which he chose as a centre from which to suppress piracy, and compete in trade with the Dutch. When returning to Europe he lost his valuable collection of natural history specimens, and all his manuscripts, in a fire at sea. He lived to found the Zoological Society, and to become its first President.

RAGLAN, LORD, *b.* 1788, fourth son of the Duke of Beaufort. As Lord Fitzroy Somerset he served with distinction under Wellington in the Peninsula. At Waterloo he lost his right arm. When Wellington was made Commander-in-Chief, Lord Fitzroy Somerset became his secretary. He took the command of the English army in the Crimean War (1854–6), and died during its progress in 1855.

RAIKES, ROBERT, *b.* at Gloucester, 1735, *d.* 1811. Shocked at the ignorance of the children of Gloucester, his native town, he in 1780 opened a Sunday School for teaching them reading and the repetition of the Church Catechism. Other cities followed the example, and Sunday Schools became general.

RAILWAYS. The advantage of a firm and even road for carriages led to the laying of stone and wood tracks, and later, of iron rails, the wheels of the carriages being flanged to keep them on the track. At first the carriages were drawn by horses, and these roads led mostly to collieries and quarries. Hedley's "Puffing Billy," the first successful steam locomotive, was patented in 1813. It was worked at Wylam Colliery, Northumberland, till 1872, when it was purchased by the Government. George Stephenson was the first to overcome the difficulty of keeping a sufficient head of steam on the locomotive. He ran an eight-ton engine at 15 miles an hour on the Stockton and Darlington mineral line in 1825. The first passenger railway was the Liverpool and Manchester, opened in 1829.

RAINBOW, the coloured arch seen in the sky by a spectator standing between the sun and a falling shower. The sun's rays passing into the rain drops are partly by refraction, and partly by reflection, divided into and presented to the spectator as the different coloured rays shown in the solar spectrum, viz., red, orange, yellow, green, blue, and violet.

RAINFALL. Refer to *Index*.

RAISINS are dried grapes, and are used as food, or for making wine. They are mostly grown in Spain and in Asia Minor. Currants are a small variety, mostly grown in the Morea and the Ionian Islands. Raisins are dried by exposure to the sun upon hurdles, or they are permitted to dry on the vines, the stems of the bunches being partially severed.

RAKE'S PROGRESS, THE. A set of satirical pictures painted by Hogarth in 1735. Their subject is the descent of a rich young man, through debauchery, to poverty, despair, and madness.

RALEIGH, SIR WALTER, courtier, soldier, and historian, was born near Budleigh, in Devonshire, 1552. As a youth he served in France and Ireland. In the suite of the Earl of Leicester he went to the Netherlands, and on his return was much favoured by Queen Elizabeth. He attempted without success to colonise in North America the district which he named Virginia. On the accession of James I. (1603), Raleigh was accused of complicity in a plot for placing Arabella Stuart on the throne. He was condemned to death, reprieved on the scaffold, and sent to the Tower, where he spent a portion of fourteen years in writing a "History of the World." On being released, in 1616, he led an unsuccessful expedition to Guiana in search of a gold mine. When he returned in 1618 he was executed on his former sentence.

RAMADAN, the ninth month of the Mohammedan year. In that month the Prophet is said to have received his first revelation. It is kept as a strict fast.

RAMBLER, THE. This was the last of a series of publications containing the news of the day, and an essay on some interesting subject. Addison and Steele had issued the *Tatler*, the *Spectator*, and the *Guardian*. Johnson followed with the *Idler* and the *Rambler*, the latter appearing twice a week.

RAMESSE'UM. This statue, which is often called the Memnonium, is the eastern of two enormous, seated statues sixty feet high, standing on the banks of the Nile at Thebes. The statues probably represent Amenoph III., for they are placed opposite to his temple, of which little now remains. The Ramesseum was long supposed to give out a musical note when struck by the first rays of the rising sun.

RAMILLIES, a village in Belgium, near Namur. It was the scene of a crushing defeat of the French by Marlborough in 1706.

RAMMOHUN ROY was a Brahmin of high birth, born in Bengal in 1772. His wide readings in Oriental literature led him to doubt the truth of Brahminism. His frank criticism of his ancestral faith, in which he denounced Hindu idolatry, estranged him from his family and led him to form, in 1828, the Brahmo-Somaj (or Theistic church), a Brahminical society which refuses to recognise caste, and sets its face against idolatry. He died at Bristol, 1833.

RAMSAY, ALLAN, a Scottish poet, *b.* 1686, *d.* 1758. He was apprenticed to a wigmaker in Edinburgh, but at the age of thirty he left wigmaking and set up a bookseller's shop in the Edinburgh High Street. To this he soon added a circulating library, the first opened in Scotland. He had long been known for his humorous poems, which had been sold in the streets at a penny each. His bookseller's business prospered, his shop becoming the fashionable resort of the wits of the time. His principal poem is "The Gentle Shepherd," a Pastoral Comedy published in 1725.

RAMSAY, SIR WILLIAM, *b.* at Glasgow, 1852, was educated at Glasgow University, and at Tübingen in Germany, where he studied chemistry chiefly. He has done much original work in chemistry. To him we owe the discovery of Helium, and our knowledge of Neon, Crypton, and Xenon as constituents of the air. And in conjunction with Lord Rayleigh he discovered Argon. In 1904 he was awarded the Nobel Prize in Chemistry.

RANCH. This name is given to the great grazing farms which extend for hundreds of miles east of the Rocky Mountains in the United States and Canada. Formerly ranches were of enormous extent, and the cattle, at the annual "round up," were driven hundreds of miles to the nearest railway for sale. Now the increase of population, and extension of railways have altered all this. There is still a "round up" once or twice annually, but the ranches are smaller and the markets much nearer. The quality of the cattle has been much improved by crossing with superior breeds.

RANGOON is the chief port of Burmah. It stands on the Rangoon river, a branch of the Irawadi, about 20 miles from the sea. The city, which has a population of nearly 200,000, has handsome regular streets, lighted by electricity, and traversed by tramways. Its position makes it the centre of an enormous trade, to accom-

modate which it has extensive docks. It has been in the possession of Britain since 1852.

RANJITSINHJI, PRINCE KUMAR, *b.* in India, 1872; a famous cricketer. On leaving Trinity College, Cambridge, 1895, he joined the Sussex County Cricket Club, and held the premier position as batsman in that club for eight years. He has twice headed the batting averages for All England, and gained great distinction as a member of Stoddart's famous team in Australia, 1897-8.

RAN'KE, LEOPOLD VON, *b.* 1795, *d.* 1886. This great German historian is best known from his "History of the Popes," so eloquently reviewed by Macaulay. He was educated in the University of Leipsic, and for seven years taught history in the Gymnasium of Frankfort on the Oder. There his published historical works brought him a call to Berlin, where he became Professor of History in the University. Histories of Germany, of Northern Italy, and of the Nations of Northern Europe, testify to his laborious research. His History of England during the 17th century was written when he was over seventy years of age.

RANZ DES VACHES. These are simple melodies played by Swiss and Tyrolese peasants on their great Alpen horns, to call the cattle down from the mountain pastures. They were prohibited in armies in which Swiss mercenaries were formerly enrolled, as they caused in these soldiers an unconquerable home sickness or *nostalgia*.

RAPE OF GANYMEDE. Ganymede was said by the Greeks to have been the most beautiful of mortals. He attracted the attention of Jupiter, who sent an eagle to carry him off, and he was made cupbearer to Jupiter in place of the nymph Hebe.

RAPE OF LUCRECE. Lucrece was the wife of a Roman noble, Collatinus, and was famous for her virtue. Being shamefully outraged by Sextus Tarquin, the son of the last Roman king, she summoned her husband and her friends, and after obtaining their promise to drive the Tarquins out of Rome, she stabbed herself. One of Shakespeare's earliest poems, "The Rape of Lucrece" depicts this episode.

RAPE OF THE LOCK, a mock heroic poem by Alexander Pope. Lord Petre, a man of fashion at the Court of Queen Anne, cut off a lock of the hair of Arabella Fennor, his fiancée, a beautiful maid of honour. Her family were very angry at this outrage, and Pope wrote this delightful little poem to heal the breach, but without success.

RAPE OF THE SABINES. When Rome was but a small fortress on the Capitoline hill, its inhabitants were almost all men. To obtain wives they invited a neighbouring tribe, the Sabines, to join them in open-air sports. While these were in progress, each Roman youth seized a Sabine maiden, and carried her forcibly into Rome as his wife. The Sabine men were about to avenge the insult, when the newly-made brides interfered and made peace.

RAPHAEL, THE ANGEL. According to Jewish tradition he was one of the four angels who stood round the throne of God (Michael, Uriel, Gabriel, and Raphael). In the book of Tobit he is the sociable angel who in human disguise accompanies Tobias in his journeys to Media and back. Milton makes him the messenger of God to Adam, warning him against Satan. Longfellow describes him as the spirit of the sun, bringing to man the gift of faith.

RAPHAEL SANTI, *b.* 1483, *d.* 1520, was a celebrated Italian painter. He learned painting from Perugini, whose style he imitated. He was greatly praised by the rival masters, Michelangelo and Leonardo da Vinci. His subjects were mostly scriptural. In 1514 he was appointed architect of St. Peter's, Rome. His celebrated cartoons are now in the South Kensington Museum. The "Ansidei Madonna" in the National Gallery is an excellent example of his work.

RAPIER, a light, highly-tempered and fine-pointed kind of sword, about 3 feet long. Having no edge, it was useful only for thrusting, and is the weapon always referred to in accounts of duels with the sword. It is still worn as a part of Court dress.

RATIONALISM has been described as a system of belief founded on reason. The rationalist applies to sacred things the same methods of research as he applies to science and history. Lecky says "Rationalism leads men on all occasions to subordinate dogmatic theology to the dictates of reason and conscience . . . It predisposes men to attribute phenomena to natural rather than miraculous causes."

RATISBON (Regensburg) is a town on the Danube, in Bavaria. Its narrow crooked streets and high gabled houses give it a mediæval appearance. It was an important rendezvous for the Crusaders who followed the Danube route to the East. The imperial diet met in its town hall from 1645 to 1806.

RATTLESNAKE, a species of snake found only in America, and so called from the noise it is able to make by means of loose skin at the end of its tail, which it shakes violently when under the influence of fear or anger. It seldom attacks man, but its bite is often fatal.

RAVAILLAC, FRANCOIS, *b.* 1578, *d.* 1610, a French schoolmaster who fanatically stabbed Henry IV. of France. He was torn asunder by horses.

RAVENSPUR, formerly a great seaport on the north of the Humber. When Henry Bolingbroke landed there in 1399, the sea had already eaten far into the land around it, and, before long, Ravenspur itself disappeared. Hull took its place.

RAWAL PINDI, an important military station in the Punjab, 160 miles north-west of Lahore. The town has greatly increased since the last Afghan war, and since the extension of the railways to Peshawar. A great Durbar was held here in 1885, when the Ameer of Afghanistan was met by Lord Dufferin, Governor-General of India.

RAWLINSON, SIR HENRY, diplomatist and oriental scholar. Born 1810, *d.* 1895; he entered the East India Company's army, 1827. In 1833 he went to Persia to reorganise the army of the Shah. While there he diligently studied the cuneiform inscriptions and made a translation of Darius's famous Behustan inscription. He afterwards held the command at Kandahar, represented England at the Persian Court, and became vice-president of the Council of India. He has been called "the father of Assyriology."

RAY, JOHN, naturalist, *b.* 1628, *d.* 1705. After the restoration he travelled over Britain with a friend, Willoughby, collecting and examining botanical and zoological specimens. In 1663 they made a tour through the Low countries, Germany, France, and Italy, Willoughby studying the zoology and Ray the botany of the countries traversed. Ray takes a high rank both as a botanist and as a zoologist. He proposed a system of botany which led to the present natural system of classification. He has been styled "the father of English natural history."

RAYLEIGH (John William Strutt), **LORD,** *b.* 1842, a distinguished scientist, was Senior Wrangler and Smith's Prizeman. He has made many investigations in Physics and Chemistry, and shared with Professor Ramsay the discovery of Argon in 1894. His scientific writings are important. Admitted to O. M., 1902.

READE, CHARLES, *b.* 1814, *d.* 1884; son of an Oxford squire, was a novelist and playwright. His most successful play was "Masks and Faces." Among his novels the best are, "It is Never Too Late to Mend," "Hard Cash," "Griffith Gaunt," and "The Cloister and the Hearth." He stands high among the novelists of the 19th century.

READING, capital of Berkshire, stands at the junction of the Kennet with the Thames. Henry I. was buried there in the Benedictine Abbey, which he had founded. Nine parliaments were held within its walls. Reading Castle was destroyed by Henry V. The last abbot of Reading was hanged by Henry VIII. The town has an important corn trade. Huntley and Palmer's biscuit works, and Sutton's seed warehouses are features of Reading. (For population, etc., see p. 902.)

RÉAUMUR, RENÉ, physicist, was born at La Rochelle in 1683, and was educated in the Jesuits' College at Poictiers. He became a member of the Paris Academy of Sciences and did much literary work for the government. For his discoveries regarding iron and steel he was awarded a government grant of 12,000 livres, which he paid over to the Academy of Sciences for original research. Réaumur is best known from the thermometer which bears his name. He was killed by a fall from his horse in 1757.

REBECCA RIOTS were popular outbreaks against tollgates. They broke out in Wales in 1843. Bands of men, disguised as women, attacked and destroyed the tollbars at night. The military had to be called out and the riots were not suppressed without bloodshed. An enquiry showed that the grievance complained of was real, steps were taken to redress it, and the rioters who had been captured received but light sentences. They took their name from Genesis xxiv. 60.

REBELLION, THE GREAT, was the revolt of the Long Parliament against the tyranny of Charles I. The King claimed the right to levy taxes without the consent of parliament, and to imprison without trial such subjects as offended him. The Parliament, by withholding supplies, forced him to sign the Petition of Right, in which he formally renounced his claims. Still he continued to raise money by illegal exactions, till the Parliament (which sat from 1640 to 1653, and was hence called the Long Parliament) took up arms. The Royal Party were known as Cavaliers, the Parliamentarians as Roundheads. The war between them lasted from 1642 to 1645, when, at Naseby, the power of Charles was completely broken. The king, falling into the hands of the Parliament, was tried, condemned and executed in 1649.

REBUS, a kind of puzzle in which the words are expressed by drawings of things (*rebus*, in Latin, meaning "by things)." Thus an eye, a water-can, a knot, a bear, and a window-pane would stand for "I cannot bear pain."

RECAMIER, MADAME, *b.* 1777, *d.* 1849, a celebrated leader of French society during the First Empire. Her salon was crowded with all the wits and celebrities of the day.

RECIPROCITY, in Political Economy, is the arrangement between two countries that each will admit the goods of the other

on easy terms, though a high tariff excludes the goods of other nations. When Britain adopted the policy of Free Trade, she expected reciprocity on the part of other countries. As many of these taxed British goods, so as practically to exclude them, a demand arose, in 1904, for a tax against these protectionist countries.

RECHABITES. These seem to have been the same as the Kenites who came into Canaan with the Israelites, but had no territory assigned to them, and remained nomads. They abstained from wine, built no house, sowed no seed, nor owned land. We hear of them as associated with the Israelitish priests, and as taking part in religious celebrations. Dr. Wolff found an Arab tribe near Mecca, who professed to be descendants of the Rechabites, and were strict abstainers.

RECORDER. Refer to *Index.*

RECORDS, RECORD OFFICE. See *Archives.*

REDAN. This is one of the simplest forms of fortification, having but two faces, meeting at an angle a little less than a right angle. The Redan and the Malakoff were two celebrated earthworks, forming part of the defences of Sevastopol during the Crimean War. The capture of the Malakoff by the French, September 8th, 1855, led to the fall of Sevastopol, although the British failed in their attack on the Redan.

RED CROSS SOCIETY. An association formed in most civilised countries for co-operating with the governments in tending the sick and wounded during war. The society was the outcome of a convention which met at Geneva in 1863. The nurses and officials wear as a badge a red cross on a white ground. A flag bearing the same emblem flies over the field hospitals and is shown on the ambulance wagons. This secures immunity for all those engaged in the work of the Red Cross Society.

RED CROSS, THE ROYAL. Refer to *Index.*

REDMOND, JOHN EDWARD, *b.* 1851, succeeded Mr. Parnell on his death, 1891, as leader of the Parnellite party in Parliament, and on the reunion of the Irish Nationalists in 1900, he was appointed Parliamentary leader of the whole party.

RED RIVER EXPEDITION. In 1869 the territory of the Hudson Bay Company was transferred to the government of Canada. A number of French and half-breed settlers objected to the transfer, and proclaimed a republic under a French Canadian, Louis Riel. The English government sent a military force of 1,200 men under Lieutenant Wolseley (afterwards Lord Wolseley) to put down the rebellion. Their journey from Thunder Bay, on Lake Superior, to Winnipeg, a distance of 600 miles through pathless forests, down rivers abounding in rapids, was accomplished between the end of May and August 24th, 1870. When Fort Garry (as Winnipeg was then called) was reached, the rebellion collapsed.

RED SEA. This sea fills a deep rift in the earth's crust 1,200 miles long and 130 to 250 miles wide. Its northern end divides into two parts the Gulf of Suez and Akaba. The sea is noted for its high temperature, which partly arises from the fact that both shores are desert. The evaporation is so great that the sea is exceedingly salt. The whole area is rising so that the Red Sea is gradually becoming shallower. It is now connected with the Mediterranean Sea by the Suez Canal. Its southern entrance is commanded by the strong fortress of Aden, a British possession.

REED, the vibrating part of various wind instruments. In the clarionet and similar instruments it is made of the tough outer covering of a reed found in Southern Europe. In the organ pipe, harmonium, and concertina, the reed is of metal, although arranged differently in the two latter.

REEVES, SIMS, *b.* at Shooter's Hill, Kent, 1818, *d.* 1900; England's great tenor singer. He first appeared as a baritone in 1839, but after a course of training at Paris and elsewhere, he re-appeared as a tenor in 1847, taking the first place then, and retaining it for more than forty years, singing latterly only in ballad and oratorio music.

REFERENDUM. In Switzerland, on the demand of 50,000 voters or of eight cantons, any law passed by the Federal Parliament must be submitted to the general body of the people for acceptance or rejection. Similarly the laws passed by the parliaments of the separate cantons may be, and in many cantons must be, referred to the cantonal voters. This referendum is frequently called into requisition. Whilst a referendum is a regular process of Swiss government, a *plébiscite* is an unexpected or occasional reference to the whole body of electors. It was employed on various occasions by Napoleon III.

REFLECTION OF LIGHT. When a ray of light falls on any surface, a portion of it is thrown back or reflected. It is by these reflected rays that objects are made visible to us. When a ray falls upon a plane surface, the reflected ray makes with the surface the same angle as the incident ray.

REFLEX ACTION. See *Med. Dict.*

REFORMATION, THE, is the name given to that religious revolution which stirred all England and a great part of Europe in the 16th century. The results of the movement in this country were (1) the withdrawal of the Church of England from the rule of the Pope, (2) the dissolution of the monasteries, (3) the translation of the Bible into English and the placing of a printed copy in the parish churches, and (4) the compilation of the "Book of Common Prayer" for use in public worship. The first three steps were taken in the reign of Henry VIII. and the fourth in the reign of Edward VI.

REFORM BILLS, PARLIAMENTARY. (1) The first Reform Bill, 1832, disfranchised all boroughs with less than 2,000 inhabitants, and took away one member each from 30 boroughs more, whose population was between 2,000 and 4,000. This gave 143 seats for distribution among the more populous places. It bestowed the franchise upon tenants paying in boroughs a rental of £10 a year, and, in counties, a rental of £50. (2) The second Reform Bill, 1867, gave the franchise in boroughs to all householders paying poor rates, and all lodgers paying £10 a year, and in counties to all tenants whose rental was at least £12 a year. (3) The third Reform Bill, 1884, conferred household suffrage on residents in the counties, the smaller boroughs with less than 15,000 were deprived of their members, and the seats thus obtained were divided among the more populous towns and districts. At the same time an addition of 18 members was made to the House of Commons, thus bringing the number up to 670.

REFORMATORY. Children under sixteen years of age, convicted of crimes and sentenced to certain terms of imprisonment, may be sent to a reformatory selected by the court which passes the sentence. The expenses of these reformatories are met by the government, by local rates, and by payments levied on the parents or guardians of the offenders.

REFRACTION OF LIGHT. When a ray of light passes out of one transparent medium into another of different density its path is bent, that is, the ray is refracted. Thus a ray passing out of air into water is refracted, as is also a ray passing out of water into air, as is seen in the broken appearance presented by an oar in water. In the latter case, refraction causes a lake or river to appear shallower than it is.

REFRIGERATED FOOD. Of late years vast quantities of fresh beef and mutton have been brought to England in cold chambers. These chambers are cooled by air, which is first compressed and then cooled, by means of water poured over the vessel containing the compressed air. This air is then permitted to expand and to enter pipes circulating through the refrigerating chamber, which contains the meat. By this expansion acting against the resistance of the air already in the pipes, the air does mechanical work, and thus its heat is used up as mechanical energy, and it becomes intensely cold. In this way the air in the refrigerating chamber is kept down to a very low temperature even in the tropics.

REGALIA is the name given to the outward signs of royalty, such as the crown, sceptre, orb, swords of justice and mercy, the ampulla containing the anointing oil, the anointing spoon, and the regal vestments. It is at the coronation only that all these are brought into requisition, though some of them are used on other state occasions. They are on view at the Tower of London.

REGENCY BILL, 1910. By this Queen Mary is appointed Regent in the event of the death of King George V., during the minority of his heir. One of the clauses enacts that, "If Her Majesty Queen Mary shall, after becoming Regent, be reconciled to or hold communion with the See of Rome, or shall profess the Roman Catholic religion, or shall marry a person professing the Roman Catholic religion, or shall cease to reside in, or absent herself otherwise than temporarily from the United Kingdom," her regency will be determined.

REGENERATION. (1) In a theological sense regeneration means "new birth," and, according to the teaching of the Church of England, expresses that change of state which takes place at Baptism, when the person baptised is made "a member of Christ." Many Christians, however, identify the term with "conversion," and limit its application to those who give evidence of actually living in Christ. (2) In a biological sense it means the renewal of lost parts in animals. In most animals there is a constant renewal of the skin and hair; reptiles change their skins, and deer renew their antlers. But in many creatures regeneration goes much farther than this. Lizards renew their tails if these are lost, crabs and lobsters replace missing claws, and salamanders renew lost limbs, which have been amputated again and again.

REGIUM DONUM (Latin—*royal gift*), was an annual grant of money by the government to Presbyterians and Nonconformists in England, Ireland and Scotland. It was discontinued in England and Scotland in 1859, and in Ireland in 1871.

REHOBOAM, son and successor of Solomon. When requested by his subjects to lighten their taxes, he threatened to increase them. Ten of the twelve tribes thereupon revolted and chose Jeroboam as their king. Thus the tribes were separated into the kingdom of Judah under Rehoboam, and the kingdom of Israel under Jeroboam, 975 B.C.

REICHSTAG is the legislative chamber of the German Empire. It consists of 397 members—that is one for every 100,000 people—elected by manhood suffrage, the voting being by ballot. The Hungarian parliament is also called the "Reichstag," and consists of a House of Magnates and a House of Representatives. The imperial

parliament of Austria is called a *Reichsrath*.

REID, MAYNE, a writer of boys' tales, *b.* in Ireland, 1818, *d.* 1883. He went to America at the age of 20, and served in the United States Army in the Mexican war of 1847. Returning to Europe he devoted himself to literature. His plots are mostly laid on the Mexican frontier, his description of its natural features being accurate and vivid. His thrilling tales have always been favourites with boys; "The Rifle Rangers," "The Scalp Hunters" and 'The Headless Horseman" being among his best.

REID, THOMAS, *b.* 1710, *d.* 1796, Scotland's greatest Mental Philosopher, was the son of a Kincardineshire minister. He was educated at the Marischal College of Aberdeen, and was for ten years its librarian. In 1763 he was elected to succeed Adam Smith as Professor of Moral Philosophy in the University of Glasgow. In 1781 he resigned his chair to devote himself to the systematic exposition of his philosophy. In 1785 he published a treatise on "The Intellectual Powers of Man," and three years later, a second on "The Active Powers of the Human Mind." In these he sought to combat the scepticism of Hume, not by attacking his reasoning but by demonstrating the falsity of the assumptions on which his reasoning was based. Thus he founded what has been called the new school of Scottish Philosophy.

REIGN OF TERROR. This was a period of 420 days from May 31st, 1793, to July 28th, 1794, in which France was given over to a government of murderers. The chief of these were Robespierre, Danton, Hébert Couthon, and Carrier. An infamous 'Committee of Public Safety" daily sent to the guillotine batches of victims, many of whom were only *suspected* of enmity to the government. More than 30,000 people were beheaded in Paris alone.

REINDEER. a species of deer, native to the northern parts of the Old and New World. It is the most prized of the deer family, its flesh and skin being most valuable, while the domesticated reindeer furnishes milk, and is the draught animal of the polar regions. Both male and female are furnished with antlers.

REJECTED ADDRESSES. In October, 1812, Drury Lane Theatre was to be reopened after its destruction by fire. The management offered a prize for the poem most suitable to be recited on the opening night. It occurred to James and Horace Smith to write a set of poems in parody of what the leading poets, as Wordsworth, Southey, Coleridge, etc., might be supposed to have sent in and had rejected. They were published in 1813 and attained an immense popularity.

RELICS are personal memorials of the great dead, especially of those distinguished in religion. Supposed fragments of the "true cross," of the crown of thorns, portions of bones, garments, books, instruments of torture, connected with the history of holy men are reverently treasured as relics.

RELIGIO MEDICI, a kind of confession of faith written by Sir Thomas Browne, a Norwich physician of Stuart times. He takes the reader into his confidence in matters of ordinary life, as well as of religion. The work is a fantastic medley of solemn reflections and outlandish digressions. He died in 1685.

REMBRANDT, *b.* at Leyden, 1607, *d.* 1669, a famous Dutch painter. He learnt painting in the studio of Van Swenburch, but commenced his career as an etcher. Settling in Amsterdam, he took pupils, at the same time producing from 30 to 40 etchings a year. His first great oil painting was the "Anatomical Lesson," painted when he was 25. The celebrated "Night Watch" was produced in 1642. He was one of the most interesting of the great artists, both in his subjects and their treatment.

REMONSTRANCE, THE GRAND. This was a summary of the illegal acts committed by Charles I. since his accession, followed by a scheme of proposed reforms. The first half of the Remonstrance passed the Commons with little opposition, but the last clauses which proposed to make radical changes in the Established Church were hotly opposed by the friends of the Church. In the end they passed by a narrow majority of eleven.

REMUS, UNCLE, an old plantation negro who is supposed to relate the plantation tales and folk lore collected by Joel Harris.

RÉMUSAT, COMTESSE DE, a French lady, wife of the Chamberlain of Napoleon the Great, and an attendant on the Empress Josephine. Her "Memories" give an insight into the court life of the First Empire.

RENAISSANCE, or "New Birth," is the name given to the great awakening of men's minds in the latter part of the 15th century. It was largely due to the revived study of the Greek and Roman classics, which led to broader views in art, religion and science. The study of classical literature led naturally to a taste for classical architecture. The Renaissance architecture, while imitating classical models, is still largely influenced by the Gothic style which preceded it.

RENAN, JOSEPH ERNEST, *b.* 1823, *d.* 1892, was a Breton and educated by the priests of his native village, of whom he says: "They taught Latin in the old fashion, but they sought above all things to turn out good men." After being trained for the Church, he found himself unable to accept its teaching, and therefore devoted himself to general literature. For a time he filled the Hebrew chair in the University of Paris. His work, entitled, "La vie de Jésus," caused an immense sensation. It was followed by a series of important works on the origin and progress of Christianity.

RENI, GUIDO, *b.* 1575, *d.* 1642, was one of the greatest painters of the Bolognese school. He was born at Bologna, and at nine years of age was set to work in the studio of the painter Calvert. After a time he joined the rival studio of Caracci, whose work he admired. Removing to Rome, he obtained the patronage of the Pope, Paul V. His best work in Rome is considered to be the fresco in the Rospigliosi Palace, "Phœbus and the Hours, preceded by Aurora." He spent the last years of his life in Bologna, where, through his mania for gambling, he was reduced to the condition of a picture dealer's hack.

RENNET, the inner lining of a calf's stomach. It yields a juice which causes milk to curdle. It is taken from the stomach as soon as the calf is killed, then salted and dried. When wanted, a small piece is cut off and soaked in water, which is then added to the milk to be curdled. An extract of rennet is also extensively used.

RENNIE, SIR JOHN, was a famous engineer. Starting as a workman for Meikle, the inventor of a Thrashing Machine, he attended lectures at the Edinburgh University. Then he worked for Boulton and Watt, at Soho, near Birmingham, and distinguished himself by his ingenuity, especially as a millwright. This made him known, and brought him many commissions. The construction of bridges, canals, and docks next engaged his attention, and in all he was eminently successful. Waterloo Bridge, in London, is among the many monuments of his skill.

REPOUSSÉ is a method of ornamenting metals by blows delivered from the back. Punches of various shapes are used, and the design is thus raised above the surrounding surface of the metal. The more delicate portions of the work are executed from the front by the aid of gravers or punches. The metal to be operated on is placed on the surface of a block of pitch, or other yielding material.

REPRESENTATIVES, HOUSE OF, the Lower House of the United States Congress, comprising (1903) 386 members, chosen every second year by the people of the several States. This House, like the British House of Commons, has the sole power of originating bills for raising revenue.

REPTILES. These form one of the five classes of the vertebrate animals. They breathe by means of lungs, and are allied to the birds on the one hand and the amphibians on the other, and through the amphibians to the fishes. The amphibians, in the earlier stages of their existence, breathe by means of gills, but in the adult state by means of lungs. We may therefore consider them to begin life as fishes and end it as reptiles. The reptiles have been divided into four natural orders (1) Ophidia or Snakes, (2) Crocodilia or Crocodiles and Alligators, (3) Lacertilia or Lizards, (4) Chelonia, comprising Tortoises and Turtles.

REPUBLICAN PARTY (United States). In 1856 a party calling itself by this name was formed for the purpose of limiting slavery to the States in which it then existed. The opposite or Democratic party was in favour of extending it. The antagonism of these two parties in 1861 led to civil war. The Republican party triumphed, and slavery was abolished throughout the States. The Republicans and Democrats now differ only on the question of tariffs, the former being strict protectionists, and the latter advocating a certain amount of free trade.

REREDOS, the ornamental screen or wall which is placed at the back of the altar. It is often adorned with figures.

RESINS. These are vegetable secretions found in a large number of plants, mostly in solution in an essential oil. Thus common resin is found in pine trees dissolved in turpentine. Resins are insoluble in water, but soluble in alcohol. Many such solutions are used as varnishes. Ordinary resin, Dammar, Copal, Mastic, Sandarach are examples of resins. Amber is a fossil resin.

RESPIRATION is the natural process by which animals take in oxygen and give out the waste product of their tissues, mostly as carbon dioxide and water. Respiration is effected in some animals by the general surface of the body; others, as in insects, by tubes called tracheæ, which open on the body surface by spiracles. Creatures living beneath the water breathe mostly by means of gills; while reptiles, birds, and mammals breathe by lungs, as do also adult amphibia. (See *Frog.*)

RESPONSIONS. Refer to *Index.*

RESZKÉ, JEAN DE, *b.* at Warsaw, 1852, a celebrated operatic tenor singer. Like Sims Reeves, he appeared first as a baritone. His brother EDOUARD, *b.* 1855, is almost equally famous as a baritone. The two brothers caused a great sensation in London when singing at the Royal Italian Opera.

RÉUNION, an island belonging to France, formerly "Ile de Bourbon," one

of the group of islands lying to the east of Madagascar. It is mountainous, and has one very active volcano. It produces coffee and vanilla, but its chief export is sugar; capital, St. Denis.

REUSS, a tributary of the Aar, rising in the northern slope of Mount St. Gothard and making its way down a wonderful gorge, where it is crossed by the Devil's Bridge, after passing Andermatt. It flows through the Lake of Lucerne, and joins the Aar near Brugg after a course of 90 miles.

REUTER, BARON PAUL JULIUS, *b.* at Cassel, 1821, *d.* 1904. In 1849 he organised at Aix la Chapelle an office for collecting and distributing political and commercial news. In 1851 he removed his head quarters to London. As telegraphs extended, he widened his field of operations, employing special messengers in important centres beyond the reach of the telegraph. In 1871 he was made a baron of Germany.

REVELS, MASTER OF THE, a former Court officer whose function it was to regulate the amusements provided for the Christmas season. He also attended the sovereign on a royal progress to see that the temporary accommodation provided was adequate, as well as to supervise the various masques and pageants generally arranged for the occasion.

REVENUE, NATIONAL. Refer to *Index.*

REVERE, PAUL, was a young mechanic born in Boston, Massachusetts, in 1735. He is known for his midnight ride, described by Longfellow. The English were about to march from Boston to Concord, on April 19th, 1775, to seize a quantity of military stores, and Revere rode forward the preceding night to warn his comrades. The battles of Concord and Lexington fought that day were the first of the war.

REVERSION is the tendency in plants and animals to exhibit the character of some ancestral form. An egg from a pure breed of pigeons may yield by reversion the original blue rock. A cultivated flower may produce blossoms like those of the wild plant from which it sprang.

REVERSIONARY ANNUITIES. These are annuities which are to commence at a given future time, or on the failure of a life or a combination of lives. They continue payable during a given time or during the lifetime of a given person or persons. Thus an annuity left to a son, to be paid after the death of his parents, is a reversionary annuity.

REVIVAL OF LEARNING. See *Renaissance.*

REVOCATION OF THE EDICT OF NANTES. Henry IV. of France inaugurated his reign by the issue of the famous "Edict of Nantes," 1598, granting perfect freedom to all Protestants, and placing them on an entire equality with Catholics. Louis XIV., in 1685, revoked this edict, despoiled the Huguenots of all their civil rights, and subjected them to a cruel persecution.

REVOLUTION. (1) The English Revolution of 1688 led to the abdication of James II. and the election of William of Orange to be King of England in his stead. The revolution was caused by the Roman Catholic sympathies of James, and the terms of the election of William III. secured for England a succession of Protestant princes. (2) The French Revolution of 1789. [Refer to *Index.*] (3) Revolution of July. Charles X. of France issued on July 26th, 1830, six ordinances, in which, among other tyrannical acts, he suspended the liberty of the press and disfranchised eight out of every nine voters. A revolution followed, and Charles fled to England. (4) Revolution of 1848. Louis Philippe succeeded Charles X., but, after reigning 18 years, he had become so unpopular, that he was forced to abdicate, February 24th, 1848. He died in England two years later.

REYNARD THE FOX is a popular epic poem in which the characters are beasts instead of men. The hero is the Fox who constantly by his cunning outwits Isengrin the wolf. The tales seem to have originated in the north of France, or in Flanders, about the 10th century. Some Flemish and Low German editions reach a high literary standard.

REYNOLDS, SIR JOSHUA, *b.* at Plympton, Devon, 1723, *d.* 1792; an eminent painter. At the age of eighteen he went to London and entered the studio of Robert Hudson, a portrait painter. He next went to Rome, where he studied the works of Raphael and Michael Angelo. In the Vatican he caught a chill, which resulted in deafness. Returning to London he soon attracted notice, and his studio in Leicester Square became a meeting place of Burke, Johnson, Boswell, and the literary wits of the day. His portrait of Mrs. Siddons as the Tragic Muse, his "Strawberry Girl" and "Simplicity" have obtained world-wide celebrity. He was the first President of the Royal Academy, and was knighted in 1769.

RHADAMANTHUS, the mythical son of Zeus, was made judge in the lower world with Æacus and Minos.

RHÆTIA, an Alpine province of ancient Rome. It included the modern Grisons, Tyrol, and Southern Bavaria. Its name survives in the Rhaetian Alps.

RHEIMS, a city of France, 82 miles north-east of Paris. Cæsar speaks of it as the capital of the Remi, whence its name. Its magnificent cathedral is renowned throughout the world. In the ancient church that occupied its site Clovis was crowned in 496, and in the cathedral most of the French kings were crowned, including Charles VII., through the heroic conduct of Jeanne d'Arc. Rheims is celebrated for its woollen goods, and is one of the centres of the champagne trade; population exceeds 100,000.

RHETORIC has been described as the "Science of Persuasion." It attempts to lay down rules for compositions written or spoken, intended to sway the feelings and convince the minds of the hearers or readers. Thus it deals with style, with accuracy of expression, with the proper arrangement of arguments, the use of figures of speech, etc.

RHINE, THE, rises in Mount St. Gothard, flows through Lake Constance, and forms the northern boundary of Switzerland. Turning north at Basle, it flows between the Black Forest and Vosges Mountains, traverses Western Germany, flows through Holland, and enters the North Sea. It is navigable by steamer below Mannheim. Between Bingen and Bonn the scenery is highly romantic. After leaving Cologne, the largest city on its banks, it flows through a busy manufacturing district, passing Düsseldorf. On entering Holland it divides into several branches, the two chief of which being the Waal and the Leck; total length 760 miles.

RHINE, CONFEDERATION OF THE. When Napoleon defeated the combined forces of Russia and Austria at Austerlitz in 1805, he obtained unlimited power on the Continent. Hence he was able to sweep away the German Diet, and combine fourteen German States into what he called the Confederation of the Rhine, under himself as Protector.

RHINE PROVINCE or **RHENISH PRUSSIA.** This, the most populous and the busiest manufacturing district of Prussia, lies along its western border, touching Luxemburg and the Netherlands. The capital is Coblenz, at the junction of the Moselle and Rhine. Bonn, Köln, Trier, Essen, Aachen, Crefeld, Barmen, Elberfeld, and Dusseldorf are also important towns. Essen is the centre of a coal and iron district, and contains the celebrated "Krupp" cast-steel works, famous for the manufacture of heavy guns, etc.

RHODE ISLAND, one of the thirteen original states of the American Union, and of all the American States the smallest and most densely populated; it has extensive manufactures of cottons and woollens. The capital is Providence, a large manufacturing town. Area, 1,250 square miles; population about 450,000.

RHODES, an island in the Greek Archipelago, 50 miles long by 20 wide. It was originally peopled by Greeks, but afterwards passed into the hands of the Persians, Saracens, and Knights of St. John. By these last it was held for two centuries, and was finally surrendered by them to the Turks, who still hold it. Its capital, Rhodes, at the north end of the island, was long celebrated for its Colossus—a gigantic statue of Helios, bestriding the entrance to one of its harbours. The trade of Rhodes is now small, its fine harbours being sand-choked and neglected.

RHODES, CECIL JOHN, *b.* at Bishop Stortford, Herts, 1853, *d.* at Cape Town, 1902; was educated at the Grammar School of his native town. Being in delicate health, he joined his brother, a planter, in Natal. Attracted to the Kimberley diamond mines, he acquired a fortune, returned to England, and became a student at Oriel College, Oxford, where he took his degree. He went back to South Africa, and sat in the Cape House of Assembly, as member for Barkly. As Premier of Cape Colony, he devoted himself to the reconciliation of the two races—British and Dutch—in that Colony, and to the extension of the British Empire in South Africa. To this great patriot England owes the extension of her Empire from the Transvaal to the Zambesi, and far beyond it to Lake Tanganyika, over a vast region called in his honour *Rhodesia:* to him also she owes the possession of Walfisch Bay, the best harbour on the south-west coast of Africa. His tomb is in the Motopo Hills, near Bulawayo. By his will the bulk of his vast fortune was devoted to the founding of scholarships at Oxford for students from the Colonies and the United States.

RHO'DOPE (o-pe) **MOUNTAINS,** called also the Despoto Dagh, a range forming the boundary between Thrace and Macedonia. They rise to a height of over 9,000 feet in Mus Alta, on the extreme western border of Eastern Roumelia.

RHONE GLACIER. This glacier lies on the western flank of Mount St. Gothard. Moraines and perched blocks show that the glacier once occupied the whole of the space between the Bernese and Pennine Alps and extended westward to the Jura, throwing off two branches, one westerly towards France, the other northerly as far as Berne.

RHONE RIVER. This, the swiftest stream in France, rises in the Rhone Glacier, in Switzerland, and flows through the Lake of Geneva, in which it leaves its glacial mud. It emerges from the lake a clear stream and runs in a zigzag course westerly to Lyons, where it is joined by the sluggish Saone. Thence its course is southerly, till it enters the Mediterranean by many mouths after a course of 490 miles. Geneva, Lyons, and Avignon are the chief towns on its banks.

RHUBARB. See *Med. Dict.*

RHYL is a watering place in Flintshire, on the mouth of the river Clwyd. It has fine sands, and a promenade nearly half a mile long. From it there are fine views of Snowdon.

RHYME, or RIME. The recurrence of the same sound at the end of two or more lines of poetry constitutes rhyme. A true rhyme demands that the vowel and what follows it should be the same, as in "flown" and "moan," but that the consonant preceding should be different. Words such as "tearing," "declaring," make a double rhyme; "unfortunate" and "importunate" a triple rhyme.

RHYTHM, in poetry is the regular recurrence of accent in a line which gives its character to the metre; in music it is the ordered recurrence of an accented beat or beats in each bar. Dancing also, is entirely dependent upon rhythm, a certain number of movements recurring again and again in a very marked manner.

RIALTO, BRIDGE OF THE, a bridge over the Grand Canal in Venice. It was built in 1591, and consists of a marble arch 91 feet in span. Shakespeare, in his "Merchant of Venice," makes the Rialto the meeting place of Venetian merchants.

RIBBON SOCIETY. This was one of the Irish secret societies which were common between 1820 and 1870. "Ribbonism" was strongest between '25 and '35. The Ribbon men were almost entirely peasants and differed in their aims in different parts of Ireland. In the north they were merely the opponents of the Orangemen, in the west the agitation was purely agrarian, while in Leinster "Ribbonism" was trades unionism of a violent kind.

RICARDO, DAVID, *b.* in London, 1772, *d.* 1823; was of Jewish descent. After making a large fortune on the Stock Exchange he devoted himself to the study of Political Economy, publishing in 1817 a valuable work on the subject, entitled "Principles of Political Economy and Taxation."

RICE. One of the most widely cultivated of the cereals, forming the staple food of at least a third of the human race. It was probably native to India, but is now cultivated wherever there is sufficient heat and moisture. It is grown in vast quantities in the great deltas and low alluvial plains of India, Burma, China, Japan and Java. The hot swamps of Carolina and the well-watered plain of Lombardy are also famous rice-growing districts. Rice when fermented yields an alcoholic liquor named *arrack*, well-known in the East Indies.

RICEPAPER, a paper made, not from any part of the rice plant, but from the pith of a tree growing in the island of Formosa. The stem is cut into lengths, and the pith pushed out. Then the latter is very skilfully cut into a kind of very thin spiral, which is afterwards flattened out. The paper made from rice-straw is much coarser and more uneven.

RICHARD I., son of Henry II., king of England, 1189–99. Brought up in Poitou among knights and troubadours, he imbibed the romance of the times. He joined the Third Crusade, and his deeds in Palestine aroused the greatest enthusiasm in Christendom. In returning from the Holy Land he was imprisoned by the Archduke of Austria, but was ransomed by his English subjects. He was killed by an arrow while besieging the castle of Chaluz in 1199.

RICHARD II., son of the famous Black Prince, reigned 1377–99. Though as a boy of 15 he showed great courage during Wat Tyler's rebellion, he became weak and yet tyrannical, and was at length deposed in favour of Bolingbroke, son of John of Gaunt, Richard's uncle. The fate of the deposed king is uncertain, except that he ended his days in Pontefract Castle soon after his deposition.

RICHARD III., son of Richard, Duke of York, reigned 1483–85. On the death of his brother, Edward IV., he was made Protector of the realm, as Edward's son and successor was only twelve years of age. Richard imprisoned the young king and his brother in the Tower, where they were murdered. The usurper was defeated and slain at Bosworth-field, Leicestershire, in 1485, by Henry, Earl of Richmond, a Lancastrian prince, who was crowned on the battle-field under the title of Henry VII. [See *Richmond, Earl of.*]

RICHARDS, BRINLEY, *b.* 1819, at Carmarthen, *d.* 1885; was a composer and teacher of music who did much to encourage the study of music in his native Wales. He received his musical education at the Royal Academy, in which he became a professor. Two of his best known compositions are "The Harp of Wales" and "God bless the Prince of Wales."

RICHARDSON, SAMUEL, *b.* 1689, *d.* 1761; was one of the best known novelists of the 18th century. He was the son of a joiner, and was apprenticed to a printer. In 1719 he started a printer's business in Salisbury Square, and became famous as the author of a novel, "Pamela," which is written in the form of letters, and is said to have been at first intended as a guide to letter writers. Two other novels, "Clarissa Harlowe" and "Sir Charles Grandison," also written in letter form, helped to make him famous. He excelled in the delineation of female character.

RICHARDSON, SIR BENJAMIN, *b.* 1828, *d.* 1896; a distinguished physician and writer on medical subjects, was educated at Glasgow and at St. Andrews University. He did much by his writings and lectures to promote the cause of temperance and observance of the laws of health. He invented the lethal chamber for dogs, and a mask for workers as a protection from metal dust, etc. He was knighted in 1893 in recognition of his public services.

RICHELIEU, CARDINAL, *b.* 1585, *d.* 1642; was a celebrated French statesman. In 1616 he became secretary of state and for 18 years (1624–42) was the chief minister of Louis XIII., who resigned to him all real power. Richelieu aimed at three things (1) to reduce the power of the Protestants, (2) to enforce the submission of the turbulent nobles, (3) to humble the house of Austria. In all these he was successful, and at his death, in 1642, left France the most powerful nation in Europe.

RICHMOND. There are at least three well-known towns of this name. (1) Richmond in Yorkshire is beautifully situated on the Swale. It is noted for its fine Norman Castle, now used as barracks. The Earldom of Richmond was granted by Henry VI. to the father of Henry VII. The view of the castle, and the bridge across the Swale below, is a favourite subject with artists. (2) Richmond in Surrey was formerly known as Shene. In its palace, rebuilt by Henry VII., and hence called Richmond, Elizabeth spent part of her infancy, and there she died. The view over the valley of the Thames from Richmond Hill is celebrated. (3) Richmond in Virginia, situated on the James river, was in the early part of the Secession War (1861–64), the head quarters of the southern army under General Lee. The falls of the James river supply power for the industries of Richmond, which has foundries, rolling mills, and tobacco factories.

RICHMOND, EARL OF. The first Earl of Richmond was Edmund, son of Owen Tudor, a Welsh gentleman, and Catherine, the widow of Henry V. Their son Edmund was created Earl of Richmond by Henry VI., and his son Henry, Earl of Richmond, became Henry VII.

RICHMOND, SIR WILLIAM, *b.* in London, 1843; English painter, elected R.A. in 1895, and president of the Society of Miniature Painters in 1899. He was founder of the Grosvenor Gallery. His decoration of St. Paul's Cathedral, begun in 1891, has been variously criticised.

RICHTER, JEAN PAUL, *b.* 1723, *d.* 1825, a German humorous and satirical writer, was educated for the ministry, but soon gave up theology for literature, which, however, provided him with a poor living at first. By about 1795 his name became known, and thenceforward till his death he was in easy circumstances. The admiration of Carlyle for Jean Paul's works first drew attention to him in England, but he is now appreciated only by those who face the difficulties of studying him.

RIDLEY, NICHOLAS, bishop of London, *b.* 1500, *d.* 1555, was one of the most prominent of those who suffered for the Protestant cause in the reign of Mary I. He had travelled on the Continent as a young man, and there he became acquainted with the aims of the Reformers. In Henry VIII.'s reign he showed his reforming zeal, and through Cranmer's favour became bishop of Rochester. Under Edward VI., as bishop of London, he did much to help on the Reformation, and was therefore marked out as an early victim when Queen Mary came into power, and on October 11th, 1555, with Latimer, he was burnt at Oxford as a heretic.

RIEL, LOUIS, leader of two rebellions in Canada against British rule. The first, or Red River rebellion, in 1869–70, was put down by Colonel (now Lord) Wolseley. The second was a general rising of the French half-breeds, had its centre in Manitoba, and was put down by General Middleton at the head of the Canadian Militia. Riel was afterwards executed at Regina.

RIENZI, COLA DI, *b.* 1313, *d.* 1354, the great Roman tribune, was the son of an innkeeper at Rome. He showed great talent, and received a good education, in gaining which he learnt how far Rome had fallen from her once high estate. Fired with enthusiasm, he resolved to put down the nobles and free his fellow-citizens from their tyranny. The sanction of the Pope made this feasible, and in 1347 he was made tribune of Rome and granted full power over his fellow-citizens on the understanding that his rule was to be in accordance with the constitution which he produced for their sanction. But his head soon grew giddy with his elevation, and acts of despotism paved the way for his fall. After seven months of power he fled. He returned again in 1354, but his former faults were accentuated rather than eliminated, and a popular rising ended in his assassination.

RIFLE ASSOCIATION, NATIONAL. See *National Rifle Association.*

RIFLES. A rifle is a musket which has grooves cut inside the barrel proceeding in a spiral direction from the breech to the muzzle. The object of these grooves is to impart a rotary motion to the bullet, so that it flies much truer to the mark than a bullet from a smooth bore. The advantage of the rifle over the smooth bore was known so early as the 14th century, but no attempt was made to arm soldiers generally with it till the middle of the 19th century. Cannon also are rifled.

RIGA, a Russian seaport near the mouth of the river Dwina, which flows into the

Gulf of Riga, an arm of the Baltic Sea. It has a very large import and export trade, the two together totalling about £10,000,000. The port is closed by ice for about four months in the year, but the numerous manufactures in the city provide employment for many of the dock workers. Corn, timber, flax, hemp, and linseed are largely exported; coal, wine, and manufactured goods form the chief imports; population over 280,000.

RIGHT OF WAY. Refer to *Index.*

RIGHTS, BILL OF. See *Declaration of Rights.*

RIGHTS OF MAN, DECLARATION OF THE, a document adopted by the French National Assembly in 1798, declaring that all men had equal rights, and ought to have equality of opportunity at the hands of the State. After Burke had published his "Reflections on the French Revolution," Thomas Paine issued "The Rights of Man," a book vindicating the Revolution.

RIGI, a mountain in Switzerland, between Lakes Zug and Lucerne. The views from the Rigi are exceedingly fine, and as the ascent is not difficult, and a railway leads to the summit, thousands of tourists ascend the mountain every year. Height 5,900 feet.

RINALDO, the first serious work of Tasso, the great Italian poet, was published in 1562, when he was only eighteen. It is a poem of many beauties, and at once stamped its author as the coming poet of the age.

RING. The wearing of metal rings on various parts of the body as ornaments dates from very early times. It must not be forgotten, however, that a ring forms a very convenient form of portable treasure; the women of India, indeed, almost invariably put their savings into this form. There is no doubt that before the invention of coins, rings were used as a means of exchange. This seems to have originated with the Egyptians, and paintings still exist showing the weighing of the money rings. Among the Gauls and Britons, Cæsar found the same use, and traders with Africa to-day have rings of copper made to exchange with the natives. The use of signet rings dates far back beyond the general use of writing. It was obviously so convenient to carry about something which could be used as an unmistakable token of the owner's identity, or with which he could make a mark on a soft substance like wax in order to establish his personality. The use of poison rings amongst the Italians of the Middle Ages seem to have been widely spread. The origin of the marriage ring is not very clear; it was certainly used among the Jews previous to the Christian Era.

RING AND THE BOOK, THE, the most important of Robert Browning's longer poems, was published in 1868. The scene of the poem is laid in Italy, and the minute portrayal of the motives and feelings of each actor in the tragedy are wonderful. The poem contains over 20,000 lines.

RING DES NIBELUNGEN, a set of operas by Wagner, consisting of the "Die Walkure," "Siegfried," and the "Gotterdammerung," with "Rheingold" as an introduction. The plot is taken from the "Nibelungenlied," or the song of the Nibelungs, a great, early German epic poem. Wagner's treatment is worthy of his great subject, but the length of the whole sequence is too great to allow its frequent performance as a whole.

RIO DE JANEIRO, the capital of Brazil, and the most important town in South America, is beautifully situated on an inlet of the same name on the east coast of the Continent. The harbour is one of the finest in the world, and the scene, when one has passed the narrow entrance to the harbour, one of the most beautiful. The city is not a handsome one, nor healthy, yellow fever being very prevalent. Its commercial importance, however, is very great, half the imports and exports of Brazil, to the value of £17,000,000, passing through it. The population of the city and suburbs, covering an area of 540 square miles, is nearly 600,000.

RIO DE LA PLATA, or Plate River, is really an estuary, on the coast of South America, receiving the waters of the rivers Parana and Uruguay, just as our river Humber receives the Ouse and Trent.

RIO NEGRO, the most important tributary of the Amazon on the left, or north bank, rises in the south-east of Colombia, and flows in a general south-easterly direction in a course of 1,350 miles to join the Amazon in about the middle of its basin. Its dark waters can be distinguished for a long time from those of the Amazon.

RIOT ACT. Refer to *Index.*

RIPON, a cathedral city of Yorkshire, on the river Ure, 22 miles from York. The cathedral, though not large, is handsome, and contains some interesting monuments. It was rebuilt under the direction of Sir Gilbert Scott. The manufactures of the town, especially that of spurs, have declined. Studley Royal, the fine seat of the Marquis of Ripon, is well worth a visit; within its grounds is Fountains Abbey; population about 8,000.

RIP VAN WINKLE, a story by Washington Irving, tells how Van Winkle, a careless, good-natured farmer, goes hunting, and falls into a sleep which lasts for twenty years. When he wakes, he falls into numerous mistakes until he gradually learns what has happened. Then he is much amused, and affords amusement by comparing existing things, manners, and men with those of twenty years ago.

RIVALS, THE, the first play produced by the great dramatist, Richard Brinsley Sheridan. It had not a great success at first, but afterwards gained great applause, and is now regarded as a classic.

RIVERS, the natural channels by which water that falls on to the land is restored to the sea, to be drawn up again by evaporation. The latter part of their course may be, and often is, through a plain, but the impetus derived from the sharp descent from the hilly country of their origin, keeps them in motion, as in the case of the Amazon, Ganges, Rhine, etc. The uses of rivers for navigation and irrigation need hardly be mentioned, but the advantage they afford in mountainous or hilly districts by supplying power to set machinery in motion should not be forgotten. The basin of a river is the whole area from which it draws water. The basin of the Amazon comprises two and a quarter million square miles; the Congo one and a half millions; the Nile and Mississippi each above one and a quarter millions. Some rivers never reach the open sea; their water is evaporated in some desert region; these are called *continental* rivers. The Volga and Oxus, which are of this class, fall respectively into the Caspian Sea and the Sea of Aral, which are in reality lakes.

RIVIE'RA. The word "riviera" simply means river-bank, or sea-shore. The name is, however, generally restricted to the shore of the Gulf of Genoa from about Toulon to Leghorn. The charm of this district is due partly to its natural beauties and partly to the mildness of the winter, the majority of days at that season being as fine as a fair English summer day. Hyères, Cannes, Nice, Monaco, Mentone and San Remo are the principal resorts. The gambling tables of Monaco are world-renowned.

RIVIERE, BRITON, *b.* 1840, a popular painter of the present day, excels perhaps in animal scenes, but paints all kinds of pictures with facility. "Daniel in the Lion's Den," "A Roman Holiday," and "Væ Victis," are among his chief works.

RIZZIO, DAVID, an Italian musician and linguist, born at Turin early in the 16th century. In 1564 he became secretary to Mary, Queen of Scots, and the favour shown him soon excited the anger of her husband, Lord Darnley, who with Ruthven and others burst into Mary's apartments and murdered Rizzio almost under her eyes.

ROADS, the great means of communication between one place and another, are one of the greatest civilizing agents known to man. Their importance from a military point of view was appreciated by the Greeks, and still more by the Romans; some of the roads, indeed, made by the latter being still in existence and well adapted for traffic. But with the departure of the Roman power, road-making as an art disappeared, not to revive until the beginning of the 19th century with Macadam and Telford. During the intervening years, the roads were merely tracks, impassable from mud in winter, and full of ruts in summer, so that in the 18th century it often took two hours to drive in a carriage from Kensington to St. James's Palace, a distance of three miles. The vast increase of locomotion in the last half-century has led to many experiments in road-making, with the result that the best country roads are now made of whinstone, or some similar material, while in towns "macadam" and the paving stone are giving place to wood and asphalt.

ROARING, in horses, is the utterance of a sound, sometimes like a slight whistle, sometimes much louder and deeper, as an accompaniment to the breathing. It is caused by disease in the larynx, which often becomes half choked up by the hardening of a discharge from the diseased part. There is no cure for roaring; once a horse begins it, he gradually gets worse and worse until he becomes unfit for work.

ROBBIA, LUCA DELLA, *b.* in Florence, 1400, *d.* 1482, a celebrated sculptor and modeller. Most of his work was of a religious nature, executed for the cathedral or churches of Florence. Some of his relief work on the doors and galleries of the cathedral has never been surpassed. But his name is best known in connection with the figures in enamelled terra cotta, a kind of work he brought to high perfection.

ROBERT, SURNAMED "THE DEVIL," was Duke of Normandy from 1027 to 1035. He succeeded his brother Richard, whom he is said to have poisoned. He made war successfully on his neighbours, and was feared as a bold and successful leader. Later, he went on a pilgrimage to Jerusalem as a penance for his youthful sins, and died on the way back. His son William, afterwards William the Conqueror, whose mother was a farrier's daughter, succeeded him. The libretto of Meyerbeer's splendid opera "Robert le Diable" is founded on supposed incidents of his life.

ROBERT, DUKE OF NORMANDY, the eldest son of the Conqueror, became Duke of Normandy on his father's death, 1087, whilst his brother William (Rufus) became King of England. In 1096 he went on a Crusade. During his absence, William died, and Henry seized the crown. An attempt by Robert to gain the crown led to his capture and imprisonment in Cardiff Castle, where he died.

ROBERT I. See *Bruce, Robert.*

ROBERTS, EARL. Before the great Boer War of 1899–1902, the career of the great general was almost limited to India, where he was born in 1832. After receiving his education in England, he returned to India in 1851 with a commission in the Bengal Artillery. He was in the thick of the Mutiny in 1857–8, and gained the V.C. for his gallantry. He did good service in the organising and conduct of the Abyssinian Expedition of 1867, so good indeed that the honour of carrying home the final despatches was conferred on him. The Afghan campaign of 1878–80 gave Roberts, now Major-General, a splendid opportunity of showing his capacity, and never did general more thoroughly justify his appointment. His celebrated march from Cabul to Kandahar, a distance of 313 miles, in 22 days, will be long remembered. Honours were showered upon him, and as Baron Roberts of Kandahar and Waterford, and Commander-in-Chief of the Army in India, he seemed to have set the crown on a brilliant career. But the serious reverses of our troops in 1899, at the Tugela River and Magersfontein, called for fresh counsels. How Lord Roberts turned the scale of victory in our favour by the relief of Kimberley and the victory at Paardeberg will not soon be forgotten. Nor will it be forgotten how, within six months from his landing in South Africa, 1900, he led the British army in triumph into the capitals of the two Boer States. An earldom and a grant of £100,000 were the reward of Roberts's services in South Africa. His "Rise of Wellington" and "Forty-one Years in India" have been widely read and greatly admired.

ROBERTSON, FREDERICK WILLIAM, *b.* 1816, *d.* 1853, was intended for the army, like his father and grandfather before him. But feeling his vocation to be the Christian ministry, he went to Oxford to prepare for the ministry. In due time he became a curate, first at Winchester, then at Cheltenham and Oxford. For the last six years of his life he was incumbent of Trinity Chapel, Brighton. During his incumbency he preached a series of sermons which are still widely read and which have suggested to preachers of all denominations many lines of fresh thought. The intensity of his feelings probably hastened the brain disease which was undermining his strength. His eloquence is said to have been very striking, and it was assisted by a very musical voice capable of great expression

ROBERTSON, WILLIAM. *b.* 1721, *d.* 1793, a great Scottish historian, was a minister of the Scottish Church. "The History of Scotland," "History of the reign of Charles V.," and "History of America," are his chief works. They brought him handsome pecuniary rewards, as well as commendations from the leading men of the time, and, though subject to correction to-day, are still worth reading for the penetration and acuteness they display in judging of the problems of history as they then presented themselves.

ROBESPIERRE, MAXIMILIEN, *b.* 1758, *d.* 1794, one of the chief actors in the French Revolution, was also one of its victims. Educated as a lawyer, he soon gained a hearing in the States-General. His rise, both in popularity and in power, was rapid, and by clamouring for the king's death, he gained the confidence of all who aimed at destroying the monarchy. In 1793 he became a member of the "Committee of Safety," and then began the notorious "Reign of Terror." For weeks his enemies and rivals were guillotined at the rate of thirty a day. By the end of a twelvemonth he had forfeited the confidence of his partners in the Government, and was himself sent by them to the guillotine.

ROBIN GOODFELLOW. See *Puck.*

ROBIN HOOD, the hero of several old English ballads, cannot be said with certainty to have had any real existence. No doubt, in the days of the Norman kings and their early successors, many bold yeomen haunted the greenwood, both in Sherwood Forest and elsewhere, setting the forest laws at defiance, and combining the occupations of the deer-stealer and the highwayman. And no doubt such men often formed themselves into bands under the leadership of such a chief as Robin Hood. The first mention we have of the Robin Hood ballads is in Langland's "Piers Plowman," written about 1360.

ROB ROY, "Robert the Red," a chieftain of the clan Macgregor in Scotland, about the beginning of the 18th century. For some time he called himself a Campbell on account of his own tribe having been outlawed. He joined the Pretender in 1715, but, not having been very prominent, he soon gained a pardon, and lived the rest of his life making covert war on the Duke of Montrose, under the protection of the Duke of Argyle. Scott's novel, "Rob Roy," gives a very life-like picture of the man and the times.

ROBSART, AMY, daughter of Sir John Robsart, and the unacknowledged wife of Robert Dudley, afterwards Earl of Leicester, the favourite of Queen Elizabeth. In 1560 she went to live at Cumnor place, under the care of one Forster, in the service of her husband, and one night she was found dead at the foot of the staircase, but the cause of her death can only be conjectured.

ROC, THE, a fabulous bird of such immense size and strength as to carry off even elephants in its talons. It is frequently mentioned in the "Arabian Nights," and its existence was at one time widely credited.

ROCHDALE, an important manufacturing town of Lancashire, on the river Roch, about 11 miles north of Manchester. Besides its cotton industry, it has an important flannel manufacture dating back to Edward III. But its chief title to fame is the fact that it was the birthplace of the co-operative movement, its now flourishing society having commenced in 1844 with twenty-eight members. (For population, etc., see p. 902.)

ROCHELLE, LA, a seaport of France on the Bay of Biscay, opposite the Isle de Ré, and about 90 miles north of Bordeaux. It has, for its size, considerable trade, both coasting and oversea, the imports and exports together totalling three and a half millions. The chief export is brandy. It was a Huguenot stronghold, and the employment of English ships against it caused great indignation against Charles I. in 1626.

ROCHES MOUTONNÉES, the name given by Swiss peasants to rounded rocks, possessing a fancied resemblance to sheep lying down. In Scotland they are called "grey wethers." Such rocks have been smoothed by the grinding action of the glacier on the surface of the rocks over which they travelled.

ROCHESTER, a cathedral city of Kent, on the right bank of the Medway, near its mouth. It really forms one large town together with Chatham and Strood. It possesses considerable historical interest, the cathedral having been founded by Augustine in 606, and some of the original building still remaining. Rochester Castle is a noble Norman ruin. Dickens, who lived at Gad's Hill, 3 miles away, frequently introduced Rochester into his novels.

ROCHESTER (John Wilmot), **EARL OF,** *b.* 1647, *d.* 1680; a witty and dissolute courtier in the reign of Charles II. He was the author of the memorable lines on Charles, beginning: "Here lies our sovereign lord the king." Good judges have declared his writings to show a talent that might have placed him among the first writers.

ROCHET, a fine linen vestment worn by bishops. It resembles a surplice, except that the sleeves fasten at the wrist instead of being open.

ROCKEFELLER, JOHN DAVISON, *b.* in New York, 1839; a multi-millionaire who owes his wealth to petroleum, first in consolidating many oil companies into the Standard Oil Company, 1870, and later in establishing the Standard Oil Trust, 1882. He has devoted a large share of his wealth to Educational purposes in the United States.

ROCKET, a cylindrical tube filled with inflammable material, the rapid combustion of which causes a great rush of gas out of an opening, or openings, at the base, and thus propels the rocket with great force. In war, rockets are chiefly used for setting buildings on fire, and to inspire terror. [See *Life-Saving Appliances.*]

ROCKY MOUNTAINS, the mountains which stretch almost continuously from the Arctic Ocean to the junction with Central America. They are parallel with the western coast of North America, and not far from it. The name is sometimes restricted to the more easterly ranges, while those quite near the coast are called Cascade Range and Sierra Nevada. The highest peaks are in British Columbia, where Mount Hooker and Mount Brown attain a height of about 16,000 feet. A peculiar feature of the Rocky Mountains is the plateaus enclosed between the several ranges. Yellowstone Park, amid these mountains in the north-west of Wyoming, probably contains as fine scenery as the world can show. The Rocky Mountains are especially rich in deposits of gold, silver, and other metals.

ROCOCO, a name given to a style of decoration prevalent in the early and middle parts of the 18th century. Its characteristic was excess of detail in ornament without unity of design.

RODENTIA, an order of animals embracing all those that gnaw their food. Rats, mice, squirrels, hares, rabbits, porcupines, guinea-pigs, and beavers, with many others, are included in the order. Their characteristic is the peculiar sharpness of the front teeth, which, being covered with enamel only in front, wear away quickly at the back, and so present the knife-like edge formed by the enamel.

RODIN, AUGUSTE. *b.* Paris, 1840, said to be the best sculptor of the present age. Amongst his most notable works are: "Le Printemps," "La Porte de L'Enfer," "Le Baiser" and "La Guerre." He is President of the International Society of Sculptors, Painters and Gravers.

RODNEY, GEORGE, LORD, *b.* 1718, *d.* 1792, a famous English admiral, entered the navy at the age of twelve. By the time he was twenty-four he had gained the rank of post-captain. He served with success in most of the wars of the time, but his greatest services were the relief of Gibraltar, in 1780, and his victory over the French under De Grasse off Dominica in the West Indies in 1782.

RODOMONT, a character in the "Orlando Furioso" of Ariosto. He is represented as a very brave and fierce knight, but given to bragging, whence his name is used to denote a bragger, or boaster, and indulgence in bragging is often designated "Rodomontade."

ROE, RICHARD. See *Doe, John.*

ROGATION DAYS, the Monday, Tuesday, and Wednesday before Ascension Day. They were so called because of the solemn "rogations," i.e., supplications or litanies, recited in early times on those days. Before the Reformation the Litany used to be said or sung in a solemn procession, and a trace of this custom remains in "beating the bounds," which is still done in some places on Ascension Day.

ROGER DE COVERLEY, SIR, a delightful creation by Steele and Addison. He is the chief character in the Club professing to write the "Spectator," and the ideal portrait of an English gentleman of the reign of Queen Anne, when the "Spectator" was published.

ROGERS, JOHN, *b.* about 1500, *d.* 1555; the first Protestant martyr in the reign of Mary. He was converted by Tindal at Antwerp, and afterwards assisted the latter in his English translation of the Bible. He returned to England and obtained a prebendal stall in St. Paul's Cathedral. He was burnt at Smithfield.

ROGERS, SAMUEL, *b.* 1763, *d.* 1855, a leading poet of the first half of the 19th century, made his name in 1792 by his poem "The Pleasures of Memory." His next great work was "Human Life," published in 1819, a poem abounding in many happy phrases. "Italy," considered by many his finest work, was published at intervals between 1820 and 1830. A handsome fortune, inherited from his father, enabled him to keep his work in his own hands until he had polished it to his satisfaction.

ROIS FAINEANTS, the later Merovingian kings of France (656-751). They were called "Fainéants" (do-nothings) because they were content to leave the government of the country in the hands of their chief ministers, who were called "Maires du Palais."

ROJDESTVENSKY, PETROVITCH, *b.* 1848; a Russian admiral entrusted with the Russian fleet that sailed from the Baltic, October, 1904, to destroy the Japanese fleet. His exploit at the Dogger Bank (which see) is well known. In May, 1905, Rojdestvensky, with a great fleet of nearly 40 vessels, made for Vladivostok, through the Strait of Tsushima, between Corea and Japan. In the disastrous battle which took place here, he was wounded and taken prisoner (See *War, Russo-Japanese*).

ROKEBY, a small parish in Yorkshire on the river Greta, 10 miles north of Richmond. It forms the scene of Sir Walter Scott's poem of "Rokeby," in which he well describes the romantic scenery of the district.

ROLAND, the hero of many romantic old French ballads, was undoubtedly one of Charlemagne's knights. It is also pretty certain that in Charlemagne's retreat, or return, from Spain, the vanguard, commanded by Roland, was cut up almost to a man, and the leader slain. The rest of the story consists of additions made by the "jongleurs," or wandering minstrels.

ROLAND, MADAME, the wife of Jean Marie Roland, a minister of the ill-fated Louis XVI. Spurred on by his wife, Roland took an active part in the Revolution until the September massacres showed them how things were going. Their protests made them hateful to the Jacobins, and with others they were arrested, but Roland escaped. Madame Roland was guillotined, after five months' imprisonment, during which she wrote her "Memoires," which have thus a tragic interest, as being written under the shadow of the scaffold.

ROLLO, or **ROLF,** a Norwegian noble who harried England, Scotland and France towards the end of the 9th century. In 912, Charles the Simple, of France, was glad to cede to him the territory which we now call Normandy, and he thus became the founder of the Duchy of Normandy, and the ancestor of William the Conqueror. He was called Rolf the "Ganger" (or "walker"), being it is said, too long-legged to ride a horse.

ROLLS, MASTER OF THE. Refer to *Index*.

ROMAN CATHOLIC CHURCH, that part of the Christian Church which yields allegiance to the Pope. It ought, perhaps, to be pointed out that the members thereof do not themselves claim or use this title. They call theirs the "Catholic," i.e., the *Universal* church, the other Christian bodies prefixing the title "Roman," to assert their own claim to be part of the "Universal" church. No doubt the two chief epochs in the history of the Roman Catholic Church are the separation between East and West, which took place finally in 1054, and the great upheaval called the Reformation, in the 16th century, which resulted in the appearance of the various Protestant churches. Two great factors in the vitality of the Roman Catholic Church are the celibacy of the clergy and the complete ultimate subordination of every officer in it to the Pope. The first of these factors prevents any external interest from interfering with the interest of the Church, whatever sacrifice may be required to maintain or promote it; the second produces a practical unity of belief and action. Refer to "Roman Catholic Church," in *Index*.

ROMANCE. As now generally used, the term "romance" is used to denote a fictitious story, either in prose or verse, in which some, if not most, of the incidents border on the marvellous and impossible. In the 12th and succeeding centuries, stories in verse about Charlemagne, about Arthur, and about Amadis of Gaul became very popular with the upper classes, and as these were mostly written in one of the *Romance* languages, i.e., Spanish, French, or Italian, the name was applied to all such compositions.

ROMANCE LANGUAGES — Spanish, French, Portuguese, and Italian; so called because derived from the *Roman*, or Latin tongue.

ROMAN EMPIRE, THE HOLY, a term applied to the confederation of German States which, under the title of the Holy Roman Empire, held together more or less loosely from the time of Otho, who was crowned Emperor in 962, to that of Francis II. of Austria, who formally resigned the title in 1806.

ROMA'NES, GEORGE JOHN, *b.* at Kingston, Canada, 1848, *d.* at Oxford, 1894, a British naturalist. He has published "Animal Intelligence," "Mental Evolution in Animals," and "The Philosophy of Natural History before and after Darwin."

ROMANOFF, HOUSE OF, the present dynasty of Russian rulers; founded in 1612 by Mikhael Romanoff, a noble of Prussian descent.

ROMANY, the language spoken by Gypsies. It is curious that the language of true gypsies in every land is so nearly alike that a Gypsy from England can without much trouble understand the language of the Siberian Gypsy; and careful examination shows that Romany, though not derived from, is closely allied to, Sanscrit.

ROME, the capital of Italy, and for centuries the capital of the world, stands on the river Tiber, about 15 miles from the sea. How far its present interest depends upon its ancient importance and history would be hard to say, but undoubtedly few go to Rome, or mention it, without feeling that they have to do with a city that has a mighty past. The seven hills on which ancient Rome was built can still be traced, but the Campus Martius, which lay between them and the river, and which was the field of exercise for the early inhabitants, has long been built over. The remains which exist in the form of amphitheatres, baths, and circuses belong almost entirely to imperial times. The churches, pictures, and palaces are mostly of mediæval origin. The Vatican, probably the largest palace in the world, is near the west bank of the Tiber. It was begun in 1150, and has not long been completed. It is said to contain 11,000 rooms, and the treasures of art within its walls are marvellous. It is the seat of the Pope. The king's palace, the Quirinal, is on the east side of the river. The catacombs or underground burial places of Rome have long been celebrated. Here the Christians used to bury their dead, and taking advantage of the sacredness accorded to places of burial by the Romans, they held here, in times of persecution, their meetings for worship. It is said the length of the galleries, if all were placed in line, would amount to three or four hundred miles. The manufactures of Rome are few and unimportant; population exceeds 460,000.

ROMILLY, SIR SAMUEL, *b.* 1757, *d.* 1818, an eloquent and learned lawyer, is chiefly remembered for his persistent advocacy of the reform of the criminal law, especially with regard to the limitation of capital punishment, and the reduction of penalties for lesser crimes. He gained his knighthood for services rendered as Solicitor-general.

ROMNEY, GEORGE, *b.* 1734, *d.* 1802, portrait painter, was the son of a carpenter of Dalton, Lancashire. At twenty-one he began to learn painting, and in two years more he had married and set up as a portrait painter on his own account. He left his wife and family and went to London, where for thirty-seven years he worked and made money. The story of his return in old age to his wife, and her forgiveness, is very touching. Some of his portraits are very celebrated.

ROMOLA, one of the most successful of "George Eliot's" novels, deals with the Florence of Savonarola's time. She succeeds in giving us some highly interesting characters, but they are not quite the Florentines of the 15th century.

ROMULUS, the fabled founder, with his brother Remus, of the city of Rome. The sons of King Numitor, of Alba Longa, they were placed by the usurper Amulius, on the Tiber's bank to die. After being suckled by a she-wolf they were rescued and reared by a shepherd. In 753 Rome was founded, and Romulus slew Remus in a quarrel. Romulus died after a reign of thirty-seven years, and was later worshipped under the name of Quirinus.

RONCESVALLES, the valley in Navarre where the rear of Charlemagne's army was cut off, and Roland was slain. In the church are shown many relics asserted to have belonged to Roland [See *Roland*].

RÖNTGEN RAYS, rays, probably of light, produced by passing a current of electricity through a highly exhausted vacuum tube. Unlike ordinary light, however, they possess considerable power of passing through opaque bodies, as paper, wood, metal. As a rule, the denser the substance the greater resistance it offers to the passage of the Röntgen rays; hence if one's hand is interposed between the vacuum tube and a photographic plate, the bones cast a deeper shadow than the flesh, and the same with coins in

a purse, etc. Hence the value of the rays in searching for bullets in the bodies of wounded men.

ROOD, signifies a cross. Anciently there was a rood or crucifix set up between the body of the church and the chancel. This was flanked with images on either side, generally of Saint John and the Virgin Mary, and the spaces filled with carved work. The carved work still remains in many cases, and forms the rood-screen.

ROOK is a common bird of the crow family. Its chief food consists of grubs, specially those of the cock-chafer, and it is thus useful to the farmer. It, however, eats grain, eggs, and even young birds, and so does harm to fields newly sown with corn and to game preserves. Rooks form colonies during the breeding season, building their nests in the tops of tall trees; the eggs are five in number, green with dark blotches, and are incubated by both sexes, which sit alternately.

ROOKE, SIR GEORGE, *b.* 1650, *d.* 1709, an English admiral, did good service at the battles of Beachy Head and La Hogue. In the War of the Spanish Succession, also, he distinguished himself greatly by destroying the combined fleets of France and Spain in Vigo Bay. His great service, however, to his country was the capture of Gibraltar in 1704, a prize whose value was not recognised at the time.

ROON, COUNT VON, *b.* 1803, *d.* 1879, a Prussian soldier and field-marshal, whose reforms and improvements in the army paved the way for the success of the Prussians in 1866 over the Austrians, and in 1870–71 over the French. His idea of a nation trained to arms is now practically universal on the Continent and in Japan.

ROOSEVELT, THEODORE, *b.* in New York, 1858; twenty-sixth President of the United States. Having finished his education at Harvard College, he tried the law first, then ranching. In both municipal and national politics he soon proved himself a fearless, able, and determined reformer. The outbreak of the war with Spain, for which as Secretary of the Navy he had long been preparing, gave him the opportunity to form and lead his "Rough-riders," who did such good service before Santiago. The assassination of President Mc.Kinley, 1901, gave him his first term of office as President, and paved the way to his election, in 1904, to a second term. He has the honour of having taken the initiative in bringing about peace between Russia and Japan. He made a tour of Europe in 1910, in the course of which he visited London and received the Freedom of the City at the Guildhall. On this occasion he made a memorable speech upon England's policy in Egypt, which gave rise to much controversy.

ROOT-AND-BRANCH MEN, the party in the Commons who supported a petition presented in 1640 by 15,000 citizens of London, praying that Episcopacy might be destroyed "root and branch." Hampden, Sir Harry Vane, and Nathaniel Fiennes were the leaders.

RORKE'S DRIFT, a ford of the Tugela River, in Natal. Here Lieutenants Chard and Bromhead, with 80 men, kept at bay an army of 3,000 Zulus in 1879, after their annihilation of a British regiment at Isandlana.

RORQUAL, one of the commonest whales, often attains a length of 80 or 90 feet.

ROSA CARL, *b.* at Hamburg, 1843, *d.* 1889; an operatic impresario. In 1875 he formed a company to bring out standard operas in English. He also encouraged English musicians to write operas, inducing Mackenzie to write "Colomba" and "The Troubadour," and Stanford to write "Canterbury Pilgrims."

ROSAMOND, FAIR. See *Clifford, Rosamond.*

ROSA, SALVATOR, *b.* 1615, *d.* 1673, poet, musician, and painter, could have won distinction in either field. He is best known, however, as a painter, although his poems are still reprinted. His powers showed best in depicting wild scenes of Alpine grandeur.

ROSARY, a string of beads used by Roman Catholics as aids in remembering the number of times they have recited certain prayers and invocations.

ROSCOE, SIR HENRY ENFIELD, *b.* in London, 1833; an eminent chemist and writer on chemistry, was educated at Liverpool University College, London, and Heidelberg. He was professor of chemistry at Owens College at 25, and F.R.S. at 30. His works on chemistry have a world-wide reputation, and he has done much to advance secondary and technical education.

ROSEBERY, EARL OF. See *Primrose, Archibald Philip.*

ROSE, SIR HUGH (Lord Strathnairn), *b.* 1801, *d.* 1885; a distinguished commander in India, where he gained great distinction in the time of the Indian Mutiny. By his skilful operations in Central India, he did much to localise the Mutiny, and to rehabilitate British authority. From 1860 to 1865 he was Commander-in-Chief of the army in India, and from 1865 to 1870 held the same post in Ireland. He was made a peer in 1866.

ROSES, WARS OF THE. See *Wars of the Roses.*

ROSETTA, a seaport town of Egypt, a few miles east of Alexandria. It is a great mart for the rice grown in the delta. As a port, its importance has almost vanished; population 16,000.

ROSETTA STONE, a stone found at Rosetta, a town at the mouth of the western branch of the Nile, containing an inscription in honour of Ptolemy Epiphanes in three forms: in Hieroglyphics, in the popular tongue of Egypt (Coptic), and in Greek. This acted as a key to the meaning of the hieroglyphics, and since then their interpretation has gone on apace. It was brought to England in 1802, and is now in the British Museum.

ROSEWOOD, a very hard and beautifully marked wood imported into this country from Brazil. It takes a fine polish and is very durable, and is much used as a veneer. The wood of an allied tree found in the East Indies yields East Indian rosewood. It derives its name from the odour the wood gives out when fresh cut.

ROSLIN, a small village in Scotland, 6 miles from Edinburgh, is famous for its beautiful chapel, built in 1450, and adorned with much fine carving. It contains the celebrated "Prentice Pillar."

ROSS, a small town in Herefordshire, 11 miles south-east of Hereford. Its chief title to fame consists in the fact that John Kyrle, Pope's "Man of Ross," lived here. His body lies in the handsome church of the town; population 3,500.

ROSS, SIR JOHN, *b.* 1777, *d.* 1851, English admiral and Arctic explorer, entered the navy at the age of nine. His chief services were rendered in the Polar Seas, where he took part in, or conducted, many exploring expeditions. His last voyage was an attempt to find Sir John Franklin, in 1850. His accounts of his voyages are very interesting.

ROSS, SIR JAMES, *b.* 1800, *d.* 1862, nephew to Sir John, followed closely in his uncle's footsteps as an explorer. He accompanied his uncle and Captain Parry in their Arctic voyages, but his fame was gained by the great Antarctic exploring expedition of 1839, in which he commanded the *Erebus*, and Captain Crozier the *Terror*. They spent four years in the Antarctic regions, and made most valuable observations. Sir James was knighted on his return.

ROSSE (William Parsons), **EARL OF,** *b.* 1800, *d.* 1867; the maker of the celebrated "Rosse" reflecting telescope, devoted himself early to the branch of work which gained him his fame. His great six-foot reflector, set up at Parsonstown, Ireland, in 1845, began to be used in 1848, and soon solved many astronomical problems, chiefly with regard to nebulæ. This great achievement brought Lord Rosse many scientific distinctions in England and from abroad.

ROSSETTI, DANTE GABRIEL, *b.* 1828, *d.* 1862, son of an Italian refugee from Naples, possessed in an eminent degree the characteristic southern temperament. Artistic in every fibre of his nature, he might have excelled either as a poet or a painter. His influence in painting has had great effect on the subsequent development of English art, for he was one of the pioneers of the *Pre-Raphaelite* movement. His wife's early death was probably the cause of his comparative failure in later years.

ROSSINI, GIOACHINO ANTONIO, *b.* 1792, *d.* 1868, a great Italian composer, was born at Pesaro, an Adriatic seaport. He took to music early, and had written much before he was twenty. His first lasting work was "Tancredi," produced in 1813, but the "Barber of Seville" (1816) far outshone it. "Semiramide" and "William Tell" complete the list of his masterpieces, but many more good operas came from his pen. His great *forte* was melody.

ROSYTH. See *Forth, Firth of.*

ROTATION OF CROPS. Long before chemistry was applied to agriculture, it was known that continual raising of the same crop from a piece of ground tended to "exhaust" the ground, while if different things were grown in turn, much greater crops resulted. The most common rotation of crops is the Norfolk system, under which they follow this order:—(1 clover or mixed grass, (2) wheat or oats, (3) roots (such as turnips and mangolds) or potatoes, or else the ground is left fallow, and (4) barley. Of course, the intelligent farmer does not blindly adhere to this, but his operations must be based on it, or on some similar system, to secure the best results.

ROTHAMSTED, seat of Sir John Bennet Lawes, near St. Albans. Here in 1843, with the assistance of Dr. (afterwards Sir) J. H. Gilbert, he began a series of experiments in farming and cattle-breeding, testing the effect of manures on crops and of various foodstuffs on cattle, etc. At his death, 1900, besides the experimental fields and laboratories, he gave £100,000 for the continuance of the research work.

ROTHESAY, a favourite seaside resort in the north-east of the Island of Bute, and the chief town of Buteshire. It has a splendid harbour and a very mild climate, and is a good centre for tourists.

ROTHSCHILD. This celebrated family of bankers attribute their rise to the proud eminence they occupy to Meyer Amschel Rothschild, a banker in Frankfort during the latter half of the 18th century. Setting aside the story of the landgrave's treasure hid in his garden, there is no doubt that Meyer made much money by negotiating loans during the Napoleonic wars. His son Nathan greatly extended the scope of the bank's operations. Lionel, his successor, did much towards

removing the civil and political disabilities of the Jews. The present head of the house, Nathaniel Meyer, was made a peer in 1885. His niece, Hannah, married Lord Rosebery.

ROTTEN ROW, a fashionable place for riding and driving in Hyde Park. Here, in "the season," from about 4 to 6 in the afternoon, may be seen the wealth and fashion of England walking, driving, riding or lounging. The name is derived from "route du roi" or "king's drive."

ROTTERDAM, the second largest city of Holland, is situated on the river Maas, about 19 miles from its mouth. The city is intersected with canals, along whose banks trees are planted, producing a very pleasing effect. Rotterdam is the chief seaport of Holland, trading largely with the East Indies, as well as with other places. It does a large trade with England in butter, cheese, eggs, and other food produce, and its river traffic is enormous. Erasmus, the celebrated divine, was born here; population exceeds 360,000.

ROUEN, the old capital of Normandy, and still an important town, is situated on the river Seine, about 80 miles by river from the sea. The old ramparts have been converted into handsome boulevards, but quaint old houses, the abbey, and the interesting cathedral, remain to give a flavour of antiquity to the town. The close connection of Normandy and England at one time makes Rouen very interesting to Englishmen. Here William the Conqueror died and Joan of Arc was burnt. As a port, Rouen comes fourth in France; imports and exports amounting to a total of nearly £11,000,000. It has important manufactures of cotton and hosiery; population 115,000.

ROUGH RIDER, in general, a horse-breaker. In the army, men are specially chosen out to help to teach riding to the cavalry recruits, and to break in horses for military purposes. These men are called rough-riders.

ROUMANIA, a kingdom in the south-east of Europe, bordering on the Black Sea. For boundaries it has the river Pruth and the Black Sea on the east, the Danube on the south, and the Carpathian mountains on the north and west. The northern part is called Moldavia and the southern Wallachia. Roumania was dependent on Turkey until 1877. Then Prince Charles joined the Russians in the great Turco-Russian war, and won independence for his country, which became a kingdom in 1881. Agriculture is very successfully carried on, and much corn and fruit are exported. The population amounts to six million, nearly all belonging to the Greek Church. Bucharest is the capital; population exceeds 250,000.

ROUNDHEADS, a name applied during the Civil War to the Parliamentarians, who wore their hair cropped short, whilst the Cavaliers generally had long flowing hair.

ROUND TOWERS, tall, strongly built towers, found chiefly in Ireland, where over 100 still exist. They are from 100 to 120 feet high, 16 feet diameter at base, and have walls 3 or 4 feet thick; built of more or less prepared stone. The building consisted of four stories, each reached by a ladder, and they were probably used as strongholds against the attacks of the Danes.

ROUP, is an infectious and usually fatal disease of the throat occurring amongst poultry kept with damp and insanitary surroundings. The hen mopes and presents an offensive discharge from the nostrils, and often has a grey membrane in the throat also. The diseased hens must be isolated, and if valuable, a veterinary surgeon consulted; if not, they are best killed and buried in quicklime, the hen house being thoroughly cleaned and, if possible, moved to fresh ground.

ROUSSEAU, JEAN JACQUES, *b.* 1712, *d.* 1778, the son of a watchmaker, was a native of Geneva. At the age of sixteen he began a wandering life, which lasted, with intervals of repose, till his death. As a writer he first became known by his "Discourse on Arts and Sciences," in which he maintained very plausibly that knowledge had not made mankind happier. His "Social Contract" helped largely to pave the way for the French Revolution, for his ideas as to the true basis on which a state should be founded permeated the minds of thoughtful Frenchmen. His autobiographical works reveal him as a selfish, unprincipled character, capable of sending his own children to a Foundling Asylum. There are few great writers, if any, for whom the world has so little respect.

ROWE, NICHOLAS, *b.* 1674, *d.* 1718, poet and dramatist, gained success with his "Ambitious Stepmother" when he was but twenty-four. Other tragedies followed, mostly successful, and his miscellaneous poems were welcomed. In 1714 he was made Poet Laureate. His works are not much read.

ROWLEY POEMS, THE, the poems which Chatterton professed to have found in manuscript, and which he published as the work of a priest named Rowley [See *Chatterton*].

ROWTON HEATH. Soon after his defeat at Naseby Charles entered Chester, then besieged by a Parliamentary army. Attempting to raise the siege, the Royalists were utterly defeated at Rowton Heath. This disaster, added to that at Philiphaugh (which see), deprived the king of his last hope.

ROWTON HOUSES, dwelling-houses for unmarried working men, who for 7d. a night, or 3s. 6d. a week, can obtain bed and use of public rooms. The first block, accommodating nearly 500 persons, was erected at Vauxhall, 1892, by Lord Rowton, formerly private secretary to Earl Beaconsfield. His expectations were more than realised, and now (1906) there are six blocks of these houses in different parts of London, all paying a fair interest on the capital laid out.

ROYAL ACADEMY OF MUSIC, Tenterden Street, Hanover Square, was founded in 1823 by Lord Burghersh. It received a royal charter in 1830, but had a chequered existence till 1868, when it was assured an annual grant of £500 from Government. All branches of music are taught, as well as the principal modern languages, and there are valuable scholarships.

ROYAL ACADEMY, THE. This institution, which now has its home in Burlington House, Piccadilly, was founded in 1768 under the patronage of George III., with Sir Joshua Reynolds as first President. It consists of 42 academicians (of whom two are engravers) and about 30 Associates. Besides holding an annual exhibition, it does important work in providing the best tuition,—gratis to necessitous students of talent—and in awarding valuable scholarships and exhibitions to enable students to continue their studies in painting, sculpture, or architecture.

ROYAL COLLEGE OF MUSIC, is the outcome and successor of the National Training School for Music. The latter was established in 1876, mainly to give free instruction to pupils of merit, selected by competition. Sir Arthur Sullivan was the first principal. In 1883 the Royal College was incorporated and received its charter, and in its home at Kensington Gore has done good work in conjunction with the Royal Academy in promoting and directing musical education.

ROYAL EXCHANGE, THE, a handsome building in the city of London, where merchants may meet and transact their business. The first building for the purpose was erected in 1570 by Sir Thomas Gresham, a flourishing and enlightened London merchant. It was opened by Queen Elizabeth. A second Exchange had to be built after the Great Fire, and it was opened in 1669. This, too, was burnt down, and in 1845 the present building was opened by Queen Victoria.

ROYAL FAMILY. Refer to *Index.*

ROYAL GEORGE, THE, a British warship which went down in 1782 in deep water off Portsmouth, with Admiral Kempenfeldt and a crew of 800 men. The vessel had been placed so as to get at the lower hull for repairs, when by the shifting of her guns she suddenly heeled over and went down. Cowper's beautiful poem, "Toll for the Brave," well expresses the emotion excited by the sad news.

ROYAL SOCIETY, THE, a society which aims at the advancement of scientific knowledge of all kinds, was incorporated by a Royal Charter granted by Charles II. in 1662. Most of its first members had been previously in the habit of meeting to discuss and read papers on scientific subjects. The history of the Society is almost the history of English Science, and a list of its members would include all the great scientists of the last 250 years. Nearly every week papers are read on the latest discoveries and developments in Science, and are collected and published yearly. Besides this, the Society makes grants to scientific investigators of all kinds, and awards medals to those who make striking or valuable discoveries. There are about 500 Fellows of the Society, and about fifteen are elected every year. Needless to say that the right to put F.R.S. after his name is one of a scientist's highest ambitions.

RUBBER. The trees and shrubs which produce some sort of rubber grow in a narrow belt round the world, within five degrees, north and south of the equator. There is a great disparity in the quality of rubber, the best being *Para* rubber, which comes from the *Hevea brasiliensis*, which grows in the Amazon valley. The great demand for rubber for the tyres of vehicles, and the increasing uses to which it is put by engineers, has recently led many companies, in Ceylon and elsewhere, to root up the old plantations of tea and coffee and to plant instead the famous Hevea or Para rubber tree. Planters in Ceylon, Borneo, the Malay Peninsula, and Java, are clearing off patches of jungle and planting Hevea. The present (1906) total output of the Eastern plantations is only 200 tons per annum, whereas Brazil exports 30,000 tons. Very large quantities of inferior rubber come from the Congo and Liberia, Peru and Bolivia. The great rubber ports in Brazil are Manaos and Para.

RUBENS, PETER PAUL, the great Flemish painter, *b.* 1577, *d.* 1640, was born in Germany, the temporary home of his parents. In 1609 he settled in Antwerp, his mother's native city, and there, five years later, produced his masterpiece, the "Descent from the Cross." He visited France, Spain and England, practising his art, and acting as diplomatic agent on behalf of his country, for he was a skilful politician and an excellent linguist. His finest works are to be seen in Antwerp, but London, Paris, and Munich contain many excellent specimens.

RUBICON, a little river of central Italy, near Rimini, which in Cæsar's time formed the boundary between the Roman Republic

and its dependent state, Cisalpine Gaul. If Cæsar crossed this with an army without a special decree enabling him to do so, he would be making war on his country. Hence "to cross the Rubicon" is a metaphorical expression for taking an irrevocable step.

RUBINSTEIN, ANTON, *b.* 1829, *d.* 1894, pianist and musical composer, of Jewish race, was born in Roumania. At the age of eleven he performed before the public at Moscow, and at twelve in Paris. The great Liszt recognised his genius, and encouraged him. He made his home in St. Petersburg, but his time was largely occupied in concert tours, which were immensely successful. He wrote numerous operas, besides his oratorios, "Moses" and "Christus," but he will best be remembered for his songs and chamber music, in which two species of composition he has few equals.

RUBRICS, in law books, are the titles or headings of chapters or of statutes. In ecclesiastical use they are the directions and rules given in the Liturgy for the conduct of the service. The name arises from these parts being formerly printed in *red* (*L. rubricus*).

RUBY, a gem prized next to the diamond and in many cases above it. It is a species of alumina, as are the sapphire, emerald, and amethyst, and has a specific gravity of about 3·9. Only the diamond exceeds it in hardness. A perfect ruby is not so common as a perfect diamond of the same size. Its value per carat increases with its size, so that where a 5 carat ruby may be worth £100 per carat, one of 20 carats would probably be worth £500 per carat. Burma is now the chief source of natural rubies, but artificial ones of great merit are produced chemically.

RUGBY SCHOOL, one of the four greatest public schools of England, only Eton, Winchester and Harrow rivalling it in importance and antiquity, has accommodation for about 570 pupils. Founded in 1567 by Laurence Sheriff, it did good work locally for a long time, but Dr. Arnold, who became Head Master in 1828, made its reputation national. "Tom Brown's Schooldays," by Judge Hughes, gives a vivid picture of life at Rugby School.

RULE BRITANNIA. This stirring national song is one of the lyrics from a masque written by Thomson and Mallet in 1740 for Frederick, Prince of Wales. Which of the two actually wrote the words we do not know; the music is by Dr. Arne, the composer of so many favourite songs.

RUM, a liquor obtained by distillation from the "scum" that arises when cane-juice is boiled to obtain sugar, and from molasses. Jamaica and Demerara are our chief sources of supply, but the consumption has gone down from nearly nine million gallons in 1875 to about half that quantity.

RUMINANTS, a group of animals distinguished from all other animals by the fact that they "chew the cud," or in other words, that their food is brought back from the stomach to the mouth to be masticated. Camels, deer, giraffes, oxen, sheep, goats, and antelopes are the chief ruminants. The stomach is divided into four compartments, of which the first is practically a place of storage; the second forms the food into the required shape and consistency to pass back up the gullet; and the third and fourth complete the process of digestion when it returns.

RUMP PARLIAMENT. On December 6th, 1648, Cromwell, who had been alarmed by the willingness of the Long Parliament to treat with Charles, sent Colonel Pride with an armed force to prevent all members but those who were devoted to the army from entering the House of Commons. By the remnant who were allowed to enter, together with the army, the trial and execution of the king were authorised. The members who thus continued to sit were called the "Rump" Parliament. They were expelled by Cromwell in 1653, but assembled again in 1659 to take measures which resulted in the Restoration.

RUNCORN, a market town and seaport of Cheshire, stands near the head of the Mersey estuary, on the south side. It dates from Saxon times, but rose to importance in 1772, when it became the terminus of the Bridgewater Canal. Its dock accommodation has been increased since the Manchester Canal was finished. Shipbuilding and the manufacture of chemicals are carried on. The railway bridge over the Mersey is a fine work; population about 20,000.

RUNES, the characters or letters of the alphabet used by the ancient German and Scandinavian tribes in the early centuries of our era. The origin of the letters is not clear, but probably they were learnt from the early Phœnician traders, and modified to suit the sounds they were required to symbolise. Inscriptions traced in Runic characters are also often called "runes." They are commonly found in Scandinavia, and a few have been discovered in England.

RUNNYMEDE, a meadow on the right bank of the Thames, between Staines and Windsor. Here the army of the barons assembled in June, 1215, while John and his attendants were encamped on the island opposite. On the 15th of the month John signed the document called "Magna Charta," still preserved in the British Museum.

RUPEE, a silver coin current in India, and in some other of our eastern possessions. Its nominal value is two shillings, but owing to the depreciation of silver, its value is fixed by the Indian Government at 1s. 4d., or 15 rupees to the £.

RUPERT, PRINCE, *b.* 1619, *d.* 1682, was the son of Elizabeth, daughter of James I., who married Frederick, the Elector Palatine of the Rhine. Rupert was present when his uncle, Charles I., raised the royal standard at Nottingham in 1642, and he took an active part in the Civil War. Had his caution equalled his daring, it is possible that the war might not have ended quite as it did, for he would win a battle by a dashing charge and then lose it by a heedless pursuit of the flying enemy. After the Restoration, he did good service in the Dutch wars, and also took great interest in scientific investigations.

RURAL DEAN. Refer to "Church Dignitaries" in *Index*.

RUSKIN, JOHN, *b.* in London, 1819, *d.* 1900, the great art teacher, social reformer, and writer of the 19th century, was the son of a wealthy wine merchant, who had his boy educated at home until the time came for him to go to Oxford. Long before this he had dabbled in authorship, and his work, though having no permanent value, gave undoubted signs of genius. His mission in art was to teach the true nature of beauty, and to aid people in appreciating it aright. To this end his "Modern Painters," "Seven Lamps," and "Stones of Venice" were directed. Later in life he lectured and wrote on education, morals, and social topics generally. "Ethics of the Dust," "The Crown of Wild Olive," and "Fors Clavigera" mark this period. He spent his last years in retirement at Coniston, where he was buried.

RUSSELL, (JOHN), EARL, *b.* 1792, *d.* 1878, politician, statesman, and writer, commonly known as "Lord John Russell," till his elevation to the peerage. Trained for politics, he entered Parliament young, and soon made his mark, being found always on the side of progress. He advocated the repeal of the Test and Corporation Acts, and had a great hand in the Reform Act of 1832. He has a large share of the credit of conciliating the Canadians by the settlement of 1841. He was Prime Minister in 1846 and in 1866, and indeed took a leading part in all Liberal administrations up to the latter year. His literary works are chiefly biographical and historical. His peerage was bestowed in 1861.

RUSSELL, LORD WILLIAM. See *Rye House Plot*.

RUSSELL OF KILLOWEN, LORD, *b.* at Newry, Ireland, 1832, *d.* 1900; Lord Chief-justice of England. He was noted for his physical and mental vigour, which made itself keenly felt in cross-examination. He gained a great reputation as counsel for Parnell, 1889. He was counsel for Britain in the Behring Sea Fisheries Arbitration, 1892; succeeded Lord Coleridge as chief-justice in 1894; conducted the trial of the Jameson raiders, 1896; and was one of the arbitrators in settling the boundary of Venezuela, 1899.

RUSSELL, SIR WILLIAM HOWARD, the first great "war correspondent," was born in Ireland, 1821, and educated at Trinity College, Dublin. He went out to the Crimea as correspondent for the *Times*, and thence wrote those famous letters which revealed to England the painful condition of our soldiers there, owing to stupid mismanagement. His correspondence in the Crimean War and the Indian Mutiny has been published in book form: "Letters from the Crimea," "My Diary in India," etc.

RUSSIA, a country hardly reckoned to be of European importance in the 18th century, began to show her strength and resources at the opening of the 19th, and bids fair to engage a large share of the world's attention in the 20th. In Europe she rules 2,000,000 square miles, or about half the total area, and in Asia 6,000,000 more, so that the Russian Empire nearly equals the British in size. A good deal of the northern part of Russia is uninhabitable from the intense cold, and in the more southern parts the climate is very extreme, the summer being very hot, and the winter cold to a degree hardly realisable by Englishmen. Agriculture is the chief industry, and the exports of grain, timber, tallow, hemp, hides, skins, oil, flax, wool and leather are considerable. The petroleum wells in the Caspian districts are of considerable importance. The Russian Government has tried by prohibitive tariffs to encourage native manufactures, but their growth is not rapid. The reign of Peter the Great (1696-1725), marks the commencement of modern Russia. He built St. Petersburg, organised the army, founded a navy, introduced improved methods of agriculture, and gave an impetus to education. But none of these reforms touched the serfs, and until Alexander II. freed them in 1861, they were practically slaves. The persistent persecution of all who differ from the "orthodox Church" is a serious blot on the religious and civil administration of the country. St. Petersburg, the capital, on the Neva, has a population of 1,370,000. Moscow, the ancient capital, contains the Kremlin, a group of imperial and ecclesiastical buildings; population 1,000,000. Odessa, population 400,000, near the mouth of the Dnieper, is the great grain port of the Black Sea; Astrakhan, population 113,000, at the mouth of the Volga, trades

largely with Asia; Baku, also on the Caspian, is the head of the petroleum industry.

RUSSO-JAPANESE WAR. See *War, Russo-Japanese.*

RUSSO-TURKISH WAR. In 1877 Russia took up arms on behalf of the ill-treated Christians in Turkey. The Turks offered a much stouter resistance than had been anticipated, but after the Russians, aided by the Roumanians, took Plevna, their resistance crumbled. The Treaty of San Stefano, which marked the conclusion of the war, was greatly modified at the Berlin Congress, held soon afterwards, 1878.

RUST, a compound of oxygen and iron that only forms in presence of water. Iron that is exposed to the atmosphere is usually coated with paint, which requires to be renewed from time to time. Thin iron articles are covered with zinc (galvanized) or tin to preserve them from rust. Japanning is an effectual but more expensive way of preserving iron. Warships have four or five coats of special paint to preserve their armour, but even then rust has been known to be produced underneath.

RÜTLI, a meadow above the southern branch of Lake Lucerne, in Switzerland. Here, in 1307, the men of the Swiss cantons —Uri, Schwitz, and Unterwalden—met in conference and organised the rising that overthrew the Austrian power in Switzerland.

RUYSDAEL, JACOB, a great Dutch landscape painter of the 17th century. He lived and worked at Haarlem, and most of his subjects were taken from the neighbourhood. The gloomy and majestic was the aspect of nature he delighted to portray.

RUYTER, ADMIRAL, a great Dutch sailor who rose from the lowest ranks, is chiefly interesting to us from the trouble he gave us in the time of the Commonwealth, and under Charles II. In the former period, he and De Witt fought for naval supremacy with Blake and Monk; while in 1677 he actually sailed up the Thames and Medway, and burnt some ships at Chatham.

RYE, an interesting old town of Sussex, nine miles east of Hastings. It is one of the old "Cinque Ports," but is now two miles from the sea; population 4000.

RYE, a cereal allied to wheat and barley, much cultivated in Northern Europe, where wheat will not ripen. Bread made of it is much darker than wheaten bread, and not quite so nutritious. Rye is mostly grown in England to be cut down as a green food for sheep, cattle, and horses.

RYE HOUSE PLOT. a plot made in March, 1683, to assassinate the king, Charles II., as he returned from Newmarket to London. The few desperadoes who formed the plot were also connected with a much more extensive scheme for raising a general rebellion against the government, and both plots being discovered, Charles managed to involve the heads of the latter scheme in the odium of his attempted assassination. Thus at one blow he got rid of the chief Whig leaders, including Lord William Russell and Algernon Sidney.

RYMER, THOMAS, a 17th century writer and critic, is chiefly remembered for his invaluable collection of historical materials, whether letters, treatises, acts, or proclamations, dealing with the 12th and succeeding centuries, to his own time.

RYSWICK, a Dutch village near the Hague. Here was signed, in 1697, the treaty which brought peace between France on the one side and England with her continental allies on the other. It was a veritable triumph for William III., although he had gained no brilliant successes in arms.

SAARBRÜCK, a town of Rhenish Prussia, with important manufactures in iron, glass and chemicals. It was the scene of the first encounter in the Franco-German War of 1870-1.

SABBATH, a Hebrew word meaning *rest*, the name of the seventh day in the week, which was set aside, from the earliest times, as a day of rest. The fourth of the commandments committed to Moses on Sinai directed the observance of the seventh day as a Sabbath, and after the Captivity the day was observed with great strictness. The early Christians transferred their Sabbath to the Sunday or first day of the week; but the Jews still observe Saturday or the seventh day of the week as the Sabbath.

SABLE, a kind of marten, a native of Siberia, trapped in pits to prevent injury to the fur. It is about 20 inches long, and has a brown fur, yellowish on the throat. The skin is of great value, a perfect one fetching nearly £30.

SABOTS, wooden shoes worn in the Netherlands and the north of France. They are made of blocks of soft, tough wood, usually alder, beech or fir, and the industry is carried on principally in the Cevennes. A padding of wool or packing of straw is used to make the shoes fit.

SACCHARIN, an intensely sweet, white, crystalline product of coal-tar, useful as a substitute for sugar. At present it is used for diabetic patients, and in disguising the taste of drugs, but its cost and the uncertainty of its effects have so far prevented it from usurping the place of sugar.

SACHEVERELL, HENRY, *b.* 1672, *d.* 1724, an ardent High Church preacher of great popularity in the reign of Queen Anne. He was impeached by the Whigs before the House of Lords, for his pulpit attacks upon the Act of Toleration, and forbidden to preach for three years. The succeeding Tory government invited him to preach before them.

SACHS, HANS, *b.* 1494, *d.* 1576, a German poet of a singularly happy disposition, who worked as a shoemaker at Nuremberg.

SACK was a general name for the white, dry wines that came from Spain and the south, as distinguished from the red wines of Portugal and France. Canary was the commonest of sacks. The popularity of the wine is illustrated by the fact that Shakespeare made it the favourite drink of Falstaff.

SACRAMENT. The Latin word originally denoted the *oath* taken by a Roman soldier on entering the army. It was adopted by the early Christians as the name for the most sacred rites of the Church. The Protestant Churches restrict the term to the two ordinances "ordained by Christ Himself," viz., "Baptism and the Supper of the Lord." In the Roman Catholic Church the term is applied to seven ordinances:—Baptism, Confirmation, the Mass, Penance, Extreme Unction, Holy Orders and Matrimony.

SACRIFICE, a form of religious observance almost universal amongst ancient nations and peoples, both civilised and barbarian. It took two forms: (1) gifts or oblations as thank-offerings, consisting of fruits, oil, wine, grain or flesh, which were partly consumed by the worshippers and partly poured out on the ground or burned for the object of worship to partake of; (2) living victims, slain as a propitiatory sacrifice, to appease the anger of the Deity, or to avert the wrath of some god whom the worshippers feared. Ordinarily the sacrifice was a feast in which gods and worshippers shared.

SACRILEGE, a term denoting the act of breaking into and stealing from a place of worship. The offence of sacrilege comes under the description of house-breaking, and has no longer a separate legal signification.

SADDUCEES, an aristocratic party among the Jews at the time of our Lord. They rejected the traditional teaching of the Scribes and recognised only the written law. They denied the doctrine of the resurrection, and did not believe in the existence of angels or spirits. They were probably highly cultured, but worldly and somewhat cynical.

SADOWA, a village near the city of Königgratz, in Bohemia. It gave its name to a battle fought in 1866, when the Prussians signally defeated the Austrians.

SAFES, or strong boxes for the protection of papers and valuables from fire and burglary, were first brought to a state of satisfactory security by Mr. Thomas Milner in 1840. They are built of double plates, and the interspace is filled with fire-resisting chemicals, such as alum. The outer wall or plate is threefold, and the door has a series of locks set in dovetail directions on each of the four edges. Safe-deposits are large chambers containing safes, specially built and guarded with a view to perfect security. The Chancery Lane Safe Deposit is open to inspection daily.

SAFETY-LAMP, an oil lamp for use in coal mines, with a chimney made of fine gauze, which fits so closely as to leave no aperture greater than the mesh of the gauze. Its purpose is two-fold; it shows by a change in the colour and size of the flame the presence of firedamp, and it enables the flame to exist in this explosive atmosphere without communicating the effects to the air outside the gauze. Sir Humphry Davy announced his invention of the first safety-lamp in 1815, and although electric light has now become common in mines, the safety-lamp is still used as a means of detecting the presence of explosive gases.

SAFETY-VALVE, an arrangement by which the pressure of steam within a boiler may be relieved after it has reached a certain degree of intensity. The valve is kept closed by a spring or by weights, which are only movable by a high pressure of steam. In this way the pressure effects the opening of the valve when otherwise it might have injured or burst the boiler plates.

SAFFRON, a colouring matter obtained from the dried stigmas of a species of crocus. Many flowers are necessary to yield a small quantity of saffron, and its uses as a dyeing agent is declining. It has medicinal values, and is esteemed as a condiment as well as a safe colouring matter for foods and confectionery.

SAGAS, Icelandic tales partly historical and biographical and partly fabulous, but giving a vivid idea of the manners and life of the days in which they were written. The first writer of sagas lived in the 11th century, and his work deals with Iceland and the early Norwegian kings. The *Edda*, an account of Scandinavian mythology, was written about 1200 A.D.

SAGHALIEN ISLAND, an island in the Sea of Okhotsh, separated from Siberia by the Gulf of Tartary, and from Yezo, Japan, by La Perouse Strait. It stretches for 550 miles from north to south with a breadth varying from 15 to 80 miles. It has extensive forests of valuable timber, frequented by numerous fur-bearing animals, but its most important product is coal. In 1875 it was ceded by Japan to Russia by whom it has been used as

a convict station. As a result of the Russo-Japanese War, 1904–5, the island is divided between the two Powers, the southern half now belonging to Japan.

SAGO, a food-stuff obtained from the pith of various palm trees in the Eastern Archipelago, and particularly in Sumatra and Borneo. The tree is cut, and the pith extracted from sections of the stem and placed in a sieve, through which water is passed. This carries the flour into a second vessel, where it is deposited and dried after the water has been run off. The sago is then sent to Singapore, where it is prepared for the market, and shipped.

SAHARA, THE, is the great belt of desert that stretches eastwards from the Atlantic to the Nile, and southwards to the Niger and Lake Chad. Its northern edge is the hinterland of Morocco, Algeria, Tunis and Tripoli. South of Algeria and Morocco and in the centre are important mountain ranges seamed with valleys in which water is to be found below the surface. The mountains of the central plateau are covered with snow for three months of the year. The Sahara is crossed by many caravan routes, which follow the oases. The routes from Murzuk in Tripoli to Lake Chad, and from Morocco to Cairo are of particular importance. A process of desiccation or drying is in progress all over this area. Extreme heat during the day and excessive cold during the night, combined with the great evaporation that takes place, tend to break up the rock and thus to produce fragments that the wind reduces to sand. It is a wide error to suppose that the Sahara lies as a whole below the sea level, although a chain of lagoons exists in Northern Algeria, which have been surveyed with a view to forming them into an inland sea by connecting them with the Mediterranean.

SAHIB (Arab. "Master") a term of respect equivalent to Mr. or Sir, used by natives in India and Persia in addressing Europeans.

SAIGON, the capital of French Cochin-China, is a handsome modern city 60 miles from the sea, on the delta of the Mekong. It is the centre of French influence in Siam and the East.

SAINT. For names of saints, see under the proper name, as *Augustine, Saint.*

ST. ALBANS, a cathedral city of Hertfordshire, 20 miles north of London. It was the important Roman station of Verulam, and remains of the original British and Roman works still exist. The Abbey is an interesting Norman building of great length, and containing a remarkable number of Roman tiles in its structure. The abbots of St. Albans were of great importance in the Middle Ages, and the shrine of the martyr attracted pilgrims and offerings to the church.

ST. ANDREWS, an ancient Scottish city and university town on the coast of Fife, 40 miles north of Edinburgh. There are about 200 students at the University, and many ladies take the St. Andrews degree of L.L.A. (Lady-literate in Arts). The golf links are famous as the home and headquarters of the game; population 7,000.

ST. ALDWYN, LORD. See *Hicks Beach, Sir Michael.*

SAINT-ARNAUD, MARSHAL, *b.* at Bordeaux, 1796, *d.* 1854, made his name as a soldier in Algeria, and assisted Louis Napoleon in the *coup d'état* by which he became Napoleon III. in 1852. He led the French troops in the Crimea, at the battle of the Alma, in 1854, and died on his way home.

ST. ASAPH, a small cathedral city of Flintshire of 2,000 inhabitants, with the smallest cathedral in Great Britain. It is built of red sandstone in the Decorated style and is of simple cruciform plan. There is a small Elizabethan Grammar School, which was rebuilt in 1882.

ST. BARTHOLOMEW'S DAY, August 24th, was rendered memorable in 1572 by a concerted massacre of Huguenots throughout France, by the garrisons of all the cities where the population was of mixed faith. "A white sleeve and the white cross of Lorraine were the tokens by which the murderers were to know one another" (Miss Yonge). The massacre was the outcome of the attempt of the queen-mother, Catherine de Medici, to play off the Huguenots against the powerful Romanist faction of the Guises, who in their turn, inflamed their followers by insinuations of Huguenot plots.

ST. BERNARD DOG, THE, takes its name from the hospice at the head of the Great St. Bernard Pass from Switzerland to Italy. The present St. Bernard is of the Newfoundland breed crossed with a short-haired breed, the shaggy coat of a pure Newfoundland being unfitted for work in the snow. They accompany the monks as far as the shelters on either side of the Pass to assist travellers whom the monastery has been warned to expect, by telephone from the valley.

ST. BERNARD, THE GREAT, a pass 8,120 feet high, between Martigny in the Rhone Valley in Switzerland and Aosta in Piedmont. The famous hospice at the top of the pass is kept by a dozen sturdy Augustinian monks, as a means of assisting and sheltering travellers.

SAINTE BEUVE, *b.* 1804, *d.* 1869, a great French literary critic. His best work appeared weekly, in the form of critical articles entitled "Causeries du Lundi," in the *Constitutionnel* and other papers. Each "Causerie" represented some sixty hours' work, and they form as a whole an inexhaustible mine of facts and ideas bearing on human character and literary art.

ST. CLOUD, a town 10 miles west of Paris, situated on rising ground above the Seine. A château built here by the Duke of Orleans, brother of Louis XIV., was a favourite residence of the two Napoleons. The celebrated Sèvres-ware factory stands within its grounds.

ST. DAVIDS, an ancient cathedral city of Pembrokeshire, with a population of 2,000. It stands on the extreme western point of the county, and is of great interest to students of antiquity.

ST. DENIS, a city 3 miles north of Paris. Its abbey church contains the tombs of the French kings.

ST. ELIAS, MOUNT, a snow-clad, volcanic mountain, 18,000 feet high, standing near the Pacific coast on the Canadian side of the frontier of Alaska.

ST. ELMO'S FIRE, an electrical phenomenon similar to the brush discharge from an electrical machine. It is caused by the electricity from a cloud, at a low level, combining with that of the earth, and playing about the extremities of pointed objects appears as luminous brushes. It is rarely seen in Britain.

ST. ÉTIENNE, a town of 140,000 inhabitants, standing on a tributary of the Loire, about 36 miles south-west of Lyons. It is the centre of an important coal-field, and has a great iron and steel industry. Ribbons and lace are extensively made by people working in their own houses. The town is grimy and uninteresting, but it is the most important ironworking centre in France.

ST. GOTHARD, a mountain pass in Switzerland, from whose glaciers descend the rivers Rhone, Rhine, Ticino and Reuss. The St. Gothard Pass crosses a shoulder of the mountain at a height of 7,000 feet, from Lucerne to the Ticino valley and the Italian Lakes. The railway passes through the St. Gothard Tunnel (9¼ miles) at a height of 3,600 feet, and forms one of the chief means of communication between Italy and Germany. It was completed in eight years, and opened in 1882.

ST. HELENA, a lonely island, 1,200 miles west of the African coast, and a port of call on the way to the Cape. Its capital, Jamestown, is a coaling station for the navy and is strongly fortified. Here Napoleon was obliged to live, 1815–21, and here General Cronje and 2,000 Boer prisoners of war were kept 1900–2; population over 3,000.

ST. HELENS, a Lancashire town between Liverpool and Wigan, and twelve miles from the former. Railway and canal facilities and the presence of coal have led to its development within living memory from a village to a great centre of industry. It specializes in sheet and plate glass, and has important alkali and iron works. (For population, etc., see p. 902.)

ST. JAMES'S PALACE, originally a hospital dedicated to Saint James, was adopted as a royal residence by Henry VIII., who built the clock tower and gateway from designs by Holbein. Charles I. slept at St. James's the night before his execution, and walked across St. James's Park to Whitehall next morning. The British Court is officially known as the "Court of St. James's," though the palace is no longer used as a residence of the sovereign.

ST. JOHN, (1) the largest river of New Brunswick, for a great part of its course separates that State from Maine. It flows into the Bay of Fundy after a course of 450 miles. (2) The largest town of New Brunswick stands on the north bank of the estuary of St. John River. It forms an excellent winter port for the Dominion, and is connected with Montreal by the Inter-colonial Railway; population 40,000.

ST. JOHN, HENRY, created Viscount Bolingbroke, *b.* at Battersea, 1678, *d.* 1751, an English statesman, who took an important share in the government in Queen Anne's reign. Being opposed to the House of Hanover, he fled, at Anne's death, to France, but subsequently returned and wrote on political subjects, including a "Dissertation on Parties" and the "Idea of a Patriot King."

SAINT-JUST, ANTOINE, *b.* 1767, *d.* 1794, an ardent French revolutionist, who perished on the scaffold along with his leader, Robespierre. His early work for his party lay with the armies on the North-eastern frontier, where his zeal and fiery enthusiasm were of great value. He was singularly beautiful and youthful in appearance, but utterly relentless in carrying out his purposes.

ST. LAWRENCE, THE, is the general name applied not only to the great river that issues from the great lakes of North America, but to the water-way through them. It rises with the Mississippi and the Red River, on the plateau of Minnesota, under the name of the *St. Louis*, and passes into Lake Superior. Under the name of St. Mary's river it passes to Lake Huron, which is connected by a wide water-way with Lake Michigan, the most southerly of the lakes. Thence by the river and lake of St. Clair and the Detroit river it reaches Lake Erie, and leaves that lake to pass over the great Niagara Falls on its way to Lake Ontario, the last of these inland seas. Before it reaches the island city of Montreal it becomes entirely Canadian, and after it passes Quebec it begins to widen out into the Gulf of St. Lawrence. Eight important canals have been constructed to obviate the obstacles of falls and rapids, and of these the Welland Canal, which avoids the Falls of Niagara, is the most

famous. Of the tributary rivers, the Ottawa, which joins the main stream opposite to Montreal, is the most important.

ST. LAWRENCE, GULF OF, the estuary of the St. Lawrence River is sheltered from the Atlantic by Newfoundland and Cape Breton Island. It also contains Anticosti and Prince Edward's Islands, and many clusters of islets which render navigation difficult during the fogs that often prevail. The Gulf is impeded by ice from December to March, and Halifax in Nova Scotia is used during that period as a winter port for the Dominion.

ST. LEGER, a famous annual horse-race, founded in 1776, and named after Colonel St. Leger. It is run on Doncaster racecourse about the beginning of September.

ST. LOUIS, U.S.A., the principal city of the Mississippi valley, stands on the right bank of the river, 20 miles below the junction of the Mississippi and Missouri. It extends along the river for a frontage of 19 miles, and the river is crossed by two magnificent bridges of over 800 yards in length. It has a great grain and cotton trade, and is the leading tobacco centre in the world. Population exceeds 600,000. The year 1904 was rendered memorable in the history of St. Louis by the great World's Fair, held here during the spring and summer.

ST. LUCIA, the largest of the Windward Group of the Lesser Antilles. It contains scenery of exceptional beauty, and produces sugar, cocoa, tobacco, and spices. Castries, the capital, possesses one of the finest harbours in the West Indies, and serves as the principal coaling station of the British West Indian fleet.

ST. MALO, a strongly fortified French seaport built on a rocky islet communicating with the mainland by a causeway, at the mouth of the River Rance, Brittany.

ST. MARK'S, VENICE, originally the ducal chapel, now the cathedral of Venice, was erected 976–1071. The interior is decorated with wall pictures executed in mosaic on a background of gold. Over the main entrance are the four gilded bronze horses brought from Constantinople in 1204, removed to Paris by Napoleon, and restored to Venice in 1815. Its celebrated campanile (bell-tower), 323 feet high, collapsed in 1902.

ST. MICHAEL'S, the largest of the Azores, is about 40 miles in length, with a breadth varying from 5 to 10 miles. The island is of volcanic origin, exceedingly fertile, and produces the finest oranges in the world. The exports also include lemons and other fruits, wine, wheat, and maize.

ST. MICHAEL'S MOUNT, a conical mass of granite rising to a height of 250 feet, in the north-east corner of Mount's Bay, Cornwall. On the opposite side of the English Channel stands Mont St. Michel, in Brittany.

ST. PAUL, on the Mississippi, 2,070 miles from its mouth, is the capital of Minnesota, U.S.A. It is an important railway centre, and carries on an extensive distributing trade. In August, 1904, the city was visited by a destructive hurricane; population exceeds 150,000.

ST. PAUL'S CATHEDRAL stands at the summit of Ludgate Hill, London. The present building was erected 1675–1710, by Sir Christopher Wren, on the site of the old cathedral which had been restored by Inigo Jones, but which was destroyed in the Great Fire of 1666. The cost was defrayed by levying a tax on coal. The most conspicuous feature is the immense dome, surmounted by a lantern with ball and cross, the latter 364 feet above the ground. Among its "mighty dead," Nelson and Wellington are interred close together under the centre of the dome.

ST. PETER'S at Rome is considered the finest cathedral in the world. It stands on the legendary site of the martyrdom of the Apostle and of many of the early Christians of Rome. The present building, which is the successor of the basilica erected by Constantine the Great in 306, was begun in 1450 and completed in 1626. The dome, which is 44 feet higher than that of St. Paul's, was the work of Michael Angelo. The cathedral is of immense size, but the details of the interior are so perfectly proportioned that this is not at once apparent.

ST. PETERSBURG, the capital of Russia, on the Neva, was founded by Peter the Great, in 1703. The site is low and marshy and surrounded by dreary wastes, and the poor parts of the city are liable to periodic inundations of the Neva. Its palaces and government buildings are among the largest in the world. It is the principal manufacturing centre of Russia, and is the commercial capital and chief port, taking more than half the foreign trade of the country. The principal exports are corn, flax, linseed, leather, and petroleum; population exceeds 1¼ millions.

SAINTSBURY, GEORGE EDWARD, *b.* 1845, is one of the leading literary critics of the day. His industry is extraordinary, and his work is marked by great knowledge and clear thought. He has written extensively on French and English literature, and was for some time editor of Macmillan's Magazine. He is professor of English Literature at Edinburgh University, and has now completed his *magnum opus*, "A History of Criticism."

ST. VINCENT, CAPE, a lofty, rocky headland in the south-west of Portugal. Off this cape Admiral Jervis defeated a Spanish fleet, 1797. He was created Earl of St. Vincent.

ST. VINCENT, EARL OF. See *Jervis.*

SAKHALIN. See *Saghalien.*

SALAAM, from an Arabic word meaning "peace," is the form of salutation used by Mohammedans among themselves. Saying "Peace be with you," the Mohammedan places his hand on the head and inclines his body forward, receiving usually as response "With you be peace."

SALADIN, *b.* 1137, *d.* 1193, by his military skill and daring made himself sultan of Egypt and Syria. He attempted to expel the Christians from Palestine, gaining a great victory over them on the Plain of Tiberias, in 1187, and later in the same year taking Jerusalem. These events led to the Third Crusade, in which Richard Cœur-de-Lion recovered Acre and defeated Saladin in two important battles. In 1192 a truce was concluded between the two leaders, which left the Christians in possession of the strip of coast between Jaffa and Tyre, while the rest of Palestine remained in the hands of Saladin.

SALAMANCA, a Spanish city, about 120 miles north-west of Madrid. Its university is one of the oldest in Europe, and at one time attracted 14,000 students from all parts of the continent. In the neighbourhood Wellington gained a great victory over the French, 1812.

SALAMANDER, a species of animal akin to the frog and the newt and similar in shape to a lizard. It is chiefly interesting from the ancient belief that it could live quite comfortably in fire.

SALAMIS, a mountainous island of Greece, about 10 miles west of Athens. In the narrow strait between it and the mainland was fought the famous battle in which the Greeks, under Themistocles, defeated the Persians under King Xerxes, 480 B.C., and secured their independence.

SALFORD, a parliamentary borough of Lancashire, now practically a suburb of Manchester. It manufactures cotton and iron. (For population, etc., see p. 902.)

SALIC LAW, the law that excluded women from the throne of France. It seems to have been derived from the code of the Sabian Franks, among whom women were debarred from inheriting certain lands known as *Salic lands.* One of its first applications to the crown was when it was brought forward in opposition to the claim of Edward III. of England to the throne of France. The law remained in force from that time to the close of the French monarchy.

SALISBURY, formerly called New Sarum, the capital of Wiltshire, is famous for its cathedral, begun in 1220 and completed in 1258; population about 17,000. See *Old Sarum.*

SALISBURY, MARQUIS OF (Third), *b.* at Hatfield, 1830, *d.* 1903, a celebrated English statesman and Secretary for Foreign Affairs. In early life he worked hard as a journalist, and was a regular contributor to the Saturday and Quarterly Reviews. In 1868, through the death of his father and brother, he succeeded to the marquisate, and was at once recognised as one of the greatest debaters in the House of Lords. In 1874 he was again Secretary for India, this time under Disraeli, and in 1881 he became Secretary for Foreign Affairs. He was one of the representatives of this country at the Berlin conference of 1878. On the death of Lord Beaconsfield, in 1881, he became leader of the Conservative party. After that date he four times occupied the position of prime minister, on the two last occasions forming a coalition with the Liberal Unionists. He retired from public life in July, 1902. His chief relaxation from the cares of State was the study of chemistry and electricity.

SALISBURY PLAIN, an elevated plain in Wiltshire, near Salisbury, now used as a military camp. It is famous for the remains of the Druidical temple of Stonehenge.

SALLEE, an Atlantic seaport of Morocco which, as the home of pirates, gave its name to the famous *Sallee Rovers* immortalized in "Robinson Crusoe."

SALLUST (Caius Sallustius Crispus) a Roman historian, *b.* 86 B.C., *d.* 34 B.C. He belonged to the political party of Cæsar, whose fortunes he followed. He amassed great wealth and laid out the famous Quirinal gardens. As an historian he followed the brief and concise style of the Greek historian Thucydides. His chief works are "Catalina" and "Jugurtha."

SALMON inhabit both fresh and salt water. In autumn the adult fish ascend the river from the sea for the purpose of spawning. The spawn is deposited during the months of October, November, and December, in shallow grooves hollowed out in the gravel in the river bed by the tail of the female fish. Rivers continue to be the home of the fish until the spring floods, when they return to the sea. On both the ascending and descending journey they remain for some days in the brackish waters of the estuaries, and so gradually accustom themselves th the change of habitat. The young fiso are hatched out in April or May. At first they are weak and timid, and confine themselves to the immediate neighbourhood of their birth-place, sheltering under stones and rocks in the quieter parts of the stream. In the *parr* stage, which is attained in about twelve months, their bodies are marked by dark transverse

bands. At the age of about two years they become *smolts*, when the dark bands are exchanged for a covering of bright, silvery scales, and the fish are able to pay their first visit to salt water. At this stage they average from 6 to 8 inches in length. A stay of from two to six months in the sea adds considerably to their weight, and they return to the river as *grilse* or *salmon peel*, weighing from 3 to 10 pounds. At this stage the fish are first capable of depositing eggs. The salmon is extremely prolific. It has been estimated that more than 150 millions of salmon ova are annually deposited in the Tay alone. Of these, only about one-third reach the parr stage, and probably less than one in fifty of these becomes a perfect fish.

SALONICA, the ancient Thessalonica, is the chief port of Macedonia, and stands at the head of the Gulf of Salonica which forms the north-west corner of the Ægean Sea. Its ancient importance was due to its position as a port upon the great Roman road to Byzantium (Constantinople). It has many interesting Greek, Roman, and Byzantine remains, but since the great fire of 1890 the business part of the city has been modernized. The chief exports are grain, wool, skins and tobacco.

SALON, THE, galleries in Paris in which an exhibition of pictures recently painted is held annually.

SALOP, same as Shropshire.

SALT. (1) Common salt is a compound of sodium and chlorine. It is widely diffused throughout the world. Sea-water contains nearly 3 per cent. by weight, and the waters of certain salt lakes and brine springs are even more fully impregnated. In the form of rock-salt it is found in great abundance in Cheshire and Worcestershire, and in various parts of the continent of Europe, notably so in the north-east of Austria, where the galleries in the mines at Wieliczka, near Cracow, exceed 50 miles in length. Its uses as a preservative, as a condiment, and in cooking are well known. It is extensively employed in alkali works in the manufacture of soda-ash or carbonate of soda. (2) In the science of chemistry the term salt is applied to any compound substance formed by the union of an acid with a metal or base.

SALT LAKE CITY, the capital of Utah, U.S.A., and the head-quarters of Mormonism. The city, which stands at the foot of the Wasatch Mountains, more than 4,000 feet above sea-level, was founded by Brigham Young in 1847, and contains the Mormon temple and the university of Deseret.

SALT, SIR TITUS, *b.* near Leeds, 1803, *d.* 1876, a manufacturer and philanthropist. Near his birth-place he erected mills for the manufacture of alpaca, and for the benefit of his work-people founded the model village of Saltaire. It is situated on the Aire, 3 miles from Bradford.

SALTPETRE, or nitre, is nitrate of potassium, a substance used in the manufacture of gunpowder (which see).

SALT SEA. See *Dead Sea.*

SALT, SPIRITS OF, muriatic or hydrochloric acid.

SALUTATIONS, the various forms of greeting made use of at meeting or parting. The kiss, which is still employed by royal personages on ceremonious occasions, and which persists also in the custom of kissing the hand of a monarch, was the general form of salutation in England until the time of Charles II., and continued so in country districts until a much later period. The same custom existed among the Jews, Greeks, and Romans and was adopted by the early Christians as a sign of fellowship. Handshaking is now general in all civilised countries. Other modes of greeting are seen in the custom of rubbing noses in vogue in Lapland and among the Maoris, and in the stroking the face with the hand or foot of the person met, as practised by the Polynesians. Bowing varies in degree, from the slight inclination of the head and body to complete prostration in the dust. This last method of saluting a superior is met with in China and Siam. From very ancient times the words made use of in salutations consisted of various expressions of blessing, e.g., "God be gracious unto thee" (Gen. xliii. 24). A similar form is seen in the English *Good bye*, "God be wi' ye," and in the French *Adieu*, "To God."

SALUTE. There are several modes of saluting; firing guns, dipping colours, flags and topsails, manning yards, presenting arms, &c. A royal salute consists in the discharge of a great gun twenty-one times, in the lowering by officers of their sword-points, and in the dipping of their colours.

SALVADOR, the smallest but most densely populated of the republics of Central America, has an area of 7,200 square miles, and a population exceeding one million, about three-fourths of whom are of mixed race, the remainder being Indians. Agriculture employs the majority of the people, and the country produces coffee, indigo, sugar, rubber, and tobacco. San Salvador, the capital, population about 60,000, has suffered frequently from earthquakes.

SALVAGE. Refer to *Index.*

SALVATION ARMY, the outgrowth of the Christian Mission founded by William Booth, a Methodist minister, in the East End of London in 1865. The society adopted its present name and semi-military organisation in 1878. It aims at reaching those who are too degraded or indifferent to be influenced by other religious bodies. Its "soldiers" are divided into "corps," commanded by officers who assume military titles, captain, major, colonel, brigadier, etc., the whole being under the supreme command of "General" Booth, assisted by his chief of staff and commissioners. In addition to 15,000 officers supported from the funds of the society, there is an army of 45,000 voluntary workers, each of whom undertakes a definite task. In addition to its religious work, the "Army" seeks to aid the very poorest, and for this purpose has started in various parts of the world hundreds of shelters, rescue-homes, and labour-factories, and a farm colony at Hadleigh-on-Thames, Essex. In September, 1904, the "General" propounded a scheme for providing shelters for the homeless outcasts of London. The Army possesses training homes for officers, trading and publishing departments, and extensive printing works. The total circulation of its illustrated magazines and newspapers exceeds 46 millions annually (see *Booth, William*).

SALVATOR ROSA. See *Rosa, Salvator.*

SAMARCAND, a province of Russian Turkestan. With the exception of an extremely fertile river valley the land is mostly desert. The capital, Samarcand, is connected by railway with the Caspian. It contains many remains of beautiful architecture, the finest mosque in Central Asia and the tomb of Tamerlane.

SAMARIA (1) The central province of Palestine in the time of our Lord, lying between Judea and Galilee. (2) The capital of the Kingdom of Israel, situated about 40 miles N.N.W. of Jerusalem. The city was built by Omri, about 925 B.C., and continued to be the metropolis of the Ten Tribes until they were carried into captivity by Shalmaneser, 720 B.C.

SAMARITANS, a mixed race of people sent by Shalmaneser, King of Assyria, to occupy the land vacated by the Israelites whom he had transported to his own kingdom. On the return of the Jews from Babylon, the offer of the Samaritans to assist in the re-building of the Temple was rejected, in consequence of which they hindered the work as much as possible. This gave rise to the hatred that ever afterwards existed between the two peoples.

SAMOA, or Navigators' Islands, a group of fourteen volcanic islands surrounded by coral reefs in the South Pacific. In 1899 Britain relinquished her claim to these islands, and consented to an arrangement by which Germany took possession of the two largest and the United States the remaining ones. R. L. Stevenson is buried on the top of a Samoan mountain near his home of Vailima, where he spent the last five years of his life. The chief exports are copra and cocoa beans.

SAMOS, an island 30 miles in length, in the Ægean Sea, near the coast of Asia Minor. Its highest point is 4,725 feet. The island gives its name to the ancient red Samian ware so well known in the Roman sections of our museums. The inhabitants are Greek in sentiment and are governed by a Greek prince, but pay tribute to Turkey.

SAMPSON, WILLIAM THOMAS, *b.* 1840, *d.* 1902, an American naval officer, who in the war between the United States and Spain, commanded the fleet that destroyed the Spanish ships off Santiago, Cuba, 1898.

SAMSON, an Israelite of the tribe of Dan, one of the "Judges," and famous for extraordinary strength which he used against the Philistines. His exploits are related in the Book of Judges, chapters xiii.–xvi.

SAMUEL, the last of the judges of Israel, was consecrated by his mother to the service of God from his birth. He assisted Eli, and on his death succeeded him as "Judge." He revived the worship of Jehovah, established schools of the prophets, and made a yearly circuit of the country to administer justice. He anointed Saul king, and in consequence of his disobedience to God's commands in regard to Amalek, anointed David as his successor.

SANBALLAT, a Moabite who was governor of Samaria under Artaxerxes. He opposed every measure brought forward by Nehemiah for the welfare of Jerusalem (Neh. vi.). He built a temple on Mount Gerizim, and appointed Manasseh, his son-in-law and brother of the high priest at Jerusalem, to be its chief priest.

SAN BENITO. See *Auto da fé.*

SANCROFT, WILLIAM, *b.* in Suffolk, 1616, *d.* 1693, Archbishop of Canterbury, was one of the seven bishops committed to the Tower for petitioning against the "Declaration of Indulgence" of James II. On the accession of William and Mary he refused to take the oath of allegiance, was deprived of his archbishopric, and retired into private life.

SANCTUARY, a privilege formerly attached to certain buildings, in virtue of which criminals taking shelter therein were safe from arrest. From the beginning of the 4th century, in many countries, certain churches were set apart as asylums for fugitives from justice. In England these privileges were curtailed in the reign of Henry VIII., and were finally abolished in that of James I., though sanctuaries for debtors existed in and near London until 1697.

SAND, an accumulation of water-worn particles derived from pre-existing rocks or other mineral substances such as shells, volcanic debris, coral, etc. It is most commonly composed of quartz grains.

SAND, GEORGE, *b.* 1804, *d.* 1876, the pseudonym of Aurore Dupin, an eminent French novelist. Her early novels depict the life of Paris at the time of writing; those of a later date are marked by political, philosophical, and religious speculations; while those of the last period are beautiful studies of country life. "Indiana," "Consuelo," and "La Petite Fadette," may be mentioned as typical of these various characteristics.

SANDAL WOOD, the sweet-smelling wood of a tree growing chiefly on the Malabar coast of India, and in the islands of the East Indian Archipelago. It is used as a perfume, as a sedative, and is manufactured into light articles of furniture. The Brahmans also make use of the products of the tree in various religious ceremonies.

SANDHURST (1) A village in Berkshire, famous for its Royal Military Academy, at which candidates for commissions in the British Cavalry, Infantry, and the West Indian Regiments receive a special military education. (2) A flourishing city, at first, and now again, known as Bendigo, about 100 miles north of Melbourne, Victoria. It is the centre of a rich gold-bearing district.

SAN DOMINGO, capital of the republic of the same name, is a fortified port on the south coast of the island of Hayti. Its 16th century cathedral contained the remains of Columbus for nearly 250 years. The town was captured and pillaged by Drake in 1586; population 20,000.

SANDOWN PARK, a well known race-course at Esher, Surrey. There are five important meetings held here during the flat-racing season, and four steeplechase meetings.

SANDRINGHAM, a parish about 7 miles north-east of Lynn in Norfolk. Here in 1862, King Edward, when Prince of Wales, purchased an estate, 7,000 acres in extent, and here in 1870 he built Sandringham House, which in a special sense was His Majesty's home.

SANDWICH, one of the ancient Cinque Ports, Kent, 11 miles north of Dover. It was once on the coast, but the receding of the sea has left it about two miles inland; population about 3,000.

SANDWICH ISLANDS. See *Hawaiian Islands.*

SANDY HOOK, a sandy peninsula of New Jersey, about 18 miles from New York. At Sandy Hook Bay take place the races for the American Cup.

SAN FRANCISCO, the largest town in California, and the greatest commercial city on the West coast of America. It is the terminus of two lines of railway crossing the continent to the Atlantic coast, and is connected with China, Japan, Australia, and the Hawaiian Islands by regular lines of steamers. Its rapid rise was due to the discovery of gold in the neighbourhood, 1848; population 459 in 1847, and 380,000 in 1902. Here, in April, 1906, a terrible earthquake occurred, resulting in a fire that destroyed a large part of the city, causing a loss of about 1000 lives and property worth at least £50,000,000.

SANGREAL. See *Grail.*

SANHEDRIM, the supreme judicial council of the Jews from the time of the Maccabees to the destruction of Jerusalem. It consisted of 70 members, including the chief priests, elders, and scribes, and was presided over by the high priest. Its jurisdiction extended to every Jewish settlement.

SANITATION. Refer to *Index.*

SANKEY, IRA DAVID, *b.* 1840, an American evangelist and writer of hymns and tunes. For 29 years he assisted Mr. Moody in his work as an evangelist, and by means of his hymns contributed much to their success. Many millions of his hymns and sacred songs have been sold; *d.* 1908.

SANKT MORITZ, a celebrated health resort in Switzerland, situated near the river Inn in the Upper Engadine.

SAN MARINO, an independent republic in the north-east of Italy, and, next to Monaco, the smallest state in Europe, having an area of only 33 square miles. It comprises a town of the same name, and several villages on the eastern slopes of the Apennines.

SANPO. See *Brahmaputra.*

SANSCULOTTES, a name applied in contempt by the Court Party to the mob during the early days of the French Revolution. Literally the term means "without breeches," but its application referred to the rejection of knee breeches by the people and the substitution of loose trousers. The retention of knee breeches as a feature of court dress at the present day has thus a curious bearing upon this question.

SAN SEBASTIAN, an important fortress, a busy seaport, and a favourite watering-place on the north coast of Spain, a few miles from the French frontier. The town was besieged and taken by Wellington in 1813.

SANSKRIT, the language in which the greater part of the ancient Hindu sacred literature was written, though it has not been a spoken language during the Christian era. It belongs to the Indo-European family of languages.

SAN STEFANO, TREATY OF, the preliminary treaty, signed at the village of San Stefano, a few miles west of Constantinople, which ended the Russo-Turkish War, 1878. Many of its articles were afterwards considerably modified in favour of Turkey by the Treaty of Berlin.

SANTA CLAUS, a contraction of Saint Nicholas, bishop of Myra, Asia Minor, in the 4th century. He is the patron saint of children, and is fabled to bring presents to them on Christmas Eve.

SANTIAGO (1) The capital of Chile, stands on a fertile tableland at the foot of the Andes. Most of the houses are of one storey as a precaution against earthquakes; population 336,000. (2) A seaport on the south-east coast of Cuba, carrying on a considerable trade with Europe and America. The chief exports are sugar, tobacco, timber, and fruits. The town was captured from the Spaniards by American troops in 1898.

SAÖNE, a tributary of the Rhone, rises in the Vosges Mountains, and joins the main stream at Lyons, after a course of 280 miles. The river is navigable for nearly 200 miles, and by means of canals it communicates with the Loire, Seine, and Rhine.

SAPPHIRE, a blue, transparent variety of corundum. The finest specimens of the gem, which is exceedingly hard, are found in the sands of rivers and in alluvial deposits in Ceylon.

SAPPHO, a Greek lyric poetess who flourished in the 7th century, B.C. Little is known of her life, and of her works only a few odes and some fragments of hymns and elegies have come down to us.

SARACENS, the name originally of an Arab tribe that harassed the frontiers of the Roman Empire, and afterwards applied to all the Arabian tribes who embraced Mohammedanism, and who extended their conquests over Syria, Persia, Egypt, and North Africa. To the Crusaders the term was synonymous with infidels.

SARAGOSSA, a town on the Ebro, in Spain. It contains two cathedrals, a leaning clock-tower, and many interesting relics. During the Peninsular War it became famous for its gallant defence when besieged by the French. It was obliged, however, to capitulate after a prolonged siege, 1809.

SARATOGA SPRINGS, in New York State, one of the most popular watering-places in the United States on account of its mineral springs. The scene of the surrender of General Burgoyne and his army of 6,000 men, in 1777, lies about 12 miles to the east of the town.

SARAWAK, in the north-western part of Borneo, proclaimed a British protectorate in 1890. It was in 1842 made over to an Englishman, Sir James Brooke, and for nearly 50 years administered by him and by his nephew.

SARCOPH'AGUS. A species of limestone used by the Greeks for coffins, and so called because it was supposed to consume the flesh of the dead. (*Sarcophagus* meaning "flesh-eating.") Hence the name came to be applied to a stone chest, more or less ornamented, for receiving a dead body.

SARDINE, a fish of the herring family, closely resembling the pilchard in form, but smaller in size. Immense shoals frequent the Mediterranean and the Brittany coast, but the Breton fishermen have found, in recent years, a great falling off in the supply. Numbers are sold in the fresh state, but by far the larger quantities are cured and preserved by being boiled in oil, and then packed in hermetically sealed tins or glasses.

SARDINIA, next to Sicily the largest island in the Mediterranean. It lies to the south of Corsica, from which it is separated by the Strait of Bonifacio. It now forms part of the Kingdom of Italy.

SARDOU VICTORIEN, *b.* 1831, a French dramatist of European reputation. Among his earlier plays are "La Papillone," "Nos Intimes," "Les Vieux Garçons," and "Odette," written between 1862 and 1881. He then wrote a series of dramas, beginning with "Fédora," to display the talents of Sarah Bernhardt. Of his later plays the most notable is "Madame Sans-Gêne." Many of his plays have been adapted for the English stage; among them, "A Scrap of Paper," the English rendering of his first successful comedy, "Les Pattes de Mouche"; *d.* 1908.

SARGASSO SEA. See *Atlantic Ocean.*

SARGENT, JOHN SINGER, R.A., portrait painter, *b.* at Florence, 1856, of American parentage, was educated in Italy and Germany, and studied art under Carolus Duran. As a portrait painter he has attracted great attention by his originality of style and vivid portraiture. Among his best known portraits are those of Ellen Terry, Mr. Chamberlain, and Mr. Wertheimer. Elected R.A. 1897.

SARTO, ANDREA DEL, *b.* at Florence, 1488, *d.* 1530, a celebrated artist who possessed a wonderful imitative skill. Many of his works in oil or fresco are to be seen in the galleries of Florence, Paris, and Dresden, and a celebrated portrait of himself forms one of the treasures of our National Gallery.

SASKATCH'EWAN. A province carved out of the North-West Territories of Canada lying north of Manitoba and Assiniboia, and east of Alberta, having an area exceeding 107,000 square miles. Most of the land is included in the great prairie wheat belt. The province is crossed from west to east by the river Saskatchewan, which rises in the Rocky Mountains in two great branches known as the North and South Forks, each about 800 miles in length; 280 miles after the junction the river enters Lake Winnipeg.

SATELLITES, i.e., "attendants," are the smaller bodies or moons that revolve

round the planets. The Earth has one, Mars two, Jupiter four, Saturn eight, Uranus four, and Neptune at least one.

SATIN, a soft, closely woven, glossy silk. Owing to peculiarities in weaving, the weft is hidden beneath the warp. The latter presents an even and smooth surface, which reflects light freely, and thus gives the material its characteristic lustre. The chief centres of its manufacture are Lyons, Genoa, and Florence.

SATIN-WOOD, the timber obtained from a small tree growing in India and Ceylon, and from a larger species which is a native of the West Indies. The wood, which is suitable for all kinds of ornamental work, is hard, close-grained, of a light orange colour, and capable of taking a high polish.

SATIRE, a species of literary composition that exposes, ridicules, and censures the vices and follies of the age. It originated among the Romans. Horace and Juvenal excelled in the art. Dryden, Pope, Swift, and Byron may be mentioned as English writers who have employed it in their works.

SATURN. (1) In Roman mythology, Saturn was the god of agriculture. He is usually depicted as an old man, bent with age, holding a sickle in his right hand. (2) The sixth planet in order of distance from the sun and the second in size. It rotates upon its axis in 10½ hours, and revolves round the sun in slightly less than thirty years. The most remarkable thing about Saturn is the series of bright rings that surround it, about 10,000 miles distant from it, and almost in the same plane as its equator. It is thought that the rings represent a vast aggregation of small satellites. In addition the planet has at least eight moons.

SATURNALIA, a festival in ancient Rome in honour of Saturn. All classes gave themselves up to merriment. No public business was transacted, the slaves enjoyed temporary freedom, master and servants changed places, and some prisoners were released.

SATYRS, in Greek mythology, a race of woodland deities who roamed the hills in the time of Dionysius (Bacchus). They are represented with long ears, flat noses, a man's body, and the legs and hoofs of a goat.

SAUL, of the tribe of Benjamin, was the first king of Israel. He distinguished himself in wars against the Ammonites, Philistines, Moabites, and others, but his disobedience to the divine command led to the anointing of David in his stead. Saul made several futile attempts on the life of his rival. He finally ended his own life by falling on his sword after his forces had been defeated by the Philistines.

SAUMUR, a town on the river Loire, which manufactures linen, leather, enamel, and glass. It has an important trade in sparkling wines. Until the revocation of the Edict of Nantes it was a stronghold of the Huguenots.

SAUNDERSON, NICHOLAS, a blind mathematician, *b.* 1682, at Thurlstone, Yorks., *d.* 1739. He lost his sight in infancy, but was well educated. He lectured on Newton at Cambridge, and was appointed Lucasian Professor of Mathematics. He published an "Elements of Algebra" (2 vols.) and a treatise on "Fluxions." His knowledge of geometry, a science that would appear to demand the sense of sight, was deep and accurate.

SAVANNAH. (1) The chief seaport of the State of Georgia, and the second cotton port of the United States. In addition to cotton, the exports include timber, rice, flour, and tobacco. (2) A general name for a prairie in the tropical parts of North America.

SAVINGS BANKS. Refer to *Index.*

SAVONARO'LA, GIROLA'MO, *b.* at Ferrara, 1452, *d.* 1498, an Italian political and religious reformer. He was educated for the medical profession, but became a Dominican monk. In Florence he headed the party that was agitating for a more democratic form of government, and he preached constantly with wonderful fervour against the immorality of the clergy and the vices that prevailed unrebuked by the Church. For a time he was practically dictator of Florence. But he incurred the enmity of Pope Alexander VI., was tried by a spiritual court, and, under torture of the rack, confessed that he had falsely claimed supernatural powers. The sentence of the court, that he should be strangled and then burned, was carried out in 1498.

SAVOY CONFERENCE. A conference of Episcopalians and Presbyterians held at the Savoy Palace, London, in 1661, for the purpose of revising the Book of Common Prayer. The two parties separated at the end of four months without settling any of the points in dispute, and feeling more bitterly hostile towards each other than before.

SAWDUST, the small fragments produced in sawing timber is of some commercial value. Large quantities of oxalic acid are prepared by treating it with caustic potash. Sawdust obtained from mahogany and rosewood is employed in the process of dressing furs, while that produced from cedar and other sweet-smelling woods is of value in the manufacture of perfumes. *Bois-durci,* (wood hardened) which has the appearance of polished ebony, and is used for the manufacture of various ornaments, is produced by mixing the sawdust of ebony and rosewood with blood, and compressing the mixture.

SAXE-COBURG-GOTHA, one of a group of four Saxon Duchies, sovereign states, in Central Germany. Saxe-Altenburg, Saxe-Meiningen, and Saxe-Weimar are the sister states. The sovereign houses boast a common Saxon origin and are united by family bonds. The Prince Consort was a second son of the house of Saxe-Coburg, but as his elder brother died childless, the succession passed to the Prince Consort's second son, the Duke of Edinburgh. On his death the throne was occupied by his nephew, Leopold, Duke of Albany. As the Duchy consists of two detached portions there are two capitals, Coburg and Gotha.

SAXONS, a Teutonic race who lived along the banks of the Elbe, and on the islands near its mouth, early in the 2nd century. They were a warlike and piratical people. In the 5th and 6th centuries they crossed to Britain in considerable numbers, and settled in the south of England, where the names Middlesex (Middle Saxons), Sussex (South Saxons), and Wessex (West Saxons), still bear witness to their influence.

SAXONY, THE KINGDOM OF, ranks third among the states of the German Empire, and is the most densely populated; population about 4¾ millions. The country is rich in coal, silver, and other minerals. The manufactures of wool, cotton, machinery, and paper are very important, employing nearly two-thirds of the inhabitants. Chief towns —Dresden, the capital, Leipzic, Chemnitz, and Freiberg.

SAYCE, PROFESSOR, *b.* 1846, a celebrated archæologist, who has made great contributions to Biblical and Ancient History; has spent much time in unearthing relics of Antiquity in Egypt, and in deciphering ancient monuments.

SCAB is a disease of sheep caused by a parasitic mite which burrows in the skin. Affected sheep should be isolated and dipped in an arsenical wash.

SCAGLIOLA, a composition made to imitate marble and other ornamental stones. It is composed of finely powdered plaster of Paris, mixed into a paste with alum and a thin solution of glue. The veining or other colouring is usually produced by means of ochres. Columns and other objects for interior decorations are made of a framework of wood, and covered round with laths that receive a coating of mortar, upon which the scagliola is laid while still moist. Splinters (It. *scaglie*) of spar, marble, granite, etc., are pressed into it and made level with the surface. After it has set hard it is rubbed with pumice stone, and then polished.

SCANDINAVIA, in its more restricted application, means the peninsula comprising Norway and Sweden; in its more extended application, it includes also Denmark and the adjacent islands. (See under *Denmark, Norway, Sweden.*)

SCAPE-GOAT. See *Azazel.*

SCAPULAR, part of the dress of the monks of certain orders, consisting of two woollen bands, one of which crosses the shoulders and the other the breast.

SCARABÆUS, the sacred beetle of the Ancient Egyptians, was held in great veneration. Figures of it, carved in stone, were worn as amulets, and its body was sometimes embalmed.

SCARBOROUGH, a popular watering place in Yorkshire, beautifully situated on two sandy bays, separated by a rocky promontory. The harbour is much used as a shelter from easterly gales; population exceeds 38,000.

SCHAFFHAUSEN, FALLS OF, form one of the finest cascades in Europe. They occur on the Rhine, about 3 miles below the Swiss town of Schaffhausen. The waters of the river, which is here about 120 yards broad, are precipitated in three separate cascades, over a ledge of rock more than 70 feet in height.

SCHAMYL, *b.* 1797, *d.* 1871, a Caucasian chief who, from 1830 to 1859, resisted the Russian attempts to annex Caucasia. He inflicted many defeats and heavy losses on his enemies, sometimes invading Russian territory, and retiring to his mountain fastnesses when hard pressed. In 1859, after losing nearly all his followers, he was compelled to surrender. He was sent to St. Petersburg, received a pension of 10,000 roubles, and was allotted the town of Kaluga as a residence.

SCHIEDAM, a town in the province of South Holland, on the river Maas, about 4 miles from Rotterdam. The staple manufacture is Hollands gin, for the production of which there are nearly 200 distilleries in the town and its environs.

SCHILLER, FRIEDRICH VON, *b.* in Wurtemberg, 1759, *d.* 1805, a German poet, dramatist, and historian. "William Tell" is considered the finest of his tragedies, and his historical works include the "History of the Netherlands" and the "History of the Thirty Years War."

SCHISM, THE GREAT PAPAL, a separation in the Roman Catholic Church caused by a division in favour of rival candidates for the papal chair. It began in 1378, when Urban VI. and Clement VII. both claimed to be Pope, and ended in 1429 with the abdication of Clement VIII.

SCHLEIERMACHER, FRIEDRICH, *b.* at Breslau, 1768, *d.* 1834, a distinguished German theologian and philologist. His study of Plato, Kant, and other philosophers led him to reject the teaching of the Moravians, among whom he had been educated. He was opposed to all dogmatic formulas, contending that religion is based on the feeling.

SCHLESWIG-HOLSTEIN, the southern portion of the peninsula of Jutland, now forming a province of Prussia, but previous to 1864 a part of the kingdom of Denmark. The treatment of the German inhabitants, especially the compulsory use of the Danish language in the state schools, led Prussia and Austria to commence hostilities, and the Danish king was compelled to renounce his rights to the territory. At first Schleswig was administered by Prussia, and Holstein by Austria, but after her defeat at Sadowa, in 1866, Austria relinquished the whole to Prussia.

SCHNITZER, EDWARD, better known as *Emin Pasha* (which see).

SCHOLASTICISM, the name given to the system of thought and education countenanced by the Church from about the 9th to the 15th century. The Renaissance was an intellectual revolt against the narrowness of scholasticism, just as the Reformation was a revolt against religious abuses in Europe during the Middle Ages.

SCHOMBERG, FRIEDRICH VON, *b.* 1619, was a distinguished soldier who became a marshal of France, but quitted her service on the revocation of the Edict of Nantes. In 1688 he accompanied William of Orange to England, and in the following year was sent to Ireland in command of an army to oppose the adherents of James II. He was killed at the battle of the Boyne, July 1st, 1690.

SCHOOLMEN, men versed in the niceties of the scholastic philosophy, such as Duns Scotus, Thomas Aquinas and Bonaventura. See *Scholasticism.*

SCHOONER, a small, swift-sailing vessel with two or three masts rigged either with fore-and-aft sails only on all the masts, or with two square sails, the top and topgallant sails, on the foremast, and the remainder fore-and-aft sails. As this particular rig is favourable to a high rate of speed, it is the one most commonly employed for the larger class of yachts.

SCHUBERT, FRANZ PETER, *b.* at Vienna, 1797, *d.* 1828, excelled as a musical composer of ballads and songs. His compositions also include operas, masses, symphonies, cantatas, and quartets.

SCHUMANN, ROBERT, *b.* in Saxony, 1810, *d.* 1856, a distinguished German composer and musical critic, whom his fellow-countrymen rank with Beethoven, and regard as the founder of a new school of musical composition. His best known work is the cantata, "Paradise and the Peri." He also composed several symphonies and songs.

SCHWEINFURTH, GEORGE AUGUST, *b.* at Riga, 1836, a famous German traveller who explored a portion of the centre of Africa. His book, "The Heart of Africa," contains an account of his journeys and of the Mid-African tribes.

SCILLY ISLANDS, a group of several islands and numerous clusters of rocks lying about 27 miles south-west of Land's End, Cornwall. The largest is St. Mary's. The climate is remarkably mild, and the inhabitants are chiefly employed in cultivating early vegetables and growing flowers for the London market.

SCINDE. See *Sind.*

SCIPIO AFRICANUS, *b.* about 235, *d.* 183 B.C., was one of the most illustrious Roman generals, and the great opponent of Hannibal. He was appointed proconsul in Spain, and succeeded in expelling the Carthaginians from the country. He received the surname of Africanus after his return from the successful campaign in Africa, in which he totally defeated Hannibal at Zama.

SCONE, a village in Perthshire, on the river Tay, 2 miles from Perth. The kings of Scotland were formerly crowned in its abbey, while seated on the "stone of destiny," now in Westminster Abbey.

SCORPION, an animal of the same class as the spiders, but differing from them in possessing a long, segmented abdomen, followed by a post-abdomen, the last joint of which bears a sharp claw at its end, in which is the duct of a poison-gland. With this claw the animal is able to inflict painful and, in the case of delicate persons, dangerous wounds. Scorpions chiefly inhabit tropical countries, hiding under stones and in dark places, and feeding on insects.

SCOT AND LOT, an ancient legal phrase denoting all parochial payments for the poor, church, watch, light and cleaning. In many places parliamentary votes were confined to payers of SCOT and LOT. The term *scot* which means payment, occurs in the phrases *scot-free* and "paying one's *shot.*"

SCOTCH FIR. See *Pine.*

SCOTISTS, followers of *Duns Scotus* (which see).

SCOTLAND forms the northern portion of the island of Great Britain. Much of the surface consists of rugged mountains, bare moors, and heath-covered hills, especially in the north and north-west, a part known as the Highlands. Much of its scenery is famed for its picturesque beauty, and its mineral wealth is considerable. The west coast is bold and indented with deeply-penetrating arms of the sea, known as lochs or firths, and is protected by a double chain of islands, while the east coast is comparatively low and destitute of with few openings and islands. The Highlands have numerous lakes. The chief commercial rivers are the Clyde and the Forth. The lower course of the Clyde is through a busy mining and manufacturing district in which many thousands are employed in the production of iron, cotton, woollen, and silk goods; and between Glasgow and Greenock the river passes a succession of ship-building yards which are capable of turning out the finest liners or the largest battle ships. Edinburgh is the capital, but the largest town and chief manufacturing centre is Glasgow. The principal ports are Glasgow, Aberdeen, Leith, Dundee, and Greenock. Scotland, including the islands, has an area of nearly 30,000 square miles. The country, which is divided into thirty-three counties, is represented in the British Parliament by sixteen representative peers and seventy-two members of the House of Commons. The population is about 4½ millions. Refer to "Scotland" in *Index.*

SCOTLAND YARD, in Whitehall, was the head-quarters of the Metropolitan police previous to 1890. It is said to have derived its name from a palace that formerly occupied the spot, and in which the Scottish ambassadors were lodged. New Scotland Yard is on the Thames Embankment, near Westminster Bridge.

SCOTS, a brave and warlike Celtic tribe from Ireland who were led to embrace Christianity by the preaching of Saint Patrick. Early in the 6th century they took possession of what is now the county of Argyle, and rapidly extended their conquests to the north. For three centuries there were constant wars between them and the Picts. In 843 Kenneth Mac Alpin overthrew the last of the Pictish kings, and united the kingdoms of the Picts and Scots into Scotland.

SCOTS GUARDS, a British regiment of foot, one of the regiments of the Household Brigade (See *Guards*). The term is one of great historical interest as denoting the body of Scottish troops who from 1418 to 1830 served the French crown. In "Quentin Durward," Scott gives a vivid

SCOTT, SIR GILBERT, [illegible] 1811, *d.* 1878, was the most eminent "Gothic" architect of his time. He built many churches and was also employed in the restoration of many of the English cathedrals, [illegible] Ely, Lichfield, Durham, and Exeter. His other works comprise the Foreign Office, India Office, the Midland Railway Terminus and Hotel in London, Exeter College Chapel and the Martyrs' Memorial at Oxford, the new Quadrangle at Peterhouse, Cambridge, and the Albert Memorial in Kensington Gardens. He became R.A. in 1860, and was knighted in 1872.

SCOTT, SIR WALTER, *b.* [illegible] 1771, *d.* 1832, the famous novelist and poet, was [illegible] for the Scottish Bar. His earliest attempts in literature were translations from the German, and the collecting and editing of old ballads. His first poem, "The Lay of the Last Minstrel," appeared in 1805. "Waverley" was published anonymously in 1814, and proved such a great success that other novels followed in rapid succession. He is said to have written the equivalent of thirty printed pages every day. In 1826, owing to the failure of two business houses, the author found himself personally liable to the amount of £117,000. He at once undertook the task of paying off this sum, and in the next four years his creditors received £70,000. This tremendous effort brought on paralysis. "Ivanhoe" takes the first place among the poems, and among the best novels are "Guy Mannering," "The Antiquary," "Old Mortality," "Rob Roy," "Kenilworth," and the "Heart of Midlothian."

SCREW PROPELLER, a contrivance employed for propelling steam vessels. The method of propulsion was patented by Mr. Francis Smith in 1836. The screw consists of two or three spirally twisted metal blades fixed on a shaft and revolving beneath the water at the stern of the vessel. The water plays a similar part to the nut in a screw press, the revolving of the screw producing a thrust on the shaft which is transmitted to some well lubricated point within. In heavy seas, or in a deeply laden ship, the screw propeller has many advantages over the paddle-wheel, since it is more constantly deeply submerged, and therefore [illegible] efficient work. For this reason this mode of propulsion is now universally employed on ocean-going steamers, the use of the paddle-wheel being limited to vessels engaged in river work, or for passenger boats making short coasting voyages.

SCROGGS, SIR WILLIAM, became Chief-Justice of the King's Bench in 1678, and made himself infamous by his injustice and corruption. He was impeached in 1680 and dismissed from his office, but received a pension from Charles II. His death took place in 1683.

SCROLL. (1) A roll of paper or parchment or a manuscript in the form of a roll. (2) In architecture the term is applied to a common form of ornament consisting of folded or spiral bands, as in the volutes of the capitals of Corinthian and Ionic columns.

SCRUB, a name given in Australia to extensive tracts of land in the interior, that are covered with a species of bushy eucalyptus, bearing hard prickly leaves, and commonly known as the tea-tree. The bushes grow to a height of from 8 to 10 feet, and are so densely interwoven

with climbing plants as to be almost impenetrable.

SCULLING is the term applied to the propulsion of a boat by a single rower, either by means of a pair of short oars, called sculls, working in rowlocks in the centre of the boat, or by working a single oar from side to side with a screw motion over the centre of the stern, without raising the blade from the water. The latter method is usually practised on the sea, the former on smooth water.

SCULPTURE is that branch of art which is concerned in the reproduction of natural objects in solid substances, by carving or chasing in wood, ivory, or stone, modelling in clay, wax, or other plastic substance, or casting or beating out in various metals. The object may be represented either with or without an accompanying background. In the former case it is said to be in high-relief, *alto-rilievo*, or low-relief, *basso-rilievo*, according as the representation stands out boldly from the background, or is only slightly removed from it. When the object stands alone without a background, it is technically described as "in the round." The art has been practised from very early times. Specimens of Assyrian bas-reliefs may be seen in the British Museum, but the work of the ancient Greek sculptors excelled that of all others. The Venus of Milo, the Apollo Belvedere, the Elgin Marbles, and the Dying Gladiator are world-famous. The statue of Zeus in the temple at Olympia attracted visitors from distant countries for more than six centuries after its execution, and the Colossus of Rhodes was considered one of the "Seven Wonders of the World." The art of sculpture declined after the fall of the Roman Empire. There was a revival in the 14th and 15th centuries, followed by a second decline in the 17th. The modern revival dates from the end of the 18th century.

SCUTAGE, literally "shield-money," a money payment instituted by Henry II., as a composition fee by payment of which a knight might forego the necessity of performing his military duties. This enabled the king to levy mercenary troops abroad for a long term of service and left the merchants and others of knightly rank to pursue their vocations without interruption.

SCU'TARI. (1) A town in Asiatic Turkey, on the shores of the Bosphorus, opposite Constantinople, of which it is considered a suburb. The chief manufactures are cotton and silk. The barracks on the outskirts were used as hospitals by Florence Nightingale during the Crimean War. (2) The name of a province, lake, and seaport respectively, situated in the north-west of Turkey in Europe. The town possesses ship-building yards, and manufactures cotton goods. The exports include wool, wax, hides, and tobacco.

SCYLLA. See *Charybdis.*

SCYTHIANS, an ancient nomadic race inhabiting the steppes of Russia and Western Asia. They picked up some of the arts of civilization from the Greeks, and the eastern tribes established themselves by conquest in India.

SEA covers three-fourths of the earth's surface, or a total area of about 145 million square miles. This vast area is divided into five oceans; the Atlantic about 25 million square miles, the Pacific 90 million square miles, the Indian 23 million square miles, the Arctic, and the Antarctic. The smaller divisions of the ocean are known as seas. The average depth of water is about 12,000 feet. This is exceeded in many places. The Challenger Expedition reported a sounding slightly exceeding 27,000 feet, a little to the north of the Caroline Islands, in the Western Pacific; American surveyors have recorded a depth of 30,000 feet off the eastern shores of Japan; and a sounding exceeding 27,000 feet has been obtained north of the Virgin Islands in the West Indies. One of the most striking characteristics of sea-water is the quantity of salts, chiefly common salt, held in solution, averaging about 3½ per cent. by weight. The proportion varies in different localities. It is highest in the tropics, where the evaporation is greatest. In those land-locked seas of temperate regions that receive a large volume of river-water, it is much below the average. The waters of the Baltic are merely brackish, containing less than 1 per cent. of salt in solution. The waters of the ocean are in constant motion. The inequalities of temperature, polar cold and tropical heat, assisted by the prevailing winds, gives rise to a continuous flow of surface water from the Equator towards the Poles, equilibrium being restored by under-currents from the colder regions. In this way are produced the Equatorial Currents which are felt in the three great oceans. The direction of these is modified by the diurnal motion of the earth, and by the contour of the land bordering the oceans. The attractive force exerted by the moon, and to a lesser degree by the sun, gives rise to the tidal wave which flows round the earth from east to west, varying in height from a few inches in large open expanses like the Pacific Ocean, to 50, 60, or even 70 feet in narrowing gulfs like the Bay of Fundy. The friction of currents of air on the surface of the water gives rise to ordinary waves. The use of trawls, dredges, and tow-nets has shown that animal life exists at all depths. Plant life is more dependent on sunlight, and as sunlight can penetrate only to a certain depth, plant life is found only at or near the surface.

SEABURY, SAMUEL, *b.* in Connecticut, 1729, *d.* 1796, studied medicine at Edinburgh and returned to America as a missionary of the S. P. G. In 1783 he was elected bishop by his fellow clergy, and came to London for consecration. The timidity of the English bishops, who were afraid to act without the sanction of the Government, led to a delay of more than a year, and he was finally consecrated in a house in Aberdeen by three Scottish bishops. He thus became the first bishop of the American Episcopal Church, and through him and the Scottish Episcopacy the American bishops claim apostolic succession.

SEAL, a term applied to the engraved stamp used for making impressions on the wax used for closing letters, etc., or placed at the end of legal and other documents to ratify them; and also to the substance thus impressed. Originally a seal on a document was a substitute for a signature, and showed the concurrence of the owner of the seal in the contents of the document. The employment of seals is of very ancient date. The British Museum contains specimens that bear the signature of Egyptian monarchs. Various materials have been employed for receiving the impress: fine clay, bees-wax, lead, and other metallic substances. In England three seals are officially used in the name of the sovereign: (1) The *Signet* is in the keeping of the Home Secretary; (2) the *Privy Seal*, which is affixed to letters-patent, is in the keeping of the Lord Privy Seal; and the possession of the (3) *Great Seal* confers his powers upon the Lord Chancellor.

SEAL, THE, the name commonly given to a family of aquatic, carnivorous mammals inhabiting the sea-coast in all high latitudes. The animals are hunted for the sake of the oil they produce and for their skins. The largest variety is known as the *Sea Elephant.* A single adult male of this species has produced 70 gallons of oil. The seal skin of the furrier is obtained from a species commonly called the *Sea Bear.* Next to the skin this animal has a covering of thick, soft wool, of a reddish brown colour. In the process of dressing, this wool is left adhering to the skin, while the entire coating of long, greyish brown hairs is removed. The principal fisheries are on the islands and coasts of Behring's Sea. The *Walrus*, or *Sea Horse*, furnishes the Eskimos with almost every article in daily use amongst them. The *Common Seal* was formerly abundant on the British coasts, and proved very destructive to the fisheries.

SEALED ORDERS are delivered to the commanding officer of a ship or squadron, the destination and object of which it is desirable to keep secret. The covering of the orders is to be removed only when the vessels have proceeded a certain distance, or after they have been a certain time at sea.

SEALING-WAX is composed chiefly of resin, Venetian turpentine, shellac, and some colouring matter. It was introduced into Europe from India, and was formerly in great request for the purpose of fastening letters, but the introduction of adhesive envelopes considerably reduced the demand.

SEA-SERPENT. Many reports on the appearance in the ocean, particularly in the tropics, of gigantic animals of serpentine form have been published by eye-witnesses of repute. Captain M'Quhae reported such an encounter in 1848, the animal passing so close to H.M.S. *Daedalus* that the captain stated it would have been easy to distinguish the features of a man at the same distance. The animal was travelling with its head and neck raised above the surface of the water, and about 60 feet of the length of its body was visible. The officers of H.M. yacht *Osborne* reported a similar appearance off the Scilly Islands, July 2nd, 1877, and numerous other instances are on record. The most satisfactory explanation of these appearances would seem to be that the animal seen was really a gigantic cuttle fish, a creature that, including its tentacles, attains a length of 40 feet. In other instances, the appearance was probably nothing more than a flock of sea-birds skimming the surface of the water.

SEA-SICKNESS. See *Med. Dic.*

SEA-SNAKES are common in the tropical parts of the Pacific and in the Indian Ocean, particularly around the coasts of the East Indian Archipelago. The animals rarely exceed 8 feet in length. They are exceedingly venomous, possess fangs resembling those of the cobra, and prey on fish.

SEASONS, THE. These are due to the inclination of the earth's axis to the plane of the ecliptic. At one position of the earth in its orbit the northern end of the axis is inclined towards the sun, and the sun's rays strike perpendicularly upon the Tropic of Cancer, and therefore more directly and with greater power on all parts of the northern hemisphere, the greater length of daylight aiding in the accumulation of heat. This position is known as the summer solstice. Six months later the conditions are reversed. The South Pole is inclined to the sun, the vertical rays fall on the Tropic of Capricorn, the southern hemisphere receives the more direct rays, and enjoys its mid-summer at the winter solstice of the northern hemisphere. When the earth is midway between these two positions in its orbit, neither pole is inclined to the sun. The rays are perpendicular to the equator,

and therefore equally inclined to places in corresponding latitudes in the northern and southern hemispheres. These positions are the vernal and autumnal equinoxes.

SEA-WEEDS, a name given in common to all plants whose natural habitat is in sea water. Since the sun's rays are unable to penetrate beyond a certain depth, and sun-light is essential to the growth and development of plants, the sea-weeds are found only to a depth of from 50 to 100 fathoms. They differ considerably in form. Some are mere filaments, others are ribbon-shaped, others consist of tubes, either branching or unbranching, while others closely resemble the fronds of ferns. The prevailing tints are green, olive-brown, and red. On many parts of the coast sea-weeds are extensively used as manure, and are considered very valuable for potato crops. (See *Algæ*).

SEBASTIAN, SAINT, was a captain of the prætorian guard at Rome in the 3rd century, who embraced Christianity and suffered martyrdom under Diocletian. He was first pierced with arrows, none of which however touched a mortal part, and was afterwards beaten to death with clubs. In art he is usually represented tied to a tree, and pierced by a number of arrows.

SEBASTOPOL or **SEVASTOPOL,** a Russian fortified port and naval station, situated on a fine natural harbour in the south-west of the Crimea. During the Crimean War the town was destroyed, and fell into the hands of the allies, after a siege lasting from October, 1854, to September, 1855.

SECOND-SIGHT, a superstition formerly prevalent in the Highlands of Scotland, but now practically extinct. It ascribed to certain individuals the gift of being able to look into the future and to foresee events as if they were actually passing before their eyes. The visions were sometimes involuntary, at other times were produced after the performance of certain prescribed rites.

SECRETARY-BIRD, a South African bird of prey. It is of a slaty-grey colour, and averages about 3 feet in length. It receives its name from a peculiar band of feathers that projects from each side of the head, and that presents the appearance of a bundle of pens stuck behind the ears. Its food consists principally of snakes, lizards, and other reptiles. The bird attacks snakes of the largest kind; even the cobra falls a certain prey. Making use of its wings and feet as weapons, it raises its victim and stuns it by dashing it to the ground. This habit of destroying venomous reptiles has placed the bird under the protection of the law in Cape Colony.

SECRETARY OF STATE. Refer to *Index*.

SECRETION. See *Med. Dict.*

SECRET-SERVICE MONEY. The British Government, in common with those of other States, finds it necessary to expend money on objects that policy demands should not be made public. The minister is required to give an undertaking that it shall be spent in accordance with the intentions of Parliament. The amount voted under this head in 1903 was £65,000.

SECULARISM, a system of philosophy and ethics of modern origin, the leading tenet of which is freedom of thought. It is not opposed to any form of religion, as such, but insists only on the strict examination of all beliefs before accepting them, and asserts that a person's actions should be guided chiefly by reason.

SEDAN, a town on the right bank of the Meuse, in the department of the French Ardennes. It has been long famous for its woollens. On September 1st, 1870, a French army of 86,000 men, under Macmahon, was defeated by the Germans, and, together with the emperor Napoleon III., surrendered on the following day.

SEDAN CHAIR derives its name from the town of Sedan, where it is said to have been invented. It consisted of a covered chair, capable of carrying one person, and was borne on poles by a couple of bearers. It was introduced into England in 1634.

SEDDON, RICHARD JOHN, *b.* near St. Helens, 1845. *d.* 1906, a famous imperialist statesman of New Zealand. In 1853 he left England for the goldfields of Australia, which he quitted for the gold-mines of New Zealand. His first stepping-stone to fame was his election to the Colonial Parliament in 1879. In 1893 he became Premier and held office as such to the end of his life. He was a socialist democrat and imperialist. In the Boer War he rallied thousands to the help of the mother country. So predominant was his influence in New Zealand that he was popularly styled "King Dick." On his death King Edward spoke of the "permanent place he had secured for his name among the statesmen who have most zealously aided in fostering the sentiment of kinship on which the unity of the Empire depends."

SEDIMENTARY ROCKS, a term used in geology to denote formations that have been deposited under water. Stratification is a mark of this type of rock, and among surface markings it is not uncommon to find rain marks, ripples, spoors, tracks and burrows, the relics of a time when the deposit was in a soft state by the margin of the water. Sandstones, conglomerates, shales, clays and mudstones belong to the sedimentary class.

SEDLITZ, or **SEIDLITZ,** a small town in Bavaria, famous for its mineral springs, the waters of which possess aperient properties. Ordinary Seidlitz powders have a different composition.

SEEDS are the principal agents by means of which the various species of flowering plants are perpetuated. They are produced by the fertilization of the ovule upon the plants. Each seed contains a young plant in the form of the embryo enclosed within the seed-coat. Seeds are dispersed by water, wind, animals, and mechanical contrivances. Some are so minute that they are able to remain suspended in the air for quite a long time. In the case of many larger and heavier varieties, the seed, or more generally the fruit, develops a contrivance that assists in the dispersion. This is well seen in the winged fruits of the sycamore, elm, and lime; the plumed fruit of the dandelion and thistle; the seed of the cotton grass embedded in a mass of silky hairs; and the plume-like appendages of the clematis or old man's beard. In other cases the elasticity of the stem in recovering its normal position after being bent aside by a passing animal or a sudden gust of wind, brings about a scattering of the seeds. The sudden bursting of gorse pods gives a sufficient impetus to the seeds to scatter them to some distance from the parent plant. Other plants that produce these so-called *sling* fruits are the American balsam and many species of geranium. Fleshy fruits form the food of birds, and in this way the seeds are dispersed. In numerous instances the fruit or seed is furnished with barbs or hooks, and is thus carried away by any animal brushing against the plant. Many of our most valuable food products are derived from seeds. Thus the various cereals are the seeds of highly-cultivated grasses. Peas, beans, and nuts are equally familiar.

SEELEY, SIR ROBERT, *b.* in London, 1834, *d.* 1895, became professor of History at Cambridge University in 1869. In addition to "The Expansion of England" and other historical works, he wrote "Ecce Homo" and "Natural Religion," two books that raised a great deal of hostile criticism on account of the unorthodox views expressed by the author.

SEINE, an important French river, rises in the tableland of Langres, and after passing Troyes, Paris, and Rouen flows into the English Channel. Its tributary, the Yonne, is connected with the same by a canal, and thus a waterway is provided between the English Channel and the Mediterranean Sea; length 480 miles.

SEINE-NET. See *Fishing*.

SELBORNE, (Roundell Palmer), **EARL OF,** *b.* 1812, *d.* 1895, was educated at Rugby, Winchester and Trinity College, Oxford, where his career was exceptionally brilliant. Entering parliament he became in turn Solicitor-General, Attorney-General, and Lord Chancellor. Differing from Gladstone on his Irish policy he declined in 1886 a third term of office as Chancellor. He was an able writer on Ecclesiastical questions, and a strong defender of the Established Church. He was created earl in 1882.

SELBORNE, WILLIAM WALDEGRAVE, K.G., second Earl of, *b.* 1859, noted for his able government as High Commissioner for S. Africa, and Administrator of Transvaal and Orange River Colonies, 1905-1910.

SELDEN, JOHN, *b.* near Worthing, 1584, *d.* 1654, one of the greatest of English scholars and lawyers. He established a good practice in the Inner Temple, but found leisure for study. He wrote on Anglo-Saxon and Roman law, Trial by Combat, History of Tithes, Titles of Honour, and a learned work on the Syrian deities. He joined the Parliament against James I., and afterwards helped to draw up the Petition of Right, for which he was imprisoned. In the war between Charles I. and Parliament he acted the part of peacemaker. On the execution of the king, of which he disapproved, he retired from public life. His tomb with a commemorative tablet is in the Temple Church; his books he bequeathed to the Bodleian Library.

SELF-DENYING ORDINANCE, a resolution of the Long Parliament, passed in April, 1645, the object of which was to remove from their command certain officers who were supposed to be half-hearted in the cause. It provided that no member of parliament should hold either civil or military office. Exception was made in the case of Cromwell and a few others.

SELTZER-WATER is obtained from mineral springs near the village of Niederselters, in Hesse-Nassau. The waters, the principal constituents of which are carbonic acid, carbonate of soda, and common salt, are said to have a beneficial action on the kidneys and liver. From 3½ to 4 million bottles are exported annually.

SELWYN, GEORGE AUGUSTUS, *b.* 1809, *d.* 1878, was the first bishop of New Zealand. He acquired a remarkable influence over the Maoris, and by his zeal and energy commanded the universal esteem of the English colonists. His Episcopate in New Zealand lasted twenty-six years. On his return to England, in 1867, he became bishop of Lichfield. Selwyn College, Cambridge, founded in 1882, was built to perpetuate his memory.

SEMAPHORE, an apparatus for conveying signals by means of two arms working on pivots fixed at the top of a mast. By the combination of these two arms it is possible to convey forty-eight distinct signals. Thus, having previously determined the particular combination that shall represent each letter of the alphabet and each digit, it is possible to

telegraph any message from one station to another. A system of semaphores was employed by the French in 1803, and later a similar method of signalling between London and Deal, Portsmouth and Plymouth, was adopted by the British Admiralty. The semaphore is still employed in ships, especially in calm weather, when signalling by flags is likely to be ineffective.

SEMIRAMIS and **NINUS**, her husband, were the mythical founders of the Assyrian Empire. The town of Ninus or Nineveh is supposed to have been built by them about 2182 B.C.

SEMITES, or **SHEMITES**, a term used to include the group of peoples comprising the Assyrians, Chaldeans, Syrians, Arabs, Jews, Abyssinians, Phœnicians, and Carthaginians. These are reputed to be all descended from Shem. They have much in common, in the structure of their language, their habits of thought, social organisation, religions, etc.

SEMOLINA is the name given to a coarse kind of flour prepared from the harder varieties of wheat, such as those of Naples and the south of Spain. In the process of milling, these larger grains are retained in the bolting-machine, while the finer flour passes through its meshes. Semolina is a valuable food product, possessing highly nourishing properties. A cheap imitation of semolina is manufactured from millet and maize.

SEMPACH, a small Swiss town, situated on Lake Sempach, a few miles north-west of Lucerne. It was the scene of a battle in which the Swiss routed a much larger force of Austrians, July, 1386. (See *Winkelried.*)

SENATE, i.e., "a council of elders," was the name bestowed by the Romans on their supreme legislative and administrative assembly. Its constitution and powers varied in different ages. At first it consisted of 100 members, afterwards increased to 300. Its powers, which reached their zenith during the republic, declined under the emperors. In modern times the term is applied to the upper house of the national legislature in many countries; e.g., in France and the United States of America. The governing body of a university is also called a senate.

SENECA, *b.* about 5 B.C., *d.* 65 A.D., a Stoic philosopher, who was appointed tutor to young Domitius, afterwards the Emperor Nero. On Nero's accession, Seneca did much for a time to restrain the vicious propensities of his former pupil, but his presence becoming irksome to the young emperor, he lost his influence and retired from court. He was afterwards suspected of sharing in a plot to dethrone the emperor, and ordered to take his own life. His fame rests on his numerous writings, which are chiefly on moral and philosophical subjects.

SENLAC, a hill about 6 miles north-west of Hastings, the scene of the victory of William the Conqueror over Harold, 1066, and the site of the small town of Battle.

SENNACHERIB, King of Assyria, 702–681 B.C. He greatly extended his dominions, and in 689 captured and, for a time, ruined Babylon. He made Nineveh the capital of his kingdom, and restored it to a position of great eminence. His siege of Jerusalem failed on account of a pestilence which ravaged his army. While worshipping in a temple, he was murdered by two of his sons.

SEOUL, on the river Han, is the capital of Korea, and the chief seat of the foreign trade of the country. The town, which consists chiefly of mean houses, is connected by rail with the treaty port of Chemulpo, with Fusan in the south-east, and Wiju on the Yalu; population about 200,000.

SEPIA, a genus of cuttle-fish common on the Mediterranean shores, and occasionally met with on the south coast of England. The animal secretes in a specially developed sac a brown inky material which it pours out in large quantities when pursued, and thus covers its flight. From this "ink" a fine brown pigment is prepared. Fossil cuttle-fish have been found so well preserved that the sepia in their ink-bag was used in drawing them.

SEPOY, a native soldier in the British Indian army. The Sepoys are trained and disciplined after the manner of the British army, and are commanded by British officers.

SEPOY MUTINY. See *Indian Mutiny.*

SEPTENNIAL ACT, an Act passed in 1716 for extending the duration of parliament to seven years. The Act was prompted by the Jacobite Rebellion of 1715, the fear of an invasion, and the high degree of exasperation existing in the political parties in the country.

SEPTUAGINT, the oldest Greek version of the Old Testament Scriptures. It is also known as the Version of the Seventy, because the work was reputed to have been performed by seventy or seventy-two translators, and in seventy-two days. More probably the translation was made for the use of the synagogue at Alexandria, for which reason it is called the "Alexandrine Version." More than 80 per cent. of the quotations from the Old Testament appearing in the New are taken from the Septuagint.

SERAGLIO, the palace of the Sultan in Constantinople, is not now his usual residence, but is occupied only on state occasions. Its walls enclose several mosques, extensive gardens, and buildings capable of accommodating 20,000 persons, the whole presenting a fine appearance when seen from the sea, as it occupies a splendid site on a tongue of land between the Golden Horn and the Sea of Marmora. The principal entrance is called the *Sublime Porte.* The term seraglio is sometimes applied to the women's quarters in the palace of an eastern monarch.

SERF, one of a class of slaves who, under the feudal system, were attached to the land they tilled and transferred with it, though they might not be sold away from it. The serf was able to acquire his freedom by purchase, by military service, or by residence in a borough during a year and a day. The extinction of serfdom in England and Scotland was a gradual process, but, except that mining serfs existed in Scotland as late as the 18th century, it had been completed before the close of the 16th century. In parts of Germany and in Italy the system had been abolished earlier, but in France it did not entirely disappear until the Revolution. The Russian serfs received their freedom by the ukase of Alexander II., published March 17th, 1861.

SERGEANTS, non-commissioned officers in the army ranking next in order above corporals. Each company of infantry has three sergeants and one colour-sergeant; and each troop of cavalry has three sergeants and one troop sergeant-major. The terms used in the Household Cavalry are corporals of horse and troop corporal-major. Each battery of horse artillery has six sergeants and a battery sergeant-major. A regimental sergeant-major is a warrant officer with general supervising duties but no particular command. In general, a sergeant is responsible for his men in barracks.

SERGEANT-AT-ARMS. Refer to *Index.*

SERGE, GRAND DUKE, son of Alexander II. of Russia, a determined opponent of political reform, regarded as the head of the bureaucratic party, and assassinated by the revolutionists, 1905.

SERINGAPATAM, the former capital of the province of Mysore in southern India, stands on an island in the river Cauvery. The fortress was three times besieged by the British, in 1791, 1792, and 1799. On the last occasion it was carried by assault, Tippoo Sahib, the Sultan of Mysore, falling during the attack.

SERPENTS, or **SNAKES**, form an order of reptiles known as *Ophidia.* See *Snakes.*

SERUM. See *Med. Dict.*

SERVIA, a mountainous country occupying a commanding position in the Balkan Peninsula. Its area exceeds 18,600 square miles, and the population, mostly of Slavonic origin, is about 2½ millions. There are large forests of oak, the acorns from which serve as the food for immense herds of swine, which, together with fruits and agricultural produce, form the principal exports. Belgrade, the capital, was the scene of the assassination in 1903 of King Alexander and Queen Draga by officers of the 6th Infantry Regiment.

SETON. See *Med. Dict.*

SETTLEMENT, ACT OF, passed in 1701, limited the succession to the English throne to the Princess Sophia of Hanover, granddaughter of James I., and her heirs, being Protestants. The Act also provided further security for the rights and liberties of the subject.

SEVEN BISHOPS, THE, were Sancroft of Canterbury, Ken of Bath and Wells, Lake of Chichester, White of Peterborough, Turner of Ely, Lloyd of S. Asaph, and Trelawney of Bristol. These petitioned James II. against his injunction that a Declaration of Indulgence (favouring Roman Catholics) should be read in all churches. They were accused of seditious libel and acquitted, to the great joy of the nation.

SEVEN CHAMPIONS OF CHRISTENDOM, THE. These were Saint George of England, Saint Andrew of Scotland, Saint Patrick of Ireland, Saint David of Wales, Saint Denis of France, Saint James of Spain, and Saint Anthony of Italy.

SEVEN DOLOURS OF THE B.V.M. They are (1) Simeon's prophecy; (2) The flight into Egypt; (3) The loss of Jesus in Jerusalem; (4) Jesus bearing the Cross; (5) Jesus on the Cross; (6) His descent from the Cross; (7) His entombment.

SEVEN SAGES. The name is commonly applied to seven philosophers of Ancient Greece who flourished about 500 years B.C., and were believed to be the authors of short maxims in which they embodied the main principles of their teaching. They were *Bias* of Priene, whose maxim was "Most men are evil"; *Chilo* of Sparta, "Consider the end"; *Cleobulus* of Lindos, "Seek the golden mean"; *Pittacos* of Mitylene, "Seize time by the forelock"; *Periander* of Corinth, "Nothing is impossible to industry"; *Solon* of Athens, "Know thyself"; and *Thales* of Miletus, "He who hateth suretyship is sure."

SEVEN SLEEPERS, THE. These were seven Christian youths who, according to a legend recorded by Gregory of Tours, took refuge in a cave near Ephesus from the persecutions of Decius. The entrance was closed by order of the emperor. They fell into a deep sleep, from which they were awakened after the lapse of two centuries. One of their number proceeded into the city to obtain food, and was surprised to find the emblems of Christianity everywhere. He was taken before a judge and was afterwards accompanied to the cave by the emperor, the bishop, and the magistrates, who found the sleepers still

in the bloom of youth. They repeated their story, blessed the multitude, and immediately expired. A similar legend is found in the Koran.

SEVEN WEEKS WAR, the short but decisive struggle between Prussia and Austria that arose in the spring of 1866 out of the partition of Schleswig-Holstein. The Prussians were everywhere victorious, and the war practically ended with the crushing defeat of the Austrians at Sadowa, 3rd July. As a result, Prussia became the head of the German confederation, from which Austria was excluded.

SEVEN WONDERS OF THE WORLD, THE. They were the Pyramids of Egypt, the Hanging Gardens of Babylon, the statue of Jupiter at Olympia executed by Phidias, the Mausoleum erected by Artemisia to the memory of her husband Mausolus, the Colossus of Rhodes, the Pharos of Alexandria, and the Temple of Diana at Ephesus.

SEVEN YEARS WAR, the name given to the contest between Prussia and Austria for the possession of Silesia. The greater part of Europe was involved in the struggle as the allies of the one or the other. The war broke out in August, 1756, and was concluded by the Peace of Hubertsburg, 1763. Prussia retained possession of Silesia and greatly increased her influence in Europe. At the end of the war England found herself the leading power in North America, and had also laid the foundation of her Indian Empire.

SEVERN, THE, a river that rises on the eastern slopes of Plinlimmon, and, after a course of 240 miles enters the Bristol Channel by a wide estuary. It is navigable as far as Welshpool. The tide in the estuary rises higher than in any other European inlet, and the "bore," which at times ascends the river with a height of 9 feet, is felt for a considerable distance from its mouth. A canal, navigable by vessels of 350 tons, connects Gloucester with the estuary, and other canals connect the Severn with the Thames, Trent, and Mersey.

SEVIGNÉ, MADAME, *b.* 1626, *d.* 1696, the most delightful of French letter-writers. Her 1,600 letters, most of which were to her daughter Madame de Grignan, are witty, sensible, affectionate and delightful in their quaintness of detail. They form a revelation of the inner history of her times. Her attachment to her family and friends, her tolerance, her blameless life, her personal beauty and charm of disposition have won for her a secure place in the affections of all who admire what is best in womanhood.

SEVILLE, the capital of the Spanish province of Andalusia, stands on the river Guadalquivir. The city contains many beautiful Moorish buildings, the finest of which is the Alcazar, or Moorish royal palace. The cathedral, which dates from the 15th century, is the largest in Spain, and contains paintings by Murillo and other masters. Seville is the centre of the Spanish sport of bull-fighting, the circus being capable of accommodating 14,000 spectators.

SÈVRES, a small town 10½ miles south-west of Paris, famous for its manufacture of porcelain ware. The industry has been carried on under Royal or State control since 1756.

SEWAGE. See *Med. Dict.*

SEWING-MACHINES. Simple machines for embroidery, quilting and leather-work, were devised in England during the 18th century. The modern sewing-machine, however, is of American origin, and unites two principal inventions, the *Howe* needle, and the *Wilson* four-motioned feed. The former is the well-known needle with the eye near the point, the latter is the device for gripping, urging forward, and passing on the material operated upon. Howe patented his machine in 1846, and it is the basis of all subsequent lock-stitch machines. In 1852 Singer patented his machine and this has been so improved from time to time as to become one of the best in the market. Litigation between various inventors terminated in 1854 in the agreement by all to adopt the Howe and Wilson patents paying royalties to the inventors so long as the patents held. There seems no limit to the number of uses to which sewing-machines are put. Leather working, boot making, carpet sewing, button sewing, button holing, glove stitching, fancywork of all kinds; indeed from the flimsiest gauze to the heaviest belting and harness all materials have their appropriate machines.

SEYCHELLES. Refer to *Index.*

SHAFTESBURY, EARL OF. See *Cooper, Anthony Ashley.*

SHAGREEN. (1) A kind of leather possessing a peculiar grain and used for covering cases, etc. It is manufactured at Astrakhan and in Asia Minor, from the skins of wild asses, horses, and camels. After the removal of the hair, while the skin is still soft, it is stretched on a frame-work and covered with a number of small seeds which are trodden into it, permitted to dry, and then beaten out. The leather is easily stained in various colours. (2) The skin of the shark.

SHAKERS, a popular name applied to a sect, founded about 1750, by James Wardlaw and Jane, his wife, under the title of "The United Society of Believers in Christ's Second Appearing." Ann Lee, a follower of the Wardlaws, went to America to escape persecution, and founded a communistic settlement there. There are now some fifteen settlements in the States possessing common property to the amount of ten millions. In manner of life they resemble strict Quakers, they pay much attention to education, and make no attempt to win converts.

SHAKESPEARE, *b.* at Stratford-on-Avon, 1564, *d.* 1616, was perhaps the greatest poet and dramatist of all countries and all ages. His mastery of language is shown in the extent of the vocabulary employed in his works—a vocabulary containing 21,000 words as compared with the 7,000 of Milton or the 5,000 of such a writer as Thackeray; and in the number of phrases invented by him that now enter so largely into the daily speech of the country. Hamlet alone supplies more than thirty such phrases, including such well used examples as—"Though last, not least." "As true as steel." "Every inch a king." and "A divinity that shapes our ends." To his mastery of language must be added his intimate knowledge and sympathetic portrayal of human nature in all its phases, and the number of good acting plays that fell from his pen. His works include a number of sonnets and other poems, besides his plays, which consist of comedies, tragedies, and historical plays. Shakespeare received his education at the grammar school of his native town. Early in life he proceeded to London and became attached to the Globe Theatre as an actor, and as an adapter and a writer of plays. The proceeds of his work, combined with the successful investment of his savings, enabled him to retire at the age of forty-eight to a house he had built for himself at Stratford-on-Avon, a few years previously.

SHALE, rock that has been produced by the compression of layers of mud. It possesses a more or less laminated structure by which it is distinguished from clay or marl. It is usually found in the neighbourhood of coal, and, in the case of large deposits, petroleum is obtained from it.

SHALMANESER became king of Assyria about 730 B.C. He twice invaded the territories of Hoshea, king of Israel, and on the second occasion besieged the capital, Samaria. During the siege, which lasted three years, he died. Sargon, his son and successor, took the city and completed the conquest of the country.

SHAMO, DESERT OF, same as *Gobi.*

SHAMROCK, a three-leaved plant indigenous to Ireland and held in honour as the national emblem of that country. The true shamrock, probably wood sorrel, is not accurately ascertainable, and the lesser yellow trefoil, of the clover kindred, is commonly sold in Ireland on St. Patrick's Day.

SHAMYL, a Mohammedan Mullah who led the Caucasian revolts against the Russians from 1830 to 1859, baffling his opponents again and again, surprising them by ambuscades, and keeping his followers in a state of fanatical enthusiasm. On his capture he was pensioned handsomely by the Russians, and died at Medina, 1871.

SHANGHAI, near the mouth of the river Yang-tse-kiang, is the chief commercial city of China. The central and walled part of the city consists of narrow and dirty streets; but a number of well-built suburbs have grown up outside the walls, those in the north forming the residential quarters of the foreign population, which numbers upwards of 7,000, largely composed of English and French. The principal exports are tea, silk, cotton, and rice; population exceeds 600,000.

SHANNON, the largest river of Ireland, rises in County Cavan, and flows through Loughs Allen, Ree, and Derg to Limerick, whence it opens out into a magnificent estuary. The river is 254 miles in length, and navigable for 213 miles.

SHANS, a people of Chinese origin, living in the upper valleys of Burma, Siam, and the Chinese territory adjacent. The Shan states of Burma were annexed after the third Burmese War in 1885, and a branch railway now runs up the Salwin valley into the Shan country.

SHARK, the name given to a large family of fishes inhabiting almost every part of the ocean, but most abundant in the tropics. They vary in size from the dog-fish to specimens found in the Indian Ocean and off the shores of Cape Colony, that attain a length exceeding 60 feet. The pointed snout overhangs the mouth, which is usually furnished with rows of large, sharp-cutting teeth. The skin is tough and covered with small calcified spines. The skeleton is composed wholly of gristle. The *Blue Shark* is fairly common off the coast of Ireland, and in summer visits the coast of Cornwall, where it preys on the shoals of pilchards and herrings. The *White Shark*, which abounds in warm seas, is a most formidable creature. It attains a length of from 20 to 35 feet, and its powerful jaws are capable of biting a man in two. The *Basking Shark* is a harmless species. It receives its name from its habit of lying motionless on the surface of the water. A species known as the *Greenland Shark*, inhabiting the Arctic Ocean, is said to attack the whale.

SHARON, a plain extending inland from the coast of the Mediterranean to the hills of Samaria, in Palestine, and reaching from Cæsarea to Joppa.

SHARP, GRANVILLE, *b.* at Durham, 1734, *d.* 1813, devoted a large portion of his life to the emancipation of the negro slave.

He wrote many pamphlets in its favour, took a prominent part in the formation of the Association for the Abolition of Negro Slavery, and was one of the founders of the Colony of Sierra Leone for the reception of liberated slaves.

SHARP, JAMES, *b.* at Banff Castle, 1618, *d.* 1679, pleaded the cause of Presbyterianism before Cromwell, and in 1660 was sent to Breda to procure from Charles II. the establishment of that form of Church government in Scotland. The next Scottish parliament restored Episcopacy, and Sharp became Archbishop of St. Andrews. This and the part he took in the persecution of the Covenanters, roused the bitter hatred of his former friends, and he was murdered by a party of nine men on Magus Muir.

SHAW, GEORGE BERNARD, *b.* in Dublin, 1856, an original thinker and writer. His works consist of novels, articles on Socialism, and "problem plays" of world-wide notoriety.

SHEBEEN, a term applied in Ireland and Scotland to an unlicensed house at which whisky may be bought.

SHECHINAH, the emblem of the Divine presence in the Tabernacle of the Jews and in Solomon's Temple. It rested on the mercy-seat as a bright cloud.

SHEFFIELD, on the river Don, near its junction with the Sheaf in Yorkshire, is the chief seat of the English cutlery trade, comprising every form of cutting tool. Its other manufactures include the conversion of iron into steel, the production of armour-plates, rails, etc., and the making of Britannia-metal and electro-plated goods. Its chief magistrate is now styled "Lord Mayor," and in 1905 it received a charter for the establishment of a university. Mary, Queen of Scots, was confined in its castle (destroyed by order of Parliament in 1646) from 1570 to 1584. (For population, etc., see p. 902.)

SHEKEL, the standard of weight among the Jews, equivalent to about half-an-ounce avoirdupois. The name was also applied to a coin of gold or silver, or to a certain weight of money.

SHELDONIAN THEATRE, the Senate House of Oxford University, was designed by Sir Christopher Wren, and built at the expense of Gilbert Sheldon, archbishop of Canterbury. The Commemoration of Founders, when honorary degrees are conferred, is held here in June.

SHELL, a hollow projectile filled with a bursting charge of cordite or other explosive, and fitted with a time-fuse to explode it at a desired point, or with a percussion-fuse to explode it on impact. Since the introduction of rifling to the barrels of guns, shells, which were round previously, have been made of a conical shape. Common shells contain merely a bursting charge, and are employed against buildings, earthworks, etc. Shrapnell-shells are filled with bullets and a small bursting charge fired by means of a time-fuse. The bullets, after the bursting of the shell, fly onward in a shower, with the velocity acquired from the moving projectile. Shrapnell-shells are effective against bodies of troops.

SHELLEY, PERCY BYSSHE, *b.* in Sussex, 1792, *d.* 1822, a lyric poet, who was "possessed with a passion for reforming the world." Expelled from Oxford on account of his unorthodox views, which found expression in his pamphlet "The Necessity of Atheism," he spent the remainder of his life abroad, and was drowned by the upsetting of a boat in the Gulf of Leghorn. His greatest works are "Prometheus Unbound," a lyrical drama; "Adonais," an elegy on his friend Keats; and a tragedy, "Cenci," which showed that he might have become a great dramatist.

SHEPPARD, JACK, a criminal who made himself notorious in the early part of the 18th century, by his daring robberies and escapes from Newgate Prison. He was executed at Tyburn, 1724.

SHERBORNE, an ancient town in Dorset, formerly the seat of a bishopric founded by Ina in 705. Its noble minster contains the bones of the Saxon scholar Asser, and of two of the brothers of King Alfred. It has an excellent public school founded in 1550, and the boys took a prominent part in the interesting pageant held in 1905, to commemorate the 1200th anniversary of the foundation of the town and see.

SHERBROOKE, LORD (Robert Lowe), *b.* 1811, *d.* 1892; was educated at Winchester and Oxford. Here he became fellow and tutor of University College. He emigrated and established a large legal practice in Sydney and became a member of the Colonial parliament. On returning to England he gained a seat in the House of Commons, and as Vice-President of the Education Department he introduced the harmful system of "payment by results." He was subsequently Chancellor of the Exchequer and Home Secretary under Gladstone, and in 1880 he went to the Upper House as Viscount Sherbrooke.

SHERIDAN, RICHARD BRINSLEY, *b.* at Dublin, 1751, *d.* 1816, a dramatist and political orator. His most successful plays were "The Rivals," "The School for Scandal," and "The Critic." He entered parliament in 1780, and became under-secretary for foreign affairs two years later. His greatest parliamentary successes were his speeches impeaching Warren Hastings in 1787, and one in favour of the French Revolution in 1794. His last years were spent in abject poverty.

SHERIFF, the chief officer of the crown in every county. Three names for each county are submitted annually by a meeting of the judges and privy-councillors, and from these the crown selects the sheriff for the year. His duties are many. He is responsible for the defence of his shire against rebellion or foreign invasion, and, for this purpose, may call to his assistance all adult males. He sees to the collection of all crown revenues, executes the writs of the superior courts, attends the judges during the assize, and is responsible for the execution of criminals. Most of these functions are now performed by deputy, by the under-sheriff, bailiffs, and other assistants. In Scotland the sheriff is the chief judge of the county.

SHERIFFMUIR, a plain in Perthshire, a few miles north-east of Stirling, the scene of an indecisive battle between the Jacobite forces under the Earl of Mar and an inferior number of royalists commanded by the Duke of Argyle, 1715.

SHERRY, a Spanish wine of an amber colour produced in the neighbourhood of Xeres and largely exported from Cadiz. Perfection of flavour is said to be obtained only by keeping the wine in the wood for fifteen or twenty years. That intended for export is fortified with brandy.

SHERWOOD FOREST, formerly a royal forest, but now largely disafforested or occupied by gentlemen's seats and noble parks. Four railway lines converge on Mansfield in the centre of the old forest bounds, but numerous remains of the old forest still give reality to the legends of the outlaw Robin Hood. The forest, which lies between Nottingham and Worksop, is about 25 miles from north to south, and about 7 miles from east to west.

SHETLAND ISLANDS, a group of nearly 100 islands and rocks lying N.N.E. of the mainland of Scotland, and forming with the Orkneys a Scottish county. The largest islands are Mainland, Yell, and Unst. Fishing is the principal industry, but considerable numbers of cattle, sheep, and the well-known shaggy pony are raised. Lerwick is the capital; population of the whole group about 28,000.

SHIBBOLETH. When the Gileadites, under Jephthah, overcame the men of Ephraim they chose this word as a test at the ford of the Jordan. The Ephraimites being unable to pronounce the *sh* were thus detected and put to death (Judges xii. 6). The word is now used to denote a test of opinions peculiar to any party.

SHIELDS. See *Tyne.*

SHIITES. See *Sunnites.*

SHILLIBEER, GEORGE, *b.* 1797, *d.* 1866; the introducer of the modern omnibus, was for some time a midshipman in the Royal Navy. Then he learnt coachmaking in London and Paris, where he got the idea of the omnibus. Coming to London, he had two vehicles built to run from Paddington to the Bank. The first started in July, 1829. The idea became popular at once, but others gained more from it than Shillibeer, who finished his career as an undertaker.

SHILLING. Before the reign of Henry VII. the shilling represented a standard value in which the worth of property was reckoned, but without an equivalent coin. The name was also applied to a weight, viz., the twentieth part of a pound. The first coin bearing the name was struck in 1504. From that date the shilling has decreased in weight. At first a pound troy of silver produced forty shillings. Since the reign of George III., sixty-six have been coined from the same quantity. The coin is composed of an alloy of 925 parts silver to 75 copper.

SHINTOISM. Refer to *Index.*

SHIPS. From the year 1830, iron gradually superseded wood as the material of which ships are constructed, and more recently, steel has taken the place of iron. The great attention given to the study of the theory of stability has also led to many improvements in form and construction. Steam was first applied to navigation early in the 19th century. The *Clermont*, placed on the Hudson in 1807, and the *Comet*, which began to ply on the *Clyde* in 1812, were the pioneers of steam passenger ships. The *Sirius* and the *Great Western* crossed the Atlantic in 1838. These were all paddle-boats. The great advance that has been made may be seen in comparing the *Sirius*, a wooden ship of 450 tons, with such a magnificent ship as the *Baltic*, a steel vessel of 24,000 tons register, launched in November, 1903. In 1843 the *Great Britain* occupied nearly fifteen days in crossing the Atlantic. The *Campania* has reached Queenstown from New York in 5 days, 9 hours, 18 minutes. The most recent advance in steam navigation has been the introduction of turbine-engines. These are in use on several river-steamers and cross-channel boats, and are now found on ocean-going steamers. Two out of every five of the mercantile ships of the world still depend on their sails for propulsion. Of these the largest slightly exceeds 5,200 tons.

SHIP-MONEY, an impost first levied for the defence of the country against the Danes. In 1634 Charles I. imposed such a tax on London and the coast towns, and, in 1637, its incidence was extended to the inland towns. The refusal of John Hampden to pay the tax led to his trial before the High Court. By a majority of seven to five the judges decided in favour

of the king. The verdict was highly unpopular, and was a contributory cause of the Civil War. The impost was declared to be illegal by the Long Parliament in 1641.

SHIPTON, MOTHER, a mythical personage who was long reputed to have prophesied the invention of horseless carriages, the electric telegraph, etc. A book known as "Shipton's Prophecies" was first printed in 1687. In 1862 Charles Hindley introduced new matter into the book and republished it. Among other items he made the "prophetess" say "the world to an end shall come in 1881."

SHODDY, a worsted yarn produced by tearing into fibres old woollen garments, tailors' cuttings, etc., by means of sharp spikes fixed to rapidly revolving cylinders. A little fresh wool is added to the fibres thus prepared, and the whole spun into yarn, which is rewoven into the cheaper kinds of broadcloth, pilot-cloths, witneys, blankets, etc. Dewsbury and Batley in Yorkshire are the chief seats of the British shoddy trade. It is also extensively carried on in the United States and in Germany.

SHOEBURYNESS, a small town near Southend, in Essex. A sand bank extends for some miles along the Ness, and this is utilised by the government for artillery practice; population about 4,000.

SHORE, JANE, *b.* 1460, *d.* 1524, the wife of a London goldsmith, famed for her beauty and wit. She became the mistress of Edward IV., and afterwards of Lord Hastings. She was charged with sorcery by order of Richard III., and, that charge failing, was tried by the spiritual court on a charge of adultery, and condemned to do penance at St. Paul's. She is said to have died in a ditch now occupied by the district known as Shoreditch.

SHORTHAND is the name applied to various methods of writing words by means of signs which can be more rapidly written than the ordinary letters. The most popular method is that first published by Isaac Pitman in 1837. In Great Britain about 100 associations have been formed for the practice and the extension of the knowledge of the system. The sounds of the consonants are indicated by simple, geometrical lines, straight or curved, and of the vowels by a dot or dash. The same line represents a different sound as it is thin or thick, or written vertically or horizontally, or inclined at an angle of 45°. It is claimed for the system that the principles may be acquired in a few weeks by a student who devotes an hour a day to its practice. Additional speed in writing is obtained by abbreviations. Words of common occurrence are represented by the signs of one or two of its dominant letters. The expert writer is able to take down a verbatim report of the speeches of the most rapid speakers, who utter about 180 words per minute. For the purposes of reporting debates, taking down the evidence in law cases, and, in conjunction with the tpye-writer, in business, some form of shorthand has become absolutely indispensable.

SHORTHOUSE, JOSEPH HENRY, *b.* at Birmingham, 1834, *d.* 1903, an English manufacturer who also made his name as a novelist. His masterpiece, "John Inglesant," took him many years to write, and is considered to be one of the best historical novels ever written. His other novels, though interesting, are of less importance.

SHORT PARLIAMENT, the fourth parliament of Charles I., met in April, 1640, and was dissolved in less than three weeks, because the members insisted on discussing the grievances of the nation before voting supplies.

SHOT for filling cartridges for sporting purposes is composed of an alloy of lead and a small quantity of arsenic. The molten metal is dropped through various sized holes in a special vessel placed at the top of a shot-tower, the small, globular particles being permitted to fall into a tank of water at the base. The process is completed by polishing the shot in revolving boxes, containing a little plumbago. Case-shot or canister, is used in warfare to ward off a sudden attack. It consists of a cylindrical case of tin filled with bullets and made to fit the barrel of a gun. Cannon shot is made of iron or steel. Iron shot that is cast in cold iron moulds is extremely hard and possesses great penetrative power. Steel shot, however, is still more effective. Cannon shot, whether of iron or steel, has been to a large extent replaced by shell, on account of its greater destructive power.

SHOTTERY, a village in Warwickshire, about 1½ miles from Stratford-on-Avon, the birth-place of Ann Hathaway, Shakespeare's wife. The cottage in which she was born is a place of pilgrimage for visitors to Shakespeare's county.

SHOVEL, SIR CLOUDESLEY, *b.* at Cley, in Norfolk, 1650, *d.* 1707, entered the navy as a cabin-boy, and by his abilities raised himself to the command of a ship, and finally became an admiral. He was knighted for his share in the battle of Bantry Bay. He afterwards assisted in the victory of the Hague, commanded the expedition against Dunkirk, 1694, and took a prominent part in the battle of Malaga, 1704, and the capture of Barcelona, 1705. He was wrecked on the Scilly Islands when returning from an unsuccessful expedition against Toulon.

SHREWSBURY, the county town of Shropshire, stands on the river Severn. There are remains of the old city walls and of a Norman Castle. Its famous school was founded by Edward VI., 1551. Two parliaments have met at Shrewsbury, 1283 and 1397. The battle in which Henry IV. defeated Hotspur and Douglas was fought in the vicinity, 1403; population exceeds 28,000.

SHROVE-TUESDAY, the day preceding Ash Wednesday, received its name from the custom of all persons going to confession on that day. After being "shriven," they devoted the remainder of the day to feasting and jollity. A favourite dish was pan-cakes, from which circumstance the day was afterwards called "Pan-cake Tuesday."

SIAM, a kingdom occupying a portion of the Indo-Chinese peninsula, between Burma and Annam. The territory, which has dwindled in recent years owing to cessions to France, embraces the whole of the fertile basin of the Menam and a portion of the Mekong valley. The interior consists of dense forests and jungle. Gold, tin, rubies, and sapphires are mined. Considerable progress has been made in the last half century. Roads and railways have been constructed, and postal, telegraphic, and telephone systems have been introduced. Bangkok, population about 400,000, is the capital. The total population is estimated at six millions, and includes Siamese, Chinese, and Malays, with a fair sprinkling of European traders and government servants.

SIAMESE TWINS, *b.* in Siam, of Chinese parents, 1811, *d.* 1874. Their bodies were united by a fleshy band extending from breast-bone to breast-bone. Nevertheless their early life was that of the other children of the country, and they became expert fishers and swimmers. They were exhibited in Europe and America, gained a small fortune, and settled in the United States, where they married. They died within a few hours of each other.

SIBERIA occupies the whole of northern Asia, from the Ural Mountains to the Pacific Ocean, and has an area exceeding 4¾ million square miles. The country consists chiefly of an immense plain, sloping from the highlands of the south to the north and north-west, and drained by the Obi, Yenesei, Lena, and Amur. Mighty forests, which shelter the ermine, the sable, and other fur-bearing animals, extend along the rivers; there are pasture lands of enormous extent, and the soil of the southern steppes closely resembles that of the fertile "black lands" of the south-east of Russia. The mines produce gold, silver, copper, lead, zinc, and iron. The native population is composed of various Mongolian and Tartar tribes. Russians, consisting of political exiles and their descendants, and an increasing number of voluntary immigrants, form more than 80 per cent. of the people The completion of the Trans-Siberian Railway, the last section of which, that round the south of Lake Baikal, was opened in September, 1904, promises to open up the country in many ways. The chief towns are Tomsk, Irkutsk, Omsk, Tobolsk, Yakutsk, and Vladivostock.

SIBYL, a name applied by ancient writers to ten women in all, who were fabled to have received from the gods the gift of prophecy. Of these the most famous was the Sibyl of Cumæ. She is 'aid to have written the Sibylline Books. These were a collection of prophecies written in Greek verse. Three of the books were purchased by Tarquin for the price for which the Sibyl had offered him the original nine. He twice refused to buy on account of the extortionate price demanded. Each refusal was followed by the burning of three of the books, and the offer of the remainder at the price demanded for the whole. The three were committed to the care of special priests, and, together with twelve other books that were added later, were consulted on all special occasions. They were burnt in the fire that consumed the temple of Jupiter, 83 B.C., but a new collection was made by a commission that visited various cities for the purpose. These were burnt in the reign of Nero.

SICILIAN VESPERS, a euphemistic name for a great massacre of the French in Sicily, where they had established themselves during the 13th century. The outrage began at the stroke of the vesper bell, in Palermo, on Easter Monday, 1282, and quickly spread to the other towns. Garibaldi attended the 600th anniversary of the event in 1882.

SICILY, the largest and most fertile of the islands of the Mediterranean, lies at the extreme south-western point of Italy, from which it is separated by the deep, narrow strait of Messina. The island is triangular in shape, mountainous in character, and it contains the well-known volcano Etna (which see). The soil is wonderfully rich, but the reckless destruction of forest lands is affecting both soil and climate. The island produces wheat, grapes, and oranges, but the methods of agriculture are primitive. Sulphur is the chief mineral product, and there are important sardine and tunny fisheries. Commerce is in the hands of foreigners, but it suffers from the badness of the roads. Education is defective, wages are low, and taxation high; hence a vindictive spirit still lingers among the peasants in the vendetta and maffia (which see). The population is about 3 millions; Palermo (270,000), Messina (150,000), and Catania (110,000) are the chief towns.

SIDDONS, SARAH, *b.* at Brecon, 175 *d.* 1831; the daughter of a provincial theatre-manager; made her *debut* as a tragic actress before a London audience at Drury Lane, in Garrick's company. She afterwards joined her brother, John Philip Kemble, at Covent Garden. It is probable that no tragedienne has surpassed Mrs. Siddons in the complete mastery she displayed in every department of her art.

SIDGWICK, HENRY, *b.* at Skipton, 1838, *d.* 1900; an eminent professor of mental and moral science, on which his writings are particularly valuable. But his name will go down to posterity as the champion of women's education. He had the largest share in the foundation of Newnham, and no small share in founding Girton. His best known works are: "Methods of Ethics" and "Principles of Political Economy."

SIDNEY, ALGERNON, *b.* 1622, executed 1683; a grand-nephew of Sir Philip Sidney. He joined the Parliamentarians, was wounded at Marston Moor, and held various appointments of importance under the Commonwealth. He resided in France for the first years of the Restoration, but was induced to return on a free pardon by Charles II. He was subsequently suspected of political intrigues with France, and after the Rye House Plot was executed along with Russell, Essex, and Howard, after a nominal trial by Jeffreys. Sidney drew up for William Penn the constitution of Pennsylvania, and amongst its provisions were the ballot, universal suffrage, and the abolition of capital punishment, save for murder and treason.

SIDNEY, SIR PHILIP, *b.* 1554, *d.* 1586, a nephew of Queen Elizabeth's favourite, the Earl of Leicester, was a refined, cultured, and chivalrous gentleman, whose life reflected both the ardour of mediæval knighthood and the generous refinement of the renaissance. He was the friend of the poet Spenser, and himself was a true poet, as his sonnets bear witness. His "Astrophel and Stella" is a poetical account of his fruitless love for Penelope Devereux, and like all his writings, it finds an added charm in its close relation to the poet's own life. He was mortally wounded in the attack on Zutphen in the Netherlands, and his last chivalrous act of giving to a wounded man his own draught of water represents truly the beauty of his character.

SIDON, an ancient sea-port town of Phœnicia on the eastern coast of the Mediterranean. In classical times it was famous for its royal purple dyes, its glass, and its fine linen. It declined in importance after the fall of Rome and the rise of Mohammedanism, but its former commercial greatness may be gathered from its frequent mention in Old Testament history along with its sister city of Tyre.

SIEMENS, SIR WILLIAM, *b.* in Germany, 1823, *d.* 1883; became a British subject in 1859, and acted as manager of the firm of Siemens Brothers, superintending himself the construction of marine and overland telegraphs. His own researches in metallurgy led to the application of his discoveries to the manufacture of steel. He superintended the construction of the Portrush Electric Tramway, thus first utilising electricity for locomotion in these islands. His attention was by no means confined to electrical and metallurgical research, for among his other inventions are a water meter, a bathometer for taking ocean depths, and a process for electro-gilding, also a cheap method of gas manufacture for heating purposes, such as glass melting.

SIERRA LEONE, one of the four British Colonies in West Africa, was ceded to Great Britain in 1787 as an asylum for the negroes whom the liberation movement had left destitute in various parts of the British dominions. Its capital, Freetown, has the best harbour of West Africa, and is the seat of government. Many languages are spoken owing to the manner of colonization. The inhabitants are engaged chiefly as intermediaries between the British merchants and the natives of the interior. Palm-kernels and kola nuts are the chief exports. In 1896 a British protectorate was proclaimed over the tribal territories between Sierra Leone and French Guinea.

SIERRA NEVADA, or **SNOWY MOUNTAINS,** is the Spanish name applied to several lofty ranges in Spain and America. (1) In Granada, the Sierra Nevada is a range running east and west close to the Mediterranean shore, and containing Mulhacen (11,670 ft.), the highest peak of Spain. (2) The Sierra Nevada of California runs north and south behind San Francisco for 450 miles. Mount Whitney (15,000) is its chief peak, and the quartz formations yield the gold for which California is famous.

SIGNALLING is the process of conveying information by sight or sound to a distant observer. An international code of signals has been adopted by the chief maritime nations for use at sea. It was devised by Captain Marryat, the novelist. The code is based on the use of flags arranged under one another. Semaphore signals, consisting of combinations and arrangements of the positions of two arms under one another are suitable for use either on sea or land. Vessels are bound to indicate their movements during fog or snow by sounding bells or sirens to prevent collisions. The Morse system of signalling by long and short flashes of light is used in the Navy during the night, with a secret code. The Morse system, which is practically the "dot and dash" system of ordinary telegraphy, is adapted for military purposes, certain movements of a flag denoting a "dot," and others a "dash."

SIGNET, THE, was one of the seals formerly required to give validity to a royal grant. A warrant first received the signet seal, then the privy seal, and finally the great seal. The class of solicitors in Scotland known as "Writers to the Signet," are so named because they were formerly employed in the royal service to prepare warrants and grants.

SIGN-MANUAL, THE ROYAL, is the signature of the sovereign applied to all documents before they are sealed with the privy or the great seal.

SIKHS, THE, originally a religious sect founded in the 15th century in the Punjab, near Amritsar, which has since been the headquarters of their religion. During the 18th century they organised themselves as a military power, and ultimately possessed an army of 120,000 men trained to arms by European methods under French officers. In 1845 they broke their treaty with the British by crossing the river Sutlej. Sir Hugh Gough defeated them at Mudki, and stormed their camp at Firozeshah in company with Sir Henry Hardinge. Sir Henry Smith defeated a second force of Sikhs at Aliwal, and Gough and Hardinge finally routed them at Sobraon. In the treaty signed at Lahore, much of the Punjab, as well as Cashmere and some of the hill country, were ceded to Britain. War broke out again in 1848, when, after the indecisive battle of Chillianwalla, Gough effectually crushed the Sikhs at Gujerat. The Punjab was annexed, and so completely did the Sikhs settle down under British rule, that in the Indian Mutiny a few years later they rendered great service in its suppression.

SIKKIM, a small Himalayan province of India under native rule and British protection. Darjeeling, on the British side of the southern border of Sikkim, was ceded to Britain by the Rajah of Sikkim in 1835, and is the terminus of the railway from Calcutta.

SILAGE. See *Ensilage.*

SILCHESTER, a Hampshire village 9 miles north of Basingstoke. Its chief interest lies in the ruins of the old Roman-British town of Calleva. The walls and the lines of the streets are easily traced, and many household and decorative articles have been found, as pottery, coins, and tools.

SILESIA, the most southerly of the provinces of Prussia, lies on the north side of the Carpathian Mountains, and is traversed from south-east to north-west by the Oder. Coal is plentiful in the south-east, and zinc and lead are abundant. Sheep-rearing is carried on extensively, but nearly half the population are engaged in industrial pursuits. Breslau, the capital, has a university, and its trade in grain and wool is very great; population about 4,200,000.

SILHOUETTE, an outline drawing of a profile, filled in with a black or dark colour. The copy may be made by following the outline of a shadow from a single light, or may be cut direct with scissors by a skilful person. The name is derived from Etienne de Silhouette, a French minister of finance, in 1759, whose schemes were so unsuccessful and short sighted that the phrase *à la Silhouette* came to denote cheapness and triviality.

SILK. The cultivation of the silk-worm and the manufacture of silk from the fine thread of which its cocoon is formed was practised in China for many centuries before the Christian Era. During the reign of Justinian (550 A.D.) two Persian monks brought from China to Constantinople a number of eggs secreted in a hollow cane. They had watched the operations of silk making in the East, and were able to superintend the first silk weaving industry in Constantinople, and so to introduce it into the West. The silk-worm thrives best on the leaves of the white mulberry, a tree which does not suffer to any great extent from the loss of its leaves. These are plucked and placed in boxes for the worms. After some of the cocoons have been selected for hatching, the rest are slightly roasted to destroy the worm. They are then washed, and the ends of the threads of several cocoons are picked up by a brush and twisted into *raw silk.* The thread is joined up to other lengths, the natural gumminess providing a sufficient junction, and then wound on a circular frame. The fibre is passed through fine apertures to clean it and make it uniform in thickness. It is now ready for use, but its stoutness is often increased at this stage by doubling. There is necessarily much waste silk, and this is now utilised to form silk yarn and fancy threads. About 40 per cent. of the whole supply of raw silk comes from China, and 30 per cent. from Italy. France is the greatest silk manufacturing country, but the industry is carried on extensively in the English Midlands. Leek, Staffordshire, is famous for its silk dyeing, and especially for its peculiarly glossy, black silks.

SILK-COTTON, a silky fibre obtained from the seed-pods of the Bombax and other allied trees. It is too short and soft to be spun into yarn, but its elasticity makes it eminently suitable for stuffing pillows, etc., for which it is largely used in Holland.

SILVER, one of the precious metals, is obtained chiefly from ores which also con-

tain lead. In this form rich deposits are found in the Western States of North America, yielding an annual output of over twelve millions sterling. The ores of Mexico, which yield almost as much silver as those of the U.S., are a sulphide of silver known as argentite. Norway, Saxony, and Austria produce over two millions annually, and an equal amount is obtained from Australian and Tasmanian ores. In all cases the process of separation is commenced by beating the ore into a fine mud from which the metal is taken up by various chemical processes. The rapid increase in the output of American mines during the last 25 years has lowered the price of silver, the value of an ounce falling from 3s. in 1893 to 2s. in 1902. An alloy of silver and copper, consisting of thirty-seven parts of silver to three of copper, is employed for the British coinage, and the same standard is used for hall-marked silver. Silver does not perish by exposure to the pure atmosphere, but it tarnishes readily owing to the existence of sulphur in the smoke that taints the air of a house.

SIMEON, CHARLES, *b.* 1759, *d.* 1836; a devoted Evangelical minister and eminent preacher. Educated at Cambridge, he was made a Fellow of King's College in 1782, and in the year following presented to the living of Trinity Church, Cambridge, which he held till his death. But his influence spread all over England, and he took a leading part in founding the Church Missionary Society. His published sermons, which number more than 2000, had immense influence.

SIMEON STYLI'TES, *d.* 459 A.D., an ascetic Syrian monk who for thirty years lived on a pillar (*Gr. stylos*) near Antioch, practising rigid austerities and preaching during the day to the crowds whom his fame attracted. (See *Pillar Saints.*)

SIMILE, a figure of speech in which a description is made vivid by the introduction of a comparison or resemblance; e.g.

"And every soul, it passed me by,
Like the whizz of my cross-bow."

SIMLA, a station on the southern slope of the Himalayas, 170 miles north of Delhi, which forms the head-quarters of the Indian Government in the hot season. It stands 7000 feet above the sea, amid magnificent forests of oak and cypress.

SIMNEL, LAMBERT, was a youth who was trained to impersonate the young Earl of Warwick, a Yorkist claimant of the English throne in the reign of Henry VII. Simnel was captured, and made a scullion in the royal kitchen, the true Earl being shown publicly to the people of London.

SIMON MAGUS, or **SIMON THE SORCERER,** had a considerable reputation as a magician in Samaria during the early days of the Christian Church. When the apostles visited Samaria to confirm the converts of Philip, Simon endeavoured by bribery to persuade them to confer special gifts of miraculous power upon him, a request which drew down the condemnation of St. Peter. Hence the crime of buying and selling spiritual offices or benefices for profit is called *Simony.*

SIMOOM, the general name of all those suffocating winds that blow outward from the Sahara. In West Africa it is known as the *harmattan*, in Algeria and Morocco as the *shume*, and on crossing over to Spain it becomes the *solano*, while in Egypt it takes the name *khamsin*, "fifty," because it usually blows at intervals during fifty days, from April to June. The wind is charged with small dust and causes much ophthalmia, especially in Tunis, where it goes by the name of *sheely.* In Italy the same wind is known as the *sirocco*, but in its passage across the Mediterranean it becomes damp, whilst retaining its heat and fine dust.

SIMPLON, a much used pass from Switzerland to Italy, made famous by the remarkable road constructed over it (1800-6) by Napoleon. By cutting, tunnelling, and buttressing, the extreme gradient was reduced to 1 in 13. A railway tunnel, 12 miles in length, was opened, February, 1905, after the occurrence of hot springs in the boring had caused (November, 1904,) a temporary cessation of operations.

SIMPSON, SIR JAMES, *b.* at Bathgate, 1811, *d.* 1870, the son of a baker, entered the university of Edinburgh as a medical student and took his M.D. at the age of twenty-one. He was appointed to the chair of Midwifery in 1840, and in this position greatly advanced the scientific treatment of obstetric cases. His most remarkable contribution to the advancement of medical practice was his discovery of the value of *chloroform* as an anæsthetic.

SIMS, GEORGE ROBERT, *b.* in London, 1847, one of the most popular playwriters and journalists of the day; found it a hard task to get a start in journalism, being hampered by a lucrative position in the City. His contributions to the *Referee*, under the name of "Dagonet," are well known. Among his plays are "Crutch and Toothpick," "The Lights of London," "In the Ranks."

SIN, is that in man which estranges him from, or puts him at enmity with God. Hence arises the Christian idea of the necessity of a Redeemer who saves man from the guilt and power of sin. *Original sin* is defined as the corruption of man's nature so that his will inclines naturally towards evil from his birth. Christian Baptism is a sacramental regeneration or new-birth from this state of original sin, to a state of grace. The Catholic practice of Confession led to the development of a minute classification of sins into sins of omission and of commission, voluntary and involuntary sins, sins of infirmity, mortal, and venial sins; and mediæval literature contains frequent allusions to the seven deadly sins, as in the procession of the seven sins in Spenser's Faery Queene, Book I., Canto IV., where pride, vanity, idleness, gluttony, avarice, envy, and wrath are portrayed. In so far as all religions appear to seek modes of averting the wrath of a higher power, either by sacrifice or by mysterious rites, it may be said that some idea of sin enters into all religions.

SINAI, is a peak in the mountainous peninsula of Sinai which lies between the two gulfs that form the northern extremity of the Red Sea. There are three peaks of over 6,000 feet in height, and each is claimed as the mountain on which the law was delivered to Moses. Tradition has fixed on Mount Catherine (Jebel Musa), however, at whose foot stands the monastery of St. Catherine, and at whose summit is a little pilgrim church. The many caves in this district were formerly the abode of anchorites or hermits.

SIND or **SCINDE,** a province of India within the Presidency of Bombay, occupying the flat country about the lower course of the Indus. A belt of fertile land borders the river, whose floods so enrich it that it produces two harvests annually. To the east stretches the Thur, a desert of moving sand. The capital is Karachi, a sea-port, which the government harbour works have done much to improve. The Indus Valley Railway from Karachi has developed the commercial value of the province.

SIN-EATERS, men who attended funerals for the purpose of eating a piece of bread and drinking a cup of ale that was placed on the bier. They then declared that they had, by this action, taken upon themselves the sins of the deceased, who would not, therefore, be compelled to walk the earth as a ghost. The custom was once common in the counties bordering on Wales.

SINECURE, an office without responsibilities but yielding revenue. A benefice or living without any cure of souls is known in Ecclesiastical Law as a sinecure, but sinecure rectories were abolished during the first half of the 19th century. Government sinecure offices were formerly numerous, and one, the "Chiltern Hundreds," still exists. By accepting their nominal stewardship a member of Parliament is able to vacate his seat. (See *Chiltern Hundreds.*)

SINGAPORE. Refer to *Index.*

SINON, in Greek legend, a cousin of Odysseus, whom he accompanied to Troy. Having permitted himself to be taken prisoner, he persuaded the Trojans to admit the wooden horse, full of Greek warriors, into the citadel. His name is proverbial for a treacherous deserter from the enemy.

SIPHON, a bent tube having one arm shorter than the other, used for drawing off liquid from one vessel into another. The tube is filled with liquid, the short arm is placed in the vessel to be emptied, and a flow of liquid immediately ensues. If the two arms were of the same length the pressure of the atmosphere at the two ends of the tube would not only be equal, but have the same effect. But the arms being unequal in length, the pressure of the atmosphere at the end of the long arm has to support a longer column of liquid than that at the bend of the shorter arm. Hence the pressure available for keeping the liquid in the long arm is less than that available for pushing the liquid up the short arm and down the long one.

SIR, with the Christian name and surname is now only used in speaking of knights and baronets. It is a contraction of the French "seigneur" (L. *senior*), and was formerly much used in speaking of or to clergymen. "Sire," an older form, was exclusively reserved for addressing royalty, but is now obsolete.

SIRDAR, a word signifying "chief," used in Mohammedan countries for a commander-in-chief, and hence used to designate the British officer in command of the Egyptian army.

SIREN, an instrument which produces a musical note by checking and liberating alternately a strong current of air through a nozzle, by a revolving disc pierced with holes. As each hole passes the nozzle, the air is liberated and then shut off until the next hole passes. In most sirens the blast causes the revolution of the disc, and the height of the note increases with the power of the blast. Hence the value of the instrument in determining the vibration number of each note.

SIRENS, THE, sea-nymphs who sang so alluringly as to entice to destruction all sailors who drew near their island off the south-west point of Italy. Ulysses escaped their enticement by stopping the ears of his men with wax and lashing himself to the mast. Orpheus, with his lute, provided a more winning spell for the Argonauts whom he accompanied in their quest of the Golden Fleece, and the Sirens, chagrined at this defeat, cast themselves into the sea and were turned into rocks.

SIROCCO or **SCIROCCO,** a scorching wind from the African deserts, that blows

over the northern coasts of Africa, and is experienced at certain seasons in Italy, Sicily, and Malta.

SISERA, the "captain of the host" of Jabin, king of Canaan, from whose oppressions Israel was delivered by Deborah and Barak. Sisera was treacherously slain by Jael, a Kenite woman, while asleep in her tent after his escape from the battle. (Judges iv. and v.).

SISTER DORA. See *Pattison, Dorothy.*

SISTINE CHAPEL, THE, one of the most famous of the chapels of the Vatican, was built by Pope Sixtus IV. in 1473, and its walls were adorned by Michael Angelo, who was assisted by other Florentine painters. His work on the ceiling of the chapel is beyond description; numberless groups and subjects, each a masterpiece in itself, display the genius of their author in the treatment of human subjects taken from scriptural or classical sources.

SISYPHUS, in classical mythology, is said to have been cruel to travellers and to have angered Jove. In the nether world he was doomed to perform the endless task of rolling up a hill a heavy stone, which as soon as it reached the top always rolled down again.

SIVA, or **SHIVA,** a Hindu deity who was originally regarded in Hinduism as the Destroyer, but to whom in the popular Hinduism of to-day is ascribed creation and reproduction as well as destruction. (See *Brahma.*)

SIX ARTICLES, THE, a statute passed in the reign of Henry VIII., 1539, to secure uniformity of doctrine in the English Church. The statute was an arbitrary measure of the king's, and was intended to show his dislike of certain Lutheran doctrines. The six articles insisted upon were (1) Transubstantiation, (2) the withholding of the Chalice from the laity, (3) the celibacy of priests, (4) the sanctity of religious vows, (5) the necessity of auricular confession, (6) the maintenance of private masses.

SIZAR, "a scholar of a college in Cambridge who pays lower fees than a *pensioner* or ordinary student" (Skeat). Formerly, sizars performed certain menial offices, such as waiting upon the Fellows at table; but such duties are no longer exacted from them.

SKALD, an old Norse name for a poet. Fragments of Skaldic poetry are preserved in the sagas, and they treat chiefly of the heroic deeds of the chieftains whose patronage they enjoyed.

SKEAT, WALTER WILLIAM, *b.* 1858, had a brilliant career as a mathematician before he gave himself up to the study of Early English. He was the first to hold the post of Professor of Anglo-Saxon at Cambridge. His works on Early English are of great value. He has done much to popularise his favourite study.

SKERRYVORE, the most prominent part of a reef lying about 24 miles west of Iona. Previous to 1844 few years had passed without one wreck at least on this reef, which is about 8 miles long. In 1844 a lighthouse, 140 feet high, begun in 1838, was finished by Alan Stevenson, and now sends its light a distance of 20 miles over the sea.

SKUNK, a small carnivorous quadruped of the size of a rabbit, found chiefly in the fur-hunting districts of Canada. It is valuable because of its fur, which is of a glossy black with lines of white. The skunk protects itself from attack by the sudden emission of a most foul-smelling fluid secreted in its anal glands, the effect of which is disagreeable even at a distance of several hundred yards.

SKYE, the largest island of the Inner Hebrides, is separated from Inverness-shire by a narrow and tortuous channel. Loch Coruisk, gloomy and impressive, and Glen Sligachan, the grandest of Scottish glens, are well-known to tourists in Skye. The islanders are poor and win their livelihood from the sea, or in sheep-farming. Portree, on the east, the chief village, is a place of call for the West Coast Steamers.

SLANG, is the name given to the use of words which are not to be found in a standard dictionary. Almost all professions, trades, and classes use slang terms, and when these become sufficiently familiar to society in general, they tend to become standardised and are ultimately stamped with the mark of approval by inclusion in a dictionary. Some knowledge of Stock Exchange slang is necessary to understand a financial newspaper. Kipling's best stories abound in military, engineering, and naval slang. Gipsy dialects, Yiddish, and the slang of vagabonds and thieves are a source of expressive terms. The most prolific source of slang, however, is America, where the smartness and bustle of the Yankee finds expression in the extravagant use he makes of exaggerations and striking terms.

SLATE, is a form of clay, just as marble is a form of chalk. It is highly fissile, and may often be cleft into "slates" of quite delicate thinness. The North Wales quarries yield the well-known blue slate used for roofing, and the Cumberland green slate is much sought after for its pleasing colour, although it is coarser and more expensive than the Welsh slate. A considerable supply of cheap roofing slate comes from America. School slates are made of Welsh slate, which is also largely used for clock cases, and mantel-pieces. For this latter purpose it is polished to resemble marble.

SLATE CLUB, a benefit club formed annually for support in sickness and for providing a "lump sum" at Christmas. Its name is due to the fact that each year ends, as it were, with a clean slate; for the funds in hand at the end of the year are "shared out" among the members, and the club ceases to exist.

SLAVERY. See *Abolition of Slavery.*

SLAVS, a branch of the Indo-European or Aryan family of people, like the Teutons, the Celts, and the Roman nations. They occupy the eastern part of Europe under the national names of Russians, Poles, Bohemians or Czechs, Serbs and Bulgarians. Their languages are more highly inflected than the kindred ones of the Teutons and the Latin races, and show less variation from the original Aryan language. It is estimated that there are about 100,000,000 Slavs in Europe.

SLEEP and **SLEEPING SICKNESS.** See *Med. Dict.*

SLOANE, SIR HANS, *b.* in Ulster 1660, *d.* in Chelsea 1753; was a great student of natural history and an eminent doctor. He succeeded Sir Isaac Newton as President of the Royal Society, and his museum and library formed the nucleus for the commencement of the British Museum. His herbarium is now exhibited at the Natural History Museum, and the Botanical Gardens which he gave to the Society of Apothecaries are still to be seen on the Chelsea Embankment. A monument to his memory is a prominent feature in the enclosure of Chelsea old church.

SLOTH, a tree-dwelling animal, native to Central America, which seldom comes to the ground, but lives entirely on the vegetation afforded by the trees. Its legs and claws are long, and it hangs on the branches in a suspended posture, its body being underneath. Its greenish colour, due to a lichen parasitic on its fur enables it to escape detection among the foliage of the trees, and its name significantly denotes its inactive disposition.

SLOYD, is a Swedish name for a system of wood-work followed in the schools of Sweden and Finland and now used with various modifications in very many schools in the towns of Great Britain. Besides the practical value of a knowledge of the use of tools, of the nature and uses of various kinds of timber, and of methods of construction, there is in Sloyd the educational value of manual work duly graded. This value lies in the development of the active constructional instincts of the boy, which lie dormant in the old fashioned "bookish" system that contented itself with schooling him in the three R's. The Swedish word *sloyd* is cognate with the English *sleight*, and denotes "sleight" or dexterity of hand.

SLUYS, a town by the sea in the south of Holland, near which was fought a famous sea-fight in 1340, when the English defeated the French.

SMEATON, JOHN, *b.* 1724, near Leeds, *d.* 1792, a great engineer, whose name is rendered famous by the Eddystone Lighthouse, which he built in 1756-9, and which stood for 120 years, until it was removed because its rock foundations were being undermined. Among Smeaton's other works were Ramsgate harbour, the Coldstream bridge over the Tweed, and the Forth and Clyde Canal. He was an authority on the machinery of mills and on engines, and was a Fellow of the Royal Society.

SMILES, SAMUEL, *b.* 1812 at Haddington, *d.* 1904, was educated as a medical practitioner, but, taking to literature, he became editor of a Leeds newspaper. Subsequently he was appointed secretary of a Yorkshire railway company, and in 1854 became secretary of the South Eastern Railway. Having formed a friendship with George Stephenson in Yorkshire, he undertook to write his life. Encouraged by his success he wrote his famous "Self Help," and followed this up by a large number of interesting biographical works on the lives of engineers and men of mark in the industrial world. All these works are written to illustrate the worth of self-education, integrity, and perseverance.

SMITH, ADAM, *b.* at Kirkcaldy, 1723, *d.* 1790, the famous author of "The Wealth of Nations," established by this work the treatment of political economy as a separate branch of knowledge. He was educated at Glasgow University, and Balliol College, Oxford, and as a travelling tutor to the Duke of Buccleuch he joined in the intellectual life of Paris. His book is a fearless exposition of the economic soundness of Free Trade. It contained too much destructive criticism to be a systematic treatise on political economy, but, when the stress of the Napoleonic Wars had passed, it found numberless admirers and did a great deal towards forming the body of opinion that established Free Trade in this country.

SMITH, CAPTAIN JOHN, *b.* in Lincolnshire, 1580, *d.* 1631, an adventurer, student, and writer, who served in the Low Countries, fought as a pirate in the Mediterranean, escaped from slavery in Turkey, and fought against the Spaniards at sea. In 1605 he joined an expedition to Virginia and helped to found Jamestown. He was saved from Indian treachery by Pocahontas, an Indian princess, and became president of the colony. His literary works are autobiographical, and are extremely interesting.

SMITH, GEORGE, *b.* in London, 1840, *d.* 1876; a great authority on Assyrian antiquities. He began life as an engraver,

but the extent of his studies and knowledge gained him a post at the British Museum. He did a great deal both in excavating Assyrian ruins and in deciphering the inscriptions there found, including the Chaldæan account of the Deluge.

SMITH, JAMES AND HORACE. See *Rejected Addresses.*

SMITH, JOSEPH. See *Mormons.*

SMITH, SYDNEY, *b.* 1771, *d.* 1845, is now chiefly remembered as a wit, but was in his day also a great advocate of social reforms. Educated at Winchester and Oxford, he resided afterwards in Edinburgh for six years, and was one of the founders of the *Edinburgh Review.* For twenty years he was rector of the small Yorkshire parish of Foston, and here he wrote and worked in comparative seclusion. Subsequently he became a canon of St. Paul's Cathedral, and he took at once a prominent position among the literary men of "the town" as a lecturer, conversationalist, and occasional writer.

SMITH, THE RIGHT HON. W. H., *b.* in London, 1825, *d.* 1891; was educated at Tavistock School, and in time took his share in the flourishing business (of W. H. Smith & Sons) founded by his father in 1792. To success in business he added success in politics, becoming a Cabinet Minister nine years after entering Parliament. He was made First Lord of the Admiralty in 1877, and leader of the House of Commons in 1887, a position he held till his death.

SMITH, WILLIAM, *b.* in Oxfordshire, 1769, *d.* 1839, one of the originators of the modern science of Geology in England, and the author of the first Geological Map of England. He was a surveyor and engineer, and took up the study of geology as a hobby.

SMITH, WILLIAM ROBERTSON, *b.* in Scotland in 1846, *d.* 1894, a great orientalist and Old Testament critic, was educated at Aberdeen, and elected to the chair of Hebrew at the Free Church College in that city. His article on "Bible" in the *Ency. Brit.* provoked great alarm among the Free Church Assembly, and he was put on trial for heresy, but acquitted. Subsequently he was removed from his chair because of a somewhat daring article on the "Hebrew Language." He then joined Prof. Baynes as joint editor of the *Ency. Brit.*, and after his colleague's death took the editorship alone. He held the Adam's professorship of Arabic at Cambridge from 1889 until his death.

SMITH, SIR WILLIAM SIDNEY, *b.* 1764, *d.* 1840, gained a commission in the navy for bravery at the battle of Cape St. Vincent in 1797, and rose rapidly in the service. He was one of the most active commanders all through the Napoleonic Wars, but his duties lay chiefly in the Eastern Mediterranean. In 1799 he captured the French ships co-operating in Napoleon's attack on Acre, and then threw himself into the town, which he defended so effectively that Napoleon raised the siege and abandoned his guns.

SMITHFIELD, originally an open field outside the walls of London, used for games, tilts, and fairs. Here in the reign of Henry I. the Hospital and Church of St. Bartholomew were founded, both of which exist, the former as one of the leading modern hospitals, the latter, the most beautiful Norman building in London. In 1305 Wallace, the Scottish patriot, was beheaded here, and many Protestants and Roman Catholics were burned at the stake in the Tudor days, before the place of execution was established at Tyburn. At Smithfield are now established the London Central Meat Market and the Poultry and Provision Market. The meat and provisions are brought by an elaborate system of underground railways from the various main line goods stations.

SMOLLETT, TOBIAS GEORGE, *b.* in Dumbartonshire, 1721, *d.* 1771, a novelist and historian, the author of part of Hume and Smollett's History of England, (Smollett was responsible for the years 1689-1760), and of the three well known novels, "Roderick Random," "Peregrine Pickle," and "Humphrey Clinker." The novels are suggestive of his own experiences. He was of good birth, and well educated, but he was dangerously addicted to bitter sarcasm, and was of that uncertain temperament which has kept so many literary geniuses on the brink of poverty.

SMUGGLING is the act of defrauding the State by evading the recognised custom duties. Smuggling is, of course, most prevalent when the duties are high. In the 18th and early part of the 19th century smuggling was rife, and the smuggler was often regarded as a popular hero if not a public benefactor. With the establishment of Free Trade smuggling almost ceased to be practised, tobacco being almost the only article worth the risks.

SMYRNA, the chief port of Asia Minor, is situated at the head of a gulf of the same name, which forms an arm of the Ægean Sea. The town is built on an amphitheatre of hills rising from the head of the Gulf. It is partly Turkish and partly European, but neither part of the town is cleanly. Two railways run into the interior, and bring to Smyrna the agricultural products and fruits of the inland districts. It is also an important depôt for Turkey carpets. Smyrna is the seat of a Roman, Greek, and American Archbishopric, and also the head quarters of a Turkish provincial governor; population about 200,000.

SNAKES, a class of reptiles akin to the lizard, found in most continental and tropical areas, but seldom in quite isolated islands. The Pythons of India, and the Boas and Tree-snakes of Central America are tropical snakes, unusually large, but not venomous. The Cobra, the Indian Sea-snake, the American Rattle-snake, and the English Viper are venomous snakes, which, though not large, are distinctly dangerous. Snakes swallow their prey whole, and digest it in a state of dormancy; they frequently cast their "slough," or scaly skin, and it is said that they depend on their sense of smell more than on that of sight or hearing, both of which are dull. The fangs of venomous snakes are a pair of sharp teeth in the upper jaw, communicating by ducts with poison glands behind the eyes. The lidless eyes of the snake have led to the idea that snakes fascinate their prey, but, on the other hand, the snake-charmers of the East appear to possess the power of influencing these reptiles by music and motion. Deaths from snake bite in India occur as frequently as 1 in 10,000 of the population annually. The effect of the bite is a paralysis of the nerve centres, and the best immediate treatment is sucking, tight binding, and often cauterizing or amputation of the affected limb. The mongoose, a small, Indian quadruped, and the secretary-bird of South Africa are the natural enemies of these reptiles, which they fearlessly attack, however venomous they may be.

SNEEZE-WOOD, the wood of a large and useful tree found in Cape Colony. It grows to a height of over 100 feet, and the wood is very hard and durable, being proof against both the white ant and the shipworm. The sawdust from it is very irritating to the nasal passages—hence its name.

SNOW is not frozen rain, like hail or sleet, but is the effect of frost upon the water-vapour in the atmosphere. The well-known hexagonal crystalline flowers of snow are the forms assumed by the frozen moisture which crystallizes around the nuclei of dust present in the air. The snow-fall in Great Britain is slight in comparison with that of continental areas of the same latitude, a fact which is due to the influence of the warm waters of the Atlantic. Snow-drifts in sheltered cuttings sometimes impede railway traffic, however, and the snow-plough is familiar in country districts. The perpetual existence of snow above the altitude of the "snow-line" of mountains is the cause of glaciers, and the origin of most of the great rivers of the world.

SNOWDON, a conspicuous mountain in North Wales 3,560 ft. in height. Its ascent is rendered easy by a railway, but the crags on the south-east, and the notable edge of Grib Goch, afford difficulties sufficient for the most daring mountaineer.

SNOW-SHOES are flat frames covered with a close network of hide, and fixed to the foot to prevent the wearer from sinking into the snow. They admit of a rapid skating motion, and are found extremely useful on the snow-covered prairies of Canada.

SNYDERS, FRANZ, *b.* at Antwerp, 1579, *d.* 1657, a Flemish painter of still life and animals. His representations of animals fighting are remarkable for their life and vigour.

SOANE, SIR JOHN, *b.* at Reading, 1753, *d.* 1837; the leading architect of his time; received his training at the Royal Academy, and afterwards travelled abroad to study. He held many public appointments, such as architect to the Bank of England, the Department of Woods and Forests, etc., and he designed many country mansions. He bequeathed his house in Lincoln's Inn Fields, London, and the art treasures therein to the nation. These form the "Soane Museum."

SOAP is produced from fats by the action of alkalis (potash or soda). Fat is melted in a copper with the alkaline soda, the addition of salt afterwards leads to the separation of the water from the soap, and then the by-product *glycerine* is removed along with the spent alkali. A fresh boiling of the soap with new "lye" (soda) completes the process, and leaves the soap ready for subsequent treatment as curd, mottled, or transparent, according to the kind required. Soaps made from soda, as here described, are known as "hard soaps," those made from potash are "soft soaps."

SOBIESKI, JOHN, *b.* 1624, *d.* 1696; the hero-king of Poland, saved his country first from the Cossacks and Tartars, and afterwards from the Turks. He was elected King in 1674, and in 1683 gained a celebrated victory over 100,000 Turks who were besieging Vienna. His strenuous efforts to reform his country were frustrated by the nobles.

SOCIALISM is at present a body of idealistic theories which aim at correcting the evils of the existing system of industrial competition under companies of capitalists. Capitalists served by wage-earners are to be replaced by associations of workmen, who co-operatively act as a common body of employers and employed. A man would thus serve the body corporate of which he was a member instead of being the employé of a capitalist whose gains are got from the work he procures from his paid workmen. The success of such co-operation would depend on the character of the workers.

SOCIETY OF FRIENDS. See *Quakers.*

SOCINIANS, those who hold the opinions taught by Lælius and Faustus Socinus, uncle and nephew, two Italian theologians who lived in the 16th century. They regarded our Lord as divinely endowed, but denied His divinity, and maintained that human reason was the criterion of the truth of religious dogma. Socinianism is now represented by Unitarianism and Rationalism. Both uncle and nephew were men of unblemished character, but they had to endure much persecution.

SOCRATES (a-tes), *b.* at Athens about 470, *d.* 399 B.C., a great Athenian philosopher, the famous teacher of Plato, and the originator of a distinct school of ethical philosophy. His predecessors in philosophy aimed at discovering the laws of the natural universe, Socrates applied himself to the study of man. "Virtue is knowledge, vice is ignorance," sums up his main doctrine, and he spent much of his time questioning, in public places, men of repute, in order to convince them of their real ignorance. He was accused of introducing new divinities and of corrupting the youthful citizens, and was condemned to death. He drank a poisonous draught of hemlock in the presence of his friends, but his memory was enshrined in the beautiful portraits we have of him in Plato's "Phœdo" and "Apology." Xenophon, another of his young friends, wrote an account of him in his "Memorabilia."

SODA WATER, an aërated water containing a small quantity of bi-carbonate of soda in solution. The aëration is caused by charging water with carbonic acid gas, which is very soluble in water under pressure. The release of the pressure is followed by the escape of the gas.

SODOM AND GOMORRAH, two of the "cities of the plain" mentioned in Genesis xix., whose inhabitants were destroyed for their wickedness. According to tradition the remains of these cities were submerged beneath the waters of the Dead Sea, but geologists regard this as impossible.

SODOR AND MAN, the name given to the bishopric whose area of jurisdiction in mediæval times extended over the Scottish Hebrides and the Isle of Man. The word *Sodor* is derived from a Norwegian word meaning "southern," for the Hebrides were considered and named "Southern Islands" by the Norwegians.

SOFIA or **SOPHIA,** the capital of Bulgaria since the constitution of that principality as an independent state under Turkish suzerainty in 1878. It stands in a valley of the Balkans on the main road from Constantinople to Vienna. Its business is chiefly in wheat, live stock, and hides; population 67,000.

SOHO. (1) A district in London south of Oxford Street. It contains a large colony of Italian and French cooks, restaurant proprietors, waiters, tailors, and servants. (2) A manufacturing suburb of Birmingham, where James Watt, in partnership with Matthew Boulton, produced his improved steam engines, 1775-1819.

SOKOTO, an island district of 200,000 square miles in the Niger basin, formerly administered by the Royal Niger Company but included in 1903 in the British Protectorate of Northern Nigeria, which is controlled by resident officials appointed by the Colonial Office. The centre of administration is Zungeru on a tributary of the Niger. Palm oil and kernels are the chief exports, and the protectorate is in telegraphic communication with Lagos.

SOLAR SYSTEM, THE, is the system of planets with their attendant satellites, which revolve about the sun, one of the fixed stars. In order of distance from the sun, the planets are Mercury, the nearest, Venus, the Earth, Mars, Jupiter, Saturn, Uranus, and Neptune; and of these Jupiter is the greatest in size, Mercury the least. The period of Neptune's revolution round the sun is 164 of our years, whilst the year of Mercury is 88 of our days.

SOLDERS, alloys readily fused, which are used for joining metals. Plumbers use an alloy consisting of one of tin to two of lead for joining lead piping. Iron is "cemented" by a solder of brass. Two of silver to one of brass makes an excellent solder for silver, and gold is soldered with an alloy of variable proportions of gold, silver, and copper. The use of hard solders for brass or copper is called brazing.

SOLE, a flat fish of high market value, caught chiefly in the North Sea. It is usually about twelve inches long. Its upper side is brownish yellow with dark patches. The *lemon sole* has spots instead of patches, and is much less esteemed as an article of food.

SOLECISM, any blunder in grammar or speech, or any breach of the rules of good behaviour in social life. The people of Soli spoke very rude Greek, and the cultured Athenians branded similar offences as "Solecisms," that is, mistakes such as the folk of Soli would make.

SOLENT, THE, is the name given to the western half of the channel which separates the Isle of Wight from Hampshire. It is rendered difficult of navigation for small craft by rapid tides.

SOLFATA'RA is the Italian name for a *soufrière* or semi-extinct volcano, which continues to emit gases and steam. At the time that Mount Pelée destroyed the town of St. Pierre in the terrible eruption of April, 1902, the famous Soufrière on the neighbouring island of St. Vincent awoke from its long quiescent condition, and 2,000 people were destroyed.

SOLFERINO, a village 20 miles north-west of Mantua, in the plain of Lombardy, where the French defeated the Austrians in 1859.

SOLOMON, the son of David and Bathsheba, succeeded David on the throne of Israel. During his peaceful forty years' reign the country reached its greatest territorial limits and its highest prosperity. He built the Temple at Jerusalem, and is still honoured in the mysteries of Freemasonry. His reputation for wisdom was not confined to the Jews, but is recognised throughout Mohammedan countries. The Books of "Proverbs" and "Ecclesiastes" are almost certainly not the work of Solomon, although tradition has assigned them to him; and the "Wisdom of Solomon" in the Apocrypha is of a much later date.

SOLON, *b.* about 638, *d.* 559 B.C., one of the greatest law givers of the world, gave to Athens its wonderful constitution. A poet, merchant, and traveller, his first great deed for his city was to gain for it the neighbouring isle of "Sea-girt Salamis." The lower classes in Athens were suffering from the oppressions of the rich aristocrats, and Solon, as chief magistrate, instituted a democratic form of constitution which retained the "Areopagus," or council of the old nobles, but opened up many channels of influence for the lower classes in the administration of justice, and in public offices. He divided the Athenians into four classes, according to their income, and gave both rights and responsibilities to these classes. He forbade the acquirement of much land, reformed the coinage, and annulled all excessive penalities.

SOLSTICE. Two days in the year mark the occurrence of solstices, the Summer Solstice, on June 21st, and the Winter Solstice, on December 21st. On these days the sun is vertically above the tropics of Cancer and Capricorn respectively, and these positions mark the turning points of the sun when it has reached its extreme limits north and south of the equator. The former is our mid-summer day, and the latter our mid-winter day.

SOLYMAN, THE MAGNIFICENT, *b.* about 1490, *d.* 1566, the greatest of the sultans of the Ottoman Turks, equally famous as a law giver, reformer, patron of arts, and conqueror. His greatest victory was at Mohacs, in Hungary, in 1526, when he annihilated the Hungarian army, subsequently annexing a great part of the country. His fleets scoured the Mediterranean, but failed to oust the knights of St. John from Malta.

SOMALILAND, the corner of land between the Gulf of Aden and the Indian Ocean, on the east coast of Africa. The country is subject to Abyssinia, except for the small protectorates reserved by Britain and Italy. The coast from 8° North Latitude to a point on the Gulf of Aden 49° East Longitude is British, the boundaries being settled by treaty with Abyssinia and Italy. A Mohammedan rising under the "Mad Mullah" in 1902 was met by regular military operations, which led, however, to no decisive engagement, unless General Egerton's victory at Jidballi, 1904, should prove to be so.

SOMERSET, one of the south-western counties of England. Historically interesting as the scene of Alfred's refuge at Athelney, and of Monmouth's defeat at Sedgemoor, the county contains many pre-historic relics, and is rich in Roman remains, particularly at Bath and Ilchester. Glastonbury is interesting as the former seat of a Saxon Monastery.

SOMERSET, PROTECTOR, *b.* about 1500, *d.* 1552, the brother of Jane Seymour, the third wife of Henry VIII., and mother of Edward VI. He was raised to the peerage by Henry VIII., and became Duke of Somerset in the following reign. He acted as Protector during the greater part of Edward's reign, but the sweeping changes of the Reformation movement caused him to be unpopular, and he was supplanted by the Earl of Warwick, who succeeded him as Protector with the title of Duke of Northumberland. Somerset was executed in 1552 on a charge of treason.

SOMNAMBULISM. See *Med. Dict.*

SONATA, an elaborate composition in three or four movements usually for one instrument. Vocal music predominated up to the 17th century, both in sacred music and in part songs and madrigals. Subsequently, instrumental music developed, and the sonata became a recognized form of composition. See *Glossary of Musical Terms.*

SONNET, a rhyming composition of fourteen lines, embodying a single theme or idea. The Italian, or original, form contained either four or five rhymes, and was clearly divided into an octave (the first eight lines), and a sestet (the last six lines). Shakespeare and the Elizabethan sonneteers made a free use of the sonnet, and broke through the rules of rhyming; but Milton, and his imitator, Wordsworth, reverted to the Italian form, which most modern sonneteers of the 19th century, including Rossetti, have followed.

SOPHIA, ST., the great Church of Constantinople built in the 6th century by the Emperor Justinian, and now used as a Moslem Cathedral. Its dome and the gracefulness of its lines in the interior are striking, but its external appearance is disappointing.

SOPHOCLES, *b.* 496, *d.* 405 B.C., an Athenian tragic poet. Less than one-tenth of the plays of Sophocles remain, but those we have are masterpieces. "Ajax," "Antigone," and "Electra," "Œdipus

Tyrannus" and "Œdipus at Colonus" are among his great tragedies. "Most modern critics have agreed that the tragedies of Sophocles are the most perfect that the world has ever seen." *Mahaffy.*

SORBONNE, THE, the first residential college of the University of Paris, founded in the 13th century by Robert of Sorbon. It became the greatest of all theological colleges, and was chiefly renowned for the rhetorical skill of its scholars. Failing to respond to the liberal tendencies of the Renaissance, it lost its prestige and was abolished at the Revolution (1792). Napoleon re-established it as the home of the *Academie.* It has been entirely rebuilt (1885-90).

SOTHEBY'S, the principal book-auction room in the United Kingdom, at Wellington Street, Strand. The first auction was held here in 1744. One of the most famous sales at Sotheby's was that of the Ashburnham collection of books and manuscripts, which realised more than £100,000. Though the sale of books constitutes the principal part of the business, prints, coins and antiquities are also here brought to the hammer.

SOUDAN, THE, "Land of the Blacks," is a general term for a wide belt of territory stretching across Africa, south of the Sahara, from the Atlantic to the western borders of Abyssinia. *East Soudan,* a region between Egypt proper and British East Africa, forms a joint protectorate of England and Egypt, with Khartoum as the seat of Government. *Central Soudan,* a region around Lake Chad, is occupied by Negro States, sufficiently large and civilized to be called Kingdoms. *West Soudan* comprises the basin of the Niger and the coast lands between the delta of that river and the Senegal. This region, with the exception of Liberia, has been parcelled out among the French, British, and Germans.

SOUL, may be defined as the non-corporeal part of man. In its higher aspects, and apart from the body, it is sometimes termed *spirit,* a distinction which some theologians emphasise, keeping the term "soul" to denote its lower relationship with the body. The soul is believed to be that essential part of a man by virtue of which he feels, thinks, wills, and develops personality, and which is almost universally believed to be immortal.

SOULT, MARSHAL, *b.* 1769, *d.* 1851, one of Napoleon's greatest generals. He commanded the French right at Austerlitz, and was placed in command of operations against England and Spain in the Peninsular War, where, however, his brilliance was neutralised by Wellington's persistent patience and hard fighting. He represented France at the coronation of Queen Victoria, and was received with enthusiasm.

SOUND, a sensation received through the organs of hearing. A musical sound, or *tone,* is the result of a regular succession of vibrations communicated to the ear by the wave movement of the air. Vibrations set up in a vacuum produce no sound, because they are not communicated to the air. The *pitch* of a musical sound rises with the rate of vibration. The *intensity* of the sound depends upon the amplitude of the vibrations and the distance of the observer.

SOUND, THE, a strait separating Denmark from Sweden, and leading from the Cattegat into the Baltic Sea. It is three miles broad at its narrowest part, and is defended by the Danish fortifications at Kronberg.

SOUNDING, the process of determining the depths of seas and water-ways for purposes of navigation or scientific investigation. Naval charts are carefully constructed from reliable soundings, to show shoals and all sub-marine obstructions. Deep sea soundings, such as were so largely carried out on the *Challenger,* are performed with a wire or thick hempen rope, and a detachable heavy sinker. The sinker is liberated by contact with the bottom, and a tube, arranged to take a sample of the bottom is all that is drawn up. If depth only is required, a thin twine is used and cut adrift when the bottom is reached.

SOUTH AFRICA, BRITISH. Refer to *Index.*

SOUTHAMPTON, on a peninsula at the head of Southampton Water in Hampshire, 79 miles from London. It is a great sea-port with excellent dock accommodation. It is a port of departure for the Union Castle Line to South Africa, and of the Royal Mail Line to the West Indies and South America, and it is a port of call for the Norddeutscher Lloyd Line. The headquarters of the Ordnance Survey are at Southampton, and in Hartley University College the town has an educational institute of good standing. Much of the old town still remains to remind the visitor of the days when legends told of Bevis of Hampton, or when Henry V. embarked for the campaign of Agincourt. (For population, etc., see p. 902.)

SOUTH AUSTRALIA, one of the federated colonies of the Australian Commonwealth, extends in a belt from the south coast across the continent to the north coast between 129° and 141° East longitude. Refer to "South Australia" in *Index.*

SOUTHCOTE, JOANNA, *b.* 1750, *d.* 1814; a religious monomaniac, who after being till middle life a devout Methodist, began, in about 1790, to proclaim herself a prophetess. She professed to be the woman mentioned in Rev. xii., and gained many converts. At last she gave out that she was about to give birth to the promised Shiloh, but soon after the time she fixed for that event died of dropsy.

SOUTHEY, ROBERT, *b.* at Bristol, 1774, *d.* 1843, was a writer of both prose and poetry. He became poet laureate in 1813, and is known as one of the "Lake Poets," his home for many years being at Greta Hall, Keswick. His longer poems are little read now, but his ballads and lyrics are popular. His prose works include a "Life of Nelson," histories of the Peninsular War and of Brazil, and biographies of Bunyan and Wesley.

SOUTHPORT, on the coast of Lancashire, halfway between Liverpool and Preston, is fast becoming a residential district for these towns and Manchester. Its fine sands and mild climate attract also thousands of more temporary sojourners, to whom many facilities for enjoyment are offered.

SOUTH SEA, the name given to the Pacific by Balboa, its discoverer, 1513. Previously to the 19th century the name was commonly applied to the South Pacific, and is still used in that sense.

SOUTH SEA BUBBLE, a financial project formed in 1710, to take over the floating debt of the nation, amounting at that time to £10,000,000. The Company was to receive from the Government interest on this amount at the rate of six per cent., and also the monopoly of the trade with the South Seas. Further subscriptions were called for in 1720 to buy up the remainder of the national debt, and were subscribed many times over. The £100 shares rose to £1,000, at which price the Chairman and many Directors sold out. Prices soon fell, the bubble burst, and thousands were ruined. The credit of the country was finally restored by Walpole.

SOUTH SHIELDS. See under *Tyne.*

SOUTHWELL, a small town near Newark, in Nottinghamshire, became the seat of a bishopric in 1884, the diocese including the counties of Nottingham and Derbyshire. At a house in the town Charles I. surrendered himself to the Scottish Commissioners, 1646.

SOUTHWELL, ROBERT, *b.* 1560, *d.* 1595; a Jesuit martyr of Elizabeth's reign. After being educated at Douai and Tournay, he was admitted a Jesuit at Rome. He served in England as chaplain to various noble Roman Catholic families, but was at last taken, tortured, and executed at Tyburn, the victim of a barbarous statute. Some of his religious poems are very beautiful.

SPA, a popular Belgian watering place, is situated about 20 miles south-east of Liège. Its medicinal springs, the waters of which are consumed by visitors, and also exported in considerable quantities, have been famous from Roman times. The name *Spa,* denoting an inland watering place, is derived from this, one of the oldest of European health resorts.

SPAIN occupies more than five-sixths of the Iberian peninsula in the south-west of Europe, and has an area of 191,000 square miles, and a population exceeding 18½ millions. In the 16th century it was the most powerful nation in the world. Agriculture employs more than 70 per cent. of the people. The various cereals, the olive, and the vine are cultivated, and millions of merino sheep are pastured. The mineral wealth is enormous, but is not fully developed. The mines produce iron, coal, copper, lead, and quicksilver. The manufactures are unimportant. A position fronting the Mediterranean and the Bay of Biscay, the possession of many fine natural harbours, and the natural resources of the country would be sufficient to place Spain in the forefront of commercial nations but for the indolence of the inhabitants.

SPANISH-AMERICAN WAR, THE, arose out of the demand of the United States Government, in 1898, that the Spaniards should evacuate Cuba, which had been in a state of insurrection since 1895. The immediate cause was the blowing up of the United States' ship Maine. The principal events of the war were the destruction of the Spanish fleet, and the capture of Santiago and the eastern part of the island by American troops. Consequently, the Spaniards agreed, 1898, to relinquish Cuba, which has since become a republic under the suzerainty of the United States. Spain also resigned to America Porto Rico and the Philippine Islands.

SPANISH ARMADA. See *Armada, The Invincible.*

SPANISH SUCCESSION, WAR OF THE, was undertaken to prevent the possible union of the French and Spanish Crowns. The Grand Alliance, including England, Holland, Austria, Germany, and Portugal supported the claims of Charles, the second son of Leopold of Austria, against those of Philip the son of the dauphin of France, to whom the throne had been left by the will of the late king. The war, which lasted from 1702 to 1713, was chiefly waged in the Spanish Netherlands. The principal events were the victories of Marlborough at Blenheim, Ramillies, Oudenarde, and Malplaquet, and the capture of Gibraltar. By the treaty of Utrecht, 1713, Philip was acknowledged king of Spain, and Louis XIV. of France agreed to give no further support to the Stuarts.

SPARROW, the most common British bird, is found throughout Europe and in

parts of Asia, and has been introduced into the United States, where it thrives at the expense of native birds. There are two species in England, the house-sparrow and the field or tree-sparrow. The so-called "hedge-sparrow" is really the hedge-warbler. The *house-sparrow* frequents even the busiest parts of our largest cities, building its nest in nooks of walls and under the eaves of houses, and raising as many as three broods a year. It is lively, pert, and cunning, the true *gamin* of the winged race. It is omnivorous, but prefers seeds and the larvæ of insects. On the whole, it may be reckoned among useful birds.

SPARTA, or **LACEDÆMON**, a city of ancient Greece, the capital of Laconia in the Peloponnesus, famous for the warlike prowess of its citizens. The laws of Lycurgus laid the foundation of Sparta's greatness. The inhabitants were distinguished for the simplicity of their life, terseness of speech, and courage and determination in battle. The males were trained from the age of seven under the supervision of the State, and apart from their mothers. They were taught to endure hardships and to suffer pain without complaining. Both sexes went through a rigorous course of gymnastics with the object of producing a physically perfect race of citizens. At the time of the Persian invasion in the 5th century B.C., the Spartans, with the consent of all the Greeks, obtained the chief command in the war. Subsequently, Athens and Sparta fought for supremacy in Greece with varying success, until the whole country fell under the domination of Macedonia, about 340 B.C. Sparta passed, 146 B.C., under Roman rule.

SPAVIN is a vague term denoting something wrong with the hock of a horse. It occurs in two forms: (1) *Bog Spavin*, an acute synovitis common in young horses worked too soon; (2) *Bone Spavin*, a chronic disease of the hock met with in old horses in which a chronic inflammation of the joint has resulted in the formation of bone around it. In both cases lameness results, and rest is essential. The treatment should be left to a veterinary surgeon.

SPECIFIC GRAVITY, the ratio of the weight of a given volume of any substance to that of an equal volume of some particular substance taken as the standard. In the cases of gases, Hydrogen is taken as the standard of comparison, and water for liquids and solids. Thus, taking water as unity, the specific gravity of gold is 19·3, that is, gold is 19·3 times as heavy as water, bulk for bulk; or the *density* of gold is 19·3 times that of water.

SPECTACLES are needed in certain cases of defective vision to assist the eye in focussing the rays of light on to the retina. In "far-sightedness," a common defect of advancing age, the rays of light from near objects are not sufficiently refracted by the ordinary organism of the eye, and tend to converge to a focus beyond the retina. In such cases convex lenses of suitable curvature remedy the defect. The eyes of short-sighted persons have too much convergent power, and naturally an image of the object looked at is formed in front of the retina. Concave lenses enable the eye in such cases to focus the image on the retina itself.

SPECTATOR, THE, a periodical founded by Richard Steele and Joseph Addison, published daily from March, 1711, to December, 1712, and revived by Addison from June to December, 1714. Politics were excluded. The publication contained essays on literature, religion, manners, etc. Among the best were Addison's essays on Milton, and the papers which introduced Sir Roger de Coverley.

SPECTROSCOPE, an instrument for analysing the light proceeding from any luminous body. The simplest form is that known as the "direct-vision spectroscope." It consists of three tubes which are joined together when the instrument is in use. At the end of the first tube is a narrow slit through which a pencil of the light to be examined is admitted. This passes into the second tube through a convex lens so placed that the narrow slit is situated in its principal focus, and consequently the emergent rays are parallel. The second tube contains a series of prisms of flint glass and crown glass arranged alternately. The light, in passing through these, undergoes dispersion, and forms a spectrum (*which see*) which is viewed through a compound eye-piece in the third tube.

SPECTRUM, the name given to a band of light which has entered through a narrow slit, and been projected on a screen in a darkened chamber, after undergoing dispersion in passing through a prism or prisms placed in its path. In the case of white light, such as sunlight, the electric-light, or lime-light, the spectrum is composed of a series of coloured bands arranged in the following order—red, orange, yellow, green, blue, indigo, and violet. Red light gives a red spectrum, green light a green spectrum, and so on.

SPECTRUM ANALYSIS. It is found that the spectra produced by the light from glowing vapours or gases consist of bright lines crossing a dark band. These lines, called from their elucidator Fraunhofer lines, occupy a definite position relatively to the continuous spectrum of white light, and are different in colour and position for different substances. Every gas in a state of incandescence produces its own characteristic lines or group of lines. Moreover, if more than one gas be present, the characteristic lines of all may be distinguished in the resulting spectrum; so that, if it is required to discover the elements of which a compound substance is composed, it is only necessary to reduce the substance to a condition of glowing vapour by the application of heat, and examine the resulting spectrum. The lines of the spectrum will at once reveal the composition of the substance.

SPEKE, JOHN HANNING, *b.* in Somersetshire, 1823, *d.* 1864, a celebrated African explorer. After serving with distinction in the army of the East Indian Company he joined Burton in an exploring expedition into Somaliland in 1854, and four years later the two attempted to trace the Nile to its source, and discovered the Victoria Nyanza. In 1859 Speke undertook another expedition, this time with Grant as his companion, for the purpose of verifying his supposition that this lake was the real source of the Nile. He published the results of his observations in a book entitled a "Journal of the Discovery of the Source of the Nile," 1863.

SPENCER, HERBERT, *b.* at Derby, 1820, *d.* 1903, an eminent scientist, and the greatest English philosopher of recent times. He began life as a civil engineer, but relinquished that calling for journalism, and contributed regularly to the "Economist," the "Westminster Review," and the "Edinburgh." In 1860 he published the outlines of a new system of philosophy based on the doctrine of evolution. His "First Principles of a system of Philosophy" followed in 1862, and the next twenty years were devoted to the "Synthetic Philosophy," which was published in twelve volumes. Life, conduct, society, ceremonial, political and ecclesiastical institutions are all treated from the standpoint of the evolutionist.

SPENSER, EDMUND, *b.* in London, 1552, *d.* 1599, a celebrated English poet. The "Shepherd's Calendar" appeared in 1579, and was dedicated to his friend and patron, Sir Philip Sidney. His greatest poem, the "Faërie Queene," was to have consisted of twelve books, but only six exist. (See *Faërie Queene.*)

SPERMACETI, an oily fluid obtained from two large cavities in the head of the sperm-whale. It solidifies on exposure to the air. After being refined the substance is employed in the preparation of ointments, and also for the manufacture of candles.

SPEZIA, the principal naval station of Italy, stands at the head of a magnificent harbour, about 50 miles south-east of Genoa. The town contains a naval arsenal, gun foundries, and a dock-yard.

SPHINX, THE, an immense figure, exceeding 170 feet in length and 100 feet in height, hewn out of the rock in the vicinity of the group of pyramids at Gizeh, Egypt. The body and paws are those of a lion, the face and breast those of a woman. The face impresses by its calm dignity, and the whole figure by its sovereign power. The monument is considered one of the most ancient in Egypt. The shifting sands of the surrounding desert are constantly covering it, and it is found necessary to clear them away at intervals.

SPICE ISLANDS. See *Moluccas.*

SPICES, the name given to certain vegetable productions, such as pepper, cloves, cinnamon, nutmeg, etc., all of which contain an essential oil that gives to the substance an aromatic odour, and a hot pungent flavour. They are derived from various parts of plants—the fruit, the seed, the bark, and the root. The largest supply is obtained from the East Indian Archipelago.

SPIDERS are small animals (not insects) in which the head and thorax are united into a single division, which is joined to the abdomen by a narrow stalk. The spinnerets are situated near the hinder end of the abdomen. In the common house-spider each spinneret contains as many as 400 holes from each of which issues a minute filament of the material of which the web is composed, the filaments forming strands which are pressed together by the animal's hind legs to produce the threads of the web. Of the many species of spiders the most remarkable, perhaps, is the trap-door spider, which is common along the Mediterranean shores, and in California and Jamaica, and which excavates for itself a home in the ground, cleverly closed by a hinged trap-door composed of layers of earth and web.

SPIKENARD, or **NARD**, a perfume derived from a plant of the order *Valerian*, growing on the Himalayas at a height of from 10,000 to 17,000 feet. A similar plant is found high up in the Alps. Oils and unguents perfumed with spikenard are still popular in the East, and are very costly.

SPINNING is the art of reducing the fibres of silk, wool, cotton, or flax into fine threads of uniform size ready for the weaver. This was formerly accomplished by hand, at first with the aid of the spindle and distaff, and afterwards with the help of the spinning-wheel. With such primitive apparatus the spinner was able to produce only a single yarn at a time, but the inventions of Arkwright and Crompton changed all this, and gave a tremendous impetus to the various textile manufactures.

SPINOZA, BARUCH, *b.* at Amsterdam, 1632, *d.* 1677, was educated for the rabbinical office, but his study of Descartes and other philosophic writers led him to

question portions of the Jewish faith, and he was excommunicated from the Jewish Church. At the Hague he gained a livelihood by polishing the lenses of optical instruments, and devoted his leisure to the study of philosophy. His principal works were published after his death. In his "Ethics" he attempted to develop his views by geometrical methods, starting with certain definitions and axioms, and then proceeding to state and demonstrate his propositions one by one.

SPION KOP, a rugged hill on the left bank of the Tugela, Natal. The hill was captured by General Buller's forces in their attempt to release Ladysmith, on the night of January 23rd, 1900. During the next day the summit was exposed to such a terrible fire from the Boer guns that Colonel Thorneycroft, in the evening, withdrew his men, and the British recrossed to the right bank of the Tugela.

SPIRES, or SPEYER, an ancient city in Bavaria, on the left bank of the Rhine. At a diet of the German princes, held here in 1529, the Act of Toleration, passed in 1526, was annulled. The minority prepared a protest on the ground that the diet had overstepped its authority in thus annulling what had been unanimously passed three years previously. This *protest* is the origin of the word "Protestant" as applied to a religious body.

SPIRITUALISM, in its modern form, originated in America, which is still the head-quarters of the cult, in 1848, and was introduced from that country into England in 1852. Its adherents, who now number many millions in all parts of the world, and include many eminent scientists, profess to be able to communicate, through certain of their members, known as mediums, with the spirits of the dead. The latter are said to manifest their presence by spirit-rapping, spirit writing, drawing, and photography, and by lifting and moving heavy bodies. The "Society for Psychical Research" was founded in 1882 "for the purpose of making an organised attempt to investigate that large group of debatable phenomena designated by such terms as mesmeric, psychical, and spiritualistic."

SPITALFIELDS a district in the east of London forming part of the borough of the Tower Hamlets. It took its name from the spital or hospital of St. Mary, founded there in the 12th century. After the revocation of the Edict of Nantes a number of French Refugees settled in the district and introduced the art of silk-weaving, for which Spitalfields was long famous. A few looms are still at work on the outskirts, but the staple industry now is the manufacture of boot and shoes.

SPITHEAD, the eastern portion of the strait separating the Isle of Wight from the mainland, receives its name from the *Spit*, a sandbank which runs out for a distance of three miles from the coast of Hampshire. Spithead forms a sheltered roadstead, and as such is much used by the ships of the British navy.

SPITZBERGEN, an archipelago of five large and several smaller islands, situated in the Arctic Ocean, about 400 miles north of Norway. During the short summer the islands are visited by Norwegian and Russian seal fishers and fur hunters.

SPOHR, LOUIS, *b.* in Brunswick, 1784, *d.* 1859, a celebrated violinist and musical composer. He composed operas, oratorios, and several works for his favourite instrument. His best known oratorios are the "Last Judgment," the "Fall of Babylon," and "Calvary."

SPONGES, as used for toilet and other purposes, are the skeletons of an aggregation of minute marine animals. The lower part of the animal, which is usually of a cylindrical shape, becomes attached to a stone or rock, or to the horny remains of crustaceans. When a number of these animals grow closely pressed together their outer walls partly coalesce, but a number of spaces are left into which the pores from each animal open. In this way is gradually built up a system of tubes and smaller pores freely communicating with one another, the framework of which is composed of a horny, elastic tissue secreted by the animals. The principal sponge fisheries are in the eastern part of the Mediterranean and round the West Indian Islands.

SPONTANEOUS GENERATION. See *Abiogenesis.*

SPORES are the first stage in the life history of the lower plants—seaweed. fungi, mosses, and ferns. Just as the flowering plants grow from seeds, so do the lower plants from spores. The masses of brown powder on the under side of the frond of a fern are the most familiar examples of spores. Spores are microscopic in size, and are scattered when ripe either by the wind or by water. The spores of some fungi and seaweeds are capable of swimming actively in the water and thus effecting their own dispersal. This is one of the few examples in the plant world of the power of free movement, which is so common in the animal world; hence such spores are termed zoospores. Most spores present remarkable vitality, withstanding boiling, freezing, or desiccation.

SPRINGS are discharges of water which has accumulated underground. Part of the water that has fallen as rain has penetrated through pervious strata of rocks until it has met with an impervious stratum. If this is slightly inclined the water flows along between the two strata to reappear at length at the surface, most probably on the side of a hill. Springs formed in this way are dependent on the local rainfall, and cease to flow in a season of drought. In other cases, springs are derived from large, deep-seated accumulations of water, the gathering ground for which is spread over an extensive area. From the subterranean reservoirs the water finds its way to the surface through cracks and fissures, and produces a spring of perennial character. Such springs may be hot or cold. The waters of some *thermal* springs, as in the case of the Geysers of Iceland and the Rocky Mountains, the hot springs of New Zealand, etc., are at boiling point when they reach the surface. The hot springs of Bath have a temperature of 120° F., those of Buxton of 82° F. All hot springs and many cold ones contain salts in solution, and, for this reason, many of them are of medicinal value. Harrogate waters are sulphurous, the Buxton springs and those of Tunbridge Wells contain salts of iron, while the brine springs of Cheshire and Worcestershire are impregnated with common salt.

SPURGEON, CHARLES HADDON, *b.* at Kelvedon, Essex, 1834, *d.* 1892, a famous Nonconformist preacher. In 1854 he was invited to become the pastor of a Baptist chapel in Southwark. His fame spread to such an extent that it was eventually found necessary to erect the Metropolitan Tabernacle, a building capable of accommodating 6,000 persons. Here he preached to thousands weekly, and influenced thousands of others by printing his sermons and circulating them throughout the Empire. He founded the Pastors' College, the Stockwell Orphanage, and a number of other institutions.

SPURS. Modern spurs are not so formidable as their predecessors, in fact, they have become little more than ornaments to the horseman's heel; for, though commonly worn by huntsmen, jockeys, and cavalry soldiers, they are used as goads to the horses only in extreme cases. To the skilled rider, however, they are of great value, as a slight pressure with the calf of the leg makes the horse respond promptly once he is aware that his rider wears spurs. In the days of chivalry, the knight was distinguished from his squire by wearing spurs of gold or silver gilt. The squire who attained his knighthood by his gallantry was said to "win his spurs," and he who disgraced his order might be degraded by having his spurs publicly struck from his heels.

SPY, a person sent secretly into an enemy's country or encampment to obtain information with regard to the strength and distribution of his forces, the position and nature of the fortifications, and the number and calibre of the guns, etc. Although the employment of such persons by belligerents is recognised by international law, when captured, the spy is liable by martial law to capital punishment. In consequence of the dishonour that attaches to the occupation, owing to the treachery that must necessarily be exercised, and also on account of the risks attending it, a general may not compel any of his subordinates to act the part. The spy must volunteer for the work, and his services are usually procured by the offer of large rewards.

SQUADRON. (1) In the army, a squadron is the principal division of a regiment of cavalry, and consists of two troops, each of from 60 to 100 men. (2) In the navy, a squadron consists of a portion of a fleet employed for some special service, or placed on a particular station under the command of a flag officer.

STAËL, MADAME DE, *b.* in Paris, 1766, *d.* 1817, a celebrated French authoress. She first obtained public notice by her "Letters on the Works and Character of Rousseau," published in 1788. Though in sympathy with the Royal Family she continued to reside in Paris during the period of the Revolution, exerted herself on behalf of the victims of the Reign of Terror, and wrote a powerful appeal in favour of the Queen. The views on Napoleon and his work expressed in her writings led to her banishment from Paris, and after the publication of "Corinne," in 1807, she was expelled from France. Her famous work on Germany was published in London in 1813. After the fall of Napoleon she returned to Paris and there wrote "Ten years of Exile," and three volumes of her "Memoirs of the Revolution," a work that was not completed at her death.

STAFFA, a small island of the Inner Hebrides, lying to the west of Mull, and famous for its basaltic pillars and caverns, especially Fingal's cave, the entrance and sides of which are composed of gigantic pentagonal and hexagonal columns.

STAGGERS, a disease in sheep indicated by the animal's reeling in walking. It is due to the presence in the brain of the immature embryo of a species of tapeworm that, in its perfect form, inhabits the intestines of dogs. The eggs of these tape-worms are swallowed by the sheep, are partially developed in the stomach, and from thence find their way into the brain tissue. The term is also popularly applied to several diseases of horses, especially to inflammation of the brain, known as "mad or sleeping staggers," and to an acute form of indigestion, commonly called "stomach staggers."

STALACTITES are conical masses of calcareous matter hanging from the roofs of limestone caves. They are produced by water, containing carbonic acid and

chalk in solution, which filters through the roof of the cavern; on exposure to the air, the carbonic acid evaporates, and the chalk is precipitated. The stalactite grows by the addition of fresh material brought by the water trickling over it, and as the base is much older than the apex, it acquires a conical shape with the point downwards. The water dripping from the stalactite on to the floor of the cavern produces a similar chalky deposit there, which gradually rises as a column known as a *stalagmite*. Eventually stalactite and stalagmite unite into a continuous pillar.

STAMBOUL, i.e., "the city," the name given by European Turks to Constantinople, and the name commonly given to the oldest part of the city.

STAMFORD BRIDGE, a village on the Derwent, in Yorkshire, the scene of Harold's victory over the invaders led by his brother Tostig and the king of Norway, 1066.

STAMP ACT, an act passed by the English Parliament in 1765, which required that all legal documents used in the Colonies should bear government stamps. It was resisted by the American colonists and was repealed in the following year.

STAMPS. The credit of the invention of the adhesive postage stamp has been claimed both for Sir Rowland Hill and for Mr. James Chalmers, a bookseller of Dundee. Sir Rowland Hill recommended their use in a pamphlet on post-office reform, published in February, 1837, and soon after the "Penny Post" was introduced, and the franking of letters abolished adhesive stamps were adopted as part of the scheme of reform. The first English postage stamp was black, and was introduced in 1841. Since that date there have been many changes in design and colour. Stamp collecting, which is now such a wide-spread hobby, first became popular about the year 1861. There are now several philatelic societies, and special journals are published in the interests of collectors.

STANDARD, BATTLE OF THE, was fought near Northallerton, Yorkshire, 1138, and received its name from the circumstance that a sacred standard, composed of the banners of three Saxon saints, was erected on the battle-field. David of Scotland, who had invaded the north of England on behalf of his niece Matilda, was defeated by the forces raised by Thurston, Archbishop of York.

STANDISH, MILES, *b.* in Lancashire, 1584, *d.* 1656; one of the "Mayflower" emigrants to Massachusetts in 1620. As long as he lived he was the soul of the resistance to the Indians, who often tried to raid the little colony. His courtship of his second wife has been immortalised by Longfellow.

STANLEY, ARTHUR PENRHYN, *b.* at Alderley, Cheshire, 1815, *d.* 1881, was Dean of Westminster from 1863 till his death. He was a leader of the "Broad Church" party. His published works include "Life of Dr. Arnold," "Sinai and Palestine," "Historical Monuments of Westminster Abbey," and various lectures on religious subjects.

STANLEY, SIR HENRY MORTON, *b.* near Denbigh, 1840, *d.* 1904, a famous African explorer. Stanley is a conspicuous instance of a "self-made man." He was of obscure parentage, worked his way to America as cabin-boy, and in course of time became a newspaper correspondent. In 1871, being sent by the proprietor of the New York Herald to "find" Livingstone, he met him at Ujiji, and accompanied him in one of his exploring expeditions. He explored the lake region of Equatorial Africa, and discovered the Albert Edward Nyanza. But his greatest feat was the voyage he made through the heart of Africa on the Congo, thus clearing up the mystery of its source and course, 1876-77. Ten years later he led the "Emin Relief Expedition," returning to Europe with Emin Pasha, the object of his quest, in 1890. His various journeys were described in his books, "The Congo and its Free State," and "In Darkest Africa," and also formed the subjects of a series of lectures delivered by him in England and America.

STANNARIES, tin mines (L. *stannum*, tin). The antiquity of the tin mines of Cornwall, reaching back to a period long before Julius Cæsar, has caused Cornish local customs and rights to enjoy a continuance hard to equal in the world. In the reign of Edward I. a charter was given to the Cornish tinmen, granting them their own courts for all suits except those relating to life, limb, or land. This was the origin of the Stannary Parliament, which, though remodelled in 1836, has still wide powers over the tin districts.

STAR OF INDIA. Refer to *Index*.

STARCH is a white substance composed of granules, each of which consists of a number of layers arranged around a central nucleus. It is widely diffused throughout the vegetable world, and is especially abundant in potatoes, the various cereals, arrow-root, etc. It forms one of the most valuable of the class of foods known as carbo-hydrates that are chiefly concerned in the production of animal heat and energy. In the process of digestion the starch in the food is rendered soluble by the action of the saliva and of pancreatic juice. Starch for domestic purposes is prepared chiefly from potatoes.

STAR CHAMBER, a court that was either created or remodelled by Henry VII., received its name from the fact that the ceiling of the room in which it first met was ornamented with a number of gilt stars. At first it provided a check for influential offenders against the law, who were able to intimidate the ordinary courts; but in the reign of Charles I. it supported that monarch in his unconstitutional methods, and was abolished by the Long Parliament in 1641.

STARS, with the exceptions of the planets, are distant suns, the distance of some of the nearest being more than 500,000 times the distance of the earth from the sun. According to their brightness they are classified as being of the first, second, third, down to the sixteenth magnitude. Only those of the first six classes are visible to the naked eye, and of these there are about 3,000. Powerful telescopes reveal more than 20 millions, 18 millions of which go to form the Milky Way. Some are white in colour, others yellow or orange, others red, and others blue or green, but these various tints are, as a rule, only perceptible when the stars are viewed through a telescope. The stars have been grouped into constellations, to each of which the ancient astronomers gave some fanciful name, according to the object the group was supposed to represent. Of these, twelve are visible in both the northern and southern hemispheres, and are known as the Zodiacal Constellations. The principal constellations in the Northern Hemisphere are the Great Bear, the Lyre, the Lady's Chair (Cassiopeia), and the Eagle. In the Southern Hemisphere the chief constellations are Orion and the Southern Cross. Some stars are so intimately connected that each revolves round the other. These are known as *double* or *multiple* stars.

STARS AND STRIPES, the national flag of the United States of America. It is composed of red and white horizontal stripes with a number of white stars let into a blue ground in the upper corner nearest the staff. Thirteen stripes and thirteen stars were taken to represent the thirteen original States of the Union, and a star has been added for each State admitted since.

STATIONERS HALL, the hall of the "Worshipful Company of Stationers," situated in Ave Maria Lane, London. It is customary for the proprietors of any literary or artistic work to register his name as such at Stationers' Hall. Such registration does not now confer a copyright—the proprietor is invested with that by the act of publication—but it empowers him to take proceedings against those who infringe his copyright, for the certified copy of the entry in the register is admitted as evidence of proprietorship.

STAUNTON, HOWARD, *b.* 1810, *d.* 1874, a celebrated chess player who became the chess champion in 1848. His books, the "Chess Player's Handbook," "Chess Player's Companion," and "Chess Praxis" did much to popularise the game. He was also famed as a Shakespearian scholar, and published an annotated edition of the poet's works.

STEAD, WILLIAM THOMAS, *b.* 1852, an enterprising journalist the first to introduce the interview into the English press, thus founding what is called "the new journalism." In 1890 he started the "Review of Reviews," and in 1903 the "Masterpiece" Penny Library of poets, novels, and classics. He has since been occupied with psychical research, and claims to have proved the continued existence of deceased friends.

STEAM is the vapour obtained by heating water to the boiling-point. It is dry, transparent, and invisible. The cloud or mist popularly known as steam, is produced only when the vapour mixes with air at a lower temperature than itself, and is due to condensation. In passing from the liquid to the gaseous condition steam absorbs a considerable quantity of heat, which is given up again when condensation takes place. This is known as the latent heat of steam, and is of service in cookery, the steam becoming condensed as it passes through the substances cooking in the steamer. But the property of steam that renders it of greatest service to man is its elasticity, that is, the resistance it offers to compression. When produced at a temperature of 212° F. this elastic force is just sufficient to resist a pressure of one atmosphere, or about 15 lbs. on the square inch; but if the volume of the gas be compressed to one-half, the force is doubled; if to one-third, trebled; and so on. The immense energy of steam may be understood when it is considered that a cubic foot of water is convertible into 1,662 cubic feet of steam.

STEAM ENGINE, a machine that converts the energy derived from the combustion of various kinds of fuel into mechanical work through the agency of steam. There are two principal types, the condensing, or low-pressure engine, and the non-condensing, or high-pressure engine. The *condensing engine* contains three essential parts, the boiler, the cylinder, and the condenser. The steam is generated in the boiler, and is led at a high pressure, by means of the steam-pipe, into a box called the valve-chest placed by the side of the cylinder. In the side of this chest there are three openings, or *ports*, that are opened and closed alternately by means of a slide-valve containing a hollow. The upper port communicates with the upper end of the cylinder, the middle one with the con-

denser, and the lower one with the lower end of the cylinder. The steam admitted into the cylinder through the upper port exerts a pressure on that side of the piston, and drives it forward until it has almost reached the limit of its downward stroke, by which time the slide-valve has closed the upper port and opened the lower one. The steam above the piston escapes into the hollow in the slide valve and passes thence into the condenser. The pressure being thus removed from the upper side, the elastic force of the steam admitted into the lower end of the cylinder, through the lower port, drives the piston to its original position. This forward and backward motion of the piston is communicated to a beam by means of a connecting rod, or is converted into rotary motion by means of various mechanical contrivances. In the condenser the escaping steam meets with a jet of cold water, by means of which it is condensed, the resulting warm water being pumped out into a reservoir by means of the air-pump worked by the engine. Part of the warm water becomes the feed-water for the boiler, and the remainder is run off. Uniformity of speed is obtained by means of a fly-wheel, and also by employing various forms of "governors," which open a throttle-valve automatically, and thus allow of an escape of steam when the speed of the engine exceeds a certain limit. In the *non-condensing engine* the cylinder is exhausted of steam into the open air. This class is more compact, and of simpler construction, there being fewer working parts; but, since the piston at each stroke has to overcome the pressure of the external air in exhausting the cylinder of steam, there is a greater consumption of fuel for the same amount of effective work than when the condensing engine is employed. Still, it lends itself to conditions in which the other type would be impracticable, and is largely used where portable engines are necessary, as on wharves and quays, and for locomotives and traction purposes generally.

STEAM HAMMER, THE, is of immense service in the forging of heavy guns, armour plates, etc. The first that came into extensive use was that patented by Nasmyth, in which the hammer head was attached to the piston rod. Condie's was intended to remove certain weaknesses that became apparent in the earlier forms, particularly the frequent breaking of the piston or piston rod owing to the fact that the jar of each stroke of the hammer was transmitted to those parts. The anvil is placed between two upright wrought-iron standards which are joined at the top. The piston-rod is fixed to this framework. The steam cylinder is movable, and the hammer face is dovetailed into its lower end. Steam is admitted into the movable cylinder above the piston, and its elastic force causes the cylinder to rise between the guides to the required height. An exhaust valve is then opened, the steam escapes, and the cylinder with the hammer attached descends by its own weight. The air compressed between the lower end of the cylinder and the piston gives, by its expansion, an additional impetus to the blow, and in the more powerful hammers an increased striking force is obtained by admitting steam below the piston. The attachment of certain mechanism enables the workman in charge to cause the hammer to fall from any point in its ascent, or to arrest the blow at any point in its descent, thus providing for the striking of blows of various degrees of force. These improvements were due to Mr. Wilson.

STEEL occupies an intermediate position between wrought iron and cast iron; it contains more carbon than the former, but less than the latter, so that it may be prepared from either of those substances, by the addition of carbon to the wrought iron, or by removing the impurities from the cast iron. In the older process for the preparation of steel, which is known as the *cementation process*, the converting chest is filled with alternate layers of powdered charcoal and wrought-iron bars, and the whole is then kept at a red heat for several days, the length of time depending on the services for which the steel is required. At the conclusion of the operation the bars are brittle, and are covered with blisters, from which circumstance the steel thus prepared is known as blistered steel. The *Bessemer Process* is the one more generally employed now. It is carried out in a large pear-shaped vessel called a "converter." Into this a quantity of molten cast iron is run, and a powerful air blast is admitted from below until the whole of the carbon and other impurities have been burnt, a condition of affairs that is indicated by the dying out of the flames at the surface of the molten mass. The blast is then shut off, and molten cast iron, containing sufficient carbon to convert the whole charge into steel, is added. The blast is again turned on for a few moments to ensure that the materials are thoroughly mixed. The contents of the converter are then cast into ingots. These are afterwards heated to redness and beaten or rolled into bars. The capacity of the converter varies from 3 to 7½ tons, and several charges may be dealt with every day. Since the introduction of this process the iron and steel industry has progressed to such an extent as to become, next to agriculture, the most important in the United Kingdom, employing, according to the census returns of 1901, upwards of 216,000 persons.

STEELE, SIR RICHARD, *b.* at Dublin, 1671, *d.* 1729, spent his early life in the army, and resigned his commission in 1706 to devote himself to literature and politics. In 1709 he founded the "Tatler," which appeared three times weekly, and contained brightly written essays on social subjects, the greater number of which were written by Steele. The "Spectator" and the "Guardian" were other literary ventures of the same character, in the production of which he was assisted by his friend Addison. He was also the author of several successful comedies.

STEELYARD, (1) An instrument that provides a ready method of weighing substances without the use of a set of standard weights. It consists of a bar of steel, weighted at one end, so that it balances about a point that is much nearer to the heavier end than to the other. From the shorter arm is suspended a scale-pan or a hook, by means of which the substance to be weighed is supported. A single weight is moved along the graduated longer arm until the steelyard occupies a horizontal position, when the true weight of the substance being weighed is indicated, by the figures marked on the longer arm, at the point at which the constant weight produced equilibrium. (2) The name given to a factory, situated in London, between Thames Street and the river Thames, which belonged to a body of German merchants, known as "Merchants of the Steelyard." They enjoyed various commercial privileges which practically gave them a monopoly of certain branches of trade. They were deprived of their special privileges in 1551, but continued the business of the Steelyard until 1597. The premises remained in the possession of the free towns of Lübeck, Hamburg, and Bremen until 1853.

STEEN, JAN, *b.* 1626, *d.* 1679, a Dutch painter of Leyden, is remarkable for the amount of humour he managed to throw into his pictures. Seizing on some incident in every-day life, he would depict it with a fidelity excelled by Rembrandt alone. His "Doctor Visiting his Patient," and the "Music Master," well illustrate his uncommon gifts. His works are numerous.

STEEPLECHASE, a horse-race in which the competitors have to surmount obstacles, such as hedges and ditches, in order to reach the winning-post. The first race of the kind was run in Ireland by a party of fox-hunters, who actually made a distant steeple the goal of an impromptu race. Such matches soon grew in favour, and steeplechasing became a recognised branch of horse-racing. The various meetings are under the management of the Grand National Hunt Committee.

STEEPLE-JACK, a man who makes it his business to climb steeples and tall chimneys in order to execute repairs.

STEERING, the art of managing a boat or ship so as to keep her head in the required direction. The importance of the steersman's position lies in the fact that even a slight deviation from the proper course makes the journey appreciably longer. The steering is effected by means of a lever suspended perpendicularly in the water behind the vessel, and swinging on an upright in the stern. It is actuated in a boat or small ship by a lever called the tiller, which is a continuation of the rudder forwards into the body of the ship, where it swings in a horizontal plane. In a large ship, the tiller is moved by means of a wheel and connecting chains. In steamships the paddle, or propeller, is largely used to aid in quickly turning the ship.

STENCILLING, a method of printing or executing designs by means of letters or patterns cut out in a thin sheet of metal. The sheet of metal with the letters or pattern cut out, called a stencil, is laid on the surface to be marked, and a brush with the desired colour passed rapidly over it.

STENOGRAPHY, See *Shorthand.*

STENTOR, in Greek legend, a herald of the Greeks in the Trojan War, whose voice was as loud as that of fifty men shouting together. Hence an unusually loud voice is called "stentorian."

STEPHEN, KING OF ENGLAND, (1135-1154), son of Adela, the Conqueror's daughter, was crowned king on the death of Henry I., to the exclusion of the latter's daughter, Matilda, and her son, Henry. The principle of primogeniture was not yet sufficiently established to make men take Matilda's side as a matter of pure right, so that men sided with her or Stephen as their interest or inclination prompted. The struggle between the two parties went on with varying success till 1153, when by the treaty of Wallingford it was agreed that Stephen should reign during his lifetime and be succeeded by Prince Henry, son of Matilda.

STEPHEN, SAINT, the first Christian martyr, was one of the seven deacons chosen to administer the funds of the early Christians, so as to leave the Apostles free for their more important work of preaching. Our whole knowledge of him is gained from the Acts (vi. and vii.).

STEPHEN, SIR LESLIE, *b.* 1832, *d.* 1904; became as eminent in literature as his brother, Sir James Stephen, was in the law. He was for some years editor of the "Dictionary of National Biography." Of his independent work may be mentioned, "Hours in a Library," and his "Johnson," "Pope," and "Swift" in the "English Men of Letters."

STEPHENS, JAMES, *b.* at Kilkenny, 1824, *d.* 1901; was destined, at forty, to

be spoken of with bated breath, and at seventy-seven, to die unnoticed. As "Head Centre" of the Fenian movement, he showed much skill in organisation and in directing the energies of a secret society. But when action was required, his courage failed him, and he fled to New York. He afterwards returned to Ireland, where he ended his days in obscurity.

STEPHENSON, GEORGE, *b.* at Wylam, near Newcastle, 1781, *d.* 1848, the great improver of the locomotive steam-engine, was one of six children whose father earned twelve shillings a week. In his early years George worked as fireman to a colliery-engine, and spent his evenings in learning to read, write, and calculate. Meanwhile he made a minute study of his engine. His first great step in life was gaining, in 1812, the post of engineer at the Killingworth Colliery. His first engine, "My Lord," was used to draw the coal from that colliery to the sea. He was next appointed engineer on the Stockton and Darlington Railway, opened in 1825, the first to carry passengers as well as goods by steam traction. He gained the prize offered by the directors of the Liverpool and Manchester Railway for the best locomotive, his "Rocket" making the trial trip at the rate of 29 miles per hour. His life henceforward was spent in advising on the numerous railway schemes which soon covered the country with a a network. His "safety lamp" the "Geordie," for mines, which some preferred to the "Davy lamp," should also be mentioned.

STEPHENSON, ROBERT, *b.* at Willington, near Newcastle, 1803, *d.* 1859, son of George Stephenson, was born in his father's struggling days. That father, however, sacrificed much to give his son the education he felt the lack of so keenly himself. Robert aided his father in constructing the "Rocket," and became chief engineer of the London and Birmingham Railway. His fame is bound up with the viaducts and bridges he constructed for railways, the High Level Bridge at Newcastle, the Britannia Tubular Bridge over the Menai Straits, and the Victoria Bridge at Montreal, being striking examples. He represented Whitby in Parliament from 1847 till his death. He was buried in Westminster Abbey beside Telford.

STERE, the unit of cubic measurement in the French, or decimal system of Weights and Measures. It is a cubic metre, and equals 35·32 cubic feet.

STEREOSCOPE, an optical instrument for viewing photographs so as to give the appearance of solidity to the resulting picture. Two photographs are taken instead of one, from points distant from one another as far as the centre of one eye is from that of the other. The photographs are then so arranged on a card behind a couple of lenses that each eye sees exactly the picture it would have seen from the original position of the lenses. It was Professor Wheatstone who first suggested the possibility of making stereoscopic pictures.

STEREOTYPING, the process of producing a solid cast of a page of ordinary type. Its utility lies in the fact that it saves the wear of the ordinary movable type, whilst the plates can be kept to produce further copies if required. William Ged, of Edinburgh, invented in 1725 the older, or stucco process. Setting up the page of movable type, he covered the surface with a thin layer of oil. He then poured over it stucco mixed to the consistency of thick cream, and allowed this to harden. The impression was then removed, and baked hard, after which it was ready to give casts in type-metal for printing. The present, or papier-maché process, is practically the same, except that the impression is taken with a pad of carefully-prepared papier-maché. It is the art of stereotyping that has rendered possible the production of newspapers at their present rapid rate.

STERNE, LAURENCE, *b.* at Clonmel, Ireland, 1713, *d.* 1768, was the son of a lieutenant in the English army. After being educated at Halifax Grammar School, he went to Cambridge with a view to taking holy orders. From 1738 to 1759 he worked as a simple country parson at Sutton, near York. In 1760, the production of the first two volumes of "Tristram Shandy" made him famous, and from that time till his death he revelled in his own popularity. In 1762 he published the first two volumes of the "Sentimental Journey through France and Spain." His work is marked by exquisite humour and marred in parts by coarseness.

STETHOSCOPE. See *Med. Dict.*

STETTIN, an important port and manufacturing town of Germany, on the Oder, about 30 miles from the Baltic Sea. One of the chief seaports of Prussia, its imports and exports together amount to about £14,000,000 per annum. The imports include petroleum, dried fish, wine and cotton; the exports consist mainly of sugar, metals, timber, corn, spirits and flour; population about 220,000.

STEVENSON, ROBERT, *b.* at Glasgow, 1772, *d.* 1850, an eminent Scottish engineer whose life was mainly passed in the designing and constructing of lighthouses. His great achievement was the construction of the Bell Rock Lighthouse, off the coast of Forfarshire, a task hitherto deemed impracticable. He invented the "flashing" and "intermittent" system of lighting. His works on engineering were highly thought of in their day.

STEVENSON, ROBERT LOUIS, *b.* at Edinburgh, 1850, *d.* at Samoa, 1894, was one of the most engaging writers of the 19th century. Grandson of the famous engineer, Robert Stevenson, he was trained for the same profession, but his physical strength was not equal to the necessary strain. He turned nominally to the bar, but it was soon seen that authorship was his vocation. After writing many essays and articles of high merit, he sprang into the front rank of romance writers with his "Treasure Island," which was followed by many stories of almost equal charm. His chief works include "Virginibus Puerisque," "Dr. Jekyll and Mr. Hyde," "Kidnapped," and "The Master of Ballantrae." His "Child's Garden of Verse" also made a favourable impression when it appeared.

STEWARD, LORD HIGH. Refer to *Index.*

STILL, an apparatus for distillation, i.e. for converting a liquid into vapour, and then again condensing it. It consists of a boiler, a neck, a condenser, and a receiver, and the size and material of these depend on the nature and quantity of the liquid to be operated on. It may be used to separate a liquid, say water, from its impurities, as we do in a chemical laboratory, or one liquid from another by taking advantage of their different boiling points, as in a distillery, but in both cases the principle is the same.

STILTON, a small village in Huntingdon county, 6 miles from Peterboro'. It gives its name to a favourite English cheese, which is, however, mostly made in Leicestershire.

STIVER, an old Dutch coin equivalent to a penny, being the one-twentieth part of a guilder. A new system of Dutch coinage came into force in 1875 (Refer to "Coinage" in *Index*).

STIRLING, is strikingly situated on the river Forth, about 30 miles from Edinburgh. The castle, standing on an eminence some 300 feet above the surrounding plain, is a landmark for miles around, and has been the scene of many important events in Scottish history; while Bannockburn, Cambus-Kenneth Abbey, and the Abbey Craig, on which stands the Wallace Monument, are within easy distance; population 18,000.

STOCK EXCHANGE, a market for the purchase and sale of stocks and shares of every description. Every commercial city of importance has now its stock exchange, and in the main their features are alike. The London Stock Exchange is a large building in Capel Court, near the Bank of England. The present building dates from 1801; previous to that business was transacted partly in a room of the Bank of England, and partly in the streets near it. Refer to "Stock Exchange" in *Index.*

STOCKHOLM, the capital and largest town of Sweden, stands on some islands, and on both sides of the channel by which Lake Malar pours its waters into the Baltic. The situation is one of the most picturesque in Europe, and it has also the advantage of being exceedingly healthy. Founded in 1255, it is only in recent times that Stockholm has been recognised as the capital of Sweden, but in size and importance it far surpasses all its competitors. Its population has increased from 75,000 in 1800 to 300,000 at the end of the century. The exports, consisting chiefly of iron, timber, and copper, do not amount to £2,000,000 a year, but the imports, mostly from Germany, though largely from Britain, amount to nearly £8,000,000.

STOCKPORT, in Cheshire, 6 miles south of Manchester, is a town of ancient date owing its present importance mainly to its manufacture of cotton. There are also important foundries and machine works. (For population, etc., see p. 902.)

STOCKS, (1) A vertical framework of timber with holes to receive the feet of offenders sentenced to this punishment. They are mentioned so early as 1350, and their use has only died completely out during the last fifty years. Stocks may be seen in many a village and country town. (2) Money lent to the Government or to some public body, at a certain rate of interest, or used in the establishment of some industrial concern. In all these cases, the actual money is not recoverable, but the investor can sell his right to the interest or dividends that accrue from the investment. Refer to "Stock" in *Commercial Dictionary.*

STOCKTON-ON-TEES, a seaport of Durham, near the mouth of the Tees. All kinds of iron and steel construction, including ship-building, are carried on; coal is exported, and there are large potteries. The first railway for passengers was opened from Stockton to Darlington in 1825; population, including that of South Stockton, about 75,000.

STOICISM, the state of mind and the outward behaviour usually supposed to characterize the *Stoics.* The latter were a school of philosophers founded by Zeno at Athens about 300 B.C. The gist of their moral teaching was that man can rise nearer and nearer to the divine, in proportion as he frees himself from the bondage of bodily passions and human emotions, only allowing himself to be swayed by what his reason approves. Among the Romans the Stoic system of philosophy was in great repute, Cato, Cicero, Brutus, and Seneca, being among its upholders.

STONEHENGE, a remarkable assemblage of huge stones on Salisbury Plain, in

Wiltshire, 7 miles north of Salisbury. When entire it consisted of two circles of stones, many of which are now lying on the ground. Those remaining in position show that the general arrangement was two upright stones joined by a third, which they supported. The largest of the stones is 22 feet high, 7½ feet broad, and 4 feet thick, and as they cannot have been quarried in the neighbourhood, it is not easy to understand how they were brought and set up. Their erection is generally attributed to the Bronze Age, and their use was probably both monumental and religious.

STONES, PRECIOUS. The greater number of precious stones are of mineral origin, but pearls, red coral, and amber, are usually included in a list of them. Classifying the precious stones in order of value, we should name first the diamond, ruby, sapphire, amethyst, and emerald; next to these would come the topaz, garnet, turquoise, opal, onyx, chalcedony, cornelian, agate and jasper; while a long list of stones very beautiful, but hardly scarce enough to be classed as "precious" would include moonstone, lapis lazuli, malachite, and cairngorm. Many eminent scientists have attempted to produce precious stones artificially but hitherto without success.

STOOL OF REPENTANCE, an elevated and conspicuous seat, sometimes called the "cutty-stool," in front of the pulpit in Scottish churches, on which offenders against the moral law were made to sit during Divine Service. It went out of use towards the end of the 18th century.

STORK, a genus of wading bird very common in some Continental countries, as Holland and Germany, but rather rare in Britain. They are about 4 feet in height. They love to haunt marshy places, where they feed on small fish, eels, frogs, etc., but they also do great service in towns where they are protected, by eating up the offal and garbage. They are much attached to their young. They are migratory birds, coming to Europe in spring, but spending the winter months in warmer countries.

STOTHARD, THOMAS, *b.* in London, 1755. *d.* 1834; painter and designer, was hardly out of his teens when he found himself full of engagements to produce designs for books. He became, however, a student at the Royal Academy, and in time its librarian. His designs number four or five thousand, his pictures about one hundred, of which the "Canterbury Pilgrims" and the "Flitch of Bacon" are the best known.

STOW, JOHN, *b.* 1525, *d.* 1605; was intended for a tailor, but his genuine love of knowledge led him to devote himself to surveying the past and relating it as truly as he could. He travelled much, examining and collecting manuscripts and documents. He published "Summary of English Chronicles," "Chronicles of England," and "Survey of London and Westminster."

STOWE, MRS. HARRIET BEECHER, *b.* 1811, *d.* 1896, the gifted American authoress of "Uncle Tom's Cabin," and other anti-slavery publications. She was a sister of the celebrated preacher, Henry Ward Beecher. She lived for many years at Cincinnati, Ohio, where she befriended the slaves who escaped from Kentucky. In 1852 she published her great work, and followed it by others, insisting on the evils of slavery, and in this way did much to stimulate public opinion in favour of the abolition of slavery in the United States.

STRADIVARI, ANTONIO, *b.* 1649, *d.* 1737; the great violin maker of Cremona, whose work has never been surpassed and probably not equalled. In early life he assisted Nicholas Amati, whose designs he improved and perfected. A violin by Stradivari will fetch from £400 to £2000. He made other instruments as well.

STRAFFORD, (Thomas Wentworth), **EARL OF,** *b.* in London, 1593, *d.* 1641, was the son of Sir Richard Wentworth, the representative of one of the oldest families in Yorkshire. Clever, rich, and well-educated, he was just the man to lead the Commons of England in their resistance to the king's encroachments, and this he did until the Petition of Right was passed, 1628. From that time he devoted himself to the king's interest, and was soon rewarded by being made Baron, then Lord Wentworth, and finally Earl of Strafford. The work he did for Charles fully earned his elevation; he made Charles more truly king in Ireland than any of his predecessors had been. His policy and character are best summed up in the word "Thorough." The first work of the famous Long Parliament was to impeach Strafford, but they soon had recourse to a bill of attainder. This was soon passed, and Charles broke his plighted word by allowing it to become law. Strafford died on Tower Hill with the words "Put not your trust in princes" on his lips.

STRAITS SETTLEMENTS. Refer to *Index.*

STRASSBURG, an important fortified town, capital of the German province of Alsace-Lorraine, which was ceded by France to Germany after the war of 1870-71. It stands on the river Ill near its confluence with the Rhine, and its strategic importance is enormous. Founded by the Romans, it saw many a struggle between them and the Germans. Later, as a "free town" of Germany, it acquired great importance, as a centre of trade and of learning. It was in the hands of the French from 1681 to 1871. The Cathedral may well be called one of the wonders of Europe, and the university is an important one. Strassburg is a place of great trade and varied manufactures; population 150,000.

STRATEGY, the art of generalship in its widest sense. As "strategy" is often confounded with "tactics," it way be well to state that strategy is the conduct of operations before, and leading up to, the battle, while tactics means the conduct of the battle itself. Thus it was the strategy of Wellington that alone wore out the French in Spain by preparing such a place of refuge in the lines of Torres Vedras that he could always choose his own time for fighting, while his tactics in opposing the "thin red line" to Napoleon's column formation enabled him to win Waterloo, the only battle in which they met.

STRATFORD DE REDCLIFFE, VISCOUNT. See *Canning, Stratford.*

STRATFORD-UPON-AVON, the birthplace of Shakespeare, is a pleasant little town in Warwickshire, 8 miles south-west of Warwick. The house in which the poet was born still stands; it has been made national property, and is used as a Shakespeare museum. The church contains the poet's grave with the well-known bust and still more famous inscription.

STRATHCONA (Donald Alexander Smith), **BARON,** *b.* at Forres, in Scotland, 1820, entered early in life the service of the Hudson Bay Company, of which he became the chief executive officer in Canada. He had the chief hand in the development of Manitoba and in bringing to a successful issue the construction of the Central Pacific Railway. He was created a peer in 1897. In the Boer War he raised, equipped, and transported to South Africa, at his own expense, a mounted infantry force of 600 men. These, known as "Strathcona's Horse," gained a great name. He and his cousin, Lord Mount-Stephen, have given £360,000 towards the erection and maintenance of a hospital at Montreal, as a memorial of the Queen's Jubilee (1887), and in 1902 King Edward's London Hospital Fund received from them an endowment of £16,000 per annum.

STRATHFIELDSAYE, a village 7 miles north of Basingstoke, in Hampshire. Here is situated the fine estate of that name bought in 1817 for £263,000, and presented to the Duke of Wellington by Parliament. Near it is Silchester, where most interesting Roman remains have been found.

STRATHMORE, a wide fertile valley or plain extending right across Scotland from about Dumbarton, on the Clyde, to Stonehaven in Kincardineshire.

STRATHNAIRN, LORD. See *Rose, Sir Hugh.*

STRATHSPEY, a kind of dance that originated in the valley of the Spey, in Scotland, whence its name. It is like the reel, but is more irregular in motion. Many of Burns's songs are adapted to the music of the Strathspey

STRAUSS, DAVID FREDERICK, *b.* in Würtemberg, 1808, *d.* 1874; was educated for a pastor, but became a professor at Tübingen University. His "Leben Jesü," or "Life of Jesus Critically Examined" (1835) opened a new era in Bible criticism, and the rest of his life was spent chiefly in answering his adversaries.

STRAUSS, JOHANN, *b.* 1804. *d.* 1849; the son of an innkeeper at Vienna, early showed a musical talent that would not be denied. His success as a conductor at the "Sperl" in Vienna was followed by successful tours abroad. He composed dance music of a high order. His son Johann (1825-1899) has been as successful a composer and conductor as himself.

STRAW-PLAIT, a plait or braid made usually of a special kind of wheat-straw. The best straw for the purpose in England is that of the wheat grown in Bedfordshire and the neighbouring counties. The wheat is pulled, not mown, and after the ears are removed, the straw is cut into lengths. For hats the whole straw is used, but for bonnets it is cut into four or more strips. The making of straw-plait used to give employment to thousands of women and children in and around Luton and Dunstable, but most of the plait now used comes from China, the best, as formerly, from Leghorn in Italy. The straw-plait industry still flourishes at Luton, but it consists chiefly in the sewing, partly by hand and partly by a special machine, the plaits to form bonnets and hats.

STROMBOLI, one of the Lipari Islands, off the north coast of Sicily. The volcano on this island, rising to a height of over 3,000 feet, is in an almost constant state of eruption, sending up steam, and occasionally showers of stones, which, however, usually fall into the crater again. The island, with an area of about 9 square miles, supports a population of over 1,000, occupied in producing wine, wheat, cotton, raisins, and currants.

STRONGBOW, RICHARD. See *Clare, Richard de.*

STRUTT, JOSEPH, *b.* 1749, *d.* 1802; artist and antiquary, was an enthusiast in antiquarian pursuits. His profession as engraver aided him to produce his valuable works on English customs and manners. "The Regal and Ecclesiastical Antiquities of England" was his first book; "Sports and Pastimes" his last. He died in comparative poverty.

STRYPE, JOHN, *b.* 1643, *d.* 1737; an ecclesiastical writer, was educated at

St. Paul's School and at Cambridge. He wrote lives of the principal Reformation leaders, as Cranmer, Parker, and Whitgift; also "Ecclesiastical Memorials," a history of church matters under Henry VIII., Edward VI., and Mary.

STUBBS, WILLIAM, *b.* at Knaresborough, 1825, *d.* 1901, a great historian of the 19th century, and bishop of Oxford. After a brilliant career at Oxford he took Holy Orders, and was for some years rector of Navestock, in Essex. In 1866 he became professor of modern history at Oxford, and held the post until, in 1884, he was made a bishop. His work is characterised by accuracy and lucidity. The "Constitutional History" is his best known work, but a large number of other valuable historical works are the result of his labours and learning.

STUD-BOOK, a book containing the pedigree of animals of famous breeds, especially of horses. That for race-horses dates from 1808, and is the book kept by Messrs. Weatherby, the official agents of the Jockey Club. There are also stud-books for collies, St. Bernard dogs, and special breeds of cattle, etc.

STURDY, or **THE GID,** is a disease that affects young sheep and cattle. They seem to lose control over their motions, turn round and round, and cannot take their food properly. It is caused by the presence of a bladder-worm in the brain, which may be removed with care and the animal may recover. It is remarkable that the disease is hardly known where dogs are scarce.

STURGEON, a large fish of which there are two or three distinct species found in the seas round Europe. The most common, from 6 to 10 feet long, is often caught in the seas and estuaries of Britain, especially in the Bristol Channel. A smaller one, called the sterlet, from 4 to 6 feet long, is found in the Black and Caspian Seas, as well as a much larger one, reaching sometimes a length of 25 feet. The sturgeon fishery of the Volga and the Caspian Sea furnishes material for the preparation of caviare and isinglass.

STUTTGART, the capital of the kingdom of Wurtemberg. Though one of the oldest towns of Germany, it has few ancient buildings, but many handsome modern ones. Its art collections and its library are famous, while its academy of music is of a very high class. Stuttgart is an important book-publishing town, and in various other industries, as the making of machinery, chemicals, musical instruments and sugar, it holds a high place.

STYLE, OLD AND NEW. The Old Style, a term used often in mentioning dates previous to 1752, means that the number of the year is not altered so as to bring it into accordance with the present method of reckoning the years. The year 1752 was ordered to begin on the 1st of January, whereas the year had previously begun on March 25th, so that the 20th of March preceding that of 1752 would be 1750 or 1751 according as you reckon it by the Old or New Style. See *Calendar.*

STYLITES. See *Pillar-Saints.*

STYX, in classical mythology the chief river of the infernal region, round which it flowed seven times. All shades had to cross this river, and Charon, the boatman who ferried them across, charged an obol for the service. Hence the necessity for placing this coin in the mouth of the dead.

SUAKIM, a small town on the west side of the Red Sea. It is the chief port for Egyptian Soudan, and its trade is steadily increasing. The British occupied it as a strategical point after the Mahdi's rising, and an Anglo-Egyptian garrison is still kept there. The harbour is the best in the Red Sea, but it is small and has a narrow, winding entrance; whilst the surrounding country is arid and bare. Many Moslem pilgrims embark here for Jeddah, the port of Mecca; population about 10,000.

SUBLIMATION, the process of turning solid substances into vapour by means of heat, and again solidifying them by cooling. The process is easily seen by heating a little Iodine in a flask or test-tube. Many chemicals are refined by this process, the impurities being left behind.

SUBLIME PORTE. See *Porte, Sublime.*

SUBMARINE BOATS. From time to time, during the past 150 years, attempts have been made to construct a boat that could be navigated beneath the surface of the water, but no practical result was attained until 1887, when an American engineer experimented with a submarine boat on the Hudson River, and demonstrated that it was possible to run the boat on the surface of the water, to cause it to dive and ascend again at will, and to steer it in any desired course when submerged. Mr. Nordenfeldt patented another, and constructed several for use as torpedo boats. The latest type is that known in the British navy as the "A" class. The later boats are an improvement on the first of the class, which met with disaster when manœuvring off the Isle of Wight, in February, 1904. They are built of steel, somewhat in the shape of a fish. When on the surface there is a small, narrow deck clear of the water, and above this rise a cylindrical conning tower, the periscope tube, and a temporary bridge, which is struck when the boat is about to dive. Admission into the interior is obtained only through a small hatch in the top of the conning tower which is closed by screws. When a boat is to be brought into operation, the first requisite is to find her "diving trim." This is done by careful experiment while the boat is stationary. Water is admitted into the ballast tanks until the buoyancy is so much reduced that the boat remains just hovering on the surface with her deck awash. Pressure gauges indicate when the buoyancy has been sufficiently reduced, and a clinometer shows whether the boat is sinking on an even keel. Any failure in the latter direction is rectified by admitting water to compensation tanks placed fore and aft. When the diving trim has been found, the officer in charge notes the exact amount of water admitted into each tank, and is thus in a position to repeat the operation quickly should occasion arise. The tanks are then blown out by means of compressed air, and the boat rises again to the surface, the operation serving as a test that the air-tubes and valves are in working order. Diving takes place while the boat is in motion. Her buoyancy having been sufficiently reduced as described above, the movement of a horizontal rudder inclines her head slightly downwards, and she proceeds on this line until a sufficient depth has been reached, when the rudder is restored to its normal position, and the boat travels on a horizontal keel. Usually the depth attained is not greater than will permit the top of the periscope to remain above the surface. The reflector in this may be turned in any required direction, and any object to which it is directed is focussed on a camera-obscura table below the tube. When the periscope is submerged the crew are in darkness with regard to their surroundings, except that the shadow of any large object in the immediate vicinity, may be seen through one of a number of glass lights placed round the upper edge of the conning tower. When travelling at the surface, these boats are capable of attaining a speed of from 12 to 15 knots, the screw being driven by gasolene engines. The submerged speed is about two-thirds of the surface speed, and the motive power is obtained from electric motors. Sufficient compressed air is carried to maintain the crew in comfort for six hours. Each boat is supplied with two torpedoes. When one is discharged, the delicate balance of the boat is maintained by admitting into a special tank an equal weight of water.

SUBPŒNA, a writ issued in the King's name to a witness directing him to appear under a penalty (*sub pœna*), and state what he knows of the case in question. The witness must be allowed a reasonable time to provide for his absence from his own affairs, and his travelling expenses must be paid beforehand. If the person summoned wilfully fails to appear, he is liable to be sued for damages, or to be imprisoned for contempt of court.

SUCCESSION ACTS. The English Parliament early claimed and exercised the right to limit and direct the succession to the Crown. The Revolution of 1688 proceeded on the assumption that James II. had, by fleeing the kingdom, abdicated the throne, and therefore left it open to Parliament to choose and name his successor. Finally, in 1701, it was enacted that, if William and Anne left no heirs, the Crown should pass to the next Protestant heir, Sophia of Hanover, and her Protestant descendants, and that whoever came to the Crown should "join in communion with the Church of England as by law established."

SUEZ, a small Egyptian town at the head of the western of the two branches into which the Red Sea divides at its northern end. It presents a very ill-kept appearance, and the buildings are mean; population about 17,000.

SUEZ CANAL. That only 70 miles of land should prevent ships sailing straight from the Mediterranean to the Red Sea, had always seemed a deplorable fact. The Overland Route, opened in 1837, by way of Suez, solved the difficulty as far as passenger traffic was concerned, but merchandise could not be conveyed that way because of the expense. About 1850, M. de Lesseps, a French engineer, having convinced himself that the construction of a canal was feasible, set about persuading others, and with such success that by 1860 he had raised the necessary capital, and begun the work. The Canal was opened in 1869, and soon began to revolutionise the trade with India and the East. The English had not much share in the Canal at first, but in 1875, the Khedive offered his holding for sale, which the British Government bought up, and thus became owners of nearly half the Canal stock. The Canal saves about 4,050 miles in a journey to India and the East, but the heat encountered there and in the Red Sea to some extent discounts the advantage.

SUGAR, a crystalline substance obtainable from the juice of many plants, but especially from the sugar-cane, beetroot, and (in Canada) maple-tree. Sugar is a compound of carbon, hydrogen, and oxygen, in varying proportions. The sugar-cane, a native probably of India, is now grown in most tropical and sub-tropical countries. It produces the best sugar, and was, in fact, practically its only source till Napoleon Bonaparte gave an impetus to the manufacture of beet-sugar. The United States, West Indies, Brazil, Mauritius, and East Indies are our chief sources of cane-sugar; France, Germany, and Austria supply the bulk of the beet-sugar.

SUICIDE, the killing of oneself. In law, a person is counted a suicide (*felo de se*) if he dies through committing any felonious

act, though it was not intended to bring about his own death. If two agree to commit suicide and one survive, the latter is accounted a murderer. In former days a suicide was interred at cross-roads, with a stake through his breast, and his personal property was forfeited to the Crown. The latter penalty was abolished many years ago, and the former in 1823. Suicide statistics furnish some curious facts, one of the most remarkable being that more men commit suicide than women in the proportion of more than two to one.

SULLIVAN, SIR ARTHUR, *b.* in London 1842, *d.* 1900, was the son of Thomas Sullivan, bandmaster at Sandhurst, and afterwards at Kneller Hall. The boy was musical in every fibre of his being. Chorister at the Chapel Royal, student at the Royal Academy, and afterwards at the Conservatoire of Leipzig, he absorbed the principles and practice of his art so thoroughly that at twenty he successfully produced his important musical work "The Tempest." For the next ten years he was engaged in conducting and composing with increasing success; and then, in 1872, with "Trial by Jury," began that delightful string of operettas which made his name and that of W. S. Gilbert, famous. "H.M.S. Pinafore," "The Pirates of Penzance," "Iolanthe," "The Mikado," and many others, each in turn seemed perfect and unapproachable in its kind. His "Golden Legend" testifies to his ability as a serious composer.

SULLY (Maximilian de Bethune), **DUKE OF,** *b.* 1560, *d.* 1641; one of those single-eyed personages that flit but rarely across the pages of history. Throughout the reign of Henry IV. of France he was the king's chief adviser. It was he who advised Henry to accept the Catholic faith, and he brought the country from bankruptcy to prosperity by his rigorous examination of accounts.

SULPHUR, an elementary substance found both free and in combination in many parts of the world, generally in volcanic districts. The greater part of the sulphur used in Europe comes from Sicily. The various changes undergone by sulphur by continuous heating are very interesting, and the experiment is easily made, only a test-tube being required. The uses of sulphur and its compounds are many and important; the match manufacture and that of gunpowder being examples. The fumes of burning sulphur form a powerful bleaching agent, much used to bleach straw, silk, wool, etc.

SULPHURIC ACID, a compound of sulphur, oxygen, and hydrogen, of the form commonly known as Oil of Vitriol. So important is this acid from the extent to which it is used in the arts and manufactures, that we may estimate, it is said, the commercial importance of a country from the amount of sulphuric acid it consumes. The alkali manufacture, the making of soap, glass, glue, and bleaching powder, depend on sulphuric acid. The acid is of rare occurrence in nature, but sulphates are numerous and important. The manufacture of sulphuric acid is a complicated process, starting with the combustion of sulphur.

SUMATRA, a large island having an area of 170,000 square miles, lying south-west of the Malay Peninsula, and separated from it by the Malacca Strait. Though 1,100 miles in length, its greatest breadth does not exceed 250 miles. The mountains which run parallel to, and near the west coast, attain a height of 11,000 feet, and include many still active volcanoes. The island is rich in vegetable and animal forms; rice, sugar, coffee, pepper, sago, and tobacco being easily grown, while tropical trees abound. The population is mainly of Malay origin, but in varying degrees of civilization. Since 1620, when the Dutch East India Company began to settle here, they have gradually extended their sway, until now they rule all the coast districts, and a good deal of the interior; total population exceeds 3,000,000.

SUMPTUARY LAWS, laws passed at various times, and in various countries, to prevent extravagant expenditure on banquets, dress, and other forms of personal luxury. The fact that such laws were found useless among the Romans and Greeks did not prevent the English Parliament from making them, and from Edward II. to Henry VIII. they were repeatedly passed, and as constantly evaded. Most of our sumptuary laws were repealed in the reign of James I.

SUN, THE, the body from which we derive heat and light, the director and controller of the earth in its annual course, is distant from us about 93,000,000 miles. Its diameter is about 864,000 miles and its density about ¼ that of the earth. It is a globe of matter consisting of elements corresponding to those which form the earth, but so hot as to be in a gaseous state, covered with a sort of brilliant, cloudy envelope formed by these vapours condensing through radiation. At times, through an up-rush of heated gas from below, or a downfall of the condensed particles, this brilliant envelope, the *photosphere*, is broken, and we get a glimpse of the gaseous interior, and say there are "sunspots" visible. Outside the photosphere is a gaseous layer called the *chromosphere*, and outside that again is the *corona*, best seen in eclipses. The mass of the sun is about 720 times that of all the planets taken together, so that the centre of gravity of the solar system must lie somewhere near its centre.

SUNDAY, an old Anglo-Saxon word denoting that this, the first day in the week, was set apart for the worship of the sun, one of their divinities. From very early times, Christians formed the habit of meeting on this day for prayer, for exhortation, and for the "breaking of bread," and from the beginning of the 4th century its observance has been enforced by law. The number of statutes dealing with what may, and what may not, be done on a Sunday is large, and some of them are very difficult to enforce.

SUNDERBUNDS, a low-lying district in the lower part of the Delta of the Ganges formed by the alluvial deposit brought down by that river. It is a marshy, almost uninhabited district, abandoned mostly to wild animals, among which the tiger and crocodile are conspicuous. The climate is dangerous to Europeans, but a few natives are found, occupied either in rice-growing, or in wood-cutting.

SUNDERLAND, a prosperous seaport and manufacturing town at the mouth of the Wear, in the county of Durham. In shipbuilding, Sunderland is running Glasgow close, and it has numerous other manufactures, such as chemical works, glass-making, anchor and chain factories, and iron works. Its imports and exports together total annually £3,000,000. (For population, etc., see p. 902.)

SUN-DIAL. See *Dial.*

SUNNITES, the orthodox Mohammedans, who believe in the *Sunna* as well as the Koran. The *Sunna* is a body of traditions relating to Mohammed and his teaching, and is rejected by the Shiites, the other great section of Mohammedans. The Mohammedans in Persia are the chief Shiites, the inhabitants of most other Mohammedan countries being Sunnites.

SUPERIOR, LAKE, the largest body of fresh water in the world, has an area of 31,200 square miles, equal to that of Ireland. It lies between Canada and the United States at an elevation of 600 feet above the sea. Its water is very pure and transparent, and it never freezes over. It abounds in fish, and the land round its shores is rich in copper. The navigation is dangerous owing to frequent and sudden storms. The boundary line between Canada and the United States passes nearly through its centre.

SUTTEE, the practice, once not uncommon among Hindoo widows, of sacrificing themselves on the funeral pile of their deceased husbands. Up to 1829 the practice was allowed by the English government, provided the act was perfectly voluntary. It is now rarely attempted.

SWABIA, an ancient duchy in south-west Germany, which used to stretch from the Rhine on the W. and S. to Franconia and Bavaria on the N. and E.

SWALLOW, a widely distributed genus of migratory birds, divided into about sixty species, of which three visit the British Islands. They have long wings, short legs and feet, and generally a forked tail. The Common Swallow builds its nest in chimneys, or similarly sheltered situations; the House-Martin under shelter of an overhanging rock, or the eaves of a house; and the Sand Martin makes for itself a little cave in a bank of sand. They all live on flies and other small insects, which they catch while on the wing. They arrive in April, and depart about the middle of October.

SWAN, the most graceful of the Duck family, has only one species, the common Swan, that makes its home in the British Isles, but one or two other kinds visit our shores for the winter, departing northward at the approach of summer. The swans on the Thames belong either to the Crown, or to some of the City Companies, and the ceremony of marking them each year (*swan-upping*) is observed with great care. The swannery at Abbotsbury, near Weymouth, is celebrated, some hundreds being kept there.

SWAN, SIR JOSEPH WILSON, *b.* at Sunderland, 1828, invented the autotype process in photography, bromide paper, and the incandescent electric lamp, 1879. He was knighted in 1904.

SWANSEA, a large seaport and manufacturing town of South Wales. It is the most important copper-smelting centre in the world, much of the ore being imported; it has also an important industry in the manufacture of tinplates, besides iron, chemical and lead works. The imports consist chiefly of various ores, timber, and provisions; the exports of tinplates, coal, iron, copper, and other metals. Some of the old town still remains, notably a good part of the castle; population 96,000.

SWEATING SICKNESS, a violent and rapid epidemic which broke out in England in 1485. It consisted of an intense sensation of heat at first, followed by profuse sweating and intolerable thirst, while to drink anything cold was certain death. It broke out again at intervals till 1551, both in England and on the Continent, where it was called the "English Sweat."

SWEATING SYSTEM, a system under which a large manufacturer, say of clothes, boots, or furniture, gives work out to be done for a fixed price without regard to where it is done, who does it, or what pay the actual worker gets for his work. It is difficult to say where "contracting" ends and where "sweating" begins, but, speaking broadly, when a person gives out work under the above conditions, he

is a sweater or an aider and abettor of sweating.

SWEDEN, one of the largest countries of Europe, forms with Norway the peninsula of Scandinavia. Between 1814 and 1905 they were united under one king, but the union is now dissolved. The land rises gradually from the Baltic westwards, until we come to the highest ridge of the Scandinavian Mountains, which forms the common boundary of the two countries. The lakes are a feature of the country, Wener (2,014 square miles), Wetter, and Mälar in the south-east being the largest. Stockholm, the capital, is on Lake Mälar. Copper and iron are the chief minerals, the coal being of a poor quality. The chief export of Sweden is timber; then come iron and farm-produce. The imports are manufactured goods (cotton, woollen, and iron), coffee, sugar, coal, and raw material for her own growing manufactures. Next to Stockholm, the chief towns are Gothenburg and Upsala.

SWEDENBORG, EMANUEL, *b.* at Stockholm, 1688, *d.* in London, 1772, a great scientist and writer on religious subjects. Till 1743 he devoted his attention almost wholly to science, in which he achieved notable results. But in the latter year a great change came over him. He was in London, and he had, he says, visions in which most remarkable truths were revealed to him. Of his sincerity there can be no doubt, and the books in which he makes known his doctrines are marked by a highly spiritual tone.

SWIFT, JONATHAN, *b.* at Dublin, 1667, *d.* 1745, Dean of St. Patrick's, Dublin, was one of the keenest satirists the world has seen. Born and educated in Ireland, though of English parents, he was for some time secretary to Sir William Temple, the great statesman and diplomatist, during which time he published his "Tale of a Tub," and the "Battle of the Books," the former alone sufficient to ensure him undying fame. For many years after this he was employed in political writing, both by the Whigs and Tories, but the comparative leisure of the Deanery enabled him also to produce his celebrated "Gulliver's Travels." The last few years of his life were saddened by brain disease.

SWINBURNE, ALGERNON CHARLES, *b.* in London, 1837, the most striking and original poet of the last few decades, was the son of Admiral Charles Swinburne. Educated at Eton and Oxford, he early showed his poetic genius. The novelty of his versification caused almost alarm at first, but it did good work in freeing poetry from the "iambic chains" that had held it so long; *d.* 1909.

SWINDON, in the north of Wiltshire, owes its importance to the presence of the Great Western Railway engineering works, in which about 10,000 men find employment; population 45,000.

SWISS GUARDS, a body enrolled in the 17th century for the special protection of the French king's person. Left without directions when Louis placed himself in the hands of the National Assembly, they defended the Tuileries against the revolutionaries for some time, and were then butchered in detail as they retired in obedience to the king's commands.

SWITHIN, SAINT, Bishop of Winchester from 852 to 862, was a man of great piety and charity. Many stories of his kindness of heart are related. The story of the rain preventing his bones from being moved after his canonization, is an invention of later times, and we find similar beliefs about rainy saints' days in other countries. St. Swithin's day is July 15th.

SWITZERLAND, one of the small countries of Europe, having an area of 16,000 square miles. It is one of the few countries that have no access to the sea, having Germany, France, Italy, and Austria on its respective north, west, south, and east sides. The diversified nature of its surface, besides giving variety to its products, offers scenery which attracts the world and has for centuries proved the source of freedom to its inhabitants. Since they expelled the Austrians at the beginning of the 14th century, the Swiss have maintained their freedom, and it is now guaranteed by the great Powers. Having practically no coal or metals, Switzerland can never excel in great manufactures, but the skill and ingenuity of its inhabitants in the lighter arts are admirable. The Swiss, about 3,000,000 in number, use German or French as their native tongue, though most of the educated classes speak both. Bern, the capital (population 64,000), stands on the river Aar; Zurich (150,000), Geneva (105,000), and Basle (113,000), are the next most important towns.

SWORD, a weapon consisting of a blade and handle, the former being now generally adapted either for cutting or thrusting, and the latter furnished with a guard to protect the wielder's hand. The use of the sword goes farther back than the use of the pen; we find representations of them on the earliest Assyrian monuments, and actual bronze examples in some Etruscan tombs and at Mycenae. Sword-making used to be, and still is, a fine art; the steel has to be so exactly tempered that the production of reliable swords by machinery is impossible.

SWORD-FISH, owes its name to a prolongation of the upper jaw, sometimes 3 feet in length, and forming a weapon so formidable as to enable it to attack whales with deadly effect. So powerful indeed is its stroke, that it has been known, in attacking vessels (mistaken no doubt for large fish), to pierce through copper sheathing and oak plank to a depth of 10 inches. The part of the sword that penetrates a ship's side is usually broken off and remains in the timber. In the tropics this fish is from 12 to 15 feet in length. In the Mediterranean, where the capture of sword-fishes, by harpoon or net, is a regular industry, the average weight is about one cwt. Their flesh is highly prized for the table.

SYBARIS, one of the numerous towns founded by Greek colonists in Southern Italy. It was founded about 720 B.C., and soon rose to such a pitch of wealth and luxurious living as to become a by-word; and even now "Sybarite" denotes a man exclusively devoted to luxurious pleasures. It was destroyed in 510 B.C., by the people of Croton, who captured it.

SYDNEY, (1) the capital of New South Wales, the oldest city in Australia, stands on the southern shore of Port Jackson, one of the finest harbours in the world. On January 26th, 1788, Captain Philip landed here the first load of convicts, and thus started the colonization of the continent. The city has now over 500,000 inhabitants, many of whom are engaged in the various manufactures fostered by the coal found in the colony. (2) The chief town of Cape Breton Island, on a spacious harbour. It has productive coal-fields and large iron-smelting and steel works. It is the eastern terminus of the Intercolonial Railway, which links the eastern districts to Montreal, and so to Western Canada; population 10,000.

SYLLABUB, a light dish consisting of whipped cream and sugar, or white of egg and sugar, and flavoured with wine, brandy, or lemon, according to taste.

SYLLABUS, an abstract of a book, lecture, series of lectures, or subjects of examination; a table of contents. The name is especially applied to a document issued by Pope Pius IX. in 1864, containing a list of errors to be avoided by Roman Catholics.

SYLLOGISM, a series of three statements, the third of which depends on the other two. Directly you admit the truth of the first two, called *premisses*, the truth of the third, called the *conclusion* necessarily follows: e.g., (1) All men are mortal, (2) Cæsar is a man, (3) therefore, Cæsar is mortal.

SYLPHS, a term adopted by the fantastic followers of Paracelsus (1493-1541), to denote a kind of being intermediate between men and spirits. By Pope, who introduces them into his "Rape of the Lock," they were depicted as so graceful in figure that the name has ever since denoted a girl of particularly graceful form.

SYMBIOSIS (Gr. "living together"). See *Commensalism.*

SYMONDS, JOHN ADDINGTON, *b.* in London, 1840, *d.* at Rome, 1893; an eminent literary writer and critic, was educated at Harrow and Oxford. He did much to further the study of the Renaissance period, and his books on "The Renaissance Period in Italy" form his most important production. His poetry shows, perhaps, more polish than genius.

SYMPHONY. Refer to *Glossary of Musical Terms.*

SYNAGOGUE, the building in which the Jews met for worship and religious instruction, or the congregation assembled for that purpose. The general order of the service was regulated by "the rulers of the synagogue," who called on fit persons to read and expound the law. The "minister" was the attendant who had charge of the sacred volumes. The principal service was held each Sabbath morning, and included prayer, the reading of lessons from the law and the prophets, and an address based on the passages read. The synagogue was chiefly regarded as a school of popular instruction in the law, with which it was the duty of every Jew to be well acquainted.

SYNDICATE, a body of men chosen to carry out some special business. The Senate at Cambridge University calls its various committees "Syndicates." But the word is more commonly understood to mean a body of capitalists who have combined to carry out some operation too great or too risky for an individual.

SYNOD, a meeting or assembly. The name is generally reserved for assemblies of ecclesiastics who have met to discuss Church business.

SYNTHESIS, a putting together. It is the opposite of *analysis*, which signifies a taking apart, splitting up into its constituent parts. In chemistry, synthesis is making rapid strides, and substances are made now synthetically to such an extent as to do away with the necessity in some cases of producing them by natural means. The production of indigo is a striking illustration of this fact.

SYRIA, a part of the Turkish Empire in Asia, generally understood to extend from Mount Taurus on the north to the Arabian Desert in the south, and from the Levant on the west to the Euphrates and the Syrian desert on the east. This region, some 150,000 square miles in area, includes Palestine and Phœnicia, and some of the most ancient cities of the world. Damascus, the chief city (population 150,000), is mentioned in the time of Abraham, and though situated near the border of the desert, lies amid gardens and orchards, and still remains the centre of a great caravan trade with Persia and the East.

Aleppo, Beyrut, and Jerusalem, all ancient cities, also continue to flourish. Tyre and Sidon, however, have sunk into obscurity. The inhabitants, some 3½ millions in number, are mostly Mohammedans, but there is in Palestine an increasing number of Jews, and on and around Mount Lebanon, a sect of Christians called Maronites.

TABARD, (1) a tunic without sleeves which was an article of dress in England during the Plantagenet period, and which still forms part of the dress of a herald. (2) The name of an inn formerly situated in High Street, Southwark, rendered immortal by Chaucer, who makes his Canterbury Pilgrims start from it.

TABERNACLE, the tent in which the ark of the covenant, the table of shewbread, etc., were kept during the wanderings of the Israelites in the desert. It was 45 feet long, 15 feet wide, and 15 feet high, and was constructed of shittim wood. In the Roman Catholic Church, the name is applied to the vessel in which the consecrated elements of the Eucharist are kept.

TABITHA. See *Dorcas*.

TABLEAUX VIVANTS, that is, "living pictures," are representations by living persons of groups of statuary, famous pictures, scenes in history, etc.

TABLE BAY is situated in Cape Colony on the west coast of Africa. The capital of the Colony, Cape Town, stands upon its shores, and the bay is capable of holding the largest fleet. The anchorage has been improved by the construction of special harbour works.

TABLE MOUNTAIN, situated a short distance to the south of Cape Town, above the shore of Table Bay, is about 3,600 feet high, and derives its name from the fact that it possesses a very flat top and precipitous sides. A cap of mist, which often hangs on the summit, is called the "table-cloth."

TABLE TALK, the name sometimes given to collections of essays, dealing with subjects of general interest. Among the English writers, who have produced essays under this title, are Rogers, Cowper, and Coleridge.

TABLE TURNING, table tilting, or table lifting, are names given to the moving of tables at spiritualistic séances. A number of believers place their hands in a circle upon the table, and being unconscious of exerting any force in a particular direction, they claim that the movement produced is due to spirit agency. However produced, the movement has never been accounted for to the entire satisfaction of sceptics.

TABOO a word in use among the inhabitants of the South Sea Islands, when speaking of anything which is either sacred or accursed, and must not be touched. The word is used as the name, both of the thing consecrated and the act of consecration. Thus the body of a chief is taboo: in other words, the tribesmen are forbidden to touch it under any circumstances.

TABOR, a mountain of Galilee, situated in the Plain of Esdraelon, about 6 miles east of Nazareth. It is clothed from base to summit with trees, and, according to tradition, was the scene of the Transfiguration of Christ.

TACITUS, CORNELIUS, *b.* about 54, *d.* about 120 A.D., one of the most celebrated of Latin historians. His works include "Annals," dealing with the period 14-68 A.D., "Histories," 69-97 A.D., "Germania," and "Agricola," the last named works dealing with the career of Julius Agricola, father-in-law of Tacitus.

TACTICS, that branch of military science which deals with the movements of troops, when they are face to face or actually engaged in battle. It must be distinguished from strategy, which deals with the general conduct of a campaign and from the operations which precede the actual fighting, such as manœuvring for position, etc.

TADMOR. See *Palmyra*.

TAGUS, the longest and most important river of the Peninsula, rises on the central plateau and enters the Atlantic Ocean at Lisbon, after a course of about 560 miles. There is a magnificent harbour at its mouth, but otherwise the river is of little commercial importance. The principal towns on its banks are Toledo and Madrid, the latter being situated on a small tributary.

TAHITI, the largest island of the Society group, situated in the South Pacific Ocean. It has an area of about 600 square miles, and produces copra, molasses, rum, and fruits. The island is under the protection of the French; population 11,000.

TAILOR BIRD, THE, a bird found in Southern Asia and the Malay Archipelago, derives its name from the fact that it constructs its nest by fastening together, with pieces of vegetable fibre, wool, etc., two or more hanging leaves. The nest is usually placed at the extremity of a slender branch, and is thus protected from attack.

TAINE, HIPPOLYTE ADOLPHE, *b.* 1828, *d.* 1893, a celebrated French philosopher and historian. One of his greatest works is a history of English Literature, in four volumes, and amongst his other works, which are very numerous, may be mentioned Studies of Carlyle and John Stuart Mill, and his masterpiece, "Origines de la France Contemporaine."

TAIPING REBELLION, the name given to an insurrection of a section of the Chinese which originated in 1850 and was not suppressed until 1864. The rebels were under the leadership of a man who declared that he was divinely appointed to establish a universal peace, though his real object was to overthrow the Manchurian dynasty. The rebels were finally defeated, largely through the assistance of British troops led by "Chinese Gordon."

TAIT, ARCHIBALD CAMPBELL, *b.* at Edinburgh, 1811, *d.* 1882, a celebrated English prelate. He was educated at Glasgow and Oxford. He succeeded Dr Arnold as head-master of Rugby in 1842. He became Dean of Carlisle in 1850, Bishop of London in 1856, and Archbishop of Canterbury in 1868. He was a wise statesman as well as a liberal and earnest Churchman. He started "The Bishop of London's Fund" for the purpose of building and helping to support new Churches in the Metropolis. His writings include some sermons and theological works of a critical nature.

TAJ MAHAL, a famous and beautiful mausoleum erected at Agra, India, by Shah Jehan for his favourite wife. It is of great size and is built of white marble, beautifully inlaid with precious stones. The work of building was spread over twenty years, and over 20,000 men were continuously employed upon it during that time.

TAKU FORTS are situated at the mouth of Pei-ho River, and guard the approach from the sea to both Tienstin and Pekin. They were taken by the combined forces of Great Britain and France in 1858 and 1860, and again by the European forces engaged in suppressing the Boxer rebellion, 1900.

TALAVERA, a small town of Spain, is situated on the Tagus, about forty miles east of Toledo. Talavera was the scene of a battle during the Peninsular War, in which the British, led by Sir A. Wellesley, defeated the French under King Joseph. For his success, Wellesley was created Viscount Wellington.

TALBOT, WILLIAM FOX, *b.* 1800, *d.* 1877, was one of the pioneers of the science of photography. The actual discovery of the process was made both by Talbot and Daguerre. He was also one of the first to decipher cuneiform inscriptions.

TALC, one of the softest of all minerals, is chemically, a hydrated silicate of magnesium. Its colour varies from white to a greenish white, and it possesses the property of being easily split into thin semi-transparent plates. It is used in the manufacture of crayons and porcelain, and also for forming crucibles and lamp shades and chimneys.

TALENT, a weight or sum of money which was in use amongst the ancient Greeks and Hebrews. Amongst the Greeks three distinct talents were in use, the weight of the least being about fifty-seven pounds troy, and of the greatest about eighty-two.

TALISMAN, a charm, consisting usually of a figure engraved upon stone or cast in metal. The use of charms is closely connected with the science of astrology, and it was generally believed in the Middle Ages that the talisman protected its wearer from evil spirits. The belief that such objects may bring good fortune to their possessors is not entirely dead at the present day, though the term "mascot" is now more generally applied to them.

TALLAGE, an arbitrary tax levied by the Anglo-Norman Kings on cities, boroughs, and the royal demesnes. It took the place of the ancient Dane-geld, and continued to be levied until early in the 14th century. It was abolished (1340) by the statute "de Tallagio."

TALLEYRAND, PERIGORD DE, *b.* at Paris, 1754, *d.* 1838, a celebrated French politician and a clever diplomatist. He was educated for the Church, and became Bishop of Autun, 1789, but even at this time devoted nearly all his attention to politics. For some time he supported the Republican party, but withdrew his support on their policy becoming subversive of all authority but their own. He was compelled to leave France, 1793, but returned three years later and became a firm supporter of Napoleon, until the Emperor's waning success induced Talleyrand to enter into a secret correspondence with Louis XVIII., whom he eventually saw seated upon the throne of France. In 1830, on the outbreak of the second revolution, Talleyrand again appeared on the side of a successful party, supporting Louis Philippe. His skill as a diplomatist was unrivalled, but he seems to have owed his success, in no small measure, to his want of moral principle.

TALLIS, THOMAS, *b.* about 1515, *d.* 1585; the father of English cathedral music, was organist of Waltham Abbey, till 1540, and afterwards a member of the Chapel Royal choir. His compositions are remarkable for solemnity and majesty, and his "Venite" and other canticles are still sung.

TALLY, a stick which was formerly used in keeping accounts. The stick was split longitudinally into two pieces, one of which was kept by the creditor, the other by the debtor. The transactions were recorded by cutting notches in the two pieces, these being placed side by side for the purpose, and the accuracy of the account was ensured from the fact that the notches must coincide. Tallies were preserved by the Exchequer until 1834, and it was owing to the overheating of a stove in which the old sticks were being destroyed, that the Houses of Parliament were burnt down in that year.

TALLY SYSTEM, a method of selling goods upon credit, in which both the buyer and seller hold books in which the pay-

ments are recorded. The payments are usually made weekly, and the goods most frequently obtained in this way are clothing and finery. The system is worked by pedlars who call from door to door, especially in country towns and villages.

TALMUD, the work which contains the traditional laws of the Hebrews. It is divided into "Mishnah," and "Gemara"; the former contains the laws, etc., which govern almost every action of the Hebrew, and the Gemara contains the exposition and discussions upon these laws. The Gemara is merely a record of the oral teaching as carried on in the synagogue. According to its actual contents, the Talmud is also divided into Halacha and Hagada. The former consists of detailed instructions as to conduct, and the latter of the comments on parts of the Holy Scriptures. There are two distinct Talmuds in existence, known respectively as the Jerusalem and the Babylonian, the former being the earlier and shorter of the two.

TAMARIND, a plant having two varieties, one found in the West Indies and the other in the East Indies. The wood of this tree is used in building, its bark serves as a tonic, and from its leaves a dye is extracted. The fruit is largely used in the making of sauces.

TAMERLANE. Same as *Timur.*

TAMIL, a name often used to denote the people of South India generally, but strictly belonging only to those occupying the south-eastern part of the Peninsula and northern Ceylon. They are very frugal and enterprising, and their language and literature form an interesting study.

TAMMANY SOCIETY, a powerful political organisation which has its headquarters at New York. It was founded in 1789 as a secret social society, the aims at first being of a charitable nature; but quite early in its history it became political in its aims, and associated itself with what is now known as the Democratic party. It has at times been all powerful in the politics of New York City, where its members have acquired an unenviable notoriety for peculation. In 1901 it received a severe shock when the whole of the "reform" candidates, who had advocated honesty in political matters, were elected in the New York local elections.

TANANARIVO, or **ANTANANARIVO,** the capital of Madagascar, is situated on a plateau about 4,500 feet high, some considerable distance from the sea. Its church spires, palaces, and red, pointed gables in the European style are conspicuous for miles around. Since 1895 it has been occupied by the French; population about 100,000.

TANCRED, *b.* 1078, *d.* 1112, a celebrated Sicilian prince of Norman descent, and one of the prominent leaders of the first Crusade. He was present at the taking of Jerusalem, 1099, and also at Ascalon, the same year, when Godfrey, the newly-elected King of Jerusalem, defeated the Sultan of Egypt. Tancred and his leader, Godfrey, are depicted in Tasso's "Jerusalem Delivered" as model knights.

TANGANYI'KA, a long, narrow lake, which is situated in the eastern part of Central Africa, at an altitude of about 2,700 feet. Its length is about 400 miles and its area 13,500 square miles. The lake was discovered, 1858, by Burton and Speke, and has been explored by Livingstone, Stanley, Cameron, and others. The surplus waters of the lake find their way into an affluent of the Congo.

TANGIER, the principal sea-port of Morocco, is situated on the Straits of Gibraltar. Its position is one of considerable strategic importance, almost rivalling in that respect Gibraltar itself. Tangier was occupied by the English during the 17th century, but abandoned on the score of expense; population about 25,000, of whom nearly 6,000 are Europeans.

TANN'HÄUSER, a celebrated legendary German hero. According to the legend, Tannhäuser, after living for some time in Venusberg amidst voluptuous pleasures, was induced by the Virgin Mary to lead a holy life. He travelled to Rome to obtain absolution, but Pope Urban declared himself unable to grant this, adding that he would not do it until the rod in his hand should sprout. Shortly after the departure of Tannhäuser, the rod actually began to sprout, but all efforts to find the hero failed. The legendary Tannhäuser has been confused with a wandering minstrel of the same name who actually existed during the 13th century. The story forms the subject of a well-known opera by Wagner.

TANNIN, a chemical substance which is obtained from gall-nuts, and the bark and leaves of many trees, among which may be mentioned the oak, larch, hemlock, spruce, and birch. Tannin is used to convert skins and hides into leather.

TANNING, the name given to the process of converting skins and hides into leather. By tanning, the skin is prevented from putrefying, and is kept soft and pliable. The skins used are usually those of cattle, goats, horses, and pigs. The process is as follows:—The skin is washed and scraped, and the outer surface and hairs removed by soaking in lime water. The actual tanning may be performed in two ways. In the case of the heavier skins, or hides, as they are called, alternate layers of bark and hides are placed in tan pits dug in the ground. The lighter skins are placed in a liquid obtained by steeping the bark in water. The process in either case is somewhat lengthy, usually being spread over from three to four months. In the case of leathers intended for gloves and the upper parts of "kid" boots, alum water is sometimes used instead of the ordinary tanning mixture. This process is known as "tawing," and is much more rapid than tanning.

TANTALLON CASTLE, in Haddingtonshire, 3 miles east of North Berwick, is a fine ruin, once the stronghold of the haughty Douglases. It is well described in Scott's Marmion, and for dramatic effect the parting of Marmion and Douglas at its gates is hardly surpassed.

TAN'TALUS, in classical mythology, a son of Zeus, who became king of Lydia. For some offence, such as that of betraying the secrets of the gods, he was condemned to a terrible punishment in the lower world. Afflicted with a raging thirst and hunger, he was placed in a pool of water which reached his chin, but which ever receded as he stooped to drink. Above his head hung luscious fruits, which, like the water, receded as he stretched out his hand to seize them.

TAPESTRY, the name given to wall hangings which were in general use among the rich before the introduction of wall paper. Tapestry was either made of silk or wool, and in it were woven designs representing historical scenes, animals, &c. The Bayeux tapestry is an historical record of the Norman conquest, and may still be seen at Bayeux (Normandy). Some of the most famous tapestry of the Middle Ages was produced at Arras (Flanders). Modern tapestry is often of great beauty and much resembles expensive carpeting.

TAPIOCA, a meal which is used as a foodstuff, and which is obtained from the tuber of a plant, grown in Brazil and other tropical countries. The tubers, when eaten raw, are poisonous, but the harmful constituents are driven off by reducing the tuber to a meal and roasting it. Pearl tapioca is obtained from starch grains. (See *Manioc.*)

TAR, a viscid black liquid, which is obtained by distilling coal or wood in closed vessels. It is one of the chief by-products in the manufacture of coal gas. Naphtha, benzol, pitch, etc., are obtained from tar, and from benzol and substances resembling it, the valuable aniline dyes are obtained.

TARA, HILL OF, an eminence in County Meath, Ireland, 7 miles south of Navan. Here the kings of Ireland are said to have been crowned; here St. Patrick preached, and the Danes were defeated; and here O'Connell held his last great "monster meeting" on the Repeal of the Union.

TARAN'TULA, a species of spider which is found in Italy, United States, etc. It is usually about an inch in length, and its bite is painful and venomous. The bite was formerly supposed to cause a kind of dancing madness, somewhat resembling St. Vitus' Dance, to which the name "Tarantism" was given.

TARE AND TRET. See *Commercial Dictionary.*

TARGET, a mark set up in shooting contests. In rifle practice an iron target is used, which is divided, by concentric circles, into parts known as bull's eye, inner, magpie, and outer, and the number of points scored depends upon the part struck. The targets used in big-gun practice are usually light structures of lath and canvas, or a barrel whose position is indicated by a flag. The word "target" was formerly the name of a shield.

TARGUM, the name given to various incomplete versions of the Old Testament, which are written in the Chaldæan language. They contain explanations of the text in addition to the text itself, and are reproductions of the oral teaching as given in the synagogue. They were compiled either during the Babylonian captivity or on the return of the Jews to Palestine, at the time when many of the Jews had forgotten their own language.

TARPEIAN ROCK, a precipitous rock which is situated on the Capitoline Hill, Rome. It obtained its name from a Roman maiden, Tarpeia, who treacherously admitted the Sabines into Rome. As they entered they threw upon her their shields and thus crushed her to death. She was buried near the rock named after her. The rock afterwards became the place of execution of traitors and criminals, who were thrown over its edge.

TARRAGONA, a sea-port of Spain, which is situated upon the Mediterranean coast. It is the capital of a province of the same name, and exports wine, oil, and fruits; population over 20,000.

TARTAN, a kind of cloth, mostly of wool, the pattern consisting of lines running at right angles, composed of bright colours ingeniously graded, the prevailing colour being generally green or red. A plaid and kilt of tartan was long the recognised dress of a Highlander, each tribe having its own tartan. After the Jacobite rising of 1745, the tartan was interdicted for some years.

TAR'TARUS, in Greek mythology a deep abyss situated below Hades, from which it was separated by huge gates. It is sometimes regarded by the ancient writers as the place of punishment, and sometimes was confused with Hades (the abode of the dead).

TARTARY, or **TATARY,** the name of a district of Central Asia. The word is used in a very vague sense, and is now applied to parts of the Chinese Empire, Turkestan, and Southern Russia. The

Tatars were a branch of the Mongolian race, who probably occupied a part of Manchuria about the 10th century, and the name was given by Europeans to the followers of Genghis Khan, who took Pekin and overran Central Asia during the 13th century. The name was afterwards applied to the members of all the Mongol hordes which appeared in Western Asia and Eastern Europe. The incorrect spelling "Tartar" is probably due to confusing "Tatar" with "Tartarus."

TASMAN, *b.* 1602, *d.* 1659, a celebrated Dutch explorer, who discovered Tasmania, 1642, and New Zealand. He also explored a portion of the north coast of Australia.

TASMAN SEA, the sea between New Zealand on the east, and Australia and Tasmania on the west.

TASMANIA, an island situated to the south of the Australian colony of Victoria, from which it is separated by Bass Strait. Tasmania is one of the States which form the Australian Commonwealth. Grazing and fruit-growing are the chief industries; wool and fruits the chief exports. Tasmania was discovered in 1642 by Tasman, by whom it was named Van Diemen's Land, after the governor of Batavia. In the early days of the 19th century it formed part of the colony of New South Wales, and until 1853 was used as a penal settlement. The original inhabitants, who closely resembled the Australian aborigines, became extinct, 1876. Refer to "Tasmania" in *Index*.

TASSO, TORQUATO, *b.* 1544, *d.* 1595, one of the greatest of the Italian poets. His greatest work, "Jerusalem Delivered," deals with the first crusade, and is one of the finest epics ever written. Shortly after its completion, 1574, Tasso became subject to delusions, and at length was confined in a convent at Ferrara for medical treatment. He never fully recovered his health and spirits.

TATE AND BRADY. Nahum Tate was born in Dublin (1652) and educated at Trinity College. Coming to London he gained Dryden's patronage, and was made poet-laureate after Shadwell. He was assisted by Nicholas Brady, also of Irish birth, in the production of a metrical version of the Psalms, selections from which were sung in all parish churches until the introduction of hymns, in the latter half of the 19th century. The diction is smooth, and a few pieces as "While Shepherds watched," and "As pants the Hart," are still popular.

TATIAN, *b.* in Syria about 120 A.D., a celebrated theological writer. He became a Christian about 150 A.D., and wrote "An Apology for Christianity," and "A Harmony of the Gospels," called the *Diatessaron*, a work from which we learn that about 160 A.D., our four gospels had already taken a place of supreme importance in the Church.

TATTERSALL'S, a well-known horse-market, which is situated at Knightsbridge Green, London. It was established, 1770, by Richard Tattersall, and its business is largely in connection with the sale of thoroughbreds. The name is also applied to one of the enclosures situated upon racecourses.

TATTOOING, the operation of pricking the human skin and staining the punctures with some colouring matter. The practice is common among the inhabitants of the South Sea Islands and Japan, and amongst the various Indian tribes of America. The marks made are permanent, and, when skilfully performed, the operation is not very painful. Tattooing seems to have been known and practised by the Israelites in early times, since the practice is forbidden in Leviticus xix. 28.

TAUCHNITZ, (1) Karl, *b.* 1761, *d.* 1836, a famous German printer who introduced the stereotyping process into his native country. (2) Christian, *b.* 1816, *d.* 1895, the nephew of the above, published at Leipzig numerous cheap translations of German and ancient Classics, and editions of English works, which, however, he publishes without loss to the living writer.

TAXIDERMY, the art of preserving the skins of animals, birds, etc., and also of stuffing and mounting these skins, in such a way that they closely resemble the living animals.

TAY BRIDGE, a railway bridge, over 10,000 feet in length, across the Tay, at Dundee. The present bridge was opened for public traffic in 1887. It takes the place of the first bridge, which in 1879 was partly destroyed by a gale that left a gap of about 3000 feet, into which plunged a railway-train that was passing at the time. About eighty persons perished.

TAY, RIVER, the longest river of Scotland, rises in the Western Highlands, expands into Loch Tay, and after a course of about 100 miles, enters the North Sea by the Firth of Tay. Like most of the Scottish rivers it is a famous stream for salmon. The principal towns upon the river are Perth and Dundee (the latter on the estuary).

TAYLOR, JEREMY, *b.* at Cambridge, 1613, *d.* 1667, a famous divine and writer on theology. During the civil war, Taylor acted as chaplain to Charles I., and at the Restoration was appointed Bishop of Down, and some years later Vice-Chancellor of the University of Dublin. His best known works are entitled "Holy Living," and "Holy Dying."

TAYLOR, TOM, *b.* at Bishop-Wearmouth, 1817, *d.* 1880; dramatist and man of letters, had a most successful career at Glasgow and Cambridge Universities. He was afterwards Professor of Literature at University College, London. But he got more and more engrossed in literary and dramatic work, being first on the staff of "Punch," and afterwards its editor; and in addition, producing numerous plays, almost all successful, as "Our American Cousin" (Lord Dundreary), "Masks and Faces," "Still Waters run Deep," etc.

TAYLOR, ROWLAND, was one of the prominent martyrs during the reign of Queen Mary I. He acted for some time as chaplain to Archbishop Cranmer, and at the time of his death, 1555, was Vicar of Hadleigh.

TEA, the prepared leaves of a shrub or tree which is grown in China, Assam, Ceylon, and Java. In China, the leaves are obtained from a shrub which attains a height of about 5 feet, whilst in Assam, a province of India, they are those of a tree, which is about 20 feet high. After the leaves have been picked they are heated in shallow pans and then rolled by hand. If the leaves are allowed to ferment before heating they give what is known as black tea, if not, green tea is obtained. Tea seems to have been used in China from the earliest times. It was introduced into Europe during the 16th century, but its price was for a long time prohibitive to all but the very rich. The bulk of the tea consumed in Europe was obtained from China until about 1840. Then Assam appeared as a competitor, and some 30 years later, its cultivation was introduced into Ceylon with marked success. India and Ceylon tea now forms nine-tenths of that imported into the United Kingdom.

TEAK, the name of a tree which is grown throughout the East Indies, especially in Burma, Assam, and the Philippine Islands. The largest trees are about 8 feet in diameter. The timber, which is hard and durable, is used in ship-building, carriage making, etc.

TEASEL, a plant which is found in the temperate districts of the northern hemisphere. The "burr" or prickly head of the plant is used in the manufacture of woollen goods, to "tease" the cloth and thus produce a nap. Various attempts have been made to construct suitable steel teasels, but without success, owing to the steel tearing the cloth. Teasels are imported in large quantities into Yorkshire.

TECK, a small German duchy, which is situated near Wurtemberg. In 1866 the Duke of Teck married Princess Mary of Cambridge, whose daughter married the heir to the British Crown.

TE DEUM, a hymn of praise, which obtains its name from the fact that its opening words are *Te Deum laudamus*, "We praise Thee, O God." It dates from the 4th or 5th century, and forms a part of public worship in the English, Roman Catholic, and other Christian Churches.

TEETOTALISM. This particular form of guarding against the abuse of alcoholic liquors had its origin in Preston, Lancashire, in 1832, when the "seven men of Preston" led by Joseph Livesey, resolved on total abstention in lieu of moderation. The name arose from a declaration by Richard Turner, in 1833, in favour of "tee-total abstinence,"—the "t" being reduplicated, it is said, because he used to stammer in pronouncing "total."

TEHERAN, the capital of Persia, is situated about 70 miles due south of the Caspian Sea. It is a mean-looking town, but its bazaars are crammed with silks, shawls, satins, and carpets; population 250,000.

TEINDS, The Scottish name for tithes. The origin and history of "teinds" in Scotland is much the same as that of "tithes" in England (See *Tithes*).

TELEGRAPHY. See *Electric Telegraph* and *Wireless Telegraphy*.

TEL-EL-KEBIR, situated about 50 miles north-east of Cairo, was the scene of a battle in which Sir Garnet Wolseley defeated Arabi Pasha, 1882. The latter had organised a rebellion against the Khedive, the object of which was to put an end to foreign interference in Egyptian affairs. Since the battle, a British force has been maintained in Egypt.

TELE'MACHUS, (1) the son of Ulysses and Penelope, who assisted his father on his return home after his wanderings in slaying the suitors of his mother. (2) A monk, who during a gladiatorial combat at Rome, 404, rushed into the arena to separate the combatants, and was stoned by the people for doing so. His death shocked the Christian part of the community, and led to the suppression of the combats.

TELEOLOGY, that branch of Metaphysics, or Mental Philosophy, which deals with "final causes," or the end which each thing in Nature is designed to subserve, and draws hence an argument for the existence of a Creator. Xenophon, in his "Memorabilia," represents Socrates as using the "argument from final causes" with considerable effect.

TELEP'ATHY, name given to a supposed communication of sensations between two persons, who may be a considerable distance apart at the time, but between whom there exists a close sympathy.

TELEPHONE, an instrument for conveying sounds to a distance by means of electric currents. In 1861, Reis succeeded in transmitting musical tones and other sounds to a distance of several miles, but Graham Bell, in 1876, was the first to send articulate speech. His instrument consists of a transmitter and receiver of similar structure connected by a wire. Speaking into the transmitter causes a

thin metal plate to vibrate. These vibrations are transmitted by means of an electric current to the corresponding plate in the receiver, which vibrates in an identical manner, and thus re-produces the sounds uttered by the speaker. For practical purposes, a modified form of microphone is used as a transmitter, and a Bell telephone as the receiver. Messages have been successfully sent to a distance of 1,500 miles.

TELESCOPE, an instrument employed for the purpose of viewing distant objects. There are two classes of the instrument, the refracting and the reflecting. The common astronomical refracting telescope consists essentially of an objective and an eye-piece or ocular fitted into a tube, with some mechanical contrivance for adjusting the distance between the two. The objective is a double convex lens. The rays of light, proceeding from the distant object to which the telescope is directed, are brought to a focus somewhere within the tube, and an inverted image of the object is formed at that spot. This inverted image is magnified by the convex lens of the ocular. To produce a bright and distinct image a large objective is necessary, and in the telescopes employed in observatories this is often from 16 to 24 inches in diameter, and the tube from 20 to 30 feet in length. The inversion of the image is no drawback when a celestial body is being observed. In terrestrial telescopes this is corrected by modifications in the ocular; either two additional convex lenses of equal curvature are introduced, or, as in the Galilean instrument, the ocular consists of a double concave lens. Opera-glasses and field-glasses consist usually of a pair of Galilean telescopes. The reflecting telescope is a much more powerful instrument. In this the objective is replaced by a concave mirror usually of speculum metal. The reflector forms an inverted image of the object under examination, and this is viewed through a magnifying ocular, placed in the side of the tube in Newton's and Herschel's telescopes, or in the end in the Gregorian. In the latter instrument the image is viewed through a central aperture in the main reflector, and a second smaller reflector is introduced facing the former, by means of which the inversion is corrected, the second image formed by it being magnified by the lens of the ocular. In the largest reflecting telescopes the reflector has a diameter of from 6 to 7 feet.

TELFORD, THOMAS, *b.* 1757, *d.* 1831, one of the greatest civil engineers of the early part of the 19th century. Among the numerous works carried out by him, were the construction of the Caledonian and Grand Trunk Canals, of the Menai Suspension and Conway Bridges, and of St. Catherine's Docks. He also superintended the work of draining a large area of the Fen district.

TELL, WILLIAM, the national hero of the Swiss, whose renown rests upon his patriotic endeavours to secure the independence of Switzerland. According to the legend he was compelled to shoot an apple from his son's head, as a punishment for some offence committed against an Austrian officer named Gessler. This he accomplished successfully, but afterwards accidentally disclosed a second arrow, which he said was to have been used to kill Gessler, had any harm come to his child. He afterwards killed Gessler, 1307, and helped his countrymen to throw off the Austrian yoke. A monument to Tell has been erected at Altorf to mark the spot where he shot the arrow.

TEMPE, VALE OF, a lovely valley in the north-east of Thessaly, Greece, where the river Peneus (now Salamvria) forces its way to the sea between Mt. Olympus on the north and Mt. Ossa on the south. The poets made Tempe a favourite haunt of Apollo. It had great strategic value, as being the only pass into Thessaly from the north.

TEMPERAMENT. The word "temperament" originally signified "a mixture in due proportions," "a condition resulting from mixture." Hence the ancients made man possess a choleric, phlegmatic, melancholy, or sanguine temperament, according as one or other of the four "humours" was supposed to predominate in his constitution. In music the term is applied to a compromise by which a note halfway between, say C and D, is made to do duty for both C sharp and D flat, although according to strict harmonics, it is neither.

TEMPLARS, KNIGHTS, a religious order of knights, which was founded 1118 A.D. The object of its members was to protect pilgrims to Jerusalem, and the headquarters of the order were at that city until it fell into the hands of the Saracens, 1186, when they were removed to Cyprus. The Knights wore a mantle bearing a red Maltese cross on the left shoulder. A number of the monks settled in London in the district still known as The Temple, and where their church still stands. The order was suppressed about the end of the 13th century.

TEMPLE BAR, an arched gateway which formerly stood in Fleet Street, and separated the City from Westminster. It was removed in 1879, owing to the fact that it obstructed the traffic, and now stands erected at Theobald's Park, Cheshunt.

TEMPLE, FREDERICK, Archbishop of Canterbury, *b.* 1821, *d.* 1902; was educated at Tiverton School and at Oxford, where he became fellow and tutor of Balliol. In 1858 he became head-master of Rugby, and in 1860 appeared "Essays and Reviews," containing an essay by him, entitled, the "Education of the World." Great opposition, accordingly, was manifested to his appointment to the see of Exeter, 1869, but the sincerity, wisdom, zeal, and high Christian character shown in the strenuous discharge of his Episcopal duties soon silenced all objectors, and he lived to be promoted with almost universal approbation to the see of London, 1885, and of Canterbury, 1896. He had the honour of taking the leading part at Queen Victoria's Thanksgiving Service, at St. Paul's, 1897, and at the Coronation of King Edward, 1902.

TEMPLE, HENRY JOHN. See *Palmerston, Viscount.*

TEMPLE, THE, was situated on Mount Moriah, in Jerusalem. It was built by Solomon, and was 60 cubits long, 20 wide, and 30 high, and was divided into two chambers, the innermost being known as the "Holy of Holies," in which was placed the ark of the covenant. This temple was destroyed by Nebuchadnezzar, but rebuilt by the Jews on their return from Babylon. The temple was again rebuilt by Herod the Great, and was finally destroyed by the Romans, 70 A.D.

TENCHEBRAI, a small town of Normandy, the scene of a battle in which Henry I. of England defeated his elder brother, Robert, Duke of Normandy, 1106. As a result of the victory, Normandy remained for 100 years under the rule of the King of England.

TENEBRÆ (L. *darkness*), the name given in the Roman Catholic Church to a special service on Good Friday and the two preceding days. Its peculiarity lies in the fact that during the service all the lights in the church are gradually extinguished till only one remains, and this (as a symbol of our Lord's death and burial) is hidden for a time near the altar.

TENERIFFE, the largest of the Canary Islands, has an area of over 700 square miles. It contains the famous volcanic Peak of Teneriffe, which rises to a height of 12,000 feet. The exports include wine and tobacco; population about 200,000.

TENIERS, DAVID (the younger), *b.* at Antwerp, 1610, *d.* 1690, inherited from his father, of the same name, the artistic talent he developed to such a high degree. He painted about 700 pictures, chiefly scenes of peasant life, a dozen of which are in the National Gallery, London. He took a great share in founding the Antwerp Academy.

TENNIEL, JOHN, *b.* in London, 1820, a famous artist, who made his reputation as a cartoonist in the pages of "Punch," his work for many years including the production of the political cartoon. He joined the staff of the paper in 1851, and retired in 1901.

TENNYSON, ALFRED, *b.* at Somersby, Lincolnshire, 1809, *d.* 1892, was one of the greatest of the English poets of the 19th century. His life was devoid of incident, and throughout his career he was noted for his hatred of public attention. Tennyson became poet laureate in 1850, and was raised to the peerage in 1884. Among his principal works may be included "In Memoriam," "The Idylls of the King," and "The Princess."

TENTERDEN, a small market town of Kent, 13 miles south-west from Ashford. It is chiefly interesting for its church with fine perpendicular tower, the traditional cause of Goodwin Sands. The abbot of St. Augustine's, Canterbury, is said to have used the stone that should have repaired the sea-wall of Earl Godwin's estates to build the tower, and so during the next violent storm the said lands were inundated, and Goodwin Sands formed.

TERAPHIM, the name given, among the ancient Hebrews, to certain household deities corresponding to the Penates of the Romans. The idols which Rachel stole from Laban were probably of this kind.

TERENCE, *b.* at Carthage, 195, *d.* 159 B.C., the greatest of the Latin comic poets. He was brought as a slave to Rome, and subsequently given his freedom. Six of his comedies are extant, the best known being "Phormio" and "Adelphi."

TERMITES, or white ants, are found in most tropical countries. They live in large colonies and build nests of clay which are often as much as 10 feet in height. The whole of the members of one colony are descended from one king and queen, and the various members are divided into workers and soldiers, which are blind and wingless, and a third variety possessing eyes and wings. Termites are vegetarians and are very destructive in forest districts.

TERPSICH'ORE (o-re) "delighting in the dance"; one of the nine Muses, inventress of dancing and, according to some, of the cithara. She is represented as a virgin crowned with laurel, and holding a musical instrument.

TERRA-COTTA ("cooked, i.e., baked, earth or clay"), the Italian name for pottery or earthenware, applied generally to articles not for domestic use, as ornamental bricks, tiles, vases and statues or statuettes. The use of terra-cotta is very ancient, many examples being found in the ruins of old cities in Greece and Asia Minor. Its use was revived in England by Wedgwood and has been greatly extended by Doulton and other makers for architectural purposes. (See *Tinworth, George*).

TERROR, REIGN OF, the name given to that period of the French Revolution which was marked by the execution of

thousands of the French nobility and other prominent persons. It lasted about fourteen months during the years 1793–4, and was ended by the fall of Robespierre.

TERRY, ELLEN (Mrs. James Carew), *b.* 1848, the greatest English actress of the last few decades, made her first appearance on the stage when eight years old, and acted regularly from fifteen. She belongs to a well known theatrical family, and made her first stage appearance at eight, under Charles Kean. She became a member of Irving's company in 1878, when he took the Lyceum, and shared with him the successes which made that name a household word. She shared, too, in his American triumphs, visiting the States with him in 1883 and various years subsequently.

TERTULLIAN, *b.* about 150 A.D., *d.* 230, a celebrated theological writer. He was the son of a Roman centurion, and after his conversion wrote a "Defence of Christianity." He was remarkable for his impassioned eloquence.

TESLA, NIKOLA, *b.* in Servia, 1857, a celebrated electrician and physicist. Since 1884 he has been living in the United States, where for some time he worked with Edison.

TEST ACT, an Act of Parliament, passed 1673, which required all persons holding public offices to take the oath of allegiance, to denounce the doctrine of transubstantiation, and to receive the sacrament of the Lord's Supper, according to the rites of the Church of England, at least once a year. This was done to prevent both Roman Catholics and Nonconformists from holding these offices. The act was made inoperative by an act of indemnity which was passed annually, but it was not repealed until 1828.

TÊTE NOIR, a well known Alpine pass, leads from the Rhone valley at Martigny to Chamonix at the foot of Mont Blanc; height about 5,000 feet.

TETRAZZINI, SIGNORA LUISA, *b.* at Florence, a famous soprano singer, made her first appearance in London, at Covent Garden, 1907, where she achieved an instant triumph. Her best rôle is "Lucia di Lammermoor."

TETZEL, JOHANN, *b.* at Leipzig, 1455, *d.* 1519, a Dominican monk, who carried on a profitable business of selling indulgencies, the money which he obtained being used to defray the cost of building St. Peter's at Rome. It was the action of Tetzel which caused Luther to publish his protest, 1517, which practically marks the beginning of the Reformation on the Continent.

TEUTONIC KNIGHTS, an order similar to the Templars and the knights of St. John, but restricted to Germans. Founded at Acre in 1190, it soon became a powerful organization, and when the object of the Crusades became hopeless, it devoted its attention to the Church's enemies nearer home. From Marienbad, its headquarters, to the Gulf of Finland its rule extended, and a long contest with the heathen Prussians and Lithuanians kept enthusiasm alive. But with the conversion of these, the order declined, and was suppressed by Napoleon in 1809.

TEUTONS, the name given to a number of closely related tribes, who inhabited parts of Central and Western Europe. They received a crushing defeat at the hands of Marius at Aquæ Sextiæ, 102 B.C., but some centuries later swarmed into Spain, Italy, and the Balkan Peninsula, and destroyed the Roman Empire.

TEWKESBURY, a small town situated in Gloucestershire, at the junction of the Avon and Severn. It was the scene of a battle fought during the Wars of the Roses, in which the Lancastrians under Margaret of Anjou were defeated by the Yorkist forces of Edward IV., 1471. It has a celebrated abbey church founded in the 12th century.

THACKERAY, WILLIAM MAKEPEACE, *b.* at Calcutta, 1811, *d.* 1863, a celebrated English novelist and humorist. He contributed numerous articles to "Punch," and became the Editor of "Cornhill," 1860. His novels are generally weak in plot, but are distinguished by their genial satire and keen insight into human nature. His principal works are "Vanity Fair," "Pendennis," "The Newcomes," "Esmond," "English Humorists of the 18th Century," and "The Four Georges."

THALES, (a-les) *b.* at Miletus, 640 B.C., one of the seven wise men of Greece, distinguished as a philosopher, astronomer, and mathematician. He taught the sphericity of the earth and explained the causes of eclipses, on account of which he was accused of impiety to the gods. Sentence of death was pronounced against the philosopher and all his family, a sentence afterwards commuted, through the influence of Pericles, to banishment.

THAMES, the chief river of England, rises in the Cotswold Hills, and flows into the North Sea after a course of over 200 miles. It possesses an estuary 50 miles in length, and the tide ascends as far as Teddington, 20 miles above London Bridge. The width of the Thames at the latter place is about 860 feet. During its course the river forms the boundary between nine counties, and it is connected by canals with all the important English rivers. Its commercial importance may be estimated from the size and wealth of London. The principal tributaries are the Kennet, Wey, and Mole on the right bank, and on the left the Thame and Lea. On its way to the sea it passes Oxford, Abingdon, Reading, Eton and Windsor, Kingston and Richmond; it flows through London, and on its estuary stand Greenwich, Woolwich, Gravesend, Sheerness and Southend. Below London-bridge the river is packed with merchant ships from all quarters of the world.

THANE, a class or rank in Anglo-Saxon times answering as nearly as possible to our "landed gentleman." Below the noble (earl), and above the working farmer (ceorl), he corresponded to the Norman knight. The title was hereditary, and could be acquired by any who possessed five hides of land or made three voyages in his own ship.

THANET, ISLE OF, a district forming the north-eastern corner of Kent about 10 miles long and 5 miles wide. In early times it was actually an island formed by the two mouths of the Stour, one flowing north to Reculver, the other south to Richborough. It formed the first settlement of the English in England, and here Augustine after landing at Ebbsfleet, awaited Ethelbert's permission to come to his court. The inhabitants, numbering over 60,000, are chiefly collected in the popular watering-places of Margate, Ramsgate, and Broadstairs. *Margate*, celebrated for its fine bracing air, is one of the resorts most favoured by Londoners, having about 100,000 visitors annually. *Ramsgate*, looking over Pegwell Bay to Sandwich, is also a popular seaside place, with a considerable coasting trade. *Broadstairs*, with its firm sands and sheltered position, is an ideal bathing-place.

THANKSGIVING DAY, a day specially set apart in the United States by proclamation of the President as a day of general thanksgiving for the harvest and other blessings of the year. It is usually the last Thursday of November, and one cannot read a novel dealing with American life and manners without being struck with the zest and earnestness that enter into its observance.

THEBES. (1) An ancient capital of Egypt, situated on both sides of the Nile, about 300 miles in a direct line from Cairo. Thebes was probably founded about 2500 B.C., and reached the height of its power during the years 1600–1100 B.C.; it decreased in importance as the delta region became more important, and finally the capital was transferred to Memphis. The site is now marked by the village of Luxor, in the neighbourhood of which are many magnificent ruins of temples, tombs, and obelisks. (2) The capital of Bœotia, one of the divisions of ancient Greece, is situated some distance north of Athens. It is said to have been founded about 1500 B.C., by the Phœnicians.

THEISM, the belief in the existence of a personal Deity, that is, the exact opposite of "Atheism." The term may thus be used to describe the beliefs held by Christians, Jews, and Mohammedans, and of all others who recognise the existence of one Supreme Deity.

THEMIS'TOCLES, (o-cles) *b.* about 515, *d.* 449 B.C., a famous Athenian commander and statesman. He was largely responsible for the crushing defeat of the Persian fleet at Salamis, and subsequently increased considerably the power of Athens. Having excited the jealousy of some of the citizens, he was ostracised and went to Persia to the court of Artaxerxes, where he died.

THEOCRACY, the name given to a system of government by ecclesiastical authorities, and hence regarded in primitive times as government by God Himself. The Israelites possessed such a government from the Exodus until the appointment of King Saul.

THEODOLITE, an instrument used in astronomical work and in land surveying, to measure angles in either a horizontal or vertical plane. It consists of a telescope, to which is attached a graduated circle, which rotates in a vertical plane. The telescope is supported upon a graduated circle, which rotates in a horizontal plane. The telescope can thus be turned towards any point, and the angles through which it turns read off from the circles. The instrument is provided with a compass and spirit levels, to assist in arranging it in position.

THEOLOGY, the science which treats of the nature of God, and the relations which exist between God and man. It is divided into two main divisions, Natural and Revealed Theology. The former is the result of observation and pure reasoning, the latter deals with Holy Scripture and revealed religion generally. Christian Theology deals with different aspects of revealed religion, e.g. *historical* theology treats of the history of religious thought; *dogmatic* theology deals with the system of religious doctrine; and *apologetic* theology investigates the truth of the religion from the standpoint of an adherent, defends it against the attacks of unbelievers, and offers grounds for its acceptance.

THERESA, ST., *b.* 1515, *d.* 1582, a Spanish saint and religious writer who had a marvellous influence both in her lifetime and since. Her example and exhortations achieved the reformation of the Carmelite convent of which she was a member, and she was persuaded to take in hand the other convents of the order. Her writings have a high reputation among Roman Catholics.

THERMOMETER, THE, is used for measuring temperatures. Its action depends on the principle that liquids expand when heated and contract when cooled. The instrument consists of a glass tube of

narrow bore having a bulb at one end. This is partly filled with mercury, alcohol, or other suitable liquid. When sufficient of the liquid has been introduced, the air in the remainder of the tube is expelled and the open end sealed up. The thermometer is graduated by first fixing the freezing-point and the boiling-point. The former is found by noting the height of the liquid in the tube after it has been kept for some time in melting ice, and the latter by observing the height to which it ascends after it has remained for some time surrounded by steam from boiling water. The distance between these two fixed points is divided into a number of equal spaces called degrees, 180 in the case of the Fahrenheit scale, the one in common use in England, and 100 in the case of the Centigrade scale. Freezing-point is marked 32° or 0°, and boiling-point 212° or 100° according to the scale adopted. The graduation is continued below the freezing-point, and the degrees are numbered downwards from 32° to 0° in Fahrenheit's thermometer, while in the centigrade instrument, temperatures below freezing-point are indicated by prefixing a minus sign to the number, e.g., — 12 C. indicates 12 centigrade degrees of frost, but — 12 F. represents 12 degrees below 0°, or 44 Fahrenheit degrees of frost.

THERMOPYLÆ, a famous pass, situated in the north of Greece, across which leads the only road from Thessaly to Southern Greece. It is famous for the heroic stand made there by Leonidas, at the head of 300 Spartans 480 B.C., against the whole Persian army, in which every one of the defenders perished.

THIERS, LOUIS ADOLPHE, *b.* at Marseilles, 1797, *d.* 1877, a famous French statesman and historian. As a political writer he hastened the expulsion of the Bourbons from France in 1830. Under Louis Philippe he held various cabinet posts, and was once premier. He opposed the Franco-German war of 1870-1, and Napoleon III.'s policy generally. Thiers represented France in the peace negotiations that followed the war, and subsequently, first as chief of the executive and then as President of the Republic (August, 1871, to May, 1873), his genius for finance proved of great service to his impoverished country. He was small in stature, but his brilliant powers of oratory covered all physical defects. His works include, "History of the Consulate and of the Empire," and "History of the French Republic."

THIRLWALL, CONNOP, *b.* at Stepney, 1797, *d.* 1875, bishop of St. Davids and historian of Greece, was a scholar early in life. At Cambridge he had a brilliant career. After entering the church he retained his independence, speaking for the admission of dissenters to degrees, the admission of Jews to Parliament, and the disestablishment of the Irish Church. His "History of Greece" is a monument of his learning and sagacity, and his thirty-four years' work at St. Davids a proof of his faithful service.

THIRTY-NINE ARTICLES, THE. These articles of religion contain statements on certain points of doctrine on which differences of opinion were prevalent at the time of the Reformation. In the reign of Edward VI. forty-two articles drawn up by Archbishop Cranmer were promulgated by royal authority. In the reign of Elizabeth, Convocation reduced the number to thirty-nine, and passed them in the form in which they now appear at the end of the Prayer Book. To these articles every clergyman of the Church of England has given his solemn assent.

THIRTY YEARS WAR, THE. This disastrous war, which devastated Germany from 1618 to 1648 was the outcome of the religious and political differences arising from the Reformation. The war was carried on between the Protestant States and the Catholic supporters of the German Emperor, with varying success until 1630, when a great Protestant champion appeared in the person of Gustavus Adolphus, king of Sweden. He scored success after success, but died in the hour of victory at Lützen, 1632. Oxenstiern, the Swedish chancellor, held together the Protestant States till their crushing defeat at Nördlingen, 1641. The Swedes, however, continued the war, and, aided by the French, who by the advice of the astute Richelieu had hitherto taken no active part in the contest, completely shattered the imperial power at the second battle of Nördlingen, 1645. By the treaty of Westphalia, 1648, which closed the war, France and Sweden were the chief gainers. The war left Germany in a pitiable condition of distress; Spain, the ally of the Emperor, was greatly reduced in power; and France, taking advantage of the general exhaustion, became the chief military power of Europe.

THISBE. See *Pyramus.*

THOMSON, JAMES, *b.* in Roxburghshire, 1700, *d.* 1748, a British poet. His best and longest poem is "The Seasons." The effectiveness of his best play, "Sophonisba," was quite ruined on the night of its production by the unconsciously grotesque line, "O! Sophonisba. Sophonisba O!" an apostrophe which elicted from the critics the sad reply, "O! Jimmy Thomson, Jimmy Thomson O!"

THOMSON, WILLIAM. See *Kelvin, Lord.*

THOR, one of the foremost of the Scandinavian gods, the son of Odin and Jörd (earth). He was the friend and protector of mankind. His powerful hammer, when thrown at an enemy, returned to his hand of its own accord, and the belt which he wore was one of the sources of his great strength. He was the god of thunder; and Thursday, i.e., Thor's Day, was named in his honour.

THORNYCROFT, HAMO, R.A., *b.* in London, 1850, English sculptor. He first won a name by his "Artemis," 1880. His finest works are his "Teucer," 1881, "The Mower," 1884, and his statues to General Gordon, Cromwell, King Alfred, and Gladstone.

THORNYCROFT, SIR JOHN ISAAC, *b.* at Rome, 1843, naval architect and engineer. His *Ariel*, designed in 1863, was the forerunner of the torpedo boat. The high speed now attained at sea is greatly due to his engineering improvements. He is now taking a leading part in the construction of motor vehicles.

THORWALDSEN, ALBERT BERTEL, *b.* 1770, *d.* 1844, a Danish sculptor of great excellence. From 1797 to his death he resided chiefly at Rome. His bas-reliefs and statues representing classical and religious characters are much admired. The statuary group of "Christ and the Twelve Apostles" is, perhaps, his best work. Fine specimens of his art are preserved at Copenhagen, and his "Lion" at Lucerne, commemorating the heroism of the Swiss Guards at Paris, has a world-wide celebrity.

THREAD MANUFACTURE. The principal varieties of thread manufactured are cotton, linen, and silk. In all cases yarn from the spinning machines is taken, wound upon bobbins and passed through a twisting frame which unites two yarns into one thread. The process is repeated until the thread contains the number of "cords" required. Paisley is the great centre of cotton-thread manufacture, while linen thread is chiefly made in Ulster. The thread, when completed, is usually "spooled," i.e., wound upon reels.

THREADNEEDLE STREET, in London, leads from Mansion House to Bishopgate Street Within, having the Bank of England on one side and the Royal Exchange on the other. "The Old Lady of Threadneedle Street" is a familiar title for the Bank of England.

THRESHING. In Biblical times threshing was performed b driving oxen over the threshing-floor, the tread of the animals shaking the grain from the ears. Sticks were frequently used, developing later into the flail, which consists of a stick with a shorter one fastened to it by leathern thongs. The first satisfactory threshing machine was that invented by Meikle, a Scotsman, in 1786. The mechanism consisted of an arrangement of revolving cylinders which dragged the corn to be threshed into the machine, shook and beat out the grain without crushing, and finally passed out the straw at the other end, leaving the grain on the floor below the machinery. Modern machines are the same in principle, but are much more complicated, threshing, winnowing, cleaning, weighing, and the sorting of the grains being now accomplished by the same machine.

THOROUGHBRED HORSE. See *Horse, Thoroughbred.*

THUCYD'IDES (i-des), *b.* 471, *d.* 401 B.C., a famous Greek historian. His unfinished "History of the Peloponnesian War" contains many fine examples of descriptive style. His failure, as the leader of an Athenian expedition to relieve Amphipolis from the attacks of Brasidas, led to his ostracism from Athens for several years.

THUGS, a sect in India whose religion demanded the sacrifice of human victims to appease their object of worship, the goddess Kâli. *Thuggee*, as this cult was called, was very prevalent until vigorous methods adopted by the Indian Government from 1826 to 1835 practically stamped it out. Thugs generally travelled about in bands disguised as traders or pilgrims, ingratiated themselves with travellers on the road, and when a suitable opportunity arose, murdered them, usually by strangulation with a silk handkerchief.

TIARA, the triple crown of the Pope. The three crowns rise one above the other and encircle a cylindrical cap of cloth which rises to a peak and is surmounted by a mound and cross of gold. The word is also applied to any circular ornament richly jewelled and worn on the head.

TIBER, a river which rises in the Apennines, and after a course of about 250 miles in a general southerly direction flows into the Mediterranean Sea. Rome stands on its banks, and within the city it is about 300 feet wide.

TIBERIAS, a town in Palestine on the eastern shore of the Sea of Galilee. It was founded by Herod Antipas in the 1st century A.D., was for a long period a centre of Hebrew learning and, till its capture by Saladin in 1187, one of the chief strongholds of the Crusaders.

TIBERIUS, CLAUDIUS NERO, emperor of Rome, 14-37, A.D. He married Julia, daughter of Augustus Cæsar, by whom he was made heir to the imperial throne.

TIBET, a country of Central Asia consisting of a high plateau between the Himalaya and Kuen-Lun Mountains, and under the suzerainty of China. Lamaism (a form of Buddhism) is the prevailing religion, and the government is in the hands of the Dalai-Lama (the high-priest). The valley of the Sanpo, in which stands Lhasa the capital, is the only fertile district. The industries are mainly pastoral, yaks, goats, and sheep being reared. A

great objection to the intrusion of foreigners is a marked feature of the people. Failure, on the part of the Tibetans, to fulfil the terms of a treaty made with the Indian Government in 1890, combined with the interception of secret communications between Russia and Lhasa, led, in 1904, to the dispatch of the military explorer, Colonel Younghusband, to Tibet, accompanied by an armed force of 2,500 troops. After much fighting with the brave but ignorant natives, the force reached Lhasa, and after the signing of a new treaty with the Tibetan authorities, recrossed the Himalayas before the end of the year.

TICHBORNE TRIAL, the longest trial held in England. It arose from a claim made by a butcher from Australia named Orton to the Tichborne estates, worth about £24,000 a year. On the death of Sir Alfred Tichborne in 1866, Orton came forward as his elder brother, Roger, supposed to have been lost at sea, and was acknowledged by the dowager-lady Tichborne as her lost son. The trial began 11th May, 1871, and was not concluded until 6th March, 1872, the 103rd day of the trial, when the claimant was declared non-suited. The proceedings cost the estate at least £90,000. Orton was then put on his trial for perjury and forgery. In it Sir Henry Hawkins (now Lord Brampton) for the prosecution, and Dr. Kenealy for the defence, greatly distinguished themselves. After a trial lasting 188 days, at a cost of nearly £60,000, Orton was sentenced to 14 years penal servitude, 28th February, 1874. Eventually he admitted his imposture and towards the end of his life got his living as a barman. He died, 1898.

TICKET OF LEAVE. Refer to *Index*.

TIDES, the periodic rise and fall of the waters of the ocean due to the attraction of the sun and moon, by which a wave motion is set up which traverses the oceans and causes the level of the water at points on the coast to vary. Two tides, under ordinary conditions, occur daily, but high water is fifty minutes later each day. The sun, as a tide producer, is much less effective than the moon. At new moon and full moon the relative position of sun and moon is most favourable for united action. Consequently, at these times occur the highest tides, known as the *Spring Tides*, whereas at half-moon occur the tides known as *Neap Tides*, which fail to reach the average height. The height of the tidal wave also varies with the area of the mass of water in which it moves. In mid-Atlantic it is about 12 feet high, in mid-Pacific from 3 to 4 feet. In shallow seas and funnel-shaped bays and estuaries in free communication with the ocean the height of the tidal wave is often much higher. In the case of the Bay of Fundy, for instance, at the time of Spring Tides, there is a difference of level of 70 feet between high and low water. Land-locked seas, as the Baltic and Mediterranean, are practically unaffected by the tidal wave of the ocean, and have merely slight tides of their own.

TIERRA DEL FUEGO, an archipelago off the Southern extremity of South America, from which it is separated by the Straits of Magellan. The name, signifying "The Land of Fire," was given to it by Magellan, probably from the number of signal fires lighted by the natives along the coast. The natives are in a degraded state of barbarism, but are extremely hardy, bearing the intense cold of winter with very little covering.

TIERS ÉTAT, formerly the third estate of the realm of France, the two others being the nobility and clergy. At the French Revolution, 1789, deputies of the down-trodden *tiers état* assembled for the first time during nearly 200 years, formed themselves into the National Assembly and took the Government into their own hands.

TIGRIS, a river of Asiatic Turkey, which rises in the mountains of Armenia, and after a course, generally south-west, of 1,100 miles, joins the Euphrates at a point 100 miles from the Persian Gulf, into which the united streams flow. In ancient times, its waters were used to irrigate one of the most fertile and densely-populated districts of the world. Bagdad and Mosul are on its banks.

TILBURY FORT, in Essex, on the Thames, opposite Gravesend. Henry VIII. erected the first regular fortification here in 1539. This was added to by Elizabeth, who reviewed her troops here in 1588 after the Armada had been scattered. In 1667, and at intervals since, additions have been made until Tilbury Fort is one of the strongest in England.

TILLOTSON, JOHN ROBERT, *b.* 1630, *d.* 1694, was famed for his eloquence as a preacher. In the reign of Charles II. he preached against the Declaration of Indulgence and in favour of the Exclusion Bill. When the Revolution was accomplished he became a great favourite with William III., and was made Archbishop of Canterbury on Sancroft refusing to take the oath of allegiance.

TILSIT, a small town on the Niemen, in East Prussia. Here, on a raft in mid-stream, in 1807, took place the famous compact between Napoleon and the Emperor Alexander of Russia, by which Prussia was deprived of her Polish provinces and possessions east of the Elbe, forbidden to trade with England, and reduced to a second-rate power. The trade of Tilsit in grain and timber is considerable.

TIMBER. The great drain made on English forests before the general application of iron to ship-building and coal to smelting purposes has rendered England almost entirely dependent on foreign countries for her timber supply, the annual imports in this respect amounting in value to over 25 million pounds. Many varieties of pine are imported in vast quantities: red-wood from the Baltic ports and California, white-wood from Russia, Douglas firs for ships' masts from British Columbia, pitch pine from the Eastern United States, and Kauri pine from New Zealand. Of woods used in cabinet-making and decorative woodwork, walnut from the south of Europe, rose-wood from Brazil, mahogany from Central America, satin wood from the West Indies and Ceylon, and ebony from the Congo forests and Ceylon are largely imported. The hard, durable teak, used so much in ship-building, comes chiefly from India, Burma, and Siam.

TIMBUKTU, a large town in the French Sudan, about 10 miles north of the Niger, chiefly inhabited by negroes and Arabs. Its caravan trade with Guinea and the northern coasts of Africa in gold, gum, and ivory is very large; population about 20,000.

TIME, in its general sense, is divided into days, months, and years, and is measured by the regular recurrence of certain astronomical phenomena. In its narrower sense, the number of hours, minutes, &c., from some fixed point of time in each day, it is measured chiefly by clocks and watches. In computing the relative times of places differing in longitude, three facts must be considered: (1) The rotation of the earth is from west to east. (2) A complete revolution of the earth on its axis takes 24 hours. (3) Noon occurs at the same time at all places on the same meridian. Hence (1) places east of a certain town have noon before it, and places west, after it. (2) The difference of time is found by reckoning 4 minutes for each degree of longitude separating the places, irrespective of the latitude. If it be 9 p.m. Monday, at Greenwich, at Melbourne 145° east, the time will be 6.40 a.m. Tuesday, while at New Orleans, 90° west, the time will be 3 p.m. Monday. For convenience all places in the British Isles keep Greenwich time, France takes the time from Paris, while Germany and Switzerland reckon according to central European time, which is one hour earlier than that at Greenwich. See "Relative Times" in *Index*.

TIME IMMEMORIAL, or "time out of mind." In English law any right is considered immemorial unless it can be proved to have arisen since the accession of Richard I., 1189.

TIMES, THE, a newspaper of great weight, founded in 1785 under the name of "The London Daily Universal Register," which title was changed to the present one in 1788. Under the direction of John Walter, who took it over in 1803, it became the leading London journal and gained a great reputation for the reliability of its news and the interest of its articles, a reputation which it has ever since maintained under the guidance of the Walter family.

TIMOTHY, the disciple and fellow missionary of St. Paul, was born in the province of Lycaonia in Asia Minor. He accompanied St. Paul to Philippi, Athens, and Corinth. He was with the apostle during his first imprisonment at Rome, for he is mentioned by name in St. Paul's Epistles to Philemon and the Philippians, written from that city. Two pastoral Epistles were addressed to him by St. Paul, who had left him at Ephesus to take charge of the Church there.

TIMUR, *b.* 1333, *d.* 1405, a Tartar chieftain who in 1370 became ruler of the district round Samarkand, and later conquered almost the whole of Central Asia. His campaigns were marked by great cruelty and bloodshed, but his encouragement of learning at his capital, Samarkand, proves him to have been not utterly devoid of civilized qualities. He conquered Persia, the greater part of India, defeated and took prisoner at Angora, in Asia Minor, Bajazet I., Sultan of Turkey, and at his death his territories extended from Moscow to the Great Wall of China.

TIN, a soft white metal used largely in the making of alloys such as bronze, pewter, Britannia-metal, gun-metal, etc. The principal ore from which it is extracted is tin-stone, a compound of tin and oxygen. The Cornish tin mines, once well known, are now nearly exhausted, the Malay Peninsula being the chief source of England's supply. Large quantities are used in the preparation of tin-plate.

TINDER, a substance which readily smoulders when a spark is dropped on it. Before the invention of lucifer matches cotton rags partially burnt were largely used as tinder, in England, for procuring a light. A spark was produced with flint and steel and allowed to drop into a box containing the tinder, and a thin slice of wood tipped with sulphur on being applied to the smouldering tinder readily caught fire.

TINNED MEATS. See *Canning*.

TIN PLATE, specially prepared sheets of steel plate, coated with tin and used for household utensils, cans for preserving fish, and many other purposes. The steel

plates are dipped into melted tin, the latter being distributed evenly over the surface, by passing the plate when cool between polished steel rollers. Tin is very slowly oxidised, and thus rusting is retarded. Llanelly, in South Wales, is a great centre of tin plate manufacture.

TINSEL, very thin pieces or strips of a glittering metal or an alloy—not often gold or silver—used on account of their brilliant effect in ornamentation. The name is also used for cloth in which the threads are interspersed with threads of glittering metal. Used metaphorically, it implies something showy and of little sterling worth.

TINTAGEL, a parish in Cornwall, 5 miles north-west of Camelford. On Tintagel Head stands the ruin of that castle where King Arthur is said to have held his court. It is first mentioned by Geoffrey of Monmouth (A.D. 1150).

TINTERN ABBEY, a splendid ruin in the midst of beautiful scenery on the right bank of the Wye, Monmouthshire. It was founded in 1131 by a Cistercian brotherhood, and at the dissolution of the monasteries in 1539, fell to the Earl of Worcester. It was purchased from the Duke of Beaufort in 1903 by the Crown.

TINTORETTO, *b.* 1512, *d.* 1594, a famous Venetian painter. His real name was Jacopo Robusti, the name Tintoretto arising from the fact that his father was a dyer. For some time he was a pupil of Titian, but his style is entirely original. Of his numerous works—he was a remarkably rapid worker—"The Crucifixion," "The Marriage of Cana," and "The Last Supper" are, perhaps, the most admired.

TINWORTH, GEORGE, *b.* in London, 1843, was in early life a wheelwright. He took to wood-carving, and became a student at the Lambeth School of Art, and later at the Royal Academy. While studying at Lambeth his figures and groups attracted the attention of Mr. Doulton, whose Art Pottery works he soon entered. His productions in terra-cotta and stone-ware are much esteemed.

TIRAH CAMPAIGN, a campaign conducted in 1897, by Sir William Lockhart, against the Afridis, on the N.W. frontier of India. The capture of the Dargai Heights by the Gordon Highlanders is memorable. See *Afridis.*

TITANIA. See *Oberon.*

TITANS, in Greek mythology, are the six sons and six daughters of Uranus (Heaven) and Ge (Earth). Led by Kronos (Saturn) they overthrew Uranus, but were in turn overthrown by Zeus (Jupiter), son of Kronos, and confined in Tartarus. Keats's fragment, "Hyperion," deals with the Titans after their fall.

TITHES, originally the tenth part of the annual produce of an estate, payable by the owner or tenant for the maintenance of religion. In England, the earliest example of the legal recognition of tithes is a decree of a synod in 786. The earliest mention of tithes in statute law is in 1285. The Tithe Commutation Act was passed in 1836, substituting a rent-charge, varying with the price of corn, for the payment in kind. Owing to the difficulties experienced by the clergy in collecting the tithe dues, an Act was passed, in 1891, transferring the payment of tithes from the tenant to the landowner. Refer to "Tithes" in *Index.*

TITIAN VECELLIO, *b.* 1477, *d.* 1576, one of the leading Italian painters. In landscapes, portraits, and groups of figures he was equally successful, and all his works are marked by the most exquisite colouring. Included among his masterpieces are "The Sleeping Venus," "Christ in the Garden," "Sacred and Profane Love," and "The Last Supper."

TITUS, a disciple and fellow-missionary of St. Paul, who in the last year of his life, 67 A.D., wrote his Epistle to Titus.

TITUS FLAVIUS, *b.* 40, *d.* 81 A.D., a Roman emperor revered for his personal qualities and for his ability as a ruler. He served under Vespasian, his father, in the war against the Jews, and on Vespasian becoming Emperor, his son took command and captured Jerusalem, 70 A.D. He was associated with his father in the government for a few years, and became sole Emperor, 79 A.D.

TOBACCO, the prepared leaves of certain plants of the genus Nicotiana, whose narcotic effects are due to the presence of a poisonous alkaloid called *nicotine.* The habit of tobacco smoking was introduced into England about 1586, on the return of Drake from Virginia, and thence spread through Europe in spite of royal edicts and the denunciations of the Church. Nearly 4 million pounds worth of raw tobacco, consisting of whole leaves, packed in barrels, is imported annually into England, the average annual consumption for the past five years being 30 ounces per head of the population. Virginia, Maryland, and Carolina are our principal sources of pipe and cigarette tobacco; Cuba, the Philippine Islands, and India supply cigars and tobacco used in their manufacture; the Turkish Empire grows excellent cigarette tobacco, much of the Turkish tobacco being sent to Egypt, there prepared, and exported as Egyptian produce; France, Germany, and Holland grow tobacco on a large scale, but the quality, as a rule, is inferior and the flavour unpleasant; Russian cigarette tobacco is of good quality and commands a ready sale in Germany. The ribs and stems of tobacco leaves are largely used in the manufacture of snuff.

TOBACCO PIPES, in their simplest form, consist of a hollow bowl to contain the tobacco, and a hollow stem by which the smoke is drawn through a hole in the bottom of the bowl. The most popular English pipe, the briar, is made from the knotty root of heather (Fr. *bruyère*) specially grown in the Pyrenees and Italy. Tobacco, when burning, gives out a natural oil which contains nicotine, and the absorption of this oil by the smoker is one of the most unpleasant features of the smoking habit. Bowls made of clay or meerschaum absorb the oil much better than briars, but the latter are more durable. Many ingenious inventions, some theoretically perfect, have been made to overcome this objection, but the simple, workable pipe that absorbs all moisture is yet to come. The stationary hookah, used largely in the East, has a vessel containing water between the bowl and the stem, and the passage of the smoke through the water removes most of the harmful impurities.

TOBOGGANING, "coasting" down a snow-covered slope on a toboggan, a simple kind of sledge without runners, consisting of a thin single length of wood (or two boards joined together), curved backwards in front, and guided in its descent by the steersman's foot, dragging behind, toe downwards.

TODLEBEN, FRANZ EDWARD, *b.* 1818, *d.* 1884, a Russian general with great engineering abilities, which had full play during the prolonged resistance he enabled the Russians to make at Sebastopol, in the Crimean War, 1854-5. He supervised the fortification of Kronstadt, which guards the water-way to St. Petersburg. In the Russo-Turkish war he conducted the siege of Plevna, 1877, and a year later was appointed commander of the Russian forces in Turkey.

TOGO, ADMIRAL, *b.* 1857, the Nelson of Japan, came to England as a cadet on the "Worcester" in 1873-74, and on his return did much to create the Japanese Navy. As Rear-Admiral he did good service in the war with China, but his services in the war with Russia were inestimable, ending with the annihilation of the Baltic Fleet (May 27-8, 1905). His signal before the battle ran: "The destiny of our country depends upon this battle. You are all expected to do your utmost." He received the O. M. from the late King Edward VII., and was made Count by the Mikado.

TOKIO, the capital of Japan since 1869, lies in a low, fertile plain at the head of the Bay of Tokio. The city is intersected by the river Sumida and many canals. It contains the Imperial Palace and a large university, and has all the appliances of Western civilization. The manufacture of silk goods, cotton goods, porcelain, matches, lacquer-ware, and machinery is carried on. Most of the foreign trade passes through its port, Yokohama; population exceeds 1½ millions.

TOLEDO, an ancient city of Spain, built on seven hills overlooking the Tagus. It is still famous for its swords. It contains a splendid 13th century cathedral and the remains of the *Alcazar,* the ancient palace of the Moorish kings. Both the Visi-goths and the kings of Castile made it their capital, and under the Moorish rule it was the second city of the country; population 20,000.

TOLERATION, ACT OF, an act passed by the English Parliament soon after the Revolution of 1688, removing many of the disabilities under which Protestant Dissenters from the Church of England had laboured. Those who took the oaths of allegiance and supremacy were, by this Act, allowed freedom of worship.

TOLL, originally any kind of tax, but now applied to a charge demanded for the enjoyment of certain privileges, such as landing at a pier, using a market-place for the sale of goods, crossing a bridge, etc. The highways of England were formerly maintained in good condition by tolls levied upon travellers at various points, guarded by gates, along each road, but since the beginning of the 19th century this system has been almost entirely superseded by charging road-maintenance to the local rates.

TOLSTOI, COUNT, *b.* 1828, a Russian novelist and social reformer keenly interested in the regeneration of the world in general, and of Russia in particular. He was educated at Kazan University, and was present at the siege of Sebastopol in 1855. After the war, he renounced the usual life led by wealthy Russian nobles, and settling down on his estates has since shared in the life and the work of the peasants there. "War and Peace," "Anna Karénina," "Resurrection," and "The Kreutzer Sonata" are works that testify to the passionate earnestness of their author.

TOMAHAWK, the light war-axe of the North-American Indians, formerly made with a stone head attached to the handle by strips of hide. The Indians had great skill in throwing these weapons, hitting an object with the sharp edge at a considerable distance. Their usage has supplied us with the metaphor "to bury the hatchet," meaning to "make peace."

TOMATO, a plant introduced into Europe from South America early in the 16th century. Its cultivation, for the sake of its fruit, has greatly increased in England in recent years. Tomatoes can be grown out of doors in the South of England, but for the most part they are produced in glass houses.

TOMMY ATKINS, the familiar name used for any private of the British army, as "Jack Tar" is used for a sailor.

TONE, THEOBALD WOLFE, *b.* 1763, *d.* 1798, an Irish patriot and conspirator. In 1793 he helped to establish the "Society of United Irishmen," and did much to prevail on the French to send troops to Ireland to aid the Irish in gaining independence. He took part in a French expedition sent to invade Ireland in 1798. He was made prisoner and taken to Dublin, where he committed suicide.

TONGKING, or **TONKIN,** a colonial possession of France in Indo-China, acquired in 1884. Rice, silk, and cardamoms are exported, and sugar, coffee, cotton, and tobacco grown. Minerals, especially copper, are plentiful. Area, 46,000 square miles; population, over 7,000,000, including 4,000 Europeans.

TONNAGE. The registered tonnage of a vessel is estimated by dividing the number of cubic feet of space contained in the vessel by 100. The tonnage determines the amount payable by the vessel in dock dues, canal tolls, etc. By the Merchant Shipping Acts of 1854 and 1894, careful instructions are given by which the Board of Trade officials are to measure the cubic capacity of vessels to be registered. A vessel whose capacity is 500,000 cubic feet would be 5,000 tons register.

TONNAGE AND POUNDAGE, duties on wine and other merchandise imported into the Kingdom. The amount was usually 3s. on a tun of wine and 1s. in the pound on the value of other articles. These duties were first granted to Henry V., and afterwards to succeeding kings. As these taxes had always been granted to previous kings for life, Charles I. was indignant at their being granted to him for one year only. These general charges were discontinued in 1787, and a specific duty imposed on each article imported.

TONSURE, the removal, by shaving, of a circular patch of hair from the top of the head; the bare space itself is sometimes called the tonsure. Priests of the Roman Catholic and Greek Churches are tonsured.

TONTINE, a form of annuity named from its inventor, Lorenzo Tonti, an Italian banker resident in Paris, in the 17th century. A number of members subscribe to a loan, the interest being paid annually by the borrower. As the number of lenders decreases, through death, the interest paid to each survivor increases, the last survivor drawing the whole of the interest on the sum originally lent. At the death of the last member of the tontine, the capital falls to the borrower.

TOOLE, JOHN LAWRENCE, *b.* in London, 1832, *d.* 1906, the most popular low-comedian of his day. He made his first appearance in London, at the Haymarket Theatre, in 1854. Among his more noted impersonations were Mr. Spriggins, Caleb Plummer, Joe Bright, and Dick Dolland. In 1879 he became lessee of Toole's Theatre, London, where for many years he contributed largely to the merriment of crowded houses.

TOPAZ, a silicate of aluminium in which fluorine is present. It is harder than quartz, and though comparatively abundant is classed among precious stones, some being transparent and others barely translucent. White, yellow, green, and blue topazes of varying shades occur. Besides Brazil, the Ural, Altai, and Erz-Gebirge mountains are the chief sources of supply.

TOPHET, a name given to the gloomy ravine of Hinnom or Gehenna, south of Jerusalem, where in the reign of Manasseh and other evil kings the idolatrous Israelites sacrificed their first-born to Moloch. The children were first slain and then burned. The rabbinical story of the calf-headed brazen image of Moloch, in which the children were burned alive, is pure fable. The name "Tophet" is probably derived from *tophteh*, a pyre.

TORIES. This designation for a political party arose during the struggle in 1681 over the Exclusion Bill. The Court party, supporters of Charles II. and in favour of the succession of the Duke of York, dubbed their opponents Whigs, i.e., psalm singing Covenanters. The Whigs retaliated by addressing their opponents as Tories, i.e., thieving Irish moss troopers. The names were retained to designate the two parties in Parliament, their contemptuous signification gradually being lost. The word Tory is still occasionally used, but the term "Conservative," introduced during the Reform Bill struggles in 1832 has almost entirely displaced it.

TORONTO, the capital of the province of Ontario, on the north-west coast of Lake Ontario, and, with the exception of Montreal, the largest city in Canada. It has a large output of iron, engines, and machinery, and a considerable transit trade by rail and water; population exceeds 200,000.

TORPEDO, a steel, cigar-shaped vessel charged with an explosive, and fitted with means of propulsion enabling it to move through the water towards the object against which it is directed. The Whitehead torpedo, of which those used in the British navy are modifications, consists of three chambers; the pointed head contains a charge of gun-cotton, the middle chamber contains the machinery which drives the propellor of the torpedo, and the third chamber contains compressed air to drive the machinery. The torpedo is fired from a tube fixed either above or below the water line, and as soon as the torpedo enters the water its propeller begins moving. The torpedo can be adjusted to keep at any required distance below the surface. Contrivances, in which the gyroscope figures prominently, have been invented for keeping the torpedo on the course intended. At present, it is probably the most deadly of the weapons used in naval warfare.

TORQUAY, a watering-place on Tor Bay in Devonshire, noted for its mild climate, its subtropical plants growing in sheltered places, its picturesque scenery, and its equable temperature. It is accordingly a favourite winter resort for invalids and consumptive patients; population exceeds 35,000.

TORQUE, a bracelet, armlet, or collar of gold, usually twisted into the form of a snake, and worn by ancient races, especially the ancient Celts and Germans. They are occasionally dug up in Great Britain, Ireland, and other countries of north-west Europe.

TORQUEMA'DA, TOMAS DE, *b.* about 1420, *d.* 1498, a Dominican prior who was the first to be appointed head of the Spanish Inquisition by Ferdinand and Isabella. His career was marked by great cruelty and oppression in his relentless pursuit of heretics.

TORRES VEDRAS, a small town in Portugal, 25 miles north-west of Lisbon, rendered famous by the double line of fortifications constructed by Wellington in 1810. These lines protected Lisbon, and gave Wellington a sure refuge when hard pressed by Marshal Masséna.

TORRICELLI, EVANGELISTA, *b.* 1608, *d.* 1647, a famous Italian scientist and mathematician, and a pupil of Galileo. The barometer was invented by him for measuring the pressure of the atmosphere, the phenomena of which pressure he was the first to explain. From this circumstance the vacuum in the tube of a barometer is named the "Torricellian vacuum."

TORTOISE, an animal distinguished by its horny shell supplied with holes through which the head and limbs project, and into which they can be drawn at will. The upper and more convex portion of the shell, the *carapace*, is in most cases covered with horny plates, which provide the article of commerce known as "tortoise-shell"; the lower portion is called the *plastron*. The tortoise proper is a land animal, seldom exceeding one foot in length, and is native to the Eastern countries of the Mediterranean. The turtle, a large species of tortoise which sometimes attains a weight of 200 lbs., is aquatic in its habits, though its eggs are deposited on land. The flesh of the Indian turtle is much esteemed as an article of food.

TOTEMISM. Refer to *Index*.

TOUCHSTONE, a hard kind of flinty slate found in Asia Minor anciently relied on, and still used, for testing gold. The purity and fineness of the gold is estimated by the appearance of the streak it makes when rubbed on the stone.

TOULON, a strongly fortified naval station on the south coast of France. It possesses two good roadsteads and a fine harbour, and is the head-quarters of the French Mediterranean fleet. In 1793 the Royalists, with the help of a British fleet, defended it unsuccessfully against the Republicans, with whom Napoleon Bonaparte served as an artillery officer; population exceeds 100,000.

TOULOUSE, an ancient city on the Garonne, in the south of France. Its central position on the railway between the Mediterranean and the Bay of Biscay, and at the junction of two important canals, makes its transit trade, especially in grain, hay, and wine, considerable. Woollen and silk goods, leather, and brandy are manufactured. Here, in 1814, the French were defeated by Wellington; population 150,000.

TOURNAMENT, a favourite sport of knights in the days of chivalry. The tournament proper consisted of a friendly battle between two parties of mounted knights, usually armed with blunted lances only. Occasionally the contest had all the character of real warfare, in spite of well-defined rules regulating the sport. Contests between single knights were known as *jousts*. Tournaments doubtlessly kept alive the military spirit, but with the decline of the Feudal System, they lost popularity, and disappeared during the 16th century. Scott's "Ivanhoe" contains a fine description of a 12th century tournament.

TOURS, a well-built city of central France, on the Loire. After the Reformation it became a flourishing Huguenot centre, but the revocation of the Edict of Nantes, in 1685, did lasting injury to its industries by forcing over 30,000 of its inhabitants to flee to foreign countries. Its trade is still considerable, and silk goods and carpets are manufactured. Near Tours, the crushing victory of Charles Martel over the Saracens, in 732, effectually stopped the advance of Mohammedanism north of the Pyrenees; population about 65,000.

TOWER OF LONDON, THE, one of the best preserved of mediæval citadels, stands on the north bank of the Thames. It consists of several buildings and towers, enclosed with high battlemented walls, the whole being surrounded by a moat. The oldest and most imposing part, the White Tower, was built by William I., and the remaining parts were erected at intervals up to the end of the 13th century. The entire space covered is about 13 acres

its close association with English history makes it a highly interesting monument, and the museum, in particular, containing specimens of mediæval armour and weapons, is full of interest, and so also is the room in which the regalia and Crown jewels are kept.

TOWTON, a village in Yorkshire, about midway between Leeds and York, the scene of Edward IV.'s victory, in 1461, over the Lancastrians, by which he made secure his position on the throne.

TOYNBEE HALL, an institution in Commercial Road, Whitechapel, London, built in 1885 to commemorate and continue the work of the practical social reformer, Arnold Toynbee, an Oxford graduate who devoted the best part of his short life to the poor of the East End. The work of introducing a little intellectual brightness into the dull depressing lives of the poor "East-Enders," amid their squalid surroundings, by means of lectures on economical subjects, concerts, and clubs, is carried on chiefly by young Oxford and Cambridge graduates, resident in the institution, who devote their spare time to this noble task.

TRACTS FOR THE TIMES, a series of 90 tracts, written and published between 1833 and 1841 by Newman, Keble, Pusey, and other leaders of the Oxford Movement (which see).

TRADE MARKS. Refer to *Index.*

TRADE UNIONS. Refer to *Index.*

TRADE WINDS, the name given to certain more or less permanent winds which blow respectively south-west and north-west towards the equator from two high pressure belts lying about 30° north and 30° south. In the open ocean and in the level Sahara the trade-winds are practically permanent, but the presence of elevated land masses interferes with their otherwise regular course, as in the case of India and north-west Australia. In equatorial regions, the great heat of the sun, and the consequent presence of a high percentage of water vapour in the air over the ocean, cause the air there to be comparatively light. A movement of air towards the low pressure belt at the equator is set up, giving rise to the trade winds. The apparent north-westerly and south-westerly directions of the trades is due to the rotation of the earth from west to east.

TRAFALGAR, BATTLE OF, a naval battle fought October 21st, 1805, off Cape Trafalgar, in the south-west of Spain, in which Lord Nelson won a memorable victory over a combined French and Spanish fleet. The destruction of his fleet led Napoleon to abandon his project of invading England with the great armament he had collected at Boulogne. See *Nelson.*

TRAJAN, a Roman Emperor who succeeded Nerva in 98 A.D., and died 117 A.D. He was an enlightened ruler and a good administrator. *Trajan's Arch,* over the Appian Way, at Benevento, Italy, is a beautiful arch of white marble, with sculptures representing scenes from Trajan's life and reign. *Trajan's Column* is a marble column, in Rome, on the shaft of which are bas-reliefs ascending in a spiral and representing Trajan's wars and triumphs.

TRAMWAYS, specially prepared tracks laid down in streets and roads over which vehicles called "trams" may run with greater ease than over the ordinary road. Parallel iron rails grooved to accommodate a corresponding ridge on the wheels of the tram form the chief feature of tramways. They were first introduced into England about 1860 for passenger traffic. Trams drawn by horses, others driven by steam, and others again drawn by an endless cable laid underground have been introduced, but these are being gradually replaced by the electric tram. Many municipal authorities have, during the last decade, acquired control of the tramway system in towns, and, so far, have met with great success. At the beginning of 1904, nearly 1,500 miles of tramway were in use in the United Kingdom.

TRANSMIGRATION OF SOULS. Refer to *Index.*

TRANSUBSTANTIATION. The doctrine of transubstantiation is to Protestants the most distinctive doctrine of the Roman Catholic Church, as is evidenced by the prominence given to it in many acts of religious intolerance passed in England after the Reformation. It is explained in the following canon drawn up at the Council of Trent: "If any one shall say that in the most holy sacrament of the Eucharist, there remains the substance of bread and wine together with the body and blood of our Lord Jesus Christ; and shall deny that wonderful and singular conversion of the whole substance of the bread into the body, and of the whole substance of the wine into the blood, the species of bread and wine alone remaining—which conversion the Catholic Church most fittingly calls Transubstantiation—let him be anathema." *Species,* in this definition, means appearance, being a word derived from L. *specio,* I see.

TRANSVAAL, an extensive inland territory in South Africa, between the Vaal and Limpopo Rivers, and since the Boer War forming part of the British Empire. In build it is an elevated plateau with mountainous districts in the south and south-east. Stock raising and gold mining are the leading industries. Pretoria, the capital, and Johannesburg, the gold mining centre, are connected by rail with Lorenzo Marques, Cape Town, and other sea-ports. The climate is dry but healthy. Refer to "Transvaal" in *Index.*

TRAPPISTS, a religious order marked by its extreme austerity of life. The order originated in the Cistercian Abbey of La Trappe, in Normandy, with the introduction of its stern religious system by De Rancé, abbot of La Trappe, in the middle of the 17th century. Numerous Trappist houses exist in various countries of the world.

TRAWLING. See *Fishing.*

TREAD-MILL, a long, hollow cylinder revolving on a horizontal axis, formerly in use as a means of punishment in penal establishments. The surface of the tread-mill is fitted with planks attached horizontally which serve as steps for the feet of the prisoners, who, gripping a horizontal bar fixed overhead, keep the tread-mill revolving by their weight. This involves the compulsory lifting of the feet from step to step as the mill turns round.

TREASURE TROVE, treasure discovered hidden in the ground or elsewhere, the owner of which cannot be traced. Treasure, so found, belongs by law to the Crown, and retention on the part of the finder is a punishable offence. A reward, equivalent in value to the treasure handed over, is usually paid by the Crown.

TRENCH, RICHARD CHEVENIX, *b.* 1807, *d.* 1886, was educated at Harrow and Cambridge. After being Professor of Theology at King's College, London, and Dean of Westminster, he spent his last twenty years as Archbishop of Dublin. His theological works, especially those on the "Parables" and "Miracles" are of great value, and so are his writings on English, especially his "English Past and Present." and "The Study of Words."

TRENT, COUNCIL OF, a famous Council of Roman Catholic bishops which met at Trent, in the Tyrol, at intervals stretching over the period 1545 to 1563, and settled there the discipline and doctrines of Roman Catholicism. The result of their deliberations is contained in the Creed of Pope Pius IV.

TREPANG. See *Bêche de Mer.*

TREVES, SIR FREDERICK, *b.* at Dorchester, 1853, a celebrated surgeon. In 1900 he went to South Africa as consulting surgeon to the British army, and two years later he operated on King Edward for appendicitis, and thus gained a baronetcy. In 1905 he was elected Lord Rector of Aberdeen University. He has written valuable works on anatomy and surgery.

TRÈVES, or TRIER, an ancient German city, on the Moselle, in the Rhine Province, Prussia. It contains many relics of the Roman occupation, which dates from the reign of Augustus. Its old cathedral contains the Holy Coat of Trèves, said to be the seamless Coat of Christ. In the Middle Ages the archbishops of Trèves had princely powers and took a prominent part in the politics of the Empire; population 40,000.

TRICOLOR, the flag of the French Republic, first adopted by the National Assembly in 1789. It consists of three vertical bands, the colours being red, white, and blue. The tricolor is said to have been invented by Mary Queen of Scots for the Swiss Guards in France. The white was for France, the blue for Scotland, and the red for Switzerland.

TRIDENT, the three-pronged sceptre borne by Poseidon (Neptune) to symbolise his sovereignty of the sea, with which idea it also figures in the representation of Britannia.

TRIDENTINE COUNCIL. See *Trent, Council of.*

TRIENNIAL ACT, an act passed by the Long Parliament in 1641, limiting the maximum duration of Parliament to three years, and similarly the maximum interval between successive Parliaments. This Act was repealed in Charles II.'s reign, but a second Triennial Act was passed in 1694. The latter was repealed in 1716, when was enacted the Septennial Act, still in force.

TRIER. See *Trèves.*

TRIESTE, the chief port of Austria and the foremost of the Adriatic ports. It has good harbour accommodation, and is the head quarters of the Austrian Lloyd Steam Navigation Company, which trades largely with India. Most of the export and import trade of Austria-Hungary passes through Trieste; population 134,000.

TRINIDAD. Refer to *Index.*

TRINITY COLLEGE. (1) The largest college of Cambridge University, founded by Henry VIII. in 1546. Bacon, Newton, Dryden, Macaulay, and Tennyson studied at this famous college. (2) A college of Oxford University, founded in 1554 on the site of an older institution, Durham College, which was suppressed during the Reformation. (3) A college at Dublin, founded by Queen Elizabeth in 1591, as the nucleus of Dublin University. No additional colleges were afterwards founded, and consequently the university consists of but one college.

TRINITY HOUSE, a corporation with considerable controlling powers over the mercantile marine of the United Kingdom, so called from its head-quarters being at Trinity House, on Tower Hill. By a royal charter granted in 1514, it is empowered to supervise the protection of the coasts of England and Wales with lighthouses, light-ships, and buoys, to grant licenses to pilots, and to keep the water-ways round the coast clear of wreckage and other obstructions. The corporation consists of officers chosen from the Navy and the Merchant service, besides a considerable number of men of high social position,

TRIPOS, the system adopted at Cambridge University of dividing the successful candidates for "honours" at the examination for the degree of Bachelor of Arts, into three classes. In the mathematical tripos, "Wranglers," "Senior Optimes," and Junior Optimes" are the terms used for designating the three classes respectively.

TRIPTYCH (ch=k), a word from the Greek signifying "thrice-folded." It is applied to a set of tablets or pictures, two of which fold over and cover the middle one. Triptychs are often used for altar pieces, the middle picture being complete, and the two side ones subsidiary.

TRIREME, a war-vessel used in ancient times, propelled by oars arranged in three banks or tiers. The prow was specially constructed for ramming purposes, though the Romans in their war with the Carthaginians, adopted and perfected grappling tactics. In "Ben Hur," by Lew Wallace, is a good description of an action in which such vessels figure.

TRISAGION (Gk. "thrice holy"), properly a hymn forming part of the Liturgy of the Eastern Church, so called because the word "Holy" occurs three times in each verse. The name is often erroneously applied to the "Tersanctus" ("Holy, Holy, Holy,") of the Western Eucharistic service.

TRISMEGISTUS. See *Hermes.*

TRITON, in Greek mythology, the son of Poseidon (Neptune) and Amphritrite. His descendants, known as "tritons," figured as attendants on the greater seadeities and possessed composite bodies, the upper part being human, the lower part that of a fish.

TRIUMPH, an honour granted to victorious generals by the Roman Senate. It consisted of a grand procession of the general and his victorious army, preceded by the Senate, the spoils of war, and the captives, from one of the gates of the city to the Capitol, where sacrifices were offered to Jupiter. A general holiday was declared, and everything done to honour the victor and foster military spirit.

TRIUM'VIRATE, a union or combination of three men in office or authority. Commissions of three (triumviri) were quite common at Rome for such purposes as planting a colony, superintending the coinage, etc. But the name is specially reserved in history for the commission consisting of Antony, Octavius, and Lepidus, appointed to restore order after Cæsar's death.

TRIVIUM, the name applied in the Middle Ages to Grammar, Rhetoric, and Logic, the first three of the seven subjects whose acquisition was considered necessary to a complete education. The remaining four, Arithmetic, Music, Geometry and Astronomy formed the *quadrivium.*

TROGLODYTES, uncivilised races who make their dwellings in caves. Evidence is plentiful to prove that in the remote past almost every habitable part of the world had its cave-dwellers, but the term "troglodytes" is used specially by the ancient Greeks for contemporary races dwelling on the confines of Greece and her colonies.

TROJAN WAR. See *Troy.*

TROLL, in Scandinavian folk-lore, a mountain dwarf of mischievous propensities. In the earliest legends, a troll is a giant.

TROLLOPE, ANTHONY, *b.* in London, 1815, *d.* 1882, a prolific English novelist. He served for over thirty years in the Postal Service, during which time his experiences in Ireland and abroad provided materials for his numerous novels. His works dealing with his travels in the West Indies, South Africa, Australia, and New Zealand contain many fine descriptive passages. Of his novels, the most noteworthy, perhaps, are "Barchester Towers," "Dr. Thorne," and "The last Chronicle of Barset."

TROMP (Martin), **ADMIRAL,** *b.* 1597, *d.* 1653, a Dutch commander who very nearly gained supremacy at sea for his country. He had repeatedly worsted the Spanish fleet when fate opposed him to the English in Cromwell's time. Five times in 1652–53, he met the English, and in the last fight, against Monk, he was slain.

TROOP, the eighth part of a regiment of cavalry, consisting of a captain, two lieutenants, and fifty-six mounted men, privates and non-commissioned officers. Two troops make a squadron, and the four squadrons, with the superior officers, and the unmounted men of each troop make up a regiment of 634 men on a war footing.

TROPHY. Among ancient peoples, especially the Greeks, it was customary to erect on the scene of a victory a stone pillar decorated with the spoils of the enemy, as a memorial; this received the name "trophy" (Gr. *trope,* a turning), as a sign that there the enemy were "turned" to flight. Nowadays, trophies commemorating victories in war are frequently placed in churches and municipal halls.

TROPICS (Gr. *trope,* a turning), two circles of latitude on the terrestrial globe 23½° north and 23½° south of the Equator respectively, the northern circle being known as the Tropic of Cancer, the southern the Tropic of Capricorn. On December 21st all places on the Tropic of Capricorn receive vertical rays from the sun at noon; from that date up to June 21st following, vertical rays are received at noon by places successively farther and farther north, until the Tropic of Cancer is reached; there the sun, so to speak, *turns* (hence the derivation of the word "tropics"), and is again, on December 21st, giving vertical rays to places on the Tropic of Capricorn; the tropics thus mark the northern and southern limits of places on the earth that receive vertical rays from the sun at noon.

TROSSACHS, a mountain pass about a mile in length in the west of Perthshire, between Loch Katrine and Loch Achray. Scott's glowing descriptions of the beauty of this pass and the surrounding district in his "Lady of the Lake" have made it a famous tourist resort.

TROY, a famous city of legendary Greek history, situated in the Troad, the name in ancient times of a district occupying the extreme north-west of Asia Minor. Archæologists differ as to the exact locality of the town, but the excavations of Schliemann at the modern Hissarlik, the Ilium of Greek history, have produced strong evidence in favour of this being the long-sought site. The ten years siege of Troy in the reign of Priam, its last and greatest king, by an alliance of Greek chieftains under Agamemnon, forms the theme of Homer's Iliad. The war was entered upon by the Greeks on behalf of Menelaus, King of Sparta, whose wife, Helen, had been abducted by his guest Paris, son of Priam. The city was finally taken by a ruse suggested by Ulysses. The Greeks, as if in despair, took to their ships, leaving behind a huge wooden horse, in the body of which Greek heroes were concealed. The Trojans dragged the horse into the city, and at night the hidden men emerged and opened the city gates to their comrades, who had meanwhile returned under cover of darkness. The city was set on fire and Priam killed.

TROY-WEIGHT, a system of weights introduced in the 15th century, said to take its name from Troyes in France. It is only used by goldsmiths and jewellers, in determining the weight of coins, etc. The pound troy contains 5,760 grains, while the pound avoirdupois equals 7,000.

TRUCE OF GOD, a suspension of private feuds, observed on certain church festivals and fasts, chiefly in the 11th and 12th centuries. See *God's Truce.*

TRUCK SYSTEM, a system under which employers pay their workmen a part of their wages in goods instead of coin. In cases like the Australian gold mines, the lumber districts of Canada, etc., some such arrangement is almost unavoidable, but in England it is totally forbidden by the Truck Acts of 1831 and 1887.

TRUFFLE, a genus of fungi, certain species of which are highly valued for their edible qualities. Truffles grow beneath the soil among the roots of trees. They abound in certain parts of France, where both the hog and the dog are trained to hunt them out.

TRURO, an ancient city, and the most important in Cornwall, stands at the head of Falmouth Harbour, nine miles north of Falmouth. It is a busy little town, carrying on an important fishery. The old diocese of Truro was reconstituted in 1876 with Benson, afterwards Archbishop of Canterbury, as its first Bishop.

TRYON, SIR GEORGE, *b.* 1832, *d.* 1893, British Admiral, entered the navy at sixteen, and gradually rose in the service until in 1891, he was put in command of the Mediterranean fleet. Whilst manœuvring his ships, his flag-ship the *Victoria,* by a mistaken order of his, collided with another ship and sank with the Admiral and a great part of the crew.

TSCHAIKOVSKY, PETER ILITCH, *b.* 1840, *d.* 1893, a Russian musical composer of great power. In 1866 he was appointed professor of music at the Conservatoire of St. Petersburg, and on his retirement from that office in 1878 he devoted himself entirely to composing. He wrote several operas, but is chiefly admired for his orchestral pieces. His "Pathetic Symphony" is a work of genius.

TSETSE, a small, brownish fly found in the warmer parts of South Africa, particularly the central part of the Zambesi valley. Its bite is fatal to most domesticated animals, but harmless to wild beasts, goats, and asses. Its ravages among cattle, by minimising opportunities for legitimate trade, may be said to have encouraged the slave trade in the districts infested by this pest. It is now known to disseminate sleeping sickness among the natives.

TUDOR DYNASTY, THE, a line of sovereigns that occupied the English throne from 1485 to 1603. The first of the line, Henry VII., was the grandson of Owen Tudor, and was descended through his mother, the Lady Margaret Beaufort, from John of Gaunt. Under this dynasty, England laid the foundation of its naval supremacy, and rose to the position of the leading Protestant country of Europe.

TUDOR, OWEN, a Welsh knight, who fought at Agincourt under Henry V., and married his widow, Catherine of France. He was killed at Mortimer's Cross in 1461, fighting for the Lancastrians. His son, Edmund Tudor, married the Lady Margaret Beaufort, a union which produced Henry VII., the first of the Tudor Dynasty.

TUGELA, a river in Natal, which was three times crossed and recrossed by the British under General Buller in his attempt to relieve Ladysmith in the course of the Boer War.

TUILERIES, a royal palace of the French sovereigns in Paris, begun by

Catherine de Medici in 1564, so called from the royal pottery works (Fr. *tuile*, a tile) which had stood on its site. It suffered considerably from popular risings in 1792, 1830, and 1848, and, with the exception of two pavilions which connected it with the Louvre, was totally destroyed by the Communists in 1871.

TUMULUS, a mound of earth raised, especially by men in early times, to mark the burial-place of the dead. The arms and ornaments of the dead were frequently buried with them beneath the tumuli, and much antiquarian information has been gathered by the discovery and opening of such mounds.

TUNBRIDGE WELLS, a pleasantly situated town of Kent, on the border of Sussex. Its chalybeate waters have made it a favourite health resort since their discovery in 1606, and its popularity is increasing; population 35,000.

TUNIS, a North African State which formed part of the Ottoman Empire for the three centuries preceding 1881, in which year it was occupied by French troops and declared a French protectorate. The slopes of the Atlas Mountains and the valley of its only large river, the Mejerda, yield wheat, barley, fruits, and tobacco. Under French influence, agriculture and commerce are improving. Tunis, the capital, built largely of materials collected from the ruins of ancient Carthage, a few miles north, is now connected with the Mediterranean by a short ship-canal. Kairwan has a large caravan trade with the Soudan. Sfax is an important seaport. There is a great sponge fishery off the east coast of Tunis.

TUNNELLING, or the construction of underground passage-ways, is resorted to especially in connection with railways and canals. In railway construction, tunnelling is often adopted where surface elevations, such as hills and mountains, present a declivity too steep to be climbed by ordinary locomotives. Railway tunnels beneath rivers unsuited to bridging are frequently met with, while in many large cities, underground railways constructed in iron tubes are rendered necessary for a smooth-working passenger traffic. The Alps are now pierced by the Mont Cenis, St. Gothard, Semmering, and Simplon Tunnels, all of which are triumphs of engineering, and among the longest tunnels in the world. The Simplon Tunnel, completed in 1905, is over 12 miles long. In the case of canals such as the Leeds and Liverpool Canal, which join two towns separated by high hills, tunnels are absolutely necessary if rapidity of transit is required. Tunnelling is largely affected by the variety of strata to be worked. Tunnels in soft strata are lined with brick or stone-work, while in the case of borings through the hard rock, the tunnels are simply hollowed to the required shape. The arch, modified in different strata, so as to best resist earth-thrust, is the form in which tunnels are commonly hollowed out. The ventilation of tunnels both during and after construction is one of the great problems engineers have to contend with, and the rate of mortality from pulmonary diseases among workmen engaged in tunnelling at great altitudes is very high. The dropping of shafts at intervals along the line of a proposed tunnel, and boring from the bottom of each shaft in both directions, greatly facilitates the work, but in the case of deep-lying tunnels shaft sinking is often impossible.

TURBINE. A mechanical contrivance for driving machinery by means of water or steam escaping through small orifices, the motion of the apparatus depending on the impulse of the water, and not upon its direct weight. Turbines are much smaller than ordinary water-wheels, but revolve at a much higher rate of speed, and are conveniently used where the supply of water is insufficient, or the fall is too great for driving the ordinary wheels. In outward-flow turbines the water enters at the centre, and is directed upon curved blades at the circumference of the wheel, by a series of guide blades curved in the opposite direction, and motion is caused by the pressure of the water as it glides over the wheel-blades. In inward-flow turbines, or vortex-wheels, the currents of water pass from the circumference inwards and escape at the centre.

TURBINE ENGINES. The perfecting and applying of the principles of the turbine to the steam engine are due to the Hon. C. Parsons, whose turbine works at Wallsend cover 23 acres of ground. His turbine for marine engines consists of a cylindrical case of varying diameter, fitted with a number of rings of inwardly projecting blades. Within the case is a spindle, or shaft, upon which are mounted outwardly projecting blades, by means of which the shaft is rotated. There is an annular space between the shaft and the case. The steam enters the case from a nozzle at the forward end, meets with a fixed guide blade, is deflected on to an adjoining ring of moving blades, at such an angle as to exert a rotary impulse. It passes on to a second guide blade, which deflects it on to the second ring of moving blades, and so on, until it has been made to impinge on all the rotary blades of the spindle. The advantages claimed for turbine engines are, that they occupy less space than engines of the ordinary type, and thus give increased cargo room, and that they give increased speed. Since the rotation of the shaft of the turbine takes place in one direction only, it is necessary to provide a separate turbine and propeller for motion astern. Turbine engines are also used for driving the dynamos in the great electric power station of the London District Railway.

TURBOT, a variety of flat fish inhabiting British waters, and highly prized as a dish for the dinner-table. The finest attain a weight of 70 pounds or even more. They are caught with the line or the trawl.

TURGENIEFF, IVAN, *b.* 1818, *d.* 1883, a distinguished Russian novelist, with a European reputation. Although holding a government position, he wrote against serfdom and bureaucracy, and was banished to his estates, where he wrote his "Annals of a Sportsman," a close and fearless study of Russian peasant life. "Fathers and Sons," "Virgin Soil," and "On the Eve," are characteristic among his numerous works.

TURIN, a fine, well-built city of Piedmont, Italy, in a fertile plain on the left bank of the Po, and on the main line of railway to France through the Mont Cenis tunnel. Its history dates back to Roman times, and it was the capital of the modern kingdom of Italy for the first four years (1861-5) of its existence. Its silk, jewellery, leather, and general textile manufactures are important; population 336,000.

TURKEY, the name of a now decadent empire established by the Ottoman Turks during the 14th, 15th, and 16th centuries in South-eastern Europe, Western Asia, and North Africa. Of the vast possessions once under the immediate control of the Sultan of Turkey, all that remain are a part of the Balkan Peninsula, Asia Minor, Armenia, Kurdistan, Syria, Mesopotamia, and portions of the coastal regions of Arabia. Misgovernment and official venality are chiefly responsible for the present condition of the finance, commerce, and industries of the Empire. But the peaceful revolution of 1908-9, with the restoration of a constitution, and the deposition of Abdul Hamid II., gives hope of a brighter future. Agricultural and pastoral pursuits occupy the bulk of the people. The exports include: (1) Fruits—raisins, currants, figs, oranges, and citrons. (2) Cereals—wheat, maize, and barley. (3) Raw materials—tobacco, cotton, silk, wool, coffee, and skins. (4) Manufactured articles—carpets, silk goods, and leather. Minerals are plentiful but little worked, means of transport are very antiquated, and railways undeveloped. Area over 1,000,000 square miles; population about 25,000,000. Chief towns—Constantinople, Adrianople, and Salonica.

TURKEY, the largest of British domesticated birds, was introduced from North America, where it is still found wild, in the 16th century. The erroneous idea that the bird was a native of Turkey, gave it the name which it afterwards retained. It is distinguished by its long neck, the bright, fleshy wattles on the head and neck, and the rich hue of its feathers. The flesh is in large demand as an article of food, and enormous numbers are bred in the eastern counties of England for the Christmas markets.

TURKS, the general name for numerous and widely distributed races which include the Tartars of Siberia, the Turcomans of the Caspian basin, the Kirghiz, and the Usbecks of Russian Turkestan. For the most important branch, see *Ottomans*.

TURNER, JOSEPH W. MALLORD, *b.* in London, 1775, *d.* 1851, a famous British painter. He was the son of a hair-dresser. For a short time he studied under Sir Joshua Reynolds. In 1802 he was elected a Royal Academician and began his continental wanderings by which he gathered materials for his numerous oil-paintings. Previous to 1802 he had gained fame by inimitable studies in water-colours. His works display great imagination and originality, and as a colourist he stands in the highest rank among modern painters. Ruskin's unstinted praise of Turner helped largely to secure recognition of his great merit. His pictures and sketches which he left to the nation occupy two rooms in the National Gallery. "Childe Harold's Pilgrimage," "The Fighting Temeraire," "Ulysses Deriding Polyphemus," "Dido building Carthage," and "Calais Pier" are among the most admired of his paintings.

TURPENTINE, a colourless, oily liquid, obtained by the distillation of the resins of various species of pine and fir. It is a solvent for resins and rubbers, and is used in varnish manufacture. Large quantities are imported into Britain from Russia. The name "turpentine," is also employed for the crude resinous oil obtained direct from pine and fir trees.

TURPIN, DICK, a daring highwayman, who was captured and hanged at York in 1739, at the age of thirty or thereabouts. Many romantic legends were written around his name by the ballad-writers of the period, but the tale of the famous ride from London to York on the mare, "Black Bess," in sixteen hours, was borrowed from the deeds of a less famous rogue.

TURTLE. See *Tortoise*.

TUSCANY, one of the provinces of Italy, lies between the Apennines and the Tyrrhenian Sea. Wheat, maize, the vine, olives, and fruit are successfully grown. The silk industry and straw-plaiting employ large numbers of the people. Pisa and Florence are the chief inland towns, and Leghorn the principal port.

TUSSAUD, MADAME, *b.* 1760, *d.* 1850, a Swiss lady who learnt modelling in wax at Paris, fled to England at the time of the Revolution, and, in 1802, exhibited

at a small building in Marylebone Road, London, a number of models, which have since grown into a world-famous collection.

TWAIN, MARK. See *Clemens.*

TWEED, a river of Scotland, part of whose lower course forms the boundary between England and Scotland. It rises in the Lowther Hills, and enters the North Sea at Berwick, after a course of 97 miles. It figures largely in the tales of Border raids, and many of the scenes in Scott's novels are laid in its vicinity.

TWELFTH-DAY, the twelfth day after Christmas. On this day, the festival of the Epiphany is held in honour of the three Magi, or wise men from the east, who visited Christ at Bethlehem. Twelfth-night is still celebrated in some countries with much joviality, being regarded as the conclusion of the Christmas festivities.

TYBURN, a turnpike, which once stood near the present Marble Arch, London. Previous to 1783 it was the scene of the public executions of Metropolitan criminals sentenced to death. The name is derived from that of a small brook or burn, the Tyburn, which once flowed by the place towards the Thames.

TYCHO BRAHÉ. See *Brahé, Tycho.*

TYLER, WAT, the leader of the men of Kent in the Peasants' Revolt of 1381. With his followers he marched on London, and destroyed the houses of the leading opponents to reform. On receiving from the government promises of immediate redress of grievances, the bulk of the insurgents, who throughout had acted with great moderation, dispersed to their homes. Tyler, who remained behind, with the most determined of his followers, was stabbed to death at Smithfield by William Walworth, mayor of London, during an interview with the king, in which Tyler's attitude had been very threatening and insolent.

TYNDALE, WILLIAM, *b.* in Gloucestershire, 1484, *d.* 1536, an English reformer and translator. He studied at Oxford and Cambridge, and was ordained a priest in 1521. His warm support of religious reform led to his flight from England in 1524, to avoid persecution. In Germany, he translated and had printed the New Testament and the Pentateuch. He was arrested by order of the Emperor, Charles V., with the connivance of Henry VIII., and tried for heresy. He was first strangled and his body afterwards burned at the stake in the Netherlands.

TYNDALL, JOHN, *b.* in Carlow, Ireland, 1820, *d.* 1893, a famous physicist. He was the son of a small tradesman, and after working for some years on the Ordnance Survey he spent three years studying science in Germany, at Marburg University and at Berlin. He was elected Fellow of the Royal Society in 1852, and was professor of physics at the Royal Institution, London, from 1853 to 1887. He was a most successful lecturer, his illustrations and language being remarkable for their lucidity. He made important discoveries in physics. "Heat, a Mode of Motion," "Fragments of Science" and "Mountaineering" are his best-known works.

TYNE, THE, a river in the north of England, the lower part of whose course separates Northumberland from Durham. Its length is about 70 miles. Its basin contains an important coal-field, and it has developed into one of the busiest of English rivers. By constant dredging, the river is rendered navigable for the largest steamers from the sea to Newcastle. The lower course of the Tyne is studded with towns engaged in shipbuilding, and in glass and chemical manufactures. Joined to Newcastle by three bridges is Gateshead; population 120,000. Near the mouth of the river is S. Shields (population over 110,000) the birthplace of the lifeboat; and on the opposite side is N. Shields, which forms part of the borough of Tynemouth (population over 50,000). Three miles above S. Shields is the rising ship-building town of Yarrow, the home of the "Venerable Bede."

TYPE, in printing, a small piece of metal or other suitable substance, having on one of its sides a raised letter or symbol in reverse. Types are classified into *bodies*, according to the size of the characters produced by them in printing. A proportionate quantity of each of the letters of the alphabet, with figures and other characters, in any one body form a *fount* or *font*. There are about 230 separate characters in a fount and a proportionate number of each character. The bodies in most general use for ordinary book-printing are, in descending order of size, as follows:—(1) English. (2) Pica. (3) Small Pica. (4) Long Primer. (5) Bourgeois. (6) Brevier. (7) Minion. (8) Nonpareil. (9) Ruby. (10) Pearl. (11) Diamond. The type here used is nonpareil.

TYPE-WRITING, the name given to a species of printing on paper, produced by a machine specially contrived for that purpose and known as a type-writer. The machine is fitted with a key-board, each key of which is marked with one of the letters, figures, points, or abbreviations required in business correspondence or other matter. Pressure on a key brings into play the corresponding type within the machine. Each type moves automatically for printing to the same point above the paper, which meanwhile moves automatically into position to receive successive impressions. In most machines the impression is made by the type striking an ink-saturated ribbon and pressing it against the paper. A few machines print directly, the type when not in use resting on an ink-pad. In a full keyboard, one key to each type, the number of keys is about 65, but this number is reduced in many cases to below 30 by an arrangement which allows the same key to print a capital letter, a small letter, or a figure, at the will of the operator. In business houses and amongst literary men, this invention is of great utility, and in the hands of a capable worker, greater rapidity and legibility are secured than by ordinary hand-writing. The Remington, Yost, Barlock, Smith Premier, Hammond, Empire, and Oliver are the best known machines.

TYPHOON, the name commonly given in the Chinese Seas to those storms elsewhere called hurricanes and tornadoes. The storm advances in a parabolic direction, and at the same time the wind within the storm area rotates with frightful energy, so that in the same storm the direction of the wind will be north at one place and south at another place 300 miles or so away.

TYRE, one of the most famous cities of antiquity, is situated partly on the mainland and partly on a small peninsula off the coast of Syria. It was the great port of Phœnicia from the 10th century B.C., to its capture in 332 B.C. by Alexander the Great, who succeeded in taking it after a long siege by constructing a mole from the mainland to the island on which the city then stood. Accumulations of sand and mud have since converted this causeway into a broad isthmus. Tyre continued to be an important trading centre for many centuries, till its capture by the Turks in the 14th century reduced it to its present degraded condition. It was long famous for a dye, "Tyrian purple," obtained from a shell-fish.

TYROL, with Vorarlberg, a province of Western Austria, which is extremely mountainous, being intersected by three distinct chains of the Alps. The valleys of the Inn and the Adige, its principal rivers, yield most of its agricultural products, which include cereals, the vine, tobacco, silk, hemp, and flax. Large numbers of canaries are bred for export. Timber—beech and fir—is plentiful, and lead, iron, coal, and rock-salt are worked. Pastoral pursuits occupy large numbers of the population. Tyrol has formed part of Austria since 1363. Its brilliant resistance to Napoleon in 1809 under the patriot, Andreas Hofer, forms one of the most interesting episodes of the Napoleonic Wars. Area about 11,000 square miles; population 982,000.

UGANDA, a territory in Africa, between the Congo Free State and British East Africa, containing the northern half of Victoria Nyanza. Its height above sea-level renders the climate suitable to Europeans, and its soil is remarkably fertile, being particularly adapted to the growth of cotton and coffee. The natives are peaceable and comparatively intelligent. Agriculture is at present confined to the cultivation of wheat, maize, millet, and bananas. Trade in ivory and rubber is considerable. The Uganda Railway, from Victoria Nyanza to Mombasa, the port of British East Africa, has given a strong impetus to trade, and will hasten inland development. Area about 86,000 square miles; population about 4,000,000.

UHLANS, a kind of light cavalry in the Austrian, Russian, and German armies. The Uhlans of the Prussian army gained great fame for their part in the Franco-German War of 1870-1.

UJIJI, a town on the eastern shore of Lake Tanganyika in "Central Africa." It is an important trading station on the caravan route from Zanzibar inland, and is the home of numbers of Arab traders. Here, Stanley found Livingstone in 1871.

UKASE, the name given in Russia to an edict or order issued by the Czar, or, in his name, by the Senate. It has all the force of law.

ULEMA, the name given in a Mohammedan country to the whole body of professional theologians, whose duty it is to interpret the Koran and the law derived therefrom.

ULM, a strongly-fortified city of Wurtemburg, Germany, on the Danube, at the point where that river becomes navigable. It has a fine 14th century cathedral, and manufactures woollen and linen goods, machinery, leather, and ornamental pipe-bowls. Here, in 1805, General Mack, with 28,000 Austrians, capitulated to Marshal Ney; population 43,000.

ULSTER, the most flourishing of the four provinces of Ireland, occupies the northern portion of the country, and consists of nine counties. Continual insurrections in the reign of Elizabeth and the early part of James I.'s reign, led to its appropriation by the Crown and its allotment in 1607 to Scotch and English settlers, to which circumstance must be attributed its subsequent prosperity. The linen trade of Ulster is very important, and the ship-building industry at Belfast is highly developed. Area about 8,600 square miles; population about 1,600,000.

ULTRAMONTANE PARTY, that party in the Roman Catholic Church that holds extreme views in favour of the Papal authority both in Church and State. The name originated with the Gallican

Church of France, and was applied to the bulk of Italian theologians "beyond the mountains," i.e. the Alps.

ULYSSES. See *Odysseus.*

UMBRELLA. As a screen against the sun, it was used in the East in very remote times, and figures prominently in Assyrian and Egyptian sculpture, where it appears to be one of the insignia of royalty. As a protection against rain, the umbrella was first used in England—by women only—in Anne's reign. Joseph Hanway, of London, appears to be the first Englishman to brave ridicule by its adoption in 1750, and his example was very tardily followed. Ribs of steel superseded whalebone in the manufacture of frames about 1850.

UNCIAL LETTERS, alphabetical letters of a large size, originally as high as one inch (Lat. *uncia,* inch), employed by writers from the 5th to the 9th century in copying Latin and Greek manuscripts. Original Latin and Greek manuscripts were written entirely in large square capitals, and uncial letters, being a compound of capitals and curved small letters, mark a step in the development of written language.

UNCLE SAM, a familiar name for the United States Government, derived from a humorous interpretation of the abbreviation U. S. (United States).

UNCLE TOM'S CABIN, a pathetic tale dealing with the slave question in the United States, written by Mrs. Harriet Beecher Stowe, and published in book form in 1852. It created a deep sensation in all English-speaking countries, and did much to strengthen public opinion in the Northern States against slavery.

UNCTION, the anointing of the body, or an inanimate object, with oil. The practice is of extreme antiquity, and the anointing of sacred pillars of stone was often resorted to by pagan worshippers of primitive times. Among the Hebrews, priests were anointed at their consecration, and later, at the election of Hebrew kings, anointing the head of the ruler chosen was an important rite. Unction is still performed in many ceremonies of the Roman Catholic Church. Extreme unction, the anointing of the eyes, nose, ears, mouth, hands, and feet, is performed by a bishop or priest on persons at the point of death, and symbolises purification from sins committed by the parts anointed.

UNDINES, female water-spirits, whose existence was believed in by the eccentric Swiss alchemist, Paracelsus (1493-1541), according to whom undines were allowed to marry with mortals, and on the birth of a child received human souls. The husband of an undine had to exercise extreme care when travelling on water with his wife, as, if irritated, she lost her human soul and returned to her original element. La Motte Fouqué's "Undine" is founded on this myth.

UNDULATORY THEORY, the name given to one of the theories elaborated to explain the phenomenon of light. According to this theory, a wave motion is set up in the all pervading ether by molecular motion in the source of light. The effect of the successive waves of ether on the retina produces the sensation of light.

UNICORN, a fabulous, one-horned animal, with the body of a horse, whose existence at any period in the past has never been verified. The Hebrew *reêm,* an animal whose name has been rendered in the Authorised Version of the Bible as "unicorn," has long been believed to have been a double-horned species of wild ox. For many years, two unicorns salient figured in the royal arms of Scotland, and on the accession of James I. in 1603, one of these replaced the Welsh dragon in the arms of England.

UNIFORMITY, ACT OF, an act passed by the English parliament in 1662, compelling all ministers to be of episcopal ordination, to use the Book of Common Prayer, and to publicly declare their assent to all its contents, to renounce the Solemn League and Covenant, and to take the oath of non-resistance to royal authority. By this act, about 2,000 ministers who refused to conform to its demands were removed from their livings. Acts of Uniformity had also been passed in the reign of Elizabeth.

UNION, ACT OF, an act passed in 1800, which secured the legislative union of Great Britain and Ireland. By it the Irish parliament was abolished, and Ireland empowered to send to the parliament of the United Kingdom, sitting at Westminster, 4 bishops, 28 lords-temporal, and 100 commoners. In matters of trade, Ireland was put on the same footing as England.

UNION OF ENGLAND AND SCOTLAND. From the accession of James I., attempts had been made to make the two kingdoms one, but the jealousy of the Scottish nobles, who feared to lose their importance, had rendered them nugatory. In 1707, after much negotiation, the two parliaments ratified an agreement by which the two kingdoms were to be one as regards trade and taxation, while Scotland was to retain her old laws and her Presbyterian form of religion, and to send 16 members to the Upper, and 45 to the Lower House of Parliament, meeting in London.

UNIONISTS, the name common to the Conservatives and that branch of the Liberal party which seceded in 1886, with the resolve to uphold at all costs the Union of 1800.

UNION JACK THE, the name given to the national flag of the United Kingdom. An examination of this flag shows the red cross of St. George of England uppermost. Below is the red diagonal cross of St. Patrick of Ireland, covering, with the exception of the outer edges, the white diagonal cross of St. Andrew of Scotland. The Scottish national flag was worked into the design of the cross of St. George at the union with Scotland in 1707, the Irish emblem being added in 1800. The term "jack" arises from the flag being once attached to a "jack-staff" fixed at the bow of a vessel.

UNITARIANS, a religious body which rejects the doctrine of the Trinity, because they consider that it destroys the unity of God, but they vary widely in their estimate of our Lord's person—some acknowledging Him as divine, others regarding Him merely as man, although endowed in an extraordinary degree with spiritual gifts. They first appeared as a distinct denomination in 1719, but as early as the 4th century their views found an exponent in the celebrated Arius. Refer to "Unitarians" in *Index.*

UNITED STATES OF AMERICA, THE, a great and flourishing republic, occupying over three million square miles of the central portion of North America, and stretching from the Atlantic to the Pacific Ocean. It consists of forty-five states, four territories, one district (Columbia), and the detached territory of Alaska. Vast stretches of fertile soil, a wide range of climate, abundant water-ways both natural and artificial, an elaborate railway system embracing nearly 200,000 miles of track, almost illimitable natural resources, magnificent harbours, and an energetic and ambitious people, have all been factors in the gigantic strides made by this comparatively young nation. Almost every branch of industry is represented there on the grandest scale. The great depression between the Alleghanies and the Rocky Mountains is one of the leading agricultural districts in the world, wheat, maize, and cotton being produced there in amazing quantities. Virginia, Maryland, and Kentucky produce more than half the world's supply of tobacco. Pigs are reared in enormous numbers, and pork-packing is one of the great industries of Chicago. Fruit is grown on a large scale in the Atlantic States and in California. The great prairie lands west of the Mississippi support over 40 million cattle. Minerals, with the exception of tin, exist in abundance. Pittsburg, on the great Pennsylvanian coal-field, bids fair to become the greatest iron and steel-manufacturing town in the world. Precious metals abound in the mountainous states of the western region, and the yield of the oil-fields of Pennsylvania and Texas is very large. For the year ending June, 1904, the imports and exports reached a total of nearly 2,500 million dollars, the exports being 470 million dollars in advance of the imports. The exports to the United Kingdom—its best customer—amounted to 524 million dollars, of which total, cereals, flour, cotton, bacon, and hams claimed 190 million dollars. *History.* The principal landmarks in the history of this nation since the acknowledgment of its independence by England in 1783 are as follows. In 1803, Louisiana and its dependencies were purchased from France and added to the Union, a national event whose centenary was recently celebrated by the St. Louis Exhibition. The annexation of Texas in 1845 resulted in war with Mexico, and the further addition of New Mexico and Upper California. The great Civil War of 1861-5 on the question of negro slavery, ended in favour of the Northern States, the opponents of slavery, and eventually greatly consolidated the union among the States. In 1898 a successful war against Spain freed Cuba from the domination of the Spaniards, and left the United States in possession of Porto Rico and the Philippine Islands. Population by the census of 1900 was 76,356,000.

UNREASON, ABBOT OF, or Lord of Misrule, the person chosen to lead the fooling common at Christmas time in the Middle Ages. Even the churches were not sacred from their jests, but they would lead their followers in and go through a mock service, dressed in the priest's robes, or with the aid of an ass rehearse the journey of Balaam, the Flight into Egypt, or the Triumphal entry into Jerusalem.

UNTER DEN LINDEN, i.e. "under the lime trees," the name of a broad avenue in Berlin leading from the Brandenburg Gate to the royal palace. It is a much frequented thoroughfare, and contains four rows of splendid lime trees.

UNYORO, a fertile and healthy district of Equatorial Africa, between Uganda and Albert Nyanza. Since 1896 it has formed part of the British Protectorate of Uganda.

UPAS, the name given to various species of trees found in Java and other islands of the Eastern Archipelago. From them, either by incision or naturally, oozes a poisonous gum, used formerly by the natives for tipping their arrows. The tales of the deadly effect of this tree on plants and animals in its vicinity are largely fictitious.

URAL MOUNTAINS, a chain of hills and plateaus extending for about 1,500 miles from the Arctic Ocean to the Kirghiz Steppes, and forming part of the boundary separating Europe from Asia. The highest peak, Tollpos-Iz, is 5,550 feet

high. Gold, platinum, copper, iron, and precious stones are plentiful, and the mining industry of which Ekaterinburg is the centre, is well developed. A small coal-field near Perm has greatly assisted mining in the Urals.

URANIUM. See *Pitch-blende.*

URANUS, in Greek mythology, son of Ge (Earth), and by her the father of the Titans. Kronos (Saturn), the youngest of the Titans, waylaid and mutilated his father, released his brothers and sisters imprisoned in Tartarus by Uranus, and reigned supreme till overthrown by his own son, Zeus (Jupiter). The name is also given to one of the planets of the Solar System, seventh in order from the sun, discovered by Sir William Herschel in 1781.

URSA MAJOR (Greater Bear), a constellation in the northern hemisphere, so called from the fact that the ancients saw in the stars composing it a resemblance to the outlines of a bear. It contains about eighteen stars visible to the naked eye, and the seven brightest form what is known as "The Plough" or "Charles's Wain." The two stars forming the fore part of the "Plough" are called the pointers, since the straight line joining them "points" towards the Pole Star.

URSA MINOR (Lesser Bear), a small constellation of which the brightest star, a star of the third magnitude, is the nearest bright star to the celestial pole, and is hence called the "Pole Star." The Greeks named this group Cynosura, from its resemblance to a dog's tail.

URSULA, SAINT, a virgin martyr, put to death—according to an old and much-disputed legend—by the Huns in the 4th or 5th century. A maiden companion, Undecimilla, suffered with her, and a misinterpretation of the name has probably led to the incredible story that 11,000 (Lat. *undecim millia*) virgin companions died with Ursula.

URUGUAY, a South American republic on the Atlantic coast between Brazil and the Rio de la Plata. Most of the country consists of rolling grass plains backed by high lands in the interior. The cultivation of wheat, maize, tobacco, and fruit is rapidly increasing, but at present the bulk of the exports is derived from the cattle and sheep-rearing industries. The firm of Liebig has its station at Fray Bentos, and is the largest ranch owner of the Republic. Dishonesty and corruption are rampant among state-officials, and is the chief cause of the backward condition of the country. Montevideo is the capital and chief port. Paysandu, on the La Plata, is an important meat-preserving centre. Area about 72,000 square miles; population 950,000.

USSHER, JAMES, *b.* 1581, *d.* 1656, Archbishop of Armagh and Primate of Ireland, one of the most learned men the church has produced. His chronology, accepted at the time as infallible, is now rejected, but his other works show how vast was his learning. He was buried by Cromwell's orders, though a Royalist, in Westminster Abbey.

USURY, originally meant the interest paid by a borrower for the loan of money; it is now applied to excessive and unfair interest on money lent. By the Money Lenders Act of 1900, borrowers are protected against fraud, and money-lenders suing for non-payment of debt are liable to have unfair contracts annulled and a readjustment made by the presiding judge.

UTAH, one of the Western United States of America, forms part of the elevated plateau between the Rocky Mountains and the Sierra Nevada. The Wahsatch Mountains, which are rich in gold, silver, and other minerals, run through it from north to south. Much of the country is arid, but the energy of the Mormons, who first settled there in 1847, has converted it into a fairly prosperous farming state. Its inclusion into the Union in 1896 has led to strong measures being taken against the Mormon practice of polygamy, and has also encouraged an influx of miners. Salt Lake City is a well-built and flourishing city.

UTILITARIANISM, that theory of Ethics which maintains that the individual's sense of right and wrong is the outcome (unconscious it may be) of mankind's experience as to the result of a certain line of conduct. The utilitarian, or upholder of this theory, regards utility as of primary importance, giving but a subordinate place to considerations of beauty and sentiment, in determining the right course of action.

UTOPIA, the title of a work of imagination published by Sir Thomas More in 1516. *Utopia* signifies "Nowhere," and is the name that he gives to an imaginary island, the inhabitants of which he describes as having reached a high pitch of perfection in politics, government, and social institutions. The adjective "Utopian" has come to mean, somewhat unfairly, visionary and practically unattainable.

UTRECHT, an important railway and canal centre of Holland, near its eastern boundary. It is strongly fortified, has a good university, and besides an extensive trade in grain, cattle, and dairy-produce, it manufactures general woollen goods, linen goods, and tobacco on an extensive scale. Here, in 1713, was signed a treaty between France and England which closed the War of the Spanish Succession; population 108,000.

VACUUM, a space devoid of matter. According to physicists, an absolute vacuum is impossible, the mysterious medium, ether, whose existence has been invented to explain certain phenomena, always being present. The nearest approach to a vacuum produced by mechanical means is the Torricellian Vacuum in a barometer tube, but even this contains a little mercury vapour.

VALENTINE AND ORSON, twin brothers in a famous romance of the time of Charlemagne, first printed in 1489.

VALENTINE'S DAY, the 14th of February, a day dedicated to Saint Valentine, who is reported to have suffered martyrdom in the 4th century A.D. The practice of young couples exchanging love missives on this day was once very common, and has been attributed to a belief once current that on this day birds began pairing.

VALETTA, the port of Malta and the home of the great bulk of the population of that island, stands on rather broken ground between two good harbours. As the seat of a British Government dockyard, and the head-quarters of the English Mediterranean Fleet, it has been very strongly fortified. It is a port of call for several steam-ship lines, and is also an important coaling-station. The increasing demands on its resources have necessitated great extensions of the dockyard and harbour at Gibraltar.

VALHALLA, in the mythology of Scandinavia, was the abode of Odin and the gods, and the final resting-place of the souls of heroes slain in battle. Here, during the day, the heroes enjoyed to the full their lust of fighting, and spent the night feasting and drinking with Odin as host and the valkyrs as attendants.

VALKYRS, beautiful maidens in the Norse mythology who presided over battles, marked out those destined to fall, and conducted their souls to Valhalla.

VALLOMBROSA ("shady valley") a beautiful valley among the Apennine Mountains, 15 miles east of Florence. The magnificent Benedictine monastery, founded here in 1038, and rebuilt in 1673, is now suppressed. Vallombrosa is a favourite resort of artists and tourists.

VALPARAISO, the chief port of Chile, stands on a safe and spacious bay, and is connected by rail with Santiago, 90 miles inland. The bulk of Chilian trade passes through it, and considerable quantities of wheat, barley, fruit, copper, guano, and nitrate of soda are exported; completely wrecked by a terrible earthquake, 1906.

VAMPIRE. (1) A ghost possessing a human body, which at night sucks the blood of the living. According to this superstition, which was once very widespread but is now confined to the most ignorant of the Slav races, wizards, witches, suicides, and excommunicated persons became vampires after death. (2) A species of blood-sucking bat.

VANBRUGH, SIR JOHN, *b.* 1664, *d.* 1726, architect and dramatist. He early found success both in play-writing and in building. This latter work will, however, better bear inspection than his plays, for these, clever, witty, and original, are full of indecency. The grandeur of Blenheim House witnesses to his genius as an architect.

VANCOUVER, a rapidly developing port of British Columbia, opposite Vancouver Island, is the western terminus of the Canadian Pacific Railway. It has a deep and commodious harbour on Burrard Inlet, abundance of timber, metals, and food-stuffs exist in the vicinity, and altogether it has a most promising future; population rapidly increasing.

VANCOUVER, GEORGE, *b.* 1758, *d.* 1798, a British navigator who served as midshipman under Captain Cook in his last two voyages to the Pacific. He afterwards supplemented the work of that great sailor by exploring, in 1791-5, various islands of the Pacific. In 1792 he surveyed the shores of what is now British Columbia. Vancouver Island is named after him.

VANCOUVER ISLAND, a large island off British Columbia. It is rich in gold, mercury, and coal. At present, coal, salmon, and skins are the chief exports, but the agricultural and pastoral prospects of the island are bright. The chief towns are Victoria, the capital of British Columbia, Nanaimo, a coal-mining centre, and Esquimault, a naval port on a magnificent harbour. Area nearly 16,000 miles; population exceeds 40,000.

VANDALS, a Teutonic race which played a prominent part in the disruption of the Roman Empire in the 5th century. They over-ran Gaul and Spain, and crossing to Africa established there, in 429, under Genseric, their chief, a kingdom which lasted till 534. The wanton destruction of artistic and literary monuments during the sack of Rome by Genseric in 455 has given rise to the term "vandalism."

VANDERBILT, CORNELIUS, *b.* 1794, *d.* 1877, an American financier, who began his career as a boatman and died worth 100 million dollars. For many years he held controlling interests in the shipping and railroads of the United States. The Vanderbilt University of Nashville, Tennessee, was founded by him with a gift of a million dollars.

VAN DIEMEN'S LAND, the name given by Tasman, discoverer of Tasmania, to the island which afterwards received his own name. Van Diemen was the Dutch

Governor of Java at the time of Tasman's discovery (1648).

VANDYKE, ANTHONY, *b.* at Antwerp, 1599, *d.* in London, 1641, a Flemish painter who excelled especially in portraits. He studied under Rubens for four years, and from 1632 to his death made England his home. He became Court painter to Charles I., and his paintings of the king, the members of the royal family, and the leading men of the time are not only interesting historically, but are ranked among the finest examples of portraiture.

VANE, SIR HENRY, *b.* 1612, *d.* 1662, one of the most active and able members of the Parliamentary party, was educated at Westminster and Oxford. He then spent much time abroad, imbibing the rigid views of the extreme Puritans. He took a leading part in Laud's impeachment, and in promoting the "Solemn League and Covenant." He was executed on a charge of high treason, 1662.

VAN EYCK. See *Eyck, Van.*

VANILLA, a genus of climbing orchid native to Mexico, where it is chiefly cultivated. It is grown very successfully in many islands of the Indian Ocean, especially Mauritius. The fruit, in the form of a pod, yields an aromatic fluid—also called vanilla—used in flavouring chocolate and confectionery.

VARNISH. (1) *Spirit-varnish* is made by dissolving resin or a resinous substance in a volatile liquid such as alcohol or turpentine. When dry it leaves a hard coat of resin. (2) *Oil-varnish* is obtained by the use of linseed oil and turpentine in place of the spirit. It forms a tough varnish useful for indoor purposes on woodwork. The best and hardest resin, known as copal, is obtained in Zanzibar.

VASCO DA GAMA. See *Gama, Vasco da.*

VASELINE, a copyright name applied originally by one firm to a substance now commonly known by this name. It is a yellow, translucent product of petroleum, much used as a lubricant, salve, and medicine. Of the consistency of grease, it is preferable to animal fats, because it does not become rancid.

VASHTI, the disobedient queen of King Ahasuerus, who was divorced lest her example should lead the wives of the nobles to be refractory. See *Book of Esther*, chap. i. Her successor in the royal favour was Queen Esther.

VATICAN COUNCIL, THE, was the great council which met in 1869, and proclaimed the Infallibility of the Pope. The Church of Rome regards it as the 20th Œcumenical Council, or Council representing the whole Christian Church. The Greek Church recognises only the first seven councils as œcumenical, and the English Church hardly so many.

VATICAN PALACE, THE, the residence of the Popes in Rome, and the official head-quarters of the Roman Catholic Church. It occupies a large part of the Vatican Hill to the north of St. Peter's, and is made up of a mass of imposing buildings. Its chapels, libraries, and museums contain priceless treasures of art and learning. Since the nationalisation of Italy, and the occupation of Rome by the civil power, the Popes have elected to remain virtual prisoners in their own palace.

VAUBAN, SEBASTIAN, *b.* 1633, *d.* 1707, Marshal of the French army. He was a brilliant engineer, and found scope for his ability in the campaigns of Louis XIV. against the cities of the Netherlands. He conducted fifty successful sieges, and surrounded France with a wonderful cordon of fortifications.

VAUDEVILLE, originally a topical, humorous song, afterwards came to denote a light play interspersed with such songs and enlivened with dances. *Val de Vire*, a Normandy vale, gave its name to this type of song and play, for it produced Basselin, a writer of the drinking-songs which first bore the name.

VAUDOIS. See *Waldenses.*

VEDA, THE. Refer to *Index.*

VEDETTE, a mounted sentinel stationed at a prominent outpost to observe the enemy, and report information.

VEGETARIANISM, the practice of abstaining from animal food, and living entirely on products of the vegetable kingdom. Its adherents maintain that all the nutritive properties of flesh are to be found in a higher degree in vegetarian dietaries, whilst the need of butchering animals is obviated, and an obstacle to man's higher development is removed. The use of eggs and milk by some sects of the cult led to their designation as "vems," a word formed from the initial letters of vegetables, eggs, and milk.

VEHMGERICHTE, or **VEHME,** a powerful tribunal of mediæval Germany. The court was thoroughly representative of the most powerful interests, and its acts were usually just and well weighed. Its methods were quaint. The accused was summoned by a notice fastened on his door, and, if found guilty, hanged on the nearest tree. The court was powerful in Westphalia, where it lasted with diminishing influence until its last offices were abolished in 1811.

VEILED PROPHET OF KHORASSAN. *Al-Mokanna*, "The Veiled," the subject of one of Thomas Moore's beautiful Eastern poems, gave himself out to be the incarnation of God, and gained many adherents. But the Caliph's forces proved too strong for him, and he took poison to avoid capture, 780 A.D.

VELASQUEZ, DIEGO, *b.* at Seville, 1599, *d.* 1660, a self-taught painter, who began by painting still life, and became one of the great masters of portrait and subject painting. As court painter to Philip IV. of Spain, he depicted the king on many canvases. His excellence of style may be judged from his masterpiece, "Admiral Pareja" and his celebrated "Venus," in the National Gallery.

VELVET is a fabric of silk with a thick pile formed by weaving in additional warp threads, which are passed over wires and afterwards cut. True velvet is all silk, but cotton-backed velvet is much made. Velveteen, an all-cotton fabric, is a cheap substitute for velvet. The mediæval velvets of Italy are in great request both for altar frontals or ceremonial vestments, and for private collections.

VENDÉE LA, a province of France, on the Bay of Biscay, where the Royalist peasantry rose in revolt against the excesses of the Revolution of 1793, and particularly against the execution of Louis XVI. General Kleber was sent to put down the revolt, but being too lenient was recalled and General Hoche finished the war. Many prisoners were publicly drowned in barges in the Loire.

VENDETTA, a system of private revenge for bloodshed, formerly much in vogue in Corsica, Sicily, and Southern Italy. The family of a murdered man made it a point of honour to avenge the wrong openly or by stealth, upon the members of the murderer's kindred. Such feuds often lasted for many generations. Dumas' "Corsican Brothers" shows vividly the last stages of a vendetta.

VENEER, the name given to thin facings of valuable or fine-grained woods, such as mahogany or rosewood, which are glued to commoner timber. Veneers rarely exceed $\frac{1}{8}$th of an inch in thickness; they are cut by saw, and are fixed under screw-pressure, face downwards, on a heated table, which hastens the fixing of the glue.

VENEZUELA, THE REPUBLIC OF, is a confederation of fifteen States in the north of South America, bordering upon the British colony of Guiana, with a population of $2\frac{1}{2}$ millions. The people are Roman Catholics, education is free, and there are two universities. Caracas, the capital, has 80,000 inhabitants.

VENICE, once the richest republic of the Mediterranean, is built on piles on numerous mud-banks and islets in a lagoon on the north-west of the Adriatic. The Grand Canal, spanned by the famous Rialto, is two miles long, and there are countless by-ways of water, on which ply numerous gondolas. The Piazza of St. Mark, a magnificent square, surrounded by the cathedral, the Doge's Palace, and other public buildings of great beauty, contains also the famous lion columns. The exquisite mediæval campanile which stood in the square, collapsed in 1902 and is in course of re-construction. Ruskin's "Stones of Venice" has familiarised many with the beauty of the Doge's Palace. The city is still famous for its glass making and its fine fabrics, but it is far from being the centre of that life which produced in one generation a Titian, a Tintoretto, and a Veronese.

VENTILATION. Refer to *Index.*

VENTRILOQUISM, literally, speaking in the stomach, is the art of speaking so that the voice seems to come from a point distant from the speaker. The lips are not moved, a full breath is taken and retained under effort, the voice is skilfully assimilated to imitate required sounds, and above all, the attention of the audience is directed to the point from which the sound is supposed to issue.

VENUE, the place or district where a cause of trial arises, and formerly where it must be tried. "There is, however, now no 'local venue' for the trial of any action" (Stephen's Commentaries). And if on account of prejudice a fair trial cannot be expected locally, the High Court may change the *venue* or place of trial.

VENUS. (1) the Roman goddess of love, identified with the Greek Aphrodite. As the ideal of womanly grace and beauty she was the subject of many famous statues in ancient Greece and Rome. Of those now extant, the most famous are the Venus de Medici at Florence, and the Venus of Milo in the Louvre at Paris. The latter is probably the most admired of all ancient statues now existing (see *Aphrodite*). (2) The most brilliant of the planets. Its orbit lies between that of the Earth and Mercury. It completes its revolution round the sun in 225 days. The transit of Venus across the sun's disc has enabled astronomers to calculate more accurately than in any other way the distance of the earth from the sun.

VERA CRUZ, the chief port of Mexico, has a good roadstead, but no harbour, and is unhealthy. The town was founded by Cortes in 1520; population 25,000.

VERDI, GIUSEPPE, *b.* 1813, *d.* 1901, the last of the great Italian composers of opera. "Rigoletto," "Il Trovatore," and "La Traviata" represent his best work and the best of Italian opera. Verdi rose by hard work from the obscurity of a small organist to be the recognised leader of music in Italy.

VERDIGRIS is the green product that forms on copper which has been affected by vinegar or other acid. From it is made the green paint so much used in Holland as a preservative of wood. Its

formation on copper vessels necessitates great cleanliness in culinary work, as verdigris is a dangerous poison.

VERDUN, a town and fortress on the north-east frontier of France, on the river Meuse. It was held by the Germans in 1871 till the last franc of the war indemnity was paid by France. Since Metz was lost, it has become of the highest importance as a strategic point, and is correspondingly well fortified. Its importance dates back to the early Middle Ages; population 21,000.

VERGIL, or **VIRGIL,** *b.* at Mantua, 70 B.C., *d.* 19 B.C., the greatest of Latin poets. Virgil was one of the poets "patronised" by Mæcenas, the "prime-minister" of Augustus, and his works were famous in his own day. The "Eclogues" are ten pastoral poems, the "Georgics" extols the art of farming, and the "Æneid" is a grand epic poem recounting the adventures of Æneas, after the fall of Troy.

VERJUICE, an acid liquid or vinegar, expressed from sour grapes, crab-apples, and other fruits, and formerly used for cooking purposes.

VERMICELLI. See *Macaroni.*

VERMILION, a colour formerly obtained from the cochineal insect. The name is more commonly applied now to a pigment composed of sulphide of mercury, artificially made by heating sulphur, mercury, and potash together as a paste. The colour is also obtained as one of the coal-tar dyes, but it lacks permanency in this form if exposed to sun-light.

VERMIN, harmful or troublesome wild animals, such as weasels and hawks, which are hurtful to game; pests, such as mice, rats, fleas, bugs, and lice; and other animals such as foxes, badgers, and otters, which, though classed as vermin, are treated with respect as providing good sport.

VERMOUTH, a cordial consisting of white wine flavoured with wormwood, angelica, and other aromatic substances. It is much used in France and Italy as an "appetiser."

VERNE, JULES, *b.* at Nantes, 1828, a well-known and prolific author of boys' books, dealing cleverly with impossible inventions, and marvellous methods of overcoming the limitations that nature has placed on adventure in this world. "Around the Moon," "Twenty Thousand Leagues under the Sea," and "Around the World in Eighty Days," show by their title the nature of his works.

VERNIER, PIERRE, *b.* 1580, *d.* 1637, spent most of his days in the Netherlands in the service of Spain. He invented the mechanism of the auxiliary scale known as the *vernier,* which enables minute measurements in lines and angles to be made. Micrometer-screws, graduated on the head, have now largely taken the place of the linear verniers which slid along the face of the principal scale.

VERONA, an old city, finely placed at the foot of the Alps, 72 miles west of Venice. It has many interesting Roman remains, and is rich in mediæval art treasures. It trades with Germany by the Brenner Pass and railway, and is the centre of a considerable industry in wine and oil: population 60,000.

VERONESE, PAOLO, *b.* in Verona, whence he took his surname, 1528, *d.* 1588. He was the last of the great Venetian painters, and, like them, was a great colourist. His "Saint Helena's Vision of the Cross" in the National Gallery, exemplifies his boldness as a designer and colourist.

VERONICA, SAINT, a legendary saint, supposed to be one of the holy women who followed our Lord to Calvary. She gave to Him her veil to wipe His brow, and the impression of His features remained on it. Milan and Rome claim to possess the true *veronica* (as the veil is called), and Chaucer tells us that "vernicles" were sold by palmers in his day.

VERST, a Russian measure of length, about two-thirds of an English mile.

VERSAILLES, a city near Paris, with a famous palace, now used as a museum and picture gallery, and surrounded by handsome gardens. Louis XIV. made the palace and gardens as they are now. Versailles has been the scene of many historical events. Here was signed the Treaty, in 1783, which concluded the American War of Independence. It was here that the National Assembly met, in 1789, and took the government into their own hands. On the fall of the Bastile, a mob from Paris overran the Palace and forced the king and queen to accompany them to Paris. In the siege of Paris by the Germans, 1870-71, Versailles was the head-quarters of the German army, and in its Palace the King of Prussia was solemnly proclaimed German Emperor.

VERTEBRATA, a term of very wide application denoting all the members of the animal kingdom possessing a backbone. It thus includes mammals, birds, reptiles, fishes, and other sub-classes. Animals, on the other hand, such as shell-fish, worms, insects, and molluscs, which have no backbone, are classified under the term "invertebrata."

VERULAM, the Roman name of St. Albans (which see). Francis Bacon, Lord Verulam, is buried in St. Michael's Church, St. Albans, where a well-known effigy of the philosopher is to be seen on the north wall of the chancel.

VESPASIAN, Titus Flavius, Emperor of Rome from 70-79 A.D., rose from the ranks as a soldier to imperial power. In his reign Jerusalem fell, the Colosseum was begun, and Britain was effectually subdued to the Roman power by Julius Agricola.

VESPUCCI, AMERIGO. See *Amerigo.*

VESTA, a virgin goddess of the Romans, who typified the sanctity of "hearth and home," and the civic unity of each city. A shrine to her honour existed in every home, and a sacred fire was kept burning in the Vestal temple of every city. Rome, the centre of her worship, had six Vestal virgins to keep alight the sacred fire and perform the rites of her worship.

VESUVIUS, MOUNT, an active volcano, 4,200 feet in height, situated south-west of Naples at a distance of 10 miles. Its most destructive eruption (79 A.D.) buried Pompeii in a deposit of mud and ashes, and Herculaneum by a flow of lava. A great outburst occurred in 1871–2, but owing to the fertility of the soil, the district was soon reoccupied and replanted with vineyards, only to be again devastated by a mightier eruption in 1906.

VETERINARY SURGEON, one whose work is chiefly connected with the diseases of the larger domestic animals—horses, cows, sheep, etc. Dogs and cats also come under his care. Until 1881, practically any one could call himself a Veterinary surgeon, but in that year an Act was passed requiring certain qualifications to entitle a man to practise as a "Vet." Refer to "Veterinary Surgeon" in *Index.*

VIA DOLOROSA, "the dolorous way," the name given by Christians to the road from the Mount of Olives to Golgotha.

VIA MEDIA, "the middle way," the way which at the Reformation was deliberately taken by the Church of England between Rome and Geneva. "It hath been her wisdom ever since the first compiling of her Public Liturgy to keep the mean between two extremes."

VIATICUM, "provision for a journey," is a term applied to the administration of the Holy Communion to a person in immediate danger of death.

VICAR OF BRAY, the parson of a village in Berks, named Simon Alleyn, who, according to Fuller, was "twice a Papist and twice a Protestant" in the reigns of Henry VIII. and his three successors. He is the subject of a humorous old English ballad.

VICHY, a small town almost in the middle of France, on the river Allier. Its hot alkaline springs are very valuable in disorders of the stomach and liver, and millions of bottles are annually exported. The town is handsome, and the surroundings beautiful; population 20,000.

VICTOR EMMANUEL II., *b.* 1820, *d.* 1878, was the first king of the reconstituted union of Italian States, now known as Italy. He succeeded his father as King of Sardinia in 1849, and, by the events of the time and under the guiding hand of his minister, Count Cavour, became King of Italy in 1870. His hardihood and homeliness endeared him to all his subjects.

VICTOR EMMANUEL III., *b.* 1869, King of Italy, and grandson of the above, succeeded to the throne in 1900. An heir to the king was born in 1904, to the great joy of all Italy.

VICTORIA, QUEEN, the only child of the Duke of Kent, fourth son of George III., was born at Kensington Palace, May 24th, 1819, and died at Osborne, 22nd January, 1901. Her mother, a princess of Saxe-Coburg, was a sister of King Leopold of Belgium. When the little princess was eight months old, her father died, but her education was admirably cared for by her mother, Viscount Melbourne aiding in the political education of the future queen. She ascended the throne of England in 1837, but the Hanoverian kingdom passed, by the Salic law, to her uncle, the Duke of Cumberland, and so the connection of England and Hanover ceased, to the great relief of the nation. Crowned in 1838, Queen Victoria married her cousin, Prince Albert of Saxe-Coburg, in 1840, and the royal household became an example of all that is best in English home life. The queen had four sons and five daughters. The royal family resided chiefly at Windsor, at Osborne in the Isle of Wight, and at Balmoral in the Highlands. The queen's affection for Balmoral is shown in the unpretentious little diaries which she published in 1868 and 1884, under the title of "Leaves from the Journal of our Life in the Highlands," and "More Leaves." The death of the Prince Consort in 1861 caused the queen to withdraw from public functions for many years. She personally supervised the "Life of the Prince Consort," written by Sir Theodore Martin. The sympathy of the queen with movements that aroused the spirit of her people was always spontaneous, and she never failed to associate herself with them in a manner that bore fruit after the excitement of the time had passed. Thus, she instituted the Victoria Cross "For Valour," during the Crimean War; she set her seal upon the Volunteer Movement, and the formation of the National Rifle Association by founding the "Queen's Prize," and the Indian Mutiny prompted her to establish the order of "The Star of India," to reward native loyalty.

Two jubilees were held, one in 1887 and the other in 1897, in celebration of the Queen's long and glorious reign. The love and loyalty shown on these occasions could hardly have been surpassed. And the enthusiasm evoked by

the Queen's brave and generous conduct during the Boer War was unbounded. Throughout her long reign Queen Victoria was ever the centre of our national life, and the vital link between all parts of her world-wide empire. The purity of her court, and her impartial dignity and homely sympathy, commanded universal admiration and respect, and her death was regarded as a personal bereavement by every class of her numerous subjects. Her body was conveyed on the *Alberta* under a white pall, across the Solent, through a solemn avenue of war-ships. It was borne in procession through London on a gun carriage, followed by the King and the German Emperor as chief mourners, and it now rests by the side of the Prince Consort's in the royal mausoleum at Frogmore, near Windsor.

VICTORIA (colony), originally part of New South Wales, was constituted a separate colony in 1851. It lies south of the Murray River, occupying the south-eastern corner of the continent. It is the richest gold-yielding state in Australia, over £260,000,000 having been raised there since 1851. Wool, wheat, and butter are the chief exports, and wine is a growing industry. Melbourne, the chief city, is remarkable for its fine public buildings, and for the fact that it contains about two-fifths of the population of the whole colony, namely 500,000 out of 1,250,000. Ballarat and Bendigo are the chief gold centres. Refer to "Victoria" in *Index*.

VICTORIA (city), (1) the capital of the province of British Columbia, has a population of 22,000. It is beautifully situated at the south-east of Vancouver Island; (2) the capital of Hong Kong, has a population of 182,000. It lies along the northern shore of the island, facing the mainland, and overlooking one of the finest harbours in the world. The port is free, is well fortified, and has excellent dock accommodation.

VICTORIA (ship), the name of Sir George Tryon's flag-ship; a battleship which collided with the *Camperdown* off Tripoli, while manœuvring under the admiral's orders, and went down with the loss of the admiral and 338 men, June 22nd, 1893.

VICTORIA BRIDGE, a tubular, iron bridge two miles long, built across the St. Lawrence, at Montreal, by Robert Stephenson, 1854-59. It has been replaced by the Victoria Jubilee Bridge, opened in 1898.

VICTORIA CROSS, THE. Refer to *Index*.

VICTORIA FALLS, THE, on the Zambesi River, at a point 900 miles from the sea, are as great and noble as those of Niagara. They were discovered and named in 1855 by Livingstone. The river, three-quarters of a mile wide, falls by five streams sheer into a ravine 400 feet deep, from which it emerges by a remarkable cliff-walled, winding channel. The gorge, 700 yards below the Falls, is spanned by a railway bridge, opened in 1905, 650 ft. long and 450 ft. above the river surface.

VICTORIA NYANZA, a great lake in Central Africa, 4,000 feet above sea-level. The lake, which is drained by the Nile, was visited by Speke and Burton in 1858, and proved by the former to be the source of the Nile, 1860-63.

VICTORIA REGIA, a flowering water-plant found in the Amazon and other rivers in the north-east of South America. The leaves have a diameter of 5 to 6 feet, and resemble our white water-lily; the flowers, a foot in diameter, are white and rose-centred, with a very fragrant scent. The Victoria Regia is cultivated at Kew.

VICTORY, THE, Nelson's flag-ship at Trafalgar. Struck on the shoulder by a musket-shot which pierced his lungs, the great admiral died in the cock-pit of the *Victory*, while the battle was raging. The vessel lies in Portsmouth Harbour, and is open to public inspection.

VICUNA, a South American animal not unlike a deer, but allied to the camel. It has valuable wool used for weaving vicuna cloth. Its fleetness is great, and it haunts the hilly country of the Cordilleras, much as the chamois does the Alps.

VIENNA, the capital of Austria, stands near the Danube in Lower Austria. The old boundaries of the inner city are marked by the Ringstrasse, a series of wide, handsome boulevards. Within this area are the Hofburg or royal palace, and the cathedral of St. Stephen. Among the many parks, the Prater is foremost, both in extent and interest. The university of Vienna has a famous medical side, and the hospitals are well-known. Musical and scientific instruments, artistic goods, and bent wood furniture, are among the chief manufactures of the city. The Danube is now rendered permanently navigable to Vienna, and a great trade is done in grain, cattle, and wines; population 1,800,000.

VIENNA, CONGRESS OF, held at Vienna, September, 1814–June, 1815, to settle the territories of the various European nations after the Napoleonic wars. It was finally agreed that France should have the limits existing at the outbreak of the French Revolution, that Austria should take northern Italy, that Prussia should have a part of Saxony and the Rhenish Province, that Poland should form a kingdom under the Czar of Russia, and that Britain should retain Malta and Heligoland, Ceylon and Mauritius, Cape Colony, and a part of Guiana; whilst the Swiss Confederacy was reconstituted, the kingdom of the Netherlands, including Holland and Belgium, was established, and the former dynasties in Spain, Naples, Tuscany, Modena, and Sardinia were restored.

VIEUXTEMPS, HENRI, *b.* in Belgium, 1820, *d.* 1881, one of the foremost violinists of his day, and the composer of much well-known violin music.

VIGIL, the day and night immediately preceding certain feasts in the Roman and Anglican Churches, to be observed as fasting days. Vigils are noted in the Book of Common Prayer, but no special service is authorised. Originally the Vigil was a public watch-night service.

VIGNETTE, a small picture, engraving, or design, without border, often placed on the title page of a book. The title pages of the "Golden Treasury" series exemplify this use of vignettes. Originally vignettes were small, conventional designs of vine leaves and fruit.

VIGO, a naval station in Spain. Off the harbour, in 1702, an English and Dutch fleet defeated the French.

VIK-INGS, dwellers in the *viks* or creeks of Scandinavia, were the Norsemen or Danes who ravaged the coasts of England and Northern France in the 9th and 10th centuries.

VILLARS, MARSHAL, *b.* 1653, *d.* 1734, one of Louis XIV.'s great marshals, served as a young man under Condé and Turenne. In the war of the Spanish Succession, he gave Marlborough great trouble, but was defeated by him at Ramillies (1706), and Malplaquet (1709). To the end of his life he remained the military genius of France.

VILLENEUVE, PIERRE, *b.* 1763, *d.* 1806, Nelson's antagonist at Trafalgar. His ship, the *Bucentaure*, was taken, and he was carried prisoner to England. On his return to France he committed suicide.

VILLIERS, GEORGE, first Duke of Buckingham, *b.* 1592, *d.* 1628, the chief favourite and adviser of Charles I. during the early part of his reign, as he had been of James I. for the last nine years of his rule. His autocratic arrogance was resented by the people and the Parliament, and he was assassinated at Portsmouth by John Felton, an officer who had served under him in France.

VINCENT DE PAUL, SAINT, *b.* 1576, *d.* 1660, a Roman Catholic Saint who did much mission-work in the prisons and among the galley-slaves of France. He founded the Society of the Lazarists, mission-priests who assist parochial clergy, and also the Foundling Hospital of Paris. He founded, too, the Sisterhood of Charity, and is commemorated himself as Patron Saint of the modern "Society of Vincent de Paul," a brotherhood that assists the poor.

VINCI, LEONARDO DA. See *Leonardo da Vinci*

VINE, THE GRAPE, a highly cultivated species of the wild vine which is found in Persia and Southern Asia. It cannot be raised from seed without the probability of a reversion to an inferior type. The French and Rhenish vines are kept cut back to a height of 3 or 4 feet, but Italian vines are allowed more growth and are trained on trellises. California, Victoria, and South Australia are entering into keen competition with Europe as wine-producing countries. In England, vine-culture is almost confined to hot-houses, and among notable vines may be mentioned that at Hampton Court.

VINEGAR is a form of acetic acid used for cooking, preserving, and pickling. In England it is made from malt by brewing a weak wort, which is treated with yeast, and heated in a dark room until fermentation is complete. Vinegar is made in France from wines that are sour, and from the fermentation of grape skins.

VINEGAR HILL, in Co. Wexford, Ireland, is a low hill, which was held for a month as a camp by Irish rebels in 1798. Here they were attacked by General Lake and utterly routed.

VIOLA, THE, a violin intermediate in size and compass between a 'cello and a violin. Its top string is A, the others being D, G, and C in turn below. All the strings are of gut, but the G and C strings are covered with silvered wire.

VIOLIN, THE, the most important of the stringed instruments of music. Like the *viola*, it has four strings, the bass or G string being of gut covered with silvered wire, the others, D, A, and E in ascending order, being of gut. The bow is made of horse-hair. The greatest violins were those made at Cremona during the 17th and 18th centuries, by the Amati family, and their pupil, Stradivarius. The best known modern makers are in Paris.

VIOLONCELLO, a large instrument of the violin class, held by the performer between his knees. Its strings are tuned an octave below those of the viola (which see). It has a deep, sympathetic tone, and is wonderfully effective in orchestral work.

VIPER, the name given to a genus of venomous snakes, of which the common adder is a species. Other species abound in Africa and India. The adder, or English viper, is seldom more than 2 feet long; it has a pair of divergent marks behind the eyes, and its back is covered with diamond-shaped spots, the belly being of a bluish colour. The bite of an adder is poisonous and has sometimes proved fatal.

VIRCHOW, RUDOLF, *b.* in Prussia, 1821, a leading German anatomist, physiologist, pathologist, and anthropologist, who founded the branch of medical research known as cellular pathology. His influence on the improvement of asylums and hospitals has been most beneficent. In October, 1901, Professor Virchow's 80th birthday was celebrated by a meeting of representative scientists from every country, and the Professor addressed his audience for two hours.

VIRGIL. See *Vergil.*

VIRGINIA WATER, an artificial lake in the Great Park of Windsor. It was begun in 1746 by the Duke of Cumberland, and various features have been added from time to time until, with its waterfall, ruins, and cavern, it offers many attractions to the visitor.

VIRGIN MARY, THE, the mother of Jesus. The Roman Catholic doctrine of her immaculate conception, and her consequent sinlessness, was first recognised by a Papal Bull in 1854.

VIRGINIA, (1) the daughter of a plebeian named Virginius, who slew her to save her from the lust of one of the patrician decemvirs, Appius Claudius. (2) The first of the American colonies, founded in 1607 by a permanent settlement at Jamestown. The name was given in honour of the Virgin Queen, Elizabeth, by Sir Walter Raleigh, who made three unsuccessful attempts to colonise it. Its sea-board is largely occupied by Chesapeake Bay, and its interior by the Appalachian Mountains. Richmond is its capital. It is the second tobacco-producing state, and is rich in minerals and agricultural wealth; population 1,750,000.

VISHNU, the second member of the triad in Hindu mythology, Brahma, Vishnu, and Shiva, the creating, preserving and destroying deities respectively. Buddha was regarded by many as one of the ten avatars, or manifestations in the flesh, of Vishnu, each avatar being intended to deliver mankind from some evil. The Ganges is said to issue from Vishnu's foot.

VISIGOTHS. See *Goths.*

VISION OF PIERS PLOWMAN, THE, an allegorical poem written in alliterative verse by Langland, a contemporary of Chaucer, to show up the abuses of the ecclesiastical orders and of the court, and to increase respect for the working or "plowman" class.

VISTULA, a river of the central plain of Europe, which rises in the Carpathians, flows through Poland, past Cracow and Warsaw, and, after a course of 650 miles enters the sea by a delta, on which stands the town of Dantzig.

VITAL STATISTICS, statistics with regard to the population of a country as to its increase or decrease, and the causes which have led, or are leading to one or the other. The two most important points that vital statistics reveal to us are (1) that a decrease of mortality has accompanied sanitary improvements, and (2) that the birth-rate has much declined in the last few years.

VITRIOL, or sulphuric acid, is known as oil of vitriol when concentrated. The name is variously applied to the compounds of sulphuric acid known as sulphates; thus, blue vitriol is copper sulphate, and white vitriol is zinc sulphate.

VITTORIA, the capital of a small Basque province in northern Spain, was the scene of the last and greatest of Wellington's Peninsula victories, 1813.

VITUS, SAINT, a 4th century martyr of the Roman Catholic Church, which celebrates his festival on June 15th. The practice of dancing before the shrine of Saint Vitus to ensure good health for another year, has caused the name of the saint to be connected with a nervous disorder commonly called St. Vitus's Dance.

VIVANDIÈRE, a woman who accompanies a French regiment as a seller of fruit, provisions, and liquor. Formerly such women had uniforms, and their vivacity and pluck won them a place of honour in works of fiction, as, for instance, in Donizetti's opera, "The Daughter of the Regiment."

VIVIEN, a subtle enchantress, whose malicious influence did much to ruin the success of the Round Table. She became the mistress of Merlin, and, having gained from him his secret books, imprisoned him by his own spells under a thorn bush.

VIVISECTION, the practice of experimenting with the knife upon living creatures, or, generally, of conducting experiments upon live creatures. Anti-vivisectionists maintain that no advance in knowledge has been derived from vivisection, which might not have been attained by more humane methods, but most scientists deny this.

VIZIER, an Arabic word signifying burden-bearer, and used both in the Persian and Ottoman Empires to denote the chief minister of State. Under the Mogul emperors too, the title was used in the same way, and Nawab Vizier was the title of the rulers of Oudh till 1857.

VLADIVOSTOCK, a naval port, at the extremity of the Russian Trans-Siberian Railway. Founded in 1861, it became the head-quarters of the Russian Pacific Squadron, but it is ice-bound during the winter months.

VOICE is the sound produced by the vibrations of the vocal chords in the larynx, caused by an emission of breath from the lungs. The various cavities of the head and chest act as resonating chambers increasing the volume, and determining the quality of the voice. Female voices are termed soprano, mezzo-soprano, and contralto, according as the range of the dominant notes of the voice is high, medium, or low. A similar differentiation exists in men's voices under the terms alto, tenor, and bass. Boys' voices are known as trebles.

VOLAPÜK, the name of what was intended by its author, Johann Schleyer, a teacher of Constance, in Switzerland, to be a universal language. For some time after its invention in 1879 it flourished exceedingly, but then it languished, and its place is now taken by Esperanto, proposed by Dr. Zamenhof, of Warsaw, in 1887 (see *Esperanto*).

VOLCANO, primarily, a conical hill, consisting of lava, ashes, and débris, emitted from a tubular duct which communicates with a centre of heat activity under the crust of the earth. The mouth of the duct is called the crater, and an outburst of activity is termed an "eruption." A volcano which shows no discernible signs of further activity is said to be "extinct." It is generally considered that eruptions are caused by the sudden generation and explosion of steam near the centre of heat.

VOLGA, THE, the longest river in Europe, and the chief river of Russia, rises in the low Valdai hills, and, after a course of 2,400 miles enters the Caspian Sea. It is connected by canals with the White, Baltic, and Black Seas, and is of immense value as a means of communication. Its sturgeon fisheries are profitable, but the value of the river is best estimated by considering the dependence of the Great Fair of Nijni Novgorod, a town on its banks, upon the conveying power of the river.

VOLT, the unit of electro-motive force universally adopted. It was defined in 1893 by an International Electrical Congress in terms of the ohm and ampere. The name is derived from Volta, an Italian physicist.

VOLTA, ALESSANDRE. *b.* at Como, 1745, *d.* 1826, an eminent physicist, whose discoveries in electricity have been commemorated by the adoption of the terms *volt* and *voltaic.*

VOLTAIRE, *b.* in Paris, 1694, *d.* 1778, a poet, dramatist, philosopher, and theological critic, is justly considered to have been one of the greatest of French writers. Educated in a Jesuit College, his earliest works were anti-clerical, and his subsequent lampoons caused him to become an exile in England. He became a great friend of Frederick the Great, and resided at his Prussian court. He was a keen and successful business speculator, and became in this way a man of great wealth. After a banishment of thirty-four years, he returned to Paris, to be acclaimed as a hero of liberalism, and there he died in his eighty-fifth year. His chief works were the "Henriade," an epic of the Protestant king, Henri IV., "Letters on the English," "Candide," and "Irene," a tragedy which was rapturously received in Paris in his last years. He also wrote voluminous historical and philosophical works.

VOLUNTARYISM, the system of supporting institutions by voluntary subscriptions. It also is a term used to denote the principles of those who, in the interests of religious equality, demand the disestablishment and disendowment of established churches, and who insist that religious liberty is dependent on the voluntary and unaided support of the members of each cult, sect, or congregation.

VOLUNTEERS. The volunteer movement commenced spontaneously in Great Britain in 1859, when the nation was troubled by the menacing attitude of the French. No monetary assistance was given by the Government, nor was any equipment provided. In 1861 the Queen reviewed in Hyde Park, and in Edinburgh, two gatherings of volunteers to the number of 80,000 men. Subsequently, equipment and uniforms were provided, and in 1872 the first great volunteer force encamped and manœuvred on Salisbury Plain. Since then, annual camps and manœuvres have been held all over the country. Volunteer battalions are attached to the line-battalions of regulars in their district, and are under the command of the Colonel commanding the regulars. Their motto is *Defence, not Defiance.*

VORTIGERN, according to Bede, a British prince who invited the Jute rovers, Hengist and Horsa, to assist him to repel the Picts. He is further said to have married Rowena, the daughter of Hengist.

VULCAN, the Roman god of fire, and the forge, to whom the characteristics of the Greek god, Hephæstus, were ascribed. His seat was fabled to be Mount Etna, which therefore received the name *volcano,* a name afterwards extended to all similar mountains.

VULCANITE, or ebonite, a dark brown or black form of india-rubber. Its hardness is due to the presence of more sulphur than soft rubber contains, and to the fact that it is "vulcanised" at a higher temperature. It is used for the mouth-pieces of pipes, for combs, the black keys in cheaper pianos, for screw-stoppers in bottles, and largely as an insulator in electrical instruments.

VULGATE, THE, the Latin version of the Holy Scriptures accepted as the

authorised version of the Roman Catholic Church. It was the work of Jerome, a learned doctor of the Western Church. He translated the Old Testament direct from the Hebrew, and the New Testament from the Greek version of Origen's Hexapla. The work was completed 405 A.D. There was a still older Latin version, which, in spite of its many errors, was not entirely superseded by Jerome's version until the 9th century.

VULTURE, a species of carrion-feeding bird found in both the New World and the Old, the vulture of the Andes being commonly known as the Condor. They are found in inaccessible Alpine heights, and on the deserts of Africa, whilst they also pick up carrion or garbage in Eastern cities. Keen-eyed, with powerful beak, and long powerful wings, these birds descry carrion from afar. They feed on the ground, and are unable to carry off their prey by reason of the comparative weakness of their talons.

WADING BIRDS, an order of birds distinguished by their long legs, which enable them to stand in water and look for their prey. Their legs are not feathered, the tail is short, beak long and generally somewhat flattened, wings fully developed. They haunt marshy ground and shallow water, seeking small fish, worms, and insects. The stork, lapwing, plover, bustard, crane, and heron are well-known waders, but there are many others.

WADY HALFA. "Wady" is an Arabic word signifying river bed, ravine, or valley. Wady Halfa is a small town on the Nile just below the second cataract, and near the boundary line of Egypt proper and Nubia. For some years after the "Gordon" disaster, it formed the southern limit of Egyptian rule. From here Kitchener made a railway across the Nubian desert to Abu Hamed, whence he made the great advance to Khartoum; population about 3,500.

WAFER, a small circular piece of unleavened bread used by Roman Catholics in celebrating the Holy Eucharist.

WAGER, a contract between two persons that one shall pay the other an agreed sum of money or some stated object, according as a certain future event shall turn out. Generally speaking, wagers are not now enforceable by law, whence arose the current term "debt of honour," to denote money lost in gaming or racing. The old "wager of battle" was, of course, a most illogical mode of settling a dispute, as the aggrieved party staked his life that victory would fall to the right. It was formally abolished in 1819.

WAGES, money, or other compensation, given to a person in return for his labour. Agreement between the capitalist, or hirer, and the labourer, has always been difficult to obtain. Any sudden demand for labour, as after the great Chicago fire, naturally increases wages, while a continued slackening of the demand as surely lowers them. In ignorance of this, many laws were passed, from Edward III. onwards, to regulate wages, but in vain. As a rule, wages must be paid in money, and not at a public-house; they are also recoverable before other debts.

WAGNER, WILHELM RICHARD, *b.* 1813, *d.* 1883, the great German composer and musical revolutionist, was born in Leipsic and educated at Dresden. His early musical career was not brilliantly successful, but after his "Rienzi" was produced in 1842, he had no difficulty in gaining public attention. The "Flying Dutchman" and the beautiful "Tannhäuser" saw him firmly established as a genius. King Ludwig of Bavaria proved a steady friend, and with others assisted in the foundation of the now famous theatre at Bayreuth, which was opened in 1876, where Wagner saw at last his "Ring des Nibelungen" performed. His last opera, "Parsifal," is perhaps his masterpiece.

WAGRAM, a village a few miles north-east of Vienna, where Napoleon severely defeated the Austrians in 1809. This victory, followed by the treaty of Schönbrunn, kept Bonaparte's continental enemies quiet till his impolitic invasion of Russia gave them their opportunity.

WAITS, a body of musicians formerly kept by some great person to announce the hours of the night. Many cities and towns also had their regular "*waits*," and from them the name was transferred to persons who perambulate the streets about Christmas-time singing Christmas hymns and carols.

WAKEFIELD, a handsome and flourishing Yorkshire town, on the river Calder, 9 miles south of Leeds. In 1888 it became the seat of a bishopric, and its handsome parish church, now the cathedral, was afterwards restored and enlarged as a memorial to Bishop Walsham How. Wakefield is an important agricultural market, and has many cloth mills and other works. Here Richard of York was defeated and slain by Margaret of Anjou, 1460.

WALCHEREN, an island of Holland at the mouth of the Scheldt, having an area of about 80 square miles. On it is Flushing (population 10,000), a seaport of considerable trade with England and other countries. The siege of Flushing proved the destruction of the Walcheren expedition of 1809, for had Lord Chatham, the commander, moved at once on Antwerp, instead of staying to reduce Walcheren, he might have taken that important town, and saved his men from the ravages of disease.

WALDENSES (Vaudois), Protestants of France and Italy who were much persecuted in the 12th and succeeding centuries. In 1170, Ralph Waldo, a rich merchant of Lyons, who had studied the Bible and the early Fathers, began preaching a simpler form of religion to his neighbours. He soon had many followers, who tried to fashion their lives by the precepts of the Gospel, and separated from the Roman Catholic Church. Persecution followed, and in time they were almost exterminated in France, but in Italy their congregations continued to exist.

WALES, where we may still find the descendants of the Britons almost in their ancient purity of race, has an area of 7,300 square miles. Its mountains formed a secure refuge for the Britons when the dreaded Saxons took all the rest of their land. They took with them their language, their religion, and their spirit of disunion. For centuries after England was a united kingdom Wales was split up between petty rival chiefs, whom the English kings played one against the other till the time came to annex their country to England. The mistaken policy of Llewellyn, who aided de Montfort against Henry III., perhaps spurred on Edward I. to make greater efforts than he would have made to subdue Wales, and from his time the English were masters, though the Welsh often struggled against the yoke. He made his son (Edward II.), Prince of Wales, and from that time this title has always been held by the sovereign's eldest son. The hilly surface and the humidity of the climate, render Wales more adapted for pasture than for agriculture. The mines of Wales are highly important, coal, iron, lead, and slate being widely distributed. The woollen industry of North Wales has its head-quarters at Newtown. Holyhead is an important packet-station for communication with Ireland. Milford Haven, in Pembrokeshire, is one of the finest harbours in the world. For Swansea and Cardiff, see under these headings. The great majority of the people, especially of the working-classes, are Nonconformists.

WALES, PRINCE OF. From the time of Edward I. the sovereign's eldest son has always been styled Prince of Wales. The title is not hereditary, and is usually conferred by letters patent. The title of Earl of Chester is usually conferred at the same time, but that of Duke of Cornwall belongs to the eldest son by inheritance. He also inherits various Scottish titles, as well as that of Earl of Dublin. His Majesty, Edward VII., held the title of Prince of Wales longer than any before. In that capacity he visited the United States and Canada in 1860, and India in 1875. See *George, Prince of Wales.*

WALHALLA. See *Valhalla.*

WALKER, GEORGE, the valiant clergyman who roused the people of Londonderry to defend themselves against the army of James II., when deserted by their governor, Lundy, in 1688. The siege lasted 105 days, Walker all the time exhorting the citizens in the cathedral, and leading them in the field. He fell in the Battle of the Boyne, 1690. His statue stands on the walls of Londonderry.

WALLACE, ALFRED RUSSEL, *b.* at Usk, 1822, was a co-discoverer with Darwin of the "Origin of Species" and devoted his life to travel in pursuit of botanical and zoological knowledge. He added much to our knowledge of the Amazon Valley, and the interior of the Malay Peninsula. "Travels on the Amazon," "The Malay Archipelago," and "The Geographical Distribution of Animals," are his chief works.

WALLACE, SIR RICHARD, *b.* 1818, *d.* 1890; one of the keenest art connoisseurs of late years, was born in London, but passed much of his life in Paris. During the siege of Paris, 1871, he spent vast sums in ministering to the sick and wounded. The splendid collection of pictures and "objets d'art," which he received from his putative father, the Marquis of Hertford, was kept intact after his death, and bequeathed by his widow to the nation. [For "Wallace Collection" refer to *Index.*]

WALLACE, SIR WILLIAM, the champion of Scottish freedom against Edward I., was probably a son of Sir Malcolm Wallace, of Elderslie, near Paisley. In 1297 he headed an insurrection against the English, and was for some time marvellously successful. He defeated the English army under Surrey and Cressingham near Stirling, and afterwards raided the north of England. In 1298 Edward headed a great army against him, defeating him at Falkirk. In 1305 he was taken prisoner, carried to London, and put to death as a traitor.

WALLACHIA, the southern half of *Roumania* (which see).

WALLER, EDMUND, *b.* at Coleshill, Herts., 1605, *d.* 1687, one of the most graceful of English poets. He was a trusted member of the popular party in the Long Parliament, and was detected in plotting for Charles. He wrote a fine panegyric on Cromwell, and another for Charles II. on his restoration. His poems, chiefly on topics of the day, are marked by smoothness and elegance. His verses to "Sacharissa" are his most characteristic production.

WALL OF CHINA, GREAT, a great wall, broken at regular intervals by square towers, and stretching along the north-western boundary of China, from a point

on the coast of the Gulf of Pe-chi-li to the north-western corner of the Kan-su province, a distance of nearly 1,500 miles. It varies considerably in height and thickness and state of repair. Within easy reach of Peking it is a splendid wall, 40 feet in height and wide enough at the top for two carriages to drive abreast. But in more remote parts it is a miserable mud wall, not 20 feet high, of no great breadth, and with gaps here and there from a quarter to half a mile in width. The wall was begun in 214 B.C., and was intended as a protection to China from Mongol invasion.

WALLOONS, the inhabitants of the south-eastern part of Belgium, southward of a line from Dunkirk to Maestricht. They are almost pure descendants of the old Belgae, who held their ground when Gaul was overrun by the Germans. They are steadily gaining on the other, or Flemish, part of the Belgian people.

WALLSEND, a small town near the mouth of the Tyne. Here the Roman wall constructed by Hadrian had its eastern termination. The famous Wallsend coal takes its name from the place; population 12,000.

WALL STREET, a street of New York City, famous as a financial centre, and the scene of many wild speculations in money matters.

WALMER CASTLE, in Kent, 2 miles south of Deal, was till recently the official residence of the Lord Warden of the Cinque Ports. Thus many distinguished men have resided here, including Pitt and the Duke of Wellington. The room in which Wellington died contains the hero's furniture, and there are many other relics to be seen by visitors. The Castle is now made over entirely to the public.

WALNUT, a valuable and handsome tree, native of Persia and India, but long domesticated in Europe. The nuts, when fresh gathered, are nutritious and digestible, but they deteriorate with keeping. The unripe nut makes excellent pickles and a good ketchup. Walnut wood has long been esteemed for its beautiful markings, its lightness, and its freedom from liability to split or warp. It makes an excellent veneer.

WALPOLE, HORACE, *b.* in London, 1717, *d.* 1797, third son of the great Sir Robert Walpole, was a voluminous, rather than a great writer. The Gothic villa he constructed at Strawberry Hill, near Twickenham, was long one of the sights of London, and together with its artistic contents, gives a clear insight into the character of the owner. His "Letters" and "Memoirs" are a valuable contribution to the history of his time.

WALPOLE, (Sir Robert,) **EARL OF ORFORD,** *b.* at Houghton, Norfolk, 1676, *d.* 1745, a great English statesman, if we look only to results. Educated at Eton and Cambridge, he entered Parliament at twenty-five, was a minister before he was thirty, and in a year or two was expelled the House of Commons on an almost imaginary charge of corruption. With the accession of George I. his opportunity came again. The skill with which he drew the nation out of the "South Sea Bubble" disasters stamped him as a genius in finance, and his astute use of bribery gave him a twenty years' lease of power. His opposition to the War with Spain added to the unpopularity his reforms had excited, and he retired in 1742.

WALPURGIS NIGHT, the eve of the 1st of May. Saint Walpurgis, or Walpurga, an English nun, went, in the middle of the 8th century, as a missionary to Germany. She was very successful, and was held in great honour. The eve of her festival was supposed to be a favourite meeting-time of witches and other workers of evil, whence the night of the 30th April is known in German legend as Walpurgis Night.

WALRUS, an animal allied to the seal, and haunting the same regions, the Arctic and Antarctic Seas. They may attain a length of 10 or 12 feet, and have conspicuous tusks, often a foot and a half in length. These they use as weapons, and by them they hoist themselves out of the water on to the ice. Their food consists of fishes, shell-fish, etc. The tusks afford excellent ivory, and the skin a very durable leather.

WALSALL, a town of ancient origin in Staffordshire, 8 miles N.W. of Birmingham. Standing on the edge of the Black Country it manufactures a varied assortment of iron and brass utensils, besides various leather goods. In the vicinity are numerous coal-pits and limestone quarries. (For population, etc., see p. 902.)

WALSINGHAM, SIR FRANCIS, *b.* at Chiselhurst, Kent, 1530, *d.* 1590; one of the greatest of Elizabeth's great statesmen. A zealous protestant, he travelled abroad during Mary's reign, and thus acquired an invaluable knowledge of continental politics. He is said to have done more than any other to bring about the execution of Mary, Queen of Scots. His administration of foreign affairs was marked by sagacity, acuteness, and diplomatic deception.

WALTER, JOHN, the name of the first three managers of the "Times" newspaper. The first John Walter started, on January 1st, 1785, the "Universal Daily Register," which in 1788 was renamed the "Times." The second John Walter made the "Times" the power it now is. Taking up the management in 1803, till 1810 he was also editor. His management, lasting till 1847, saw the "Times" established as the greatest journal for news and correspondence in the world.

WALTER, LUCY, the mother of James Duke of Monmouth, was said by many to have been married to Charles II. while he was in exile in Holland. Cromwell undoubtedly acted as if he believed her to be so, for on her coming to England in 1656, he sent her to the Tower, and afterwards banished her to France.

WALTHAM ABBEY, or Waltham Holy Cross, is a market town of Essex, on the river Lea, about 12 miles from London. It derives its importance from being the site of a great gunpowder factory, and its interest from the Abbey and the Cross. Of the Abbey, founded, or rather rebuilt by Harold only the nave remains. The cross is one of the original ones erected by Edward I. in memory of Queen Eleanor.

WALTON, IZAAK, *b.* at Stafford, 1593, *d.* 1683, brother-in-law of Bp. Ken, was a linen-draper of London, who amassed a modest fortune and retired early to enjoy it in the society of some of the most cultured men of his time. His great book, the "Compleat Angler," is not his only work, for his "Lives" are admirable biographies.

WALTZ. This graceful dance originated in Bohemia, and was introduced into England in 1813. Musically, a waltz is a piece of music in triple time to accompany the dance. The term waltz is also applied to a classical form of composition in triple time.

WALVISCH BAY, or **WALFISH BAY,** a bay and adjacent British territory with an area of about 720 square miles, situated in South Africa, about 420 miles north of the Orange River. It is a favourite place of call for whalers. Surrounded by German territory, its commercial value can never be very great; population under 2,000.

WANDERING JEW, a Jew who, according to tradition, told Jesus to get on faster when on his way to Calvary, and was told in return to tarry on earth till Christ should come again. This story, so adapted to romantic developments, has been used by many writers, both in poetry and prose, and many instances have been gravely related of his appearance.

WANDEWASH. See *Coote.*

WANTAGE, a market-town of Berkshire in the celebrated White Horse Vale, 26 miles north-west of Reading. Here Alfred the Great was born, and a handsome marble statue commemorates him. The first steam-tramway in England was made in 1875 to connect Wantage with its railway station, 2½ miles away; population about 3,800.

WARBECK, PERKIN, an impostor tutored by the enemies of Henry VII. to represent Richard, Duke of York, who had been murdered in the Tower. The Duchess of Burgundy and the King of France affected to believe him to be the Duke. James IV. of Scotland received him, and gave him the hand of Lady Catherine Gordon. He came to England and raised an army, but ran away on the eve of battle, to be taken prisoner and eventually beheaded, 1499.

WARD, ARTEMUS. See *Browne, C. F.*

WARD, EDWARD MATTHEW, *b.* in London, 1816, *d.* 1879; historical painter, studied at the Royal Academy, at Rome, and at Munich. His first success was "Dr. Johnson perusing the Manuscript of the Vicar of Wakefield," in 1843. Subsequently he had a large share in decorating the Houses of Parliament. His "Charlotte Corday led to Execution," "The Last Sleep of Argyll," and other historical pictures are much admired. He died by his own hand.

WARD, MRS. HUMPHRY (Mary Augusta Arnold), *b.* in Tasmania, 1851, granddaughter of the great Arnold of Rugby, married Mr. Thomas Humphry Ward in 1872, and almost immediately became a well-known writer. "Robert Elsmere," which remains her masterpiece, appealed to a wide audience of thoughtful people.

WAR OF 1812, a war between Great Britain and the United States. The main cause of this war was the British claim to search all vessels on the high seas for deserters, and the fact that as a result many American subjects had been forced to serve on British men-of-war. Moreover, the "Continental System" of Napoleon and the British counter measures were ruining American commerce. The incidents of the war were few, and not of great importance. The Americans attempted an invasion of Canada, which was repelled, and the English were driven back in an attack on the States by way of New Orleans, after they had taken the city of Washington and destroyed a great part of it. Peace was made in 1814.

WARRANT-OFFICERS, the highest class of petty officers in the navy, and of non-commissioned officers in the army.

WARRINGTON, an historic town of Lancashire on the Mersey, 18 miles from Liverpool. Its manufactures, varied and flourishing, include soap, leather, and iron. (For population, etc., see p. 902.)

WAR, RUSSO-JAPANESE. Russia's failure to carry out the Manchurian Convention, by which she had agreed to evacuate Manchuria in April, 1903, was considered a breach of faith by the Japanese; and the establishment of military posts in Korea, ostensibly for the protection of the timber concessions along the river Yalu, granted in 1896, together with the growing influence exerted by Russia in Korean affairs, led

to lengthy diplomatic negotiations between the two powers. Failing to obtain satisfactory assurances, Japan broke off negotiations on February 6th, 1904, and at once commenced hostilities. A torpedo attack was made on the Port Arthur fleet during the nights of the 8th and 9th, and several ships were badly damaged, and the following day two cruisers were sunk in Chemulpo Harbour. Port Arthur was bombarded from the sea, and attempts were made to "bottle up" the fleet by sinking old vessels in the channel. In a sortie from the harbour on April 13th, the battleship "Petropavlovsk," was sunk by a mine, the Russian admiral, Makaroff, and the famous painter, Verestchagin, going down with her.

These successes gave Admiral Togo sufficient command of the sea to enable the Japanese to pour troops into Korea. A portion of these under General Nogi occupied Kinchau, and, from the land side, began the investment of Port Arthur, which was defended by General Stoessel. Success at sea continued with the Japanese. Early in August the Port Arthur fleet made a sortie. In the ensuing battle Admiral Vitoft was killed, several ships were damaged and withdrew to the protection of the guns from the forts, while others, including the flagship, Cesarevitch, were dispersed to take shelter in neutral ports. Admiral Kamimura also inflicted a defeat on the Vladivostock squadron on the 14th of the same month.

The main armies concentrated in the north-west of Korea. The first land engagement took place at Ping-yang, and there was serious fighting at the Yalu. Admiral Alexieff had been appointed commander-in-chief of the Russian forces by land and sea, General Kuropatkin taking command of the main army. The Japanese, under the supreme command of Marshal Oyama, with General Kuroki in command of the right wing, and General Oku of the left, steadily pressed back the Russians. The latter fought with great courage and determination, but were frequently out-generalled and compelled to evacuate strong positions and retreat to previously prepared entrenched and fortified defences in the rear. Since the Napoleonic Wars no battles have been witnessed of such magnitude as those of Liao-Yang in August, and the Sha-ho in October. It is estimated that the troops engaged exceeded 400,000 men, and that the casualties in the Russian army alone in the latter battle numbered 45,000, including more than 13,000 killed. Alexieff was recalled, and General Kuropatkin left in sole command. Both the Japanese and Russians now settled down between Mukden and Liao-Yang to await reinforcements, and prepare for another battle.

From the first, the Japanese had pressed forward the investment of Port Arthur. The forts were protected by mines and live electric wires, and stubbornly held, but fell one after the other. Wolf Hill was captured in July, the other outer defences during August, and Metre Hill in December. In these assaults the Japanese sacrificed whole regiments, 25,000 men falling in the attacks on Metre Hill. After a siege of seven months, General Stoessel surrendered the fortress on New Year's Day, 1905, the Japanese securing 25,000 prisoners of war, 59 permanent forts, and 546 guns, together with a quantity of ammunition, and several battleships, cruisers, and gunboats which had been sunk in the harbour.

Strengthened by the victorious army, under General Nogi, from Port Arthur, Oyama began his attack on the Russian positions before Mukden, 24th February, 1905. The battle of Mukden that followed is considered the greatest in history, when are taken into account the number of men engaged, the extent of the battle-field, the havoc wrought in the ranks of the combatants, and the length of time over which the fighting continued. After a struggle lasting eleven days the Russians began their retreat, and three days later, March 10th, the victorious Japanese entered Mukden, the capital of Manchuria.

On 27th and 28th May the Russian Admiral was attacked in the Strait of Korea by Admiral Togo, who succeeded in taking or sinking nearly the whole Russian fleet. This decisive blow prepared the way for peace, which was practically concluded 29th August, 1905, the Russians agreeing to evacuate Manchuria, to cede the southern half of Saghalien to the Japanese, to leave Korea under their protection and to leave them in possession of the Liao-tung peninsula.

WARSAW, once the capital of the kingdom of Poland, and now the chief city of the Russian province of that name. It stands on the river Vistula, some 330 miles east of Berlin, having a population exceeding 700,000, one-third of whom are Jews. Although it has many fine palaces and mansions, the general appearance of the city by no means corresponds to its importance. As a manufacturing town, a railway centre, and a military centre, it stands easily first in south-western Russia The various revolutionary movements in Poland have usually had their head-quarters in Warsaw.

WARS OF THE ROSES. This struggle between the rival houses of York and Lancaster for the English throne began with the battle of St. Albans, 1455, and ended in 1485 with the accession of Henry VII. after Bosworth Field. The Yorkist cause had as adherents most of the mercantile and moneyed classes, the Lancastrians most of the nobles. As the worthlessness of Richard II. had given the throne to Henry of Lancaster, so the feebleness of Henry VI. gave it to Edward of York. That the rival claims were to some extent united in Henry Tudor was an inestimable blessing to England. The Yorkists gained the battles of St. Albans (1st), 1455, Northampton, 1460, Mortimer's Cross, 1461, Towton, 1461 Hedgeley Moor and Hexham, 1464, Barnet, 1471, and Tewkesbury, 1471; and the Lancastrians those of Wakefield, 1460, St. Albans (2nd), 1461, and Bosworth, 1485.

WARWICK, an interesting town on the river Avon, county town of Warwickshire. Adjoining the town, and overlooking the Avon, is the stately castle of Warwick, dating back to the 14th century. The present earldom was created in 1746 for Lord Brooke, whose family had possessed the castle since 1605. Leicester Hospital, an asylum for aged soldiers, is most interesting, as is St. Mary's Church with its beautiful Beauchamp chapel; population 12,000.

WARWICK (Richard Nevil), **EARL OF,** the Kingmaker, *b.* 1428. *d.* 1471, was the eldest son of the Earl of Salisbury. He married Anne, daughter of the Earl of Warwick, and in her right succeeded to the Warwick title and estates. By Warwick's aid, Edward IV. gained the throne, but he did not intend to be the puppet of his powerful subject. Slighted and thwarted by the king, Warwick made friends with the Lancastrians, and drove Edward out of the country for a time. When the latter returned to do battle for his throne at Barnet Field, the Duke of Clarence, who had married Warwick's daughter, forsook his father-in-law and joined the king, his brother, thus giving him the victory. Warwick was slain in the battle.

WASH, THE, a large estuary on the East Coast, between the counties of Norfolk and Lincoln. It receives the waters of four rivers, the Witham, Welland, Nen, and Great Ouse. The greater part of its surface is uncovered at low water, and one can cross it with care, but two fairly deep channels remain, the Lynn Deeps, leading to Lynn and Wisbeach, and the Boston Deeps, leading to Boston. It was in attempting to cross the Wash at low tide that King John lost his baggage, including his crown and sceptre, 1216.

WASHINGTON, the capital of the United States, is situated in the District of Columbia, on the Potomac River, on the east coast of the States. Marked out by Washington himself as the future seat of government, its development has been guided so as to leave ample open spaces within the city. Almost in the centre is the Capitol, where Congress meets, a handsome building of white stone and marble, crowned with a noble dome supporting a bronze figure of Liberty. The White House, the official residence of the President, and other Government buildings are also handsome.

WASHINGTON, GEORGE. *b* 1732. *d.* 1799, the hero of American independence, was of English parentage, though born in the New World. He gained his knowledge of war in campaigns against the French during the Seven Years War Thus he was quite capable of taking the lead when the States declared their independence in 1775. When peace came, he did his country as good service as he had done in war, and it is largely to his foresight and perseverance that the soundness of the American constitution is due. He was the first President, elected in 1789, and held the office for a second term, being re-elected in 1793. He left no children.

WASP, a family of insects embracing a good many species having marked characteristics, such as the possession of a sting, the building of a nest, and others less obvious. The life history of wasps much resembles that of bees, except that they do not store up food, and all die at the approach of winter except a few females, which hibernate in a hole or under a stone. As warm weather approaches, the female revives and commences a nest, in which she begins to lay her eggs. Some of these soon hatch and develop, and then the mother-wasp has a band of workers to aid her in enlarging the nest for the eggs she continues to lay.

WASSAIL a favourite beverage of the Anglo-Saxons, made from ale, roasted apples, toast, sugar and spices. It played an important part at all their feasts.

WASTE PRODUCTS, UTILISATION OF. See *By-Products.*

WATCH, a timepiece whose mechanism is actuated by a spring, and which is small enough to be carried in the pocket. Till lately, every watch possessed a *spring,* a *barrel* to contain it, and a *fusee* to counteract the irregularity of the spring action, but now the fusee is often dispensed with and a much longer spring used. Watches were invented at Nuremberg some time before 1500, and called "Nuremberg eggs."

WATCH, a period of four hours on board ship, during which the same set of men are on duty. The crew being divided into two or three sets, also called *watches,* take turn and turn about. But to prevent the same watch always falling to the same men, the period from 4 to 8 p.m. is subdivided into two *dog-watches* of two hours

each, which are taken in turn with the others.

WATER. See *Med. Dict.*

WATER-CLOCK. See *Clepsydra.*

WATER COLOURS, pigments intended to be laid on through the medium of water, and not oil. The quickness of drying is one great advantage over oil. Water-colour painting, though the more ancient of the two, was long practised as an auxiliary to, or preparation for oil-painting, but since Turner showed the possibilities of water colours, this branch of art has grown more and more into recognition.

WATERFORD, a town in the south of Ireland, county town of Waterford county. It has a fine situation at the point where the river Suir flows into Waterford Harbour. It sends large quantities of agricultural produce to England, comprising bacon, butter, eggs, cattle, and pigs; population 28,000.

WATERLOO, BATTLE OF, fought on June 18th, 1815, practically ended the career of Napoleon. Wellington, determined to keep the French from Brussels, had chosen his ground and made sure of assistance from Blucher. The forces on each side were about equal in number, the French numbering 72,000, the allied British, Dutch, and Germans 67,000, of whom 23,000 were British. The battle consisted of heavy charges on the British lines, preceded by severe cannonading. Confident of receiving support some time or other from Blucher, Wellington bore it patiently until the Prussians appeared. Then having repelled Napoleon's grand attack by the Old Guard, he ordered the advance, and Napoleon's hopes were crushed. The allies had 22,000 killed and wounded, the French 35,000.

WATERLOO BRIDGE, across the Thames, joining Wellington Street to Waterloo Road, is one of Rennie's masterpieces. It is of granite, 2,456 feet long with the approaches, it is level from end to end, and crosses the river by nine arches, each of 120 feet span. It was opened June 18th, 1817.

WATERPROOF. The commonest and most effective way of rendering cloth waterproof is to cover it with a solution of indiarubber. This method was patented by Charles Macintosh of Glasgow. The indiarubber is dissolved in naphtha and laid on so thin that five or six coats hardly amount to one hundredth of an inch in thickness. Other methods are to steep the cloth in various solutions which render it impervious to water, but not to air.

WATER-SPOUTS are due to whirlwinds which occur over the sea. The resulting column of water is sometimes carried over the land, and there discharged, but usually the system disperses in a short time. The rotary motion of the whirlwind acting on a cloud draws it downward in the shape of an inverted cone, and at the same time draws the water up from the sea. Eventually the column of water thus formed bursts, sometimes doing considerable damage.

WATLING STREET, a street in London running from St Paul's to Cannon Street. It is a part of the great Roman road of that name which ran from Dover to Chester by way of Canterbury, Rochester, London, and Redford.

WATSON, JOHN, *b.* at Manningtree, Essex, 1850, better known to the world at large by his *nom de plume* of Ian Maclaren, was for 25 years minister of Sefton Park Presbyterian Church, Liverpool. Educated at Glasgow University, and at Tübingen, in Germany, he served as a minister in Scotland before being called to exercise his ministry at Liverpool. His liberality of view at one time involved him in controversy. His best known works are "Beside the Bonnie Brier Bush," and "The Days of Auld Lang Syne."

WATSON, WILLIAM, *b.* at Wharfedale, 1858, but brought up in Liverpool, where his father was a merchant. He early began to produce poetry, but hardly obtained recognition till his "Wordsworth's Grave" was published with other poems, in 1890. "The Year of Shame" and the "Purple East" voiced in 1896 the feelings of those who felt the horror of the Turkish proceedings.

WATT, JAMES, *b.* at Greenock, 1736, *d.* 1819, was the originator of the modern steam-engine, for his invention of the separate condenser, together with other improvements, made an era in its history, and at once increased its efficiency about four fold. His early training as mathematical instrument maker to the University of Glasgow stood him in good stead when, perceiving the weak points in Newcomen's engine, he set himself to improve it. With his partner Boulton, he carried on a successful business at the Soho iron-works, Birmingham.

WATTEAU, JEAN ANTOINE, *b.* 1684, *d.* 1721, the painter of that imaginary rural felicity so popular with the court of Louis XIV. Born of poor parents, his life was a struggle till the last few years, when his merits gained him admission to the French Academy. His pictures will always be esteemed for their beautiful colouring and gracefulness of outline, despite the artificiality of the subjects.

WATTS, GEORGE FREDERICK, *b.* in London, 1820, *d.* 1904, an eminent painter and sculptor, whose work is chiefly remarkable for its serious symbolical teaching. He exhibited at the Academy in 1837, and then his life was one steady success. He was a great portrait painter, and his work in sculpture is marked by boldness and grace. He was twice offered a baronetcy.

WATTS, ISAAC, *b.* 1674, *d.* 1748, a Nonconformist minister, will best be remembered for his hymns, some of which are among the best loved in the English language. His intense devotion to study in early life injured his constitution, and he lived the last half of his life in semi-retirement at Theobald's. "Jesus shall reign where'er the sun," "When I survey the wondrous Cross," and "O God, our help in ages past," are by Watts.

WATTS, SIR PHILIP, F.R.S., *b.* 1849, a great naval constructor; for sixteen years naval architect to the great Elswick firm, designing many of the world's most famous warships. Afterwards, Director of Naval Construction to the Admiralty, and designer of the first Dreadnought.

WAUGH, EDWIN, *b.* at Rochdale, 1817, *d.* 1890; the Lancashire poet and writer of short stories and sketches, was entirely self-educated, having to begin work at twelve. After working in various places as a journeyman printer, he settled down in Manchester. In 1885 he published "Sketches of Lancashire Life," and thereafter he had no difficulty in gaining a hearing. His songs and stories in the Lancashire dialect are highly esteemed.

WAVERLEY, the first of the famous series of novels written by Sir Walter Scott was produced in 1814. The secret of its authorship was well kept for years, and though many felt sure that none but Scott could be the author, not till the crash in his financial affairs, 1826, was the authorship made public. The book gives a fine picture of the hopes and fears that animated parties in 1745. Its name is taken from Waverley, near Hindhead, in Surrey.

WAVRE, a town in Belgium, 15 miles south-east of Brussels, the scene of a battle between the French and the Prussians, June 18th, 1815. Napoleon had defeated Blucher at Ligny on the 16th, and on the 17th he sent Grouchy with 33,000 men to follow them while he attacked the English. But Blucher had already started to join Wellington, and his rear-guard managed to keep Grouchy from returning to aid Napoleon; population 8,000.

WAX, a fatty solid derived both from animals and vegetables. It differs from fat proper in containing no glycerine. It is insoluble in water, and only slightly soluble in alcohol. Its chief uses are to make candles, to polish floors, for modelling, and to serve the chemist as the foundation of many ointments. Sealing-wax is not a true wax.

WAYLAND SMITH, a character in Scott's "Kenilworth." He dwelt in a cave among the hills in Berkshire, and shod travellers' horses for sixpence. The cave is still shown, near the White Horse. The original "Weland" was a mythical horse smith who forged Beowulf's armour.

WEALD (the same as the German *wald*, a forest), the name of a large district between the North and South Downs, stretching from Farnham and Petersfield on the west to the sea on the east. It was once a large forest, of which parts remain here and there, and make the weald one of the most picturesque parts of England.

WEALTH OF NATIONS, a book by Adam Smith (1723-1790), a philosopher, professor, and lecturer of Glasgow and Edinburgh. In this work, which has had a world-wide influence, he points out that labour is the true wealth of a nation, and proceeds to examine what are the conditions under which labour can be most profitably employed. The book has passed through innumerable editions.

WEASEL, a small animal allied to the marten, polecat, mink, and stoat, common in the temperate and cold parts of the Northern Hemisphere. It is about 10 or 11 inches long, brown in colour with white breast. In extreme cold it becomes white all over. It feeds on rats, mice, moles, frogs, etc., and occasionally devours rabbits and birds.

WEAVER BIRD, a small bird of which there are many species in Africa, Asia, and Australia, none in Europe or America. They derive their name from weaving together flexible materials, such as grass, etc., to form a nest, and they make these materials adhere more closely with saliva. The Sociable Weaver-bird of South Africa constructs a roof or shelter, under which hundreds of nests may be found.

WEAVING, the art of producing cloth by the intersection of two sets of fibres at right angles to one another, those which go longitudinally from end to end being called the warp, and those at right angles to these being called the weft or woof. Weaving has been practised from the earliest times, but the aid of machinery dates only from 1733, when John Kay, of Bury, invented the fly-shuttle, which saved the weaver touching the shuttle with his hands. Then, in 1785, Edmund Cartwright invented the power-loom. This relieved the weaver from the task of moving the shuttle backwards and forwards, and of moving the threads up by means of the "reed." In 1801, Joseph Jacquard, a Frenchman, invented a form of loom which much simplified the work of weaving the patterns.

WEBER, KARL, BARON VON, *b.* 1786, *d.* 1826, an eminent German musician, many of whose works are still produced at intervals. "Der Freischutz," "Euryanthe," and "Oberon," retain their popularity, while some of the music in

"Preciosa" is very beautiful. His piano piece, "Concertstück," is well known, and his other compositions are numerous.

WEBSTER, DANIEL, *b.* in New Hampshire, U.S.A., 1782, *d.* 1852, a celebrated statesman, orator, and jurist. Educated as a lawyer, he soon entered Congress, and won fame both at the bar and in the Assembly. He more than once averted war with Britain, and was mainly instrumental in negotiating the famous Ashburton Treaty, which made Canada secure. On the slavery question he was unable to side with the Northerners, a fact which lessened his influence.

WEBSTER, NOAH, *b.* at Hartford, Connecticut, 1758, *d.* 1843; the author of the well-known dictionary, was at different times a lawyer, a journalist, and a schoolmaster. But his heart was in the study of English, and his "Grammatical Institute" long enabled him to follow his bent. His great dictionary took him years to prepare, and it is still an authority on the English tongue.

WEBSTER, RICHARD EVERARD. See *Alverstone.*

WEDGWOOD, JOSIAH, *b.* 1730, *d.* 1795, the founder of art pottery in England, was a native of Burslem, in Staffordshire. His skill in moulding soon brought him custom when he set up for himself, and tried to produce something better than the coarse ware he saw made around him. Before long he aimed at equalling the old classical vases, and engaged capable artists to produce designs. The Etruria pottery, near Burslem, was established by him, and here the bulk of the celebrated "Wedgwood" ware has been produced.

WEDMORE, a village in Somersetshire, 8 miles from Wells. Here Alfred made peace with Guthrum the Dane, on condition that Guthrum should be baptized and should limit his rule to England north and east of Watling Street.

WEEK. The existence of the week, as we know it, is bound up with the recurrence of the rest-day, Sunday or Sabbath. It is, of course, well known that the use of a cycle of seven days, ending with a rest-day, was strictly observed among the Jews. It is equally clear that the same practice prevailed in Egypt, but when the Egyptians adopted it is uncertain. The adoption by the Romans of this seven-day cycle, as recorded by Dion Cassius, providentially preceded the spread of Christianity, and thus saved Christians from one source of trouble.

WEI-HAI-WEI, a small harbour, with adjacent territory some 100 square miles in extent, on the southern shore of the strait of Pe-chi-li, taken in lease by the English from China in 1898.

WEIMAR, the capital of a small German duchy, is situated on the river Ilm, 50 miles south-west of Leipsic. Its great interest lies in the fact that Goethe lived here from 1782 till his death, in 1832, and here produced the greater part of his works. Here also Schiller passed his last few years; population about 30,000.

WELBECK ABBEY, now the seat of the Duke of Portland, is near Worksop, in Nottinghamshire. It is a handsome building, much enlarged, 1860-70, by the then duke, who spent enormous sums on his underground picture-gallery, riding-school, and ballroom.

WELLESLEY, MARQUIS OF, *b.* 1760, *d.* 1842, the elder brother of the great Duke of Wellington, was son of the Earl of Mornington. Educated at Eton and Oxford, he entered the English Parliament at the age of twenty-four. He gained the favour both of George III. and the ministry, and in 1797 went out to India as Governor-General. His talent for administration, with his brother Arthur's military genius, well maintained the British predominance despite the efforts of the French and Tippoo Saib. Returning from India, he was twice made Lord-Lieutenant of Ireland.

WELLHAUSEN, JULIUS, *b.* 1844, a famous Oriental scholar and Old Testament critic; was educated at Göttingen University. He resigned the professorship of theology at Greifswald from conscientious reasons, and became professor of Oriental languages at Göttingen. His criticisms and comments on the books of the Old Testament, and especially their date and authorship, have given rise to much controversy.

WELLINGTON, made from its central situation the seat of government of New Zealand. It stands on Port Nicholson, a branch of Cook Strait. It has a commodious harbour, capable of taking vessels of any size. Having regard to the frequent earthquakes, the town is mainly built of wood. Its importance is rapidly increasing, both as a manufacturing town and as a port; population 50,000.

WELLINGTON, (Arthur Wellesley), **DUKE OF,** *b.* at Dublin, 1769, *d.* 1852, third son of the Earl of Mornington, materially helped to save Europe from French domination. As a youth he was not brilliant, but in the army he soon asserted himself as a capable commander. From 1797 to 1805 he served in India, first under General Harris, and then in chief command. In 1808 he headed an expedition against the French in Portugal, but was soon superseded. In 1809 he again took command, and never again left the Peninsula till he crossed the Pyrenees in 1814, driving the French before him. The lines of Torres Vedras, a series of works stretching from a point on the river Tagus to the sea, arrested the progress of the French, and kept his base secure at Lisbon. Called to command the allied army against Napoleon after the return from Elba, he concerted with Blücher a plan of operations for their common safety in any event, and then prepared for his first and last battle with Napoleon at Waterloo. His life subsequent to the Napoleonic War is a long chapter of English history. For thirty-six years he was one of the guiding hands in English affairs, and though he made some mistakes he redeemed them by his honesty of purpose. All Europe mourned his loss when he died, and his funeral at St. Paul's was attended by representatives from nearly every country.

WELLINGTON COLLEGE, 4 miles from Wokingham, in Berkshire, was opened by Queen Victoria in 1859. It was founded by public subscription as a memorial to the Great Duke, for the education of the sons of officers in the army. There are about 400 pupils, 100 of whom hold scholarships and pay £10 a year, while the rest pay from £95 to £110.

WELLS, a pleasant city in Somersetshire, 20 miles south-west of Bath, at the foot of the Mendip Hills. The cathedral will bear comparison with any for beauty; the celebrated west front, with its host of figures, being unsurpassed. The bishopric has the dual title of "Bath and Wells," but Wells is the seat of office; population 4,900.

WELSBACH LIGHT, a light produced by gas burnt with air in a Bunsen burner, the flame of which impinges on a covering or "mantle" made of incombustible substances (See *Incandescent Light*).

WENHAM LAKE, a lake about a mile square, near Boston, U.S.A. It is celebrated for the purity of its ice, the harvesting of which is a winter sight. A good deal of Wenham Lake ice used to come to England, but we now draw almost all our foreign supply from Norway.

WENTWORTH, THOMAS. See *Strafford, Earl of.*

WEREGILD, or **WERGILD** (A.S. *wer* "man" and *gild* "compensation"), a payment customary among Anglo-Saxon and other Teutonic tribes in expiation of homicide or other serious offence against the person. The amount varied with the condition of both the aggressor and the person injured, but once paid the offender was secure from further penalty.

WESLEY, CHARLES, *b.* 1708, *d.* 1788, brother of the great John Wesley, did much good work as assistant to his brother in the great "revival." Not fitted physically to undergo the unceasing labours his brother undertook, Charles worked zealously as far as his powers went. As a poet and hymn writer he excelled. "Jesu, Lover of my soul," "Rejoice, the Lord is King," are two of the most popular of the 5,000 hymns from his pen.

WESLEY, JOHN, *b.* 1703, *d.* 1791, founder of the great Wesleyan Church, was son of Samuel Wesley, rector of Epworth, in Lincolnshire. From Charterhouse School he proceeded to Christ Church, Oxford, where he soon attracted notice by the extraordinary strictness of his life. From his ordination in 1725 until 1735 he was a zealous member of the Church of England, but undertaking a mission to Georgia in that year, he fell in with some Moravians, by whose system he was captivated for a time. In 1738 he began his work as a revivalist preacher. The rest of his life was taken up with travel and preaching, interspersed with literary work. The Wesleyan Church is a testimony to his marvellous powers of organisation.

WESLEYANS. Refer to *Index.*

WESSEX, the kingdom of the West Saxons, founded early in the 6th century, comprised the counties of Hampshire, Dorset, Wiltshire, and Somerset, with adjacent districts. It had varying fortune until the time of Ina (688-726), after whose days Wessex became more and more powerful until the reign of Egbert, who in 827 was acknowledged overlord by Mercia and the other kingdoms. Another century, however, had to pass before a king of Wessex could truly style himself "King of England."

WEST, BENJAMIN, *b.* at Springfield, Pennsylvania, 1738, *d.* in London, 1820, an historical painter of some eminence. Born of poor parents, he had practically no teaching until, in 1760, some generous friends sent him to study in Italy. Thence he came to London, where he soon made a reputation. His "Death of General Wolfe" attracted much attention in his day. For twenty-eight years he was President of the Royal Academy. He lies in Westminster Abbey.

WEST AUSTRALIA, the western portion of the Australian continent, has an area of over 1,000,000 square miles, or about twenty times that of England. The eastern half of this Colony is almost one great desert, scarcely explored; but the western and northern districts are partially settled. Gold was found in the Kimberley district in 1882, but the great rush to Western Australia was in 1893, after the discovery of the Coolgardie and neighbouring goldfields. The supply of useful timber in the colony is immense. Refer to "West Australia" in *Index.*

WESTCOTT, BROOKE FOSS, *b.* near Birmingham, 1825, *d.* 1901, a great scholar and theologian, was educated at King Edward's School, Birmingham, and at Cambridge, where he had a most dis-

tinguished career. He was for some years a master at Harrow School, afterwards professor of divinity at Cambridge, then Bishop of Durham. His lectures and works on the New Testament are much esteemed, and he took a leading part in the last revision of the Bible.

WESTERN EMPIRE, THE, When the Emperor Theodosius died, in 395 A.D., the Roman Empire was divided between his two sons, Honorius taking the western provinces, comprising Italy, Gaul, Britain, Spain, Africa, and Illyricum, and Arcadius the eastern, with Constantinople as his capital. The new Western Empire was soon shaken by Alaric the Goth, and in less than 100 years it was dissolved.

WEST INDIES, THE, a large and important group of islands lying between North and South America, and separating the Gulf of Mexico and the Caribbean Sea from the Atlantic. The largest of the islands are Cuba and Porto Rico, lately ceded to the United States; Hayti, divided into two negro republics; and Jamaica, a British colony. Of the smaller islands, a good many are British, while others belong to France, Holland, or Denmark. Nearly the whole archipelago lies within the tropics. The principal productions are sugar, tobacco, coffee, and bananas. Refer to "West Indian Possessions" in *Index*.

WESTMACOTT, SIR RICHARD, *b.* in London, 1775, *d.* 1856, an eminent sculptor, received part of his training in Rome from the great Canova. Many of the monuments in Westminster Abbey and St. Paul's are by him, and also the "Achilles" in Hyde Park.

WESTMINSTER, a city now forming part of the great county of London, while retaining many important privileges of self-government, was once a separate city, whose boundaries reached the city of London at Temple Bar. Within it are situated Westminster Abbey, the Houses of Parliament, Westminster Hall, and most of the Government Offices in palatial buildings. Near the Abbey is Westminster School, where many eminent Englishmen were educated.

WESTMINSTER ABBEY the resting-place of many of England's famous men, stands on what was the island of Thorney, in early times. The early Saxon Church was rebuilt by Edward the Confessor, and finished just in time for William the Conqueror's coronation. The present building dates from 1269, and was finished in 1735. Thirteen kings, and many of our queens, are buried here, as well as numerous poets, statesmen, and warriors. Nearly all our monarchs have been crowned here, and here is the ancient coronation stone of Scotland. The Dean of Westminster holds a unique position among church dignitaries, the office conferring many privileges and allowing considerable independence of action and opinion.

WESTMINSTER ASSEMBLY, an assembly of learned and pious men called in 1643 to consider the question of Church doctrine and government. As Charles I. had forbidden the holding of such an assembly, the Church of England was practically unrepresented, but the Presbyterians drew up statements of doctrine and directions for worship that still hold good in the Church of Scotland. The chief results of their labours were the "Directory of Public Worship," the "Confession of Faith," and the "Shorter" and "Larger" Catechisms.

WESTPHALIA, THE KINGDOM OF, was formed by Napoleon in 1807 for his brother Jerome. It consisted of the present Westphalia, with parts of Hesse, Hanover, Brunswick, and Saxony. After the Battle of Leipzig, in 1813, the kingdom was dissolved, and its constituent parts reverted to their previous owners.

WEST POINT, the site of the United States Military Academy, is situated about 50 miles north of New York. Standing high above the Hudson, it commands a view of most picturesque scenery.

WEYMAN, STANLEY JOHN, an historical novelist, was born in 1855. Educated at Shrewsbury School and Oxford University, he started life as a barrister. In 1889 he published "The House of the Wolf," and followed it by others, until, in 1893, he achieved a great success with his "Gentleman of France." "The Red Cockade," "Under the Red Robe" and the "Abbess of Vlaye," among his other works, show his skill in writing historical romance.

WHALE. See *Cetacea*.

WHALEBONE, or **BALEEN,** a horny substance found hanging in thin parallel plates from the roof of a whale's mouth. There are about 300 or 400 all round the mouth, and when the whale closes its mouth after holding it open some time, the baleen plates act as a sieve to retain the fishes and other food while the water strains out.

WHATELY RICHARD, *b.* in London, 1787, *d.* 1863, son of a distinguished English Churchman, became Archbishop of Dublin, and did great service to the Church of England and religion generally by his dialectic skill and readiness to meet sceptics in argument. He had a distinguished career at Oxford, where he was some years tutor before becoming Archbishop. Besides his theological works, he was the author of treatises on Logic and Rhetoric, which went through many editions.

WHEAT, the most important vegetable product of temperate and sub-tropical regions, has been cultivated from the earliest ages of civilization. It is a hardy plant, but is not cultivated so far north as barley and rye. The history of wheat cultivation in England is interesting; few people would believe that less than 200 years ago the poor never tasted wheaten bread. Rye bread is still a common food of the working-classes on the continent. The spread of wheat cultivation during the last century has had many important effects, one being that the industry has much declined in England, and land values in consequence have decreased. We now only grow about one-fourth of our supply, the rest coming from the United States, Canada, India, Russia, and Argentina.

WHEATSTONE, SIR CHARLES, *b.* at Gloucester, 1802, *d.* 1875, one of our greatest scientists, and the pioneer in England of electric telegraphy. He was intended for business, but his talent for inventing scientific instruments brought him to the notice of scientists. He made many original experiments in Sound and Light as well as in Electricity, and received recognition from most of the European scientific bodies.

WHEEL, BREAKING ON THE, a mode of punishment formerly used in Continental countries, and not unknown in Britain. The criminal was attached to a large wheel, his legs and arms tied to the spokes, and the bones of his legs and arms were broken as the wheel turned round.

WHEWELL, WILLIAM, *b.* at Lancaster, 1794, *d.* 1866, a great mathematician, scientist, and teacher in the first half of the 19th century. He had a distinguished career at Cambridge, where he became fellow, tutor, and finally Master of Trinity College. His text-books on mathematics and physics had a great vogue in their day, and he wrote besides many treatises on physical science and philosophy.

WHIGS, the name given in derision to the adherents of the popular party in Stuart times, soon became the common title for those who upheld the popular cause. It came from Scotland, being used there to denote the Covenanters who defied the law. It is now supplanted by the term "Liberal."

WHIRLPOOL, a circular rush of water caused by two currents or tides meeting, or by a strong wind opposing a current. The Maelstrom and Charybdis occasionally present striking examples of this effect, but only under special circumstances. As a rule there is no danger in navigating near them in calm weather.

WHIRLWIND, a circular rush of air produced by two opposing winds meeting. It rarely lasts long, a few seconds, or a minute at the outside, but its effects are often most disastrous. It travels along with more or less rapidity, tearing up and carrying to a considerable distance quite heavy objects, such as roofs and hayricks, and levelling trees and barns. At sea whirlwinds often cause waterspouts.

WHISKY, a spirit obtained by distillation from barley and other grains, and even from potatoes and other plants. The best is that obtained from barley, and in the production of this Scotland is justly famous. Pure whisky is quite colourless and transparent, the golden colour being produced by various additions. Whisky is improved by being stored in wine casks, those which have contained sherry being the most suitable. Illicit distillation is still carried on in remote districts in Ireland, but is now rare in Scotland, and almost unknown in England.

WHISTLER, JAS. ABBOTT McNEILL, *b.* 1834, *d.* 1903, artist, was a native of Lowell, Mass., U.S.A. Coming to Paris and to London, he did much work in both places, exhibiting in the Salon, the Academy, and other galleries. His etchings are probably unsurpassed, while as a painter he excels in originality of colour effect and in portraiture. His celebrated "Gentle Art of Making Enemies," was a literary excursion that will perpetuate his strange, quarrelsome disposition.

WHITBY, a seaport and watering-place in the north-east of Yorkshire. Standing amongst the bold cliffs that mark this coast, it is fast becoming a popular place of resort. The jet manufacture is decaying and that of alum almost extinct, but fishing still flourishes. The ruins of the ancient abbey are well worth visiting.

WHITE, GILBERT, *b.* 1720, at Selborne, Hants., *d.* 1793, a distinguished naturalist. He had a brilliant career at Oxford. His taste, however, was for the quiet life of a country parish; and in various places, but lastly at Selborne, he ministered as curate. His great work, the "Natural History of Selborne," appeared in 1789, four years before his death.

WHITE, HENRY KIRKE, *b.* 1785, *d.* 1806, was the son of a butcher of Nottingham. A volume of promising poems published by him in 1803 gained the notice of Southey, who, with others, aided him to go to Cambridge University. Here his severe studies, acting on a feeble constitution, undermined his health, and he died young.

WHITEBAIT, a small fish, probably the young of herrings or sprat, caught in the Thames and a few other places in early summer. It is about 2 to 4 inches in length, and when cooked soon after being caught, has a most delicate, and at the same time distinctive, flavour. The "Ministerial Whitebait Dinner," at

Greenwich, used to be a feature of every session of Parliament.

WHITEBOYS, the name of one of the numerous secret associations that flourished in Ireland during the first half of the 19th century, and even later. Enraged by their political and agrarian grievances, the Irish peasants committed many outrages on those who were on the side of law and order, and the authors could seldom be detected.

WHITEFIELD, GEORGE, *b.* 1714, *d.* 1770, the contemporary, and, for some years, the co-worker with the Wesleys, was the son of an inn-keeper of Gloucester. Obtaining a servitorship at Pembroke College, Oxford, he went there just when the Methodist movement was in its third year. He joined heartily in it, and travelled about preaching as much as John Wesley. Ejected from the Church of England, he had not even the consolation of agreeing in doctrine with Wesley, from whom he seceded in 1741, to form what is commonly known as the "Countess of Huntingdon's Connexion." His teaching was distinctly Calvinistic.

WHITEHALL, a district lying between Trafalgar Square and the Houses of Parliament, in which are situated the Home Office, the Admiralty, the new War Office, the Horse Guards, the Colonial Office, and the India Office. It takes its name from the old palace, which was the favourite residence of the Tudors and Stuarts. That palace, which passed from Wolsey to Henry VIII., was destroyed by fire, except the Banqueting Hall, in 1697. The window of this Banqueting Hall is still shown from which Charles I. stepped to his execution. The Hall itself is now the United Service Museum.

WHITEHEAD, ROBERT, *b.* at Bolton, Lancashire, 1823, *d.* 1905, engineer and inventor. His first torpedo was finished in 1866, at Fiume, and his invention was adopted by the Austrian Government, 1868, and three years later by the British Admiralty. It is now with various modifications in all navies. See *Torpedo.*

WHITE HOUSE, THE. See *Washington (city).*

WHITE SEA, THE, a large gulf in the north of Russia, opening into the Arctic Ocean. It has an area of nearly 50,000 square miles, almost as large as England without Wales. At its south-eastern corner stands Archangel, at the mouth of the Dwina, long the only port of Russia and through which trade commenced with England in Elizabeth's reign. The harbour is frozen over from September to May, and is not now important.

WHITE TOWER, THE, the largest and most important of the buildings comprised in the Tower of London. It was built about 1078 for William I., strengthened and added to by various sovereigns, and used both as a palace and as a state prison till the later Stuart times. A menagerie existed here from 1235 to 1831, when the animals were removed to the Zoological Gardens. It contains a fine collection of armour.

WHITE LEAD, a carbonate of lead, known also as ceruse, much used as a pigment and in glazes. It occurs naturally, but the greater part is made by a most interesting process from the metal. White lead is often adulterated with chalk and other substances, which diminish its brilliance but add to its lasting qualities.

WHITMAN, WALT, *b.* 1819, *d.* 1892, the most characteristic and original of American poets, had little formal education. Till the publication of his "Leaves of Grass" in 1855, he flitted from one employment to another, not for the sake of gain, but of knowledge. The great American War saw him spending all his strength and energy in tending the wounded heroes of the North, after which he produced many volumes of verse. His style, opinions, and choice of subjects have often given offence.

WHITNEY, ELI, *b.* in Massachusetts, 1765, *d.* 1825; the inventor of the cotton-gin; was a teacher in Georgia when the difficulty of separating the cotton from the seeds caused him to invent the saw-gin, which does the work rapidly. He made little money out of this invention, but he got a patent for manufacturing firearms, which proved profitable.

WHITTIER, JOHN GREENLEAF, *b.* 1807, *d.* 1892, an American poet, was as devoid of ordinary education as Whitman. But a natural love of poetry made him early master of all the best known poets, and his own genius soon supplied him with subjects for his pen. The subject of Abolition then loomed large on the American horizon, and Whittier devoted himself to helping it forward. Thus it is that many of his poems, admirable in their day, are now out of date and devoid of interest. But enough remain to show that Whittier had the true poetic inspiration, although less polished in his expression than some others. Of his longer poems, "Snowbound" is the most popular, while "The Eternal Goodness," "The Two Angels," and "Invocation," are perhaps the best of the shorter ones.

WHITTINGTON, SIR RICHARD, son of Sir William de Whittington, of Pauntley, in Gloucestershire, was resident in London in 1379, when he subscribed to a city loan. He was thrice Lord Mayor of London, he restored St. Bartholomew's Hospital, and until his death, in 1432, he took a leading part in London affairs, and was knighted by Henry V. for his financial services. The part of his story relating to the "Cat," probably took its origin from his possessing a ship of that name.

WHITWORTH, SIR JOSEPH, *b.* at Stockport, 1803, *d.* 1887, one of the men combining inventive genius with business capacity who have been the making of England as a manufacturing country. His discovery of the method of producing true planes, and other devices for obtaining exactness in machines and tools, revolutionised the engineering industry. His experiments largely paved the way for improvements in the modern rifle. He became especially famous for his breech-loading guns. A great part of the enormous fortune he amassed was left for benevolent purposes, and about £100,000 of this was devoted to establishing scholarships for young engineers.

WHYMPER, EDWARD, *b.* in London, 1840, a great mountain climber and explorer. His early training in the art of wood engraving has aided him greatly in producing the fascinating books that tell of his ascents and explorations. He was the first to climb the Matterhorn, as well as several other Alpine summits. He has also contributed largely to the exploration of Northern Greenland and of the Andes. 'Scrambles among the Alps," and "Travels among the Great Andes," are his chief works.

WICLIF. See *Wyclif.*

WICK, a busy little town almost in the extreme north-east of Scotland. It stands on a convenient little bay, from which hundreds of boats go out to the herring fishing, which is the main support of its population of about 9,000. It is the county town of Caithness.

WIELICZKA, a small town in the Austrian province of Galicia, 8 miles from Cracow. Here is one of the most important and productive salt-mines in the world. For centuries the mines have been working, and a visit to its galleries is one of the sights comprised in a tour of Austria. The annual output of salt is about 50,000 tons; population 6,000.

WIESBADEN, a handsome town of Germany, 5 miles north of Mainz, and 20 west of Frankfort. It is one of the most important watering-places in Europe, many thousands going there annually to visit its hot springs, the largest of which has a temperature of nearly 160° F., and sends out enormous volumes of water. The town has much to attract visitors, and there are interesting Roman remains to be seen; population 86,000.

WIG. The history of wigs takes us back to very ancient times. They were worn by the Egyptians and Assyrians as well as by the Greeks and Romans. In the 16th century they became common among the ladies of Europe, and in the next reign men began widely to adopt them, headed by Louis XIII. and Louis XIV. of France. Their use began to die out in the 19th century, and now they are rarely used except by judges, lawyers, and the Speaker of the House of Commons.

WIGHT, ISLE OF. See *Isle of Wight.*

WIGWAM, the name given by the American Indians to their tents of bark or skins. Stakes are placed in a circle in the ground, and bent over so that their ends cross near the top, at which point they are fastened together. The bark or skin covering is then laid on so as to leave a hole at the top for smoke to escape.

WILBERFORCE, SAMUEL, *b.* at Clapham, 1805, *d.* 1873, was a son of William Wilberforce, one of the leaders in the great anti-slave-trade movement in England. Brought up with more than usual care by a pious father, he distinguished himself in his college career at Oxford. Entering the Church, he rose to be Bishop of Oxford just when the difficulties stirred up by the Tractarian movement were at their height. The example he set as a working bishop, and the influence he exercised by his eloquent tongue had a great effect upon the men of his time. For the last four years of his life he was Bishop of Winchester. He was killed on the spot by a fall from his horse.

WILBERFORCE, WILLIAM, *b.* 1759, *d.* 1833, the great champion of the anti-slave-trade movement, was the son of a wealthy merchant of Hull. Early in life he conceived a detestation of the slave-trade with its attendant evils, and the possession of a large fortune enabled him to devote his time and energy to its abolition. Thomas Clarkson, Granville Sharp, and the Quakers generally, gave him efficient assistance, and in 1807 he had the satisfaction of seeing a law passed to stop the odious traffic. He took a deep interest in the abolition of slavery itself, but died just before the Bill was passed. He lies in Westminster Abbey.

WILD BOAR, a species of pig widely distributed in the Old World, and once common in Britain. It is a large fierce creature, 4 or 5 feet in length, haunting the recesses of the forests, and damp places generally. It lives on vegetable produce, doing great harm to the crops and young trees. In India, boar-hunting ("pig-sticking") is a favourite amusement with the English officers. The boar's head used to be a favourite dish at ceremonial banquets.

WILDEBEEST. See *Gnu.*

WILHELMINA, Queen of Holland, is the daughter of William III. of Holland, whom she succeeded on the throne. Her father, whose sole surviving child she was, died in 1890, when she was but ten years of age, and till 1898 the kingdom was under the regency of the queen-mother,

and many interesting stories are told of the devotion and firmness she showed in that trying capacity. In 1901, Queen Wilhelmina married Henry, Duke of Mecklenburg.

WILHELMSHAVEN, the second naval station of Germany, is on the Gulf called the Jahde, just west of the mouth of the Weser. Founded by King William I. (whence its name), in 1869, it has basins, docks, and workshops, as well as nautical and engineering schools, all constructed at vast expense, out of the indemnity exacted from France, 1871; population 22,000.

WILKES, JOHN, *b.* 1727, *d.* 1797, a writer and politician, by whose resolute conduct the freedom of the Press was established. For an article in his paper, the "North Briton," reflecting on the government, he was arrested in 1763 on a general warrant. But asserting that such warrants were illegal he refused to plead, and Lord Chief Justice Pratt ordered his release. He was afterwards outlawed for printing an indecent poem, but his outlawry was subsequently reversed, and the resolutions that expelled him from the House of Commons rescinded. It is a pity that his private life does him less credit than his public services.

WILKIE, SIR DAVID, *b.* 1785, in Fifeshire, *d.* 1841, was the son of a Scottish minister. He studied his art in Edinburgh, but soon proceeded to London, where he scored a great success in the Academy Exhibition of 1806 with his "Village Politicians." From this time he produced that succession of homely pictures, the "Card Players," etc., which lead up to his masterpiece, the "Chelsea Pensioners." His later efforts were of a more ambitious kind, but do not add to his reputation. He died at sea, in returning from a tour in Palestine and the East.

WILLIAM I., King of England (1066-87) surnamed the Conqueror, was the son of Robert III. of Normandy and a tanner's daughter. On the death of his father he succeeded to the duchy, and in 1066 invaded England, to seize the crown from Harold, who had been elected king by the Witenagemote. Aided a good deal by fortune, William won the battle of Hastings, and Harold's death relieved him from further serious opposition. He was crowned at Westminster on Christmas Day, 1066. After putting down a series of rebellions, he ruled England with great firmness and political wisdom.

WILLIAM II., of England (1087 1100), second son of the Conqueror, had no easy task to secure the crown his father had left him. He had to appeal to the English for help ere he could crush the resistance of the Norman barons, who knew his masterful character. William, with all his vices, was a brave warrior, prompt and rapid in action. He conquered Cumberland from the Scots, and made himself lord over a great part of Wales. He was accidentally shot dead whilst hunting in the New Forest.

WILLIAM III., King of England (1689-1702), Prince of Orange in Holland, was nephew and son-in-law of James II., whom he succeeded. He came to England in 1688, with a force of 13,000 to deliver England from the tyranny of her king, James II. Inscribed on the flag of William's ships were the words, "The Protestant Religion and the Liberties of England." On the flight of James, the crown was conferred on William and Mary his wife, jointly. After establishing his authority in Scotland and Ireland, he made use of his new power to curb the ambition of Louis XIV. His death, at the age of 52, was the result of an accident while riding in Hampton Court Park, 1702.

WILLIAM IV., King of England (1830-1837), the "sailor king," was the third son of George III. He served for some years in the navy, but after attaining the rank of captain was never again afloat. His reign saw some most important measures passed, the Reform Act in 1832, and the Acts for abolishing slavery in our colonies (1833), for reform of the Poor Laws (1834), and for Municipal Reform (1835). In his reign also was laid the foundation of our railway system. He died at Windsor after having shown serious signs of lapsing into insanity.

WILLIAM I., seventh king of Prussia, and first German Emperor, *b.* 1797, *d.* 1888. He saw and took part in more stirring events than almost any man of his time. He had an active share in the last campaigns against Bonaparte, and took a great part in quelling the revolutionary movement of 1848-9 in Prussia. In 1861 he became king of Prussia, and immediately set himself to consolidate his power. His successes against Denmark in 1864, Austria in 1866, and in the great Franco-Prussian War of 1870-71, placed him on a pinnacle of popularity that culminated in his being offered, and accepting, the crown as German Emperor. Prince Bismarck, who had aided him in his schemes, received the fitting reward of his services, and continued to be his principal adviser until his death.

WILLIAM II., *b.* 1859, ninth king of Prussia, and third German Emperor, is the son of the Emperor Frederick and Princess Victoria of England. Coming to the throne in 1888, after the short reign of his father, he soon showed his intention to rule as well as reign. The dismissal of Bismarck was a sign of the new era. In everything he proclaims the doctrine that he is the embodiment of the State, and as such his will must be obeyed. His determination to make Germany a naval power, and to promote colonial expansion are well known. He is a born ruler of men, with great natural gifts, including that of oratory.

WILLIAM THE SILENT, *b.* 1533, *d.* 1584, Count of Nassau and Prince of Orange, gained his nickname by the taciturnity he maintained concerning his plans and intentions in the great struggle against Spain. To gain an adequate knowledge of this wonderful man, one should read Motley's "Rise of the Dutch Republic." He guided the Netherlands in the long struggle against Spain that resulted in their freedom, but was afterwards assassinated.

WILLIAM OF MALMESBURY, an English historian who lived in the first half of the 12th century. His chief work, the "Gesta Regum Anglorum," is a valuable account of English affairs from the landing of the Saxons to his own time. He wrote other historical and biographical works.

WILLIAM OF WYKEHAM. See *Wykeham.*

WILLIAMS, SIR GEORGE, *b.* 1821, *d.* 1905; was educated at Tiverton School, and entered the well-known business of Hitchcock, Rogers, & Co., St. Paul's Churchyard, London, at the age of twenty. He devoted his evening hours to the religious and social welfare of his fellow-employees. Out of their meetings for mutual improvement sprang the Young Men's Christian Association. He married Mr. Hitchcock's daughter and became a partner in the firm, "Hitchcock and Williams." At the Jubilee of the Association, in 1894, he was knighted.

WILLIAMS, JOHN, *b.* 1796, *d.* 1839, missionary and martyr, commenced his career of devotion at the age of twenty under the auspices of the London Missionary Society. He had great success among the natives of the Society Islands, in the South Pacific, not only imparting Christianity, but a genuine love of civilization. In 1834 he visited England, where the account he gave of his labours excited great interest. Returning to his labours, he was cruelly murdered by the natives of the New Hebrides.

WILLOUGHBY, SIR HUGH, the leader in an expedition which resulted in our first intercourse with Russia through the port of Archangel, on the White Sea. He was sent, in 1553, by some London Merchants, on a voyage of discovery, but a storm separated the ships, and Willoughby and his men were cast ashore in Lapland. Here they perished, but their remains were found, together with Willoughby's journal.

WILL-O' THE-WISP, same as *Ignis Fatuus*, which see.

WILLOW, a tree or shrub belonging to the order of catkin-bearing plants. There are many species, most of them valuable for their timber, their branches, or their bark. The largest may attain a height of about 80 feet. Willows, under the name of *osiers*, are much used in basket-making, and vast quantities are grown in Holland for this purpose.

WILLS, WILLIAM JOHN, *b.* 1834, *d.* 1861, Australian explorer, was trained for the medical profession, but emigrated in 1852 to Australia. Here he became a surveyor, and in 1860 took part in an expedition to cross the Continent from Melbourne to the Gulf of Carpentaria. With only three companions he reached the Gulf, but perished when half the return journey was accomplished.

WILSON, JOHN (Christopher North), *b.* 1785, *d.* 1854, was the eldest son of a wealthy manufacturer of Paisley. Educated at Glasgow and Oxford Universities, he was a grand example of the "mens sana in corpore sano," so often praised, but too seldom seen. The loss of his fortune, after he had married and settled down, turned him to literature, and for many years he was the main support of Blackwood's Magazine. His "Noctes Ambrosianæ" had an immense vogue in their day.

WILSON, RICHARD, *b.* in Montgomeryshire, 1714, *d.* 1782, a talented landscape painter, and one of the original members of the Royal Academy. He acquired considerable celebrity as a portrait painter, but his landscapes never became popular, and they failed to secure him a competence. "Niobe," and the "Villa of Mæcenas," are his best works.

WINCHESTER, one of the most interesting towns in the kingdom from an historical point of view, stands on the Itchen, about 14 miles north of Southampton. The Britons had a settlement here; the Romans improved it; the west Saxons made it the capital of their kingdom. The beautiful cathedral is an epitome of early English history, containing the remains of many Saxon kings, of William Rufus, and of many bishops and celebrated persons. The restored castle, with its grand hall, also claims attention. The college, founded by William of Wykeham, was opened in 1393, and now provides education for 450 boys. A mile away is the hospital of Saint Cross, dating from Stephen's time.

WINDMILL. A mill which utilizes the pressure of the wind as motive power for performing mechanical work, such as grinding, pumping, and sawing. The wind gives a circular motion to four vanes radiating from the "wind-shaft," which, by bevelled cog-wheels, transfers the rotary movement to a vertical shaft in the tower of the mill. The "cap" which carries the wind-shaft is free to move

round horizontally so that the sails may take the wind, this adjustment being automatically regulated by a secondary set of small vanes placed opposite and at right angles to the sweep of the chief vanes. By checking the revolution of the small vanes by worm-screws, the "cap" is made to veer to meet the wind. The sails are skewed so as to take a rotary motion even from a face wind, and their frame-work is covered with canvas which has to be reefed according to the strength of the wind. In the Netherlands they are used for the ceaseless work of pumping and raising water, but in England they have been replaced by the steam-engine. It is probable that they may be used extensively in the future for electric accumulators.

WINDS are atmospheric currents caused by inequalities in the density of the air. They are usually due to the flow of cold, dense air towards heated areas. Thus, *sea-breezes* blow towards the land during the day because, the land being warmer than the sea, the land-air is less dense than the sea-air. At night the land cools quickly and a *land-breeze* sets in towards the sea. The same action is seen on a larger scale in the *monsoons* which blow over Southern Asia from April to October as rain-bearing south-west winds. Again, the high temperature of the tropics causes the constant winds known as the *trade-winds*. These blow towards the equator from the north and south, but the rotation of the earth from west to east deflects them, so that they occur as north-easterly winds in the northern hemisphere and south-easterly in the southern. They are felt for 30° north and south of the equator, and their regularity in the Atlantic and Pacific Oceans is of great assistance in the navigation of sailing vessels. The dry, oppressive *east-wind* that visits these islands in April and May is part of a cold current that comes from the frozen plains of northern Europe towards the warmer south. Many winds, such as the *simoom*, *sirocco*, *harmattan*, are local and depend on local conditions. A *light breeze* has a velocity of about 15 miles an hour, a wind of 20 miles would be termed by sailors a *steady breeze*, 40 miles would constitute a *gale*, 60 miles a *storm*, and anything more severe than 80 miles would be an irresistible *hurricane*.

WINDSOR, a town in Berkshire, on the Thames, 21 miles west of London. It derives its importance chiefly from the vicinity of the Castle, which has been a royal residence from Norman times. The parks surrounding the castle are celebrated for their beauty, and have a collective area of over 20 square miles. Across the river is the celebrated Eton College, and 5 miles south the beautiful lake called Virginia Water.

WINE. See *Med. Dict.*

WINKELRIED, ARNOLD VON, one of the great heroes of the struggle for Swiss independence. At the decisive battle of Sempach, near Lucerne, in 1386, the Austrians formed a dense mass of steel, which the utmost efforts of the Swiss failed to penetrate. At last Winkelried rushed forward, grasped as many of the Austrian spears as he could, and bore them to the ground by sheer weight, thus making a path for his comrades over his pierced body.

WINNINGTON-INGRAM. See *Ingram, Winnington.*

WINNIPEG, the capital of Manitoba, a province of the Dominion of Canada, stands at the confluence of the Assiniboine and the Red River. Its history begins only in 1873, but so rapid has been its growth that it had, in 1905, a population of 70,000, with all the appliances of a modern city.

WINNIPEG, LAKE, to the north of Winnipeg, has an area of 8,500 square miles, about the size of Wales. By the Red River, the Winnipeg, the Saskatchewan, and other rivers, it collects a vast quantity of water, which it discharges into Hudson Bay by the Nelson River.

WINNIPEG, RIVER has its origin in the low hills north-west of Lake Superior, and flows, under the names of Seine and Rainy River, westward to the Lake of the Woods. Hence it flows as the River Winnipeg into the lake of that name, in a course much interrupted by cascades and falls.

WIRE, metal drawn out into a thread. The metal must be both ductile and tenacious, which limits the number of those available. The metal is rolled into sheets, which are cut into strips of ¼ inch in width, and then drawn through holes of the required size. The various sizes are generally denoted by numbers, according to the standard of the Birmingham wire gauge (B.W.G.). Wire "ropes" are now largely used where the strain is continuous and severe.

WIRELESS TELEGRAPHY, a method of sending signals to a distance without the aid of intervening wires. To M. Marconi belongs the credit of having been the first to see how to apply the isolated discoveries of, among others, such men as Faraday, Hertz, Preece, and Lodge to the perfection of such a system. Its working depends on the following principles. Any sharp electric discharge, as that of a Leyden jar or an induction coil, sets up electrical waves in the surrounding media. The waves travel to great distances and at an enormous speed, and set up electric disturbances in other bodies upon which they impinge, providing such bodies are capable of vibrating at the same rate. The disturbances in these bodies may be made evident to the senses by the employment of certain delicate instruments. Thus, in actual practice, the powerful electric discharges from the "Transmitter" set up electric waves that travel in all directions. In the "Receiver" a delicate piece of apparatus known as the "Coherer" betrays the presence of these waves by permitting to pass through it a current of electricity to the flow of which it offered effective resistance as long as it was unaffected by the electrical disturbances. The first practical application of the Marconi system was the establishment, in 1898, of wireless communication between the North Foreland and the East Goodwin Lightship, and in the following March messages were exchanged between England and France. Since that date great advances have been made. In 1901 the first wireless message was sent across the Atlantic, from Poldhu, Cornwall, to St. John's, Newfoundland. The Marconi system has been adopted by the British and Italian navies, and installations have been set up on all our battleships and on many cruisers. During the Russo-Japanese War the Japanese vessels employed it with great advantage. It is fitted to many of the large Atlantic liners. By its aid, such vessels are able to keep touch with one side or the other throughout the voyage, and the large Cunarders issue a daily newspaper. The United States Navy Board have adopted the system invented by Dr. de Forest, and are installing it on all their battleships and cruisers. Many stations for working this system have been built along the Atlantic coast and on the shores of the great Lakes, and the company is erecting at Panama a mast that it is estimated will be able to send messages from 2,000 to 3,000 miles.

WISHART, GEORGE, a Scottish reformer and martyr of the 16th century. He travelled a good deal on the Continent and in England, where he gained the favour of Henry VIII. Returning to Scotland in 1544, he roused the anger of Cardinal Beaton by his sermons against Roman Catholic corruption. Put on his trial for heresy, he was condemned and burnt at St. Andrews, 1546.

WITCHCRAFT, the supposed art of producing supernatural effects of a malignant nature by the agency of evil spirits. Belief in the reality of this power is very ancient and wide-spread, and is still prevalent among the ignorant of most countries. During the Middle Ages it was considered a sacred duty to rid the land of witches. It is computed that between 1484, when Innocent VIII. issued his bull authorising the Inquisition to punish this crime, and 1782, no less than 300,000 women suffered death on the Continent as witches. Nor was England free from this dread of witchcraft, and the cruel treatment of suspected women. Lancashire seems to have been one of the favourite haunts of witches. Ainsworth's "Lancashire Witches" gives a vivid picture of the hold they had on the popular imagination—but other counties shared in the same superstitious belief, and in all some hundreds were put to death, mostly in the 17th century. The last trial in England was that of a woman convicted at Hereford, in 1712, but not executed.

WITENAGEMOT, the great council of the kingdom in Saxon times. It consisted of the king and the great nobles and churchmen. The common people were allowed to be present, and to express approval or disapproval of the speeches by their shouts. The Witan, or Wise-men, gave the king their advice, but the decision lay with him. When the king died, the Witan chose his successor without necessarily having regard to hereditary claims.

WITTENBERG, a town of Saxony, on the Elbe, 60 miles south-west of Berlin. It is chiefly interesting as having been the birth-place of the Reformation on the Continent. The Church where Luther nailed his famous challenge on the door was restored in 1892, and re-opened with much ceremony.

WITWATERSRAND, a low ridge of hills extending about 60 miles from east to west, in the south-west of the Transvaal. Here are the famous gold-fields, and at the eastern end of the Rand is Johannesburg. Indications of gold were found here in 1885, and the district was "proclaimed" a gold-field in 1886.

WIZARD OF THE NORTH, THE. A name given to Sir Walter Scott.

WOAD, a kind of plant belonging to the order *cruciferae*, once much cultivated for the blue dye obtained from its leaves. The extended use of indigo has made the plant go almost out of cultivation. It is supposed to be the *vitrum* with which the Britons stained their bodies according to Cæsar's account.

WODEN, or **ODIN**, in Scandinavian mythology, the ruler of heaven and earth, the source of all movement and activity, and the bestower of rewards and punishments. From his palace go daily his two black ravens *Huginn* (Thought) and *Muninn* (Memory), to learn what is doing in the world, and to his court in Valhalla go the spirits of brave men after death to revel in the feast and the fight for evermore.

WOLCOT, JOHN (Peter Pindar), *b.* near Kingsbridge, Devon, 1738, *d.* 1819; an English satirist. In early life he practised

as a physician in Jamaica. On returning to England he was ordained in the Church of England, 1769, but resumed practice as a physician. About 1780 he settled in London, and became noted for his coarse but witty satires on George III.

WOLF, THE, an animal akin to the dog, widely spread in Europe, Asia, and North America. It ceased to exist in England in the 16th century, and in Scotland and Ireland about a century later. This animal is still common in Russia, and in certain districts of Germany and Hungary. In North America it ranges from Greenland to Mexico, but is not found in South America. Its appearance varies considerably in different countries, but everywhere its habits are the same, everywhere it is known for its havoc among flocks of sheep. In winter, wolves gather in large packs, and dare to attack horses and men. In Russia, as many as 200 deaths in a year are set down to their account, and the damage to live stock approaches one million sterling annually.

WOLFE, JAMES, *b.* at Westerham, Kent, 1727, *d.* 1759, commanded the English at the taking of Quebec. Joining the army at the age of fifteen, he served at the battle of Dettingen, in 1743. He took part in most of the operations of succeeding years, and his merit was soon brought to the notice of Pitt when he was looking out for some one to take command against the French in North America. In command of about 9,000 men, he was sent to take Quebec, but the vigilance of Montcalm long foiled all his efforts. At length the unguarded path leading from the river's bank up to the Plains of Abraham was revealed to him, and he succeeded one night in getting his men up unnoticed by the French. The next morning saw the decisive battle fought, the two generals killed, and the cause of France in Canada hopelessly lost. Wolfe's body was interred in Greenwich Church, and a monument erected to his memory in Westminster Abbey.

WOLF, PRAIRIE, or Coyote, a small kind of wolf found in Mexico and Texas. It is extremely cunning and can only be destroyed by poisoned bait. Its fur is heavy, it feeds on any kind of animal offal, and it howls most annoyingly at night.

WOLLASTON, WILLIAM HYDE, *b.* at East Dereham, Norfolk, 1766, *d.* 1828, one of England's great scientists, was educated for the medical profession, but relinquished it for the paths of scientific investigation. He made some most important discoveries, the chief being his process for obtaining platinum from the native ore. He also discovered two new metals, palladium and rhodium, and added to the existing knowledge in almost every branch of science.

WOLSELEY (Garnet Joseph), **VISCOUNT,** *b.* at Dublin, 1833, entered the army in 1852, and soon saw active service in Burma, and served through the Crimean War, the Indian Mutiny, and the China War of 1860. The next ten years saw him in Canada, where his organization of the Red River expedition brought him credit. But the Ashanti expedition of 1873 set the seal on his fame, for the clockwork precision of the movements that enabled him to land his men on the Gold Coast, march inland to Kumasi, beat the foe, and again embark within the short time available, was marvellous. His brilliant operations in Egypt against Arabi Pasha in 1882, ending in the famous moonlight charge and battle of Tel-el-kebir, added still further to his fame. He was now made Baron Wolseley, besides receiving the thanks of Parliament and the rank of general. That he failed to rescue Gordon from Khartoum was not his fault, and the Government recognised this by making him a Viscount for his services in the expedition.

WOLSEY, THOMAS, *b.* at Ipswich, 1471, *d.* 1530, took his degree of B.A. at the age of fifteen at Magdalen College, Oxford, became a Fellow of his College, and in 1506 became chaplain and secretary to Fox, Bishop of Winchester. He visited the Low Countries on a diplomatic errand in 1508, and was rewarded with the deanery of Lincoln. He became the chief adviser of Henry VIII., and in 1514 was made Archbishop of York. In 1515 he was appointed Chancellor and made Cardinal. His foreign policy gave England a high place in European affairs; at home he fostered a royal despotism. He dissolved the smaller monasteries, but founded Christ Church, Oxford, as a seat of the "new learning." His reluctance to further the king's designs to procure a divorce from Catharine of Aragon, led to his loss of the royal favour. He was arrested on a charge of treason, but died at Leicester on his way to London, 1530.

WOLVERINE, THE, or American glutton, is a fur-bearing animal found in the mountainous and northern parts of North America. It is gluttonous, fierce, and cunning, is from 2 to 3 feet in length, and has a valuable pelt.

WOMAN'S SUFFRAGE MOVEMENT. A movement for extending the parliamentary franchise to women. In the early days of the movement it had the support of John Stuart Mill, and later of D'Israeli in 1873. Since then it has been steadily growing in importance. The National Union of Suffrage Societies, comprises over 200 societies which hope to achieve their end by "constitutional" methods. "Militant" tactics were first adopted by members of the "Women's Social and Political Union" in 1905, and as a result over 300 women have suffered varying terms of imprisonment. Protests at meetings addressed by Cabinet Ministers, demonstrations at Westminister and at Downing Street, and opposition to liberal candidates at elections, have so far been the chief feature of these militant methods. In 1910, all the Suffrage Societies united in support of a bill introduced by Mr. Shackleton, M.P., to extend the vote to those women who now vote municipally. On June 18th a procession of 10,000 women marched from the Embankment to the Albert Hall, where a meeting was held in support of the Bill, and on June 21st a deputation of women suffragists was received by the Prime Minister.

WOOD (Field-Marshal), **SIR EVELYN,** *b.* 1838, at Cressing, Essex, joined the navy at fourteen, and served with distinction in the Naval Brigade in the Crimea. He then joined the army, and saw much service during the Indian Mutiny, gaining the V.C. He did good work in the Ashanti War, 1874, the Zulu War of 1879, and the Transvaal War of 1880-81.

WOODCOCK, a bird allied to the snipes, belonging to the group of wading birds. In the daytime it hides in the brushwood, and at night feeds in the marshes. It nests on the ground in the woods.

WOOD-ENGRAVING, the art of graving "blocks" of box-wood so as to form dies for the reproduction of pictures. The required drawing is done upon the block, and the wood is cut away so as to leave all the lines of the drawing in relief. For a large engraving, several blocks are used and afterwards joined. The utmost skill and artistic ability are shown in the relative delicacy and boldness of the lines. German wood engravings of the 15th century frequently accompanied the texts of the first-printed books, and formed an integral part of the blocks of type before movable type was introduced. Dürer advanced the art of engraving in the 16th century, and the genius of Bewick at the beginning of the 19th century gave it a great impetus.

WOODS AND FORESTS, HIS MAJESTY'S. The lands reserved to the crown at the Conquest had for a long time to provide for all the ordinary expenditure of the Government. But as Parliament assumed more and more responsibility for the expenses of administration, it was felt that it should fully control all revenue. Hence, in 1810, the crown surrendered all control of the remaining crown property in return for a fixed income, and these estates were placed in the management of a board of Commissioners. The annual revenue from this source is about £470,000.

WOODSTOCK, a small town near Oxford, adjoining Blenheim Park, the seat of the Duke of Marlborough. The Blenheim estate was granted, in 1705, to the first Duke, as a reward for his services to the nation, and to commemorate his victory at Blenheim, 1704. The title of Scott's Cavalier romance of "Woodstock" is taken from this town.

WOODVILLE, ELIZABETH, *b.* 1437, *d.* 1492, daughter of Sir Richard Woodville. Left a widow by Sir John Grey, she was secretly married to Edward IV., and became the mother of the "Two Princes" that perished in the Tower, and of Elizabeth, who was married to Henry VII. It was Edward's marriage with Elizabeth Woodville that caused the Earl of Warwick, "The King-Maker," to make war upon his sovereign.

WOOL, the most valuable of clothing materials for use in cold or temperate climates, is got from the fleece of the sheep. It differs from hair or fur in the possession of rough, surface scales which give it its "felting" or binding property. The lustre of certain wools, such as mohair and alpaca, is due to the comparative smoothness of the fibre. The Australian merinos, and the wools of New Zealand and the Cape, supply most of the raw material for the good "woollens" manufactured in Yorkshire. English wools, on the other hand, are used for special purposes: Southdown for flannel, Lincoln and Leicester for dressy cloths of smooth texture, and Cheviot for the stout "Cheviot" cloth. *Mungo* and *shoddy* are wool substitutes obtained by grinding up clippings, old cloth, old stockings, and blankets. They are used to mix with new wool to cheapen the material.

WOOLSACK, the seat of the Lord Chancellor of England in the House of Lords, is a kind of red, wool-cushioned ottoman, which is placed before the throne. The Lord Chancellor, seated on the woolsack, acts as Speaker to the House.

WOOLWICH, a township 9 miles below London Bridge, is now a suburb of London. The chief port of the borough is on the south bank of the river, but North Woolwich on the Essex side is growing rapidly. The importance of the town is due principally to the Royal Arsenal, a Government gun-factory, which usually employs over 12,000 men. The public are admitted to the Ordnance Factories and Ordnance Store Depôt, on two days in the week, by orders which may be obtained from the War Office. There are also extensive barracks for the Royal Artillery and the Army Service Corps. Woolwich is one of the chief centres of military education. Here are situated the Ordnance College and the Royal Military Academy.

WORCESTER, a cathedral city and county town. Besides its historic and

archæological interest, it is a town of commercial importance, being the seat of the royal porcelain works, Dent's glove factory, and Lea and Perrin's Worcester Sauce factory. Here Cromwell defeated Charles II., 1651. Birmingham and a populous district around it were withdrawn, in 1904, from the see of Worcester, and formed into a separate diocese.

WORCESTER, MARQUIS OF, *b.* about 1600, *d.* 1667, a royalist nobleman, devoted to the service of Charles I. in his war with Parliament. All his leisure time was devoted to scientific and mechanical invention, and his "Century of Inventions" (1655), contains among other things a description of an engine worked by steam and applied to the construction of fountains. Worcester's Steam-engine was probably the first ever invented.

WORDSWORTH, CHRISTOPHER, the youngest brother of the poet, *b.* 1774, *d.* 1846. His "Ecclesiastical Biography" is still read with profit and interest. His two sons, Charles and Christopher, were remarkable for their scholarship. Charles, the author of a well-known Greek Grammar, became Bishop of St. Andrew's; Christopher was made Bishop of Lincoln, and left behind him many learned theological works.

WORDSWORTH, WILLIAM, *b.* 1770, at Cockermouth, *d.* 1850, one of the greatest of English poets. He was educated at Hawkshead, near Coniston, and at John's, Cambridge. He was in France at the outbreak of the Revolution, and was in full sympathy with the spirit and aims of the moderate republicans—the *Girondists*. His earliest poems were written in collaboration with Coleridge, and published under the title "Lyrical Ballads." In this as in all his work, Wordsworth strove to reform poetical taste by advocating simplicity, minute observation, and truth to nature. His longer poems, the "Excursion" and the "Prelude" are a poetical history of his own mental growth. As he lived for the greater part of his life near Grasmere and Rydal, he is very properly included with Southey and Coleridge, under the term "Lake-poets."

WORMS, one of the most ancient cities of Germany, is situated in Hesse Darmstadt, on the left bank of the Rhine. It was one of the residences of Charlemagne, and Wagner has made it the scene of the Nibelungenlied. Here, in 1521, Luther defended his theological position at a congress of German Princes known as the Diet of Worms.

WORMS, EARTH. See *Earth-worms*.

WORTH, a village in Alsace-Lorraine, where the Germans defeated the French at the opening of the great Franco-German War, 1870.

WOUVERMANS, PHILIP, *b.* at Haarlem, 1612, *d.* 1668, a Dutch painter who excelled in cavalry and hunting subjects.

WRANGLER, literally a disputant in the schools (at Cambridge), is a term now applied to a man who attains a place in the first-class in the mathematical tripos at Cambridge. The head wrangler used to be known as the "senior wrangler," but that distinction is at an end as the names are no longer arranged in the order of merit.

WRECKS, are ships or cargoes cast ashore by the sea. All action with regard to wrecks in the United Kingdom rests with the Board of Trade, who appoint *receivers* to take evidence as to ownership and report to the Board. If no owner or other claimant comes forward the proceeds of the sale of the wreck go to the National Exchequer after a year. *Salvage* may be claimed as recompense by private persons who have rescued the vessel or its cargo. *Wrecking*, the iniquitous practice of removing beacons and misplacing warning lights, was at one time common on the Cornish coast. Ships were in this way led to follow false lights, and wrecked upon the rocky coast, and then plundered.

WREN, SIR CHRISTOPHER, *b.* in Wilts., 1632, *d.* 1723, the architect of St. Paul's Cathedral, was also a Professor of Astronomy at Oxford, and one of the founders of the Royal Society. Wren prepared plans for the restoration of "old St. Paul's," but the fire of 1666 rendered a new building absolutely necessary. This he designed after the style of the cathedral of St. Peter's at Rome. He also presented plans for a complete re-building of the city which had been wrecked by the fire, but his work in that direction was confined to the building of the Royal Exchange and of some fifty churches. Among his other notable works are the Monument, Greenwich Observatory, and Chelsea Hospital. He was buried in St. Paul's, and his tomb is marked by the inscription, "Si monumentum requiris, circumspice." (If you would find his monument, look around).

WRITERS TO THE SIGNET, the principal class of solicitors in Scotland. They were so called because anciently it was their business to prepare charters, warrants, etc., for the King's signet. They have lost some of their exclusive privileges lately.

WRITING. The oldest forms of writing of which we have any examples are Babylonian and Egyptian. The former is cuneiform, that is, the characters are wedge-shaped; they were written on clay, and the clay thus inscribed, on being baked into bricks, formed permanent records, many of which have in recent times been unearthed and interpreted. The same type of characters was also used in Babylonian inscriptions on stone. Egyptian writing is still more ancient than the Babylonian, going as far back as 3000 B.C. Until 700 B.C., Egyptian writing consisted of hieroglyphics on stone. Then papyrus came into use as a writing material, with a new style of writing, known as the *hieratic*, a simpler form of the hieroglyphic. About the year 200 B.C. the supply of papyrus from Egypt to Greece was stopped, and parchment, a costly material made from skins, began to take its place. Generally speaking, parchment writing is more careful than papyrus writing because of the value of the material, and mediæval manuscripts show a remarkable development in the beauty of even individual letters. Printing followed in the wake of the introduction of paper, and the current script hand owes its development to the use of this material. It is interesting to note that our English letters arrange themselves in three distinct classes: thus "A" is a chisel letter originally inscribed on stone, "a" is a parchment letter, and "*a*" is a paper or script form. Among Aryan nations, the usual direction of writing is from left to right, as in English. Hebrew, Arabic, and Semitic writing generally take the opposite direction. Chinese is written in vertical columns, which follow one another from right to left.

WÜRTEMBERG, a kingdom of Germany, bounded by Lake Constance on the south, Baden and the Black Forest on the west, and Bavaria on the east. Within its territory lies the state of Hohenzollern. Stuttgart is the capital, and Tübingen is a university town. Education there is of a high standard, even for Germany. The valleys are fertile and produce excellent wine and fruit. Industries, including metal work of all kinds, and the making of scientific and musical instruments, occupy nearly half the population: population 2,000,000.

WYATT, SIR THOMAS, *b.* 1520, *d.* 1554, was one of the adherents of Lady Jane Grey, on whose behalf he headed a rebellion in 1554, and, being taken prisoner, was executed.

WYCLIF, JOHN, *b.* near Richmond, Yorkshire, about 1324, *d.* at Lutterworth, 1384. He became master of Balliol in 1360, and subsequently rector of Lutterworth. He is generally regarded as the leading precursor of the English Reformation. Having translated the Bible into English, he organised a body of preachers, known as "poor priests," to spread his teaching. He combated the evils of enforced confession and the doctrine of transubstantiation. His followers, who were called Lollards, combined loyalty to his teaching with socialistic sympathies with the labour movement that followed the Black Death. Wyclif died in 1384, but his writings were condemned at the Council of Constance, and his bones were exhumed and burned as a mark of the Church's condemnation of his teaching.

WYKEHAM, WILLIAM OF, *b.* at Wykeham, Hants., 1324, *d.* 1404, became Bishop of Winchester in 1367, and is justly honoured as the founder of Winchester College, the most ancient of our "Public Schools," and of New College, Oxford. He was a great architect, and one of the inventors of the perpendicular style. He personally supervised the restoration of Winchester cathedral, and carried out excellent reforms at the Hospital of St. Cross, near Winchester. His motto, "Manners makyth man," is still the motto of Winchester College.

WYVERN, a serpent or viper. The word is only another form of viper with *n* accidentally added. The word mostly occurs in heraldry, where it means a *charge*, that is, a figure of a real or imaginary animal depicted on a coat-of-arms. It is a kind of dragon with wings, only two legs, and a serpent-like tail.

XANTHIPPE, the wife of Socrates, the Greek philosopher, notorious as a scold.

XAVIER, ST. FRANCIS, *b.* 1506, *d.* 1552, assisted Loyola in founding the Jesuit Society. In 1541 he departed to the Portuguese East Indies and laboured there among both Europeans and natives with wonderful success. He preached in India and Ceylon, and even in Japan, and many witnesses attested to his miraculous power of tongues. He died while arranging an extension of the work of the society to China.

XENOPHON, *b.* about 430, *d.* 355 B.C., a great Greek historian and military leader. In 401 B.C. he joined a body of 10,000 Greek mercenaries under Cyrus, who aimed at usurping the throne of Persia. Cyrus was slain, and it devolved upon Xenophon to lead back the Greeks over the mountains of Armenia, through a hostile and rugged country to the Black Sea, a feat which he achieved successfully. Subsequently he attached himself to Agesilaus, King of Sparta, a hero whom he greatly admired, and the last years of his life were spent in recording his experiences in the "Anabasis," a narrative of the Retreat of the Ten Thousand; the "Agesilaus," a memoir of the Spartan king; the "Memorabilia," or memorials of his old master, Socrates; and the "Cyropædia," or the education of Cyrus. The "Hellenica," his best historical work, covers forty-nine years of Greek history.

XERXES I., king of Persia (485–465 B.C. led a vast expedition against Greece. He crossed the Hellespont by a bridge of boats, and cut a canal through

Mount Athos. Leonidas, king of Sparta, and his immortal 300, held the Persian host at the narrow pass of Thermopylae until every man of the Spartans was slain. The Persian fleet was destroyed at Salamis before the eyes of Xerxes, who looked on from a lofty mound, and he returned dismayed at the loss of his great fleet, after destroying Athens. Xerxes was murdered by Artabanus, and succeeded by his son.

YACHT. It differs from a sailing-boat in being decked and fitted for the accommodation of a cruising party; it may be either a sailing or a steam vessel. The development of the modern yacht dates from the commencement of the 19th century, and the establishment of "The Yacht Club" at Cowes. This club now holds the leading position in Great Britain, under the title of the Royal Yacht Squadron. The New York Club holds a similar position in America. The *America*, an American schooner, visited Cowes in 1851, and easily carried off the R.Y.S. cup. This cup was set apart by the will of the winner as an international prize. Many attempts have been made by Canada and the mother country to recover the "America Cup," but neither the three *Valkyries*, built by Lord Dunraven, nor the three *Shamrocks*, built by Sir Thomas Lipton, have succeeded in bringing back the trophy. The rules for measurements and allowances in yacht-racing are drawn up by the Yacht Racing Association, a body which is looked upon as the final authority in yachting questions. Yachting is encouraged and honoured by the Admiralty in various ways, but especially in the permission granted to various clubs to fly the white, blue, or red ensign. King Edward VII. and the German Emperor are ardent patrons of yachting.

YAHOOS, a race of debased human beings, who are described in Gulliver's Travels as being inferior to their neighbours, the Houhynhnms, a race of enlightened horses.

YAK, THE, or Tibetan ox, lives in the high altitudes of the mountains of Tibet, where it is domesticated by the natives. Its heavy coat of silky hair gives it an appearance of great size; it is an excellent beast of burden, and it yields rich milk. Yaks were used extensively for transport work during the British Expedition to Lhasa in 1904, and they did their work excellently except in the valleys, where they suffered from the comparative heat.

YAKUTS, people of Semi-Turkish origin who dwell in the dreary plain of the Lena in Siberia.

YAKUTSK, the chief town of a province of Russian Siberia, situated near the River Lena. It has a population of over 5,000, and trades in furs, hides, and ivory.

YAM, THE, grows plentifully in the East and West Indies. Its long tubers yield a sweet mealy food, but, although the plant will thrive in England, the summer heat is insufficient to develop the tubers. The plants are propagated like potatoes.

YANG-TSE-KIANG, the longest and most important of the rivers of China, rises in the mountains of Tibet, and, after a course of 3,200 miles, flows into the China Sea by an estuary on which stands the port of Shanghai. Its basin includes the greater part of China proper, and its commercial importance is enormous.

YANKEE, a word that in England means a native of the United States, but in America means simply a native of one of the New England or Eastern States. The word is said to be derived from the Indian "Yengees," the nearest they could get to "English."

YARMOUTH, GREAT, a seaport and an important herring fishery station, on a peninsula of sand on the coast of Norfolk, between Lowestoft and Cromer. Its magnificent stretch of sands and bracing climate attract many summer visitors. The quays, with their quaint Elizabethan houses and their innumerable "rows" or alleys, are a feature of interest. The parish church is a magnificent 15th century building; population 52,000. Gorleston, a suburb 2 miles south of Yarmouth, is a favourite summer resort.

YARRA-YARRA, a river of Victoria, Australia, on which stands Melbourne. It flows into Port Philip after a course of 150 miles.

YEAR, the period in which the earth accomplishes its journey round the sun and takes up the same position again in relation to the sun. This is the *solar* year, consisting of 365 days, 5 hours, 48 minutes, 49 seconds. The *sidereal* year, or period it takes for the earth to come into the same position again with regard to the sun and a fixed star behind it, is about 20 minutes longer.

YEDDO, now called *Tokio* (which see).

YELLOWPLUSH PAPERS, THE, written for Fraser's Magazine in 1837 by Thackeray, and published in book form in 1841 under the title of "Comic Tales and Sketches." They form a playful satire upon flunkeyism, whether it be the flunkeyism of the wealthy or that of their servants.

YELLOW SEA, THE, or Hwang-hai, is a wide inlet of the Pacific Ocean, bounded on the north by the isthmus of Korea, and terminating in the Gulf of Pechili. The command of the Yellow Sea by the Japanese and their blockade of Port Arthur, which commands the entrance to the Gulf of Pechili, were the chief events of the naval struggle during the first year of the Russo-Japanese War of 1904-5.

YELLOWSTONE NATIONAL PARK, in the north-west corner of Wyoming, is a wonderful region of cañons, cataracts, hot-springs, geysers, and mud volcanoes. The Yellowstone River passes through the Grand Cañon (20 miles), and near it, towards the south of the Park, stands a calcareous mass of terraces with warm, many-coloured pools, known as the White Mountain. The geysers of the Park, the finest in the world, are the most remarkable feature of this wonderful area. Congress set apart this district in 1872 as a National Park, and a body of cavalry is employed to prevent the destruction of the forests, wild animals, and natural features. The result of this foresight is that numerous species of wild animals have found refuge here, which have elsewhere been exterminated.

YEOMAN, a small farmer or countryman above the standing of a labourer, but below that of a franklin or gentleman-farmer. A corps known as *Yeomen of the Guard* was formed by Henry VII., and they still wear the uniform of the Tudor period. They consist of about 110 officers and men, and they are employed on state occasions as a royal bodyguard. The "Beef-eaters" of the Tower, who wear a similar uniform, are a different corps, founded in the reign of Edward VI.

YEOMANRY, a body of volunteers formed during the Napoleonic period, and organised according to counties, the Lord-Lieutenant of each county being in chief command. Each yeoman provides his own horse, and in return receives a grant from Government. Among the yeomanry corps raised for service in the South African War, the Scottish Horse and Lovat's Scouts are still retained as distinct yeomanry regiments, although they do not come under a county qualification. The Government provides arms, and the regiment must turn out for training once a year, besides holding drills. The yeomanry may be called out to aid the civil power in quelling riots and other serious disorders in the State.

YEW, one of the most characteristic evergreen trees of Britain, attains a great age, and yields an exceedingly hard timber. It is commonly found in country churchyards, and its occurrence along the old Pilgrim's way through Surrey and Kent to Canterbury is a feature of striking curiosity. Yew was the favourite wood for the old English long-bow, and its extreme hardness renders it suitable for cabinet work, axle-trees, and the like, where strength and durability are required.

YIDDISH, a dialect composed of corrupt Hebrew and provincial German, and spoken a good deal in the East End of London, owing to the large number of Jewish immigrants, many of whom can speak nothing else.

YOKOHAMA, the chief port of Japan, 17 miles south of Tokio, was a mere fishing village before 1850. The bay, an open roadstead, affords good anchorage, and is strikingly beautiful. Harbour works, including the erection of two piers, 1¼ miles in length, have prevented the danger of silting. The town has a considerable foreign community, and many British merchants have their head-quarters there; population 200,000.

Y. M. C. A., (Young Men's Christian Association), was founded in 1844, "as a society for improving the spiritual condition of young men engaged in the drapery and other trades." Courses of lectures were begun, suitable quarters were secured in Aldersgate Street, and, in 1881, the growth of the movement led to the purchase of Exeter Hall in the Strand. There are branches in over 1,000 districts or towns in England, and the work is carried on in every part of the world. Gymnasiums, restaurants, reading-rooms, libraries, Bible-classes, devotional meetings, and apartment registration are the leading features in the work of the different branches. The society is undenominational, and is greatly supported by the Evangelical or Low Church section of the English Church. A similar and excellent work is carried on by the Young Women's Christian Association. In London alone there are over 50 establishments where girls find their various wants cared for, and where the cost of the various privileges is remarkably low.

YONGE, CHARLOTTE MARY, *b.* at Otterbourne, 1823, *d.* 1901, a novelist and writer of considerable ability and wide range. Besides "The Heir of Redcliffe," "The Daisy Chain," and "The Dove in the Eagle's Nest," she wrote a History of France, a Life of Bishop Patteson, and a Biography of Hannah More. In addition to translations and her editorial work in the "Monthly Packet," she published over 110 volumes. Her works are spirited, of high moral tone, and interesting.

YORK, the county town of Yorkshire, is a cathedral city and the seat of an Archbishop. In the time of the Roman occupation of Britain, York (then called *Eboracum*) was the capital of the north, a position which it continued to hold in the Middle Ages. The minster, one of the finest cathedrals in England, is of noble proportions. Its beautiful east window preserves its mediæval glass, and is unrivalled in richness of effect. The city still has its walls and several of its old gates or "bars." It is under the jurisdiction of a Lord Mayor; population 80,000.

YORK, DUKE OF. (1) Richard, leader of the Yorkist party in the War of the

Roses, was slain at Wakefield, 1460. (2) Richard, second son of Edward IV., was murdered in the Tower, probably at the instigation of Richard III. (3) Frederick, second son of George III., an incapable leader, failed in an attempt to aid the Austrians against the French in 1793. He was similarly unsuccessful in 1799. A handsome column, surmounted by a statue, in a prominent position, near the Pall Mall end of Regent Street, London, was raised to his memory.

YORK, HOUSE OF, a branch of the English royal family descended from Lionel, Duke of Clarence, and Richard, Duke of Cambridge, the third and fifth sons of Edward III. The claim of the Yorkist princes was therefore superior to that of the Lancastrian princes, who were descended from John of Gaunt, Edward's fourth son. The kings of the House of York were Edward IV., Edward V., and Richard III.

YORKSHIRE, the largest English county, is divided into three parts called Ridings, i.e., thridings or thirds. The North and East Ridings are chiefly agricultural, the West is the seat of the woollen industry, and a mining district. The county is drained almost wholly by the Ouse and its tributaries the Swale, Ure, Nidd, Wharfe, Aire, Don, and Derwent. Wensleydale, the valley of the Ure, is famous for its beautiful villages, but the other valleys are almost equally interesting. These valleys contain the ruins of more than fifty monasteries, formerly of great importance and wealth in the days when the Cistercians fed their flocks of sheep on their rich pastures. The Cleveland Hills in the north-east of the county, yield the hematite iron-ore, which is smelted at Middlesborough and Stockton. York, the county town, stands on the Ouse in the centre of the Yorkshire Plain; but the great manufacturing towns—Leeds, Bradford, Sheffield, Rotherham, Halifax, and Huddersfield—are on the south Yorkshire coal-field; Hull is the chief sea-port.

YORKTOWN, on the river York, Virginia, was the scene of the surrender of Lord Cornwallis to Washington in 1781, during the War of American Independence.

YORUBA, a district in the hinterland of Lagos in West Africa. It occupies the eastern half of the slave coast, between Benin and Dahomey, and extends to the north-east as far as the Niger. It is now included in the British sphere of influence.

YOSEMITE VALLEY, a wonderful gorge formed by the river Merced in the Sierra Nevada, California. It is 6 miles in length, and from ½ to 2 miles in width, with perpendicular cliffs of an average height of 4,000 feet. The whole valley is a scene of sublime grandeur, and will be preserved for all time as a National Park. One of its most striking features is the Yosemite Falls. From a narrow ledge the river leaps in three great falls, making a descent of 2,500 feet.

YOUNG, BRIGHAM, *b.* 1801, *d.* 1877, a leader of a religious sect in America, known as the Mormons. He founded Salt Lake City, in Utah, as a Mormon colony, and devoted his energies to furthering its commercial prosperity. He was appointed Governor by the President of the United States (1851), but subsequently had to resign much of his power when the States, in 1869, determined to put down polygamy, which formed a leading feature of the Mormon religion. He left a fortune of £600,000 to his seventeen wives and numerous offspring.

YOUNG, EDWARD, *b.* 1681, *d.* 1765, the author of "Night Thoughts," spent the first forty-five years of his life in literary work and in attendance upon the Marquis of Wharton. He then took holy orders, and held the living of Welwyn, in Hertfordshire. His "Night Thoughts" commemorates the loss of his wife and daughter, and is still read for its occasional excellences and its evident sincerity.

YOUNG, JAMES, *b.* in Glasgow, 1811, *d.* 1883; may be called the discoverer of paraffin. While manager of a chemical works in Manchester, his attention was called to a dark oily liquid found in a coal mine in Derbyshire, from which (and afterwards from Scotch cannel coal) he obtained paraffin by distillation.

YUKON, the chief river of Alaska, flows into the Behring Sea after a course of 2,000 miles. It gives its name to one of the four districts into which the north-west territories are divided. The Klondyke, which flows into the Yukon, at Dawson, is celebrated for the gold-mines in its vicinity. The discovery of gold in the beds of the streams of the Klondyke basin led to a memorable rush there in 1897.

ZADKIEL, the pseudonym of Richard James Morrison. *b.* 1795, *d.* 1874; once a Lieutenant in the Royal Navy. On his retirement he issued his celebrated almanac, thousands of which sold annually. The crystal globe, whence he drew his predictions, is said to have belonged to Doctor Dee, a notorious charlatan of the 16th century.

ZAMBESI, THE, rises in the south-west of the Congo Free State, and flows in an easterly direction to the Indian Ocean, which it reaches after a course of nearly 1,600 miles. Most of its course lies in British territory, but its estuary and lower waters are Portuguese. Navigation is impeded at intervals by cataracts, notably by the Victoria Falls (which see), 900 miles from the sea.

ZANGWILL, ISRAEL, *b.* in London, 1864, was educated at the Jews' free school in Spitalfields, where he taught while studying for his London University degree. In 1892 he produced "Children of the Ghetto," which at once made him a man of mark. His other works are numerous, mostly dealing with phases of Jewish life.

ZANZIBAR, an island off the east coast of Africa, with an important port of the same name, has been under British protection since 1890, when a portion of the mainland, known as the Zanzibar Protectorate, was also ceded to Great Britain. The port of Zanzibar has an excellent harbour, and is the largest city of East Africa. It exports ivory, cloves, copra, rubber, and gum-copal, and its trade amounts to £2,000,000 annually. It was formerly the head-quarters of a great export trade in slaves.

ZEALAND, (1) the largest and most important island of the kingdom of Denmark, lies between the Cattegat and the Baltic, and is separated from Sweden by the Sound. Copenhagen, the capital of Denmark, and Elsinore, are the chief towns. (2) A Flemish province of the Netherlands, consisting chiefly of the low lying islands at the delta of the Scheldt. Flushing, on Walcheren Island, is the chief port, and Middelberg, on the same island, the chief inland town.

ZEBRA, THE, an animal akin to the horse and ass, but more closely resembling the latter in several characteristics, notably in the fulness of its ears. It is of a white colour with striking stripes of black, vertical on the body and horizontal on the limbs. It is found only in Africa, where it inhabits the more rugged and remote mountain ranges of Abyssinia and central Africa. It is of uncertain temper, and, even though trained from its earliest days, it is difficult to domesticate.

ZEBU, THE, or Brahmin Ox, is closely allied to the common ox, from which it is distinguished by a fatty hump upon its shoulders, and by the slimness of its legs. It is found throughout Southern Asia and in Madagascar. In India, the Zebu is used both as a beast of draught and of burden.

ZEMINDARS, officials in India who, under the Mogul emperors, had to collect the revenue from a certain district, comprising so many villages. Under the British the zemindars have been dealt with as the actual land-owners, and have practically become so.

ZEMSTVO, an assembly of representatives of certain provinces and districts in Russia. European Russia is divided into fifty provinces, and each province into ten to twelve districts. Of these provinces, thirty-four have the institution of the Zemstvo. This means that in these provinces each district has an assembly elected by all the inhabitants for the management of local matters, and that the district assemblies nominate a Provincial Assembly for administering the affairs of the province.

ZENANA, part of a house in India reserved for the women, corresponding with the harem in Turkey. In 1852 Zenana missions were started to uplift the women of India.

ZEND-AVESTA, the ancient sacred lore of the Parsees, consisting, like the Bible, of a collection of sacred writings of many periods and various character.

ZENGHIZ-KHAN. See *Jenghiz Khan.*

ZENO, a Greek philosopher, *b.* in Cyprus, 342 B.C., who, after a long course of study in the various schools of Greek philosophy, founded the great school of the Stoics, about 300 B.C. (see *Stoicism*).

ZENOBIA. See *Palmyra.*

ZERMATT, a great tourist and climbing centre in Switzerland near the head of the Visp valley, a lateral valley from the left bank of the Rhone. The Matterhorn, Breithorn, and Monte Rosa are climbed from Zermatt.

ZERO, the number 0, especially in its technical sense as a starting point in measuring degrees upon a scale, such as the graduated scale of a thermometer or barometer.

ZERUBBABEL, one of the leaders of the Jews, who first returned from Babylon under the proclamation of Cyrus. He was appointed governor of Judea by Cyrus, and for a short time took a leading part in the re-building of the Temple and in the restoration of public worship. (See the Book of *Ezra.*)

ZEUS, in Greek mythology, the chief of the gods. (See *Jupiter.*)

ZEUXIS, a celebrated Greek painter, who excelled in the portrayal of women. He had a high opinion of his own excellence as a painter, but not without justification. He flourished during the last half of the 5th century B.C.

ZINC, a bluish-white metal, which does not perish on exposure to the atmosphere, but assumes a thin surface film, which protects the metal beneath. The metal is mined in Wales, but more extensively in Southern Germany, and in the United States. It is used for zinc roofing, and for plating iron goods, such as coal scuttles and washing tins. The process is commonly known as galvanising. It is also used as a substitute for bronze in cheap art goods. Its chief use, however, is as a galvanizing metal to prevent iron from rusting.

ZIONISTS, Jews who aim at the re-establishment of their nation in Palestine.

For centuries only a dream, this idea has begun, since the late outbreak of Anti-Semitism, to take practical form, and an association has been formed to help forward the movement.

ZION, MOUNT, a hill on which once stood a citadel of the Jebusites, which David captured, and where he built his "City of Zion," or Jerusalem.

ZODIAC, an imaginary band or zone of the celestial sphere sufficiently wide to include the apparent movements among the fixed stars of the sun and the five planets which were known to the ancients. The zodiac was divided into twelve equal parts or "signs," each of which took its name from a characteristic constellation of fixed stars within the division. These signs were the Ram, the Bull, the Twins, the Crab, the Lion, the Virgin, the Scales, the Scorpion, the Archer, the Goat, the Water-carrier and the Fishes. The central line of the Zodiac is called the "Ecliptic," because the moon must be on this line for an eclipse to take place.

ZOLA, EMILE, *b.* 1840, *d.* 1902, the most prominent French novelist of the latter half of the 19th century, was the leader of the realistic school and did not scruple to narrate the most disgusting details of life in devotion to his cult. Of his many works, "La Debâcle," dealing with the disasters of 1870, and the trilogy, "Lourdes," "Rome," and "Paris," are characteristic of his strict but undesirable adherence to the unpleasant side of the truth.

ZOLLVEREIN, a customs-union of the various German States, founded in 1819, to enable all the States to act as one in the arrangement of commercial relations with foreign countries, and to secure free trade among themselves.

ZOOLOGY is the study of the animal kingdom. Much of our zoological knowledge is due to the labour of the Greeks, but the microscope in modern times has given us a grasp of the subject not previously possible. In the lowest forms of animal life, as in the microscopic Amœba, we find the body composed of a speck of living matter, of gelatinous consistency, enclosing one specialised part, the nucleus, which controls the activity of the whole. Such a unit of living matter is termed a cell; Amœba is composed of a single cell, and yet it eats, breathes, moves and has its being like any other animal; it thus forms no link whatever between living and non-living matter. Its mode of reproduction is peculiar; as it gets old, instead of dying, first the nucleus and then the remainder of the cell divides into two equal parts, and in place of one Amœba we have two new ones; thus Amœba only dies naturally, by giving birth to two offspring. The higher animals, the microscope shows, begin their life as a single cell, which soon divides into two, just as Amœba does, but these two remain side by side, and dividing again and again produce a colony of cells which together form the body of the animal. Amœba, we note, has to be a Jack of all trades, one cell has to eat, breathe, move, and so on; but in the colony of cells which forms the body of a higher animal, division of labour occurs; the cells that form the muscles, for instance, are capable of movement, but they are not concerned with digestion, whilst the cells forming the digestive system are concerned with some special part of the digestive process, but have nothing else to do. The animal kingdom thus falls naturally into the following groups:—**1. Unicellular Animals** (like Amœba), known also as *Protozoa;* and **2. Multicellular Animals,** known also as *Metazoa.* The *Metazoa* are divided further into two great groups:—(1) the *Cœlenterata* or Zoophytes, the bodies of which are composed of only two layers of cells, viz., an outer, sensory and protective, and an inner digestive layer; and (2) the *Cœlomata,* the bodies of which are composed of three or more, usually many more, layers of cells. The *Cœlenterata* are divided into the sponges, the anemones, and the jelly fish. The *Cœlomata* are divided into (*a*) the worms, (*b*) echinoderms or starfish, (*c*) molluscs, (*d*) arthropods, animals with jointed appendages, e.g. crustaceous insects and spiders, and (*e*) vertebrates. The study of the zoology of past ages, known as palæontology, has gained in interest since Darwin published his "Origin of Species" in 1859. We now know that fish were the first vertebrates to appear on the earth, and that they were succeeded by amphibia before the primary geological period had terminated; in the secondary geological period reptiles and the lower mammals made their appearance, and towards the close, birds also; the higher mammals have only been in existence since the tertiary period began, whilst man is of comparatively recent origin.

ZOOPHYTE. An animal of the sea-anemone class. See *Zoology.*

ZOROASTER, the founder of the religion of the Parsees, who flourished, according to Persian tradition, in the 6th century B.C. He seems to have been a leader among an agricultural people, whom he wished to establish in virtue, thrift, and industry. The Zend-avesta is in part attributed to his authorship.

ZOUAVES, a body of troops in the French army, consisting of picked infantry soldiers of fine physique and tried courage, whose uniform is a picturesque Algerian dress. Zouaves were originally a mixed Algerian and French body, the name being derived from that of a tribe of mercenaries whom the French employed in 1830, when they took over Algiers.

ZULUS, THE, a South African native people, whose territory formerly included Natal, but is now confined to a district of 10,460 square miles, with a sea-board of 210 miles, lying to the north of Natal. The Zulus are physically a fine race, and though prone to fighting, they are not resentful. They govern themselves on democratic lines, and are intelligent and liberal-minded. The Zulus, under Chief Tshaka, gained complete ascendency over the tribes from the Zambesi to Cape Colony in the early part of the 19th century. King Cetewayo succeeded to this kingdom in 1874, and the English declared war on him because his power menaced Natal. After a terrible reverse at Isandlana (1879), and the heroic defence of Rorke's Drift, the British columns retired to the Tugela River, but Lord Chelmsford's victory at Ulundi, 1879, brought the war to an end. Since then, Zululand has been incorporated partly with the Transvaal and partly with Natal.

ZURICH, a beautiful lake of Northern Switzerland, drained by the Limmat, a tributary of the Rhine. The lake is long and narrow, and at its lower end stands the town of Zurich, the capital of the canton. The town is quaint and interesting and of great commercial importance. The population, 150,000, has been trebled during the last 30 years.

ZUTPHEN, a Dutch town in the province of Guelderland, about 20 miles N.N.E. of Arnhem. Zutphen is of interest in English history as the scene of the battle in which Sir Philip Sidney was killed, 1586. (See *Sidney, Sir Philip*).

ZUYDER ZEE, a wide, shallow gulf of the North Sea, penetrating 60 miles into Holland, and formed in 1282 by an inroad of the sea which broke down the protecting sand-dunes. A chain of islands, the principal of which is Texel, marks the former coast-line. A great drainage scheme is proposed, to reclaim a large part of the Zee.

ZWINGER, a celebrated museum at Dresden, with a picture gallery containing the Sistine Madonna and numerous other famous pictures.

ZWINGLI, ULRICH, *b.* 1484, *d.* 1531, a great Swiss Protestant Reformer. He converted Zurich to his views while serving in the cathedral as a preacher, and soon the chief towns of Northern Switzerland joined him. The Catholic Cantons, however, formed a league against the Protestants, and Zwingli was killed in a sudden attack made upon Zurich. Zwingli was more broad-minded and generous than his contemporaries, Luther and Calvin, and he laboured as a patriot to establish a broad Christian union of the Swiss people. Although his views almost coincided with those of Luther, there was no hearty co-operation between them.

A MEDICAL DICTIONARY

FOR USE IN

THE FAMILY CIRCLE.

INTRODUCTION.

We venture to offer a few remarks to serve as a finger-post in directing the reader to the right use of this Dictionary of Medicine, which is not intended to supersede the doctor, but to indicate when he should be called in, and to act as a guide in emergencies when he is not immediately available, or in simple cases when his aid is not needed. Still more important than a knowledge of the means of recovering health, is that of preserving it. The writer has, accordingly, aimed at making this Dictionary a *Guide to Health*, by stating not merely the treatment to be followed in the various diseases, but by explaining their causes, and the way to avoid their incidence, especially by that most effective of all preventive measures, the maintenance of the general health.

Instead of the Science of Medicine occupying ground forbidden to the laity (that is, the general public), it should, in our opinion, form part of everyone's education. Ignorance of its principles is one of the chief causes of disease and the mainstay of the quack. It cannot be too clearly understood, however, that in the case of Medicine, knowledge must be carefully and cautiously applied, or we shall soon discover to our cost that sometimes "a little learning is a dangerous thing." But rightly applied, a little knowledge is highly valuable, and the purpose of this Dictionary is to supply such knowledge in a way that may prove useful in the home circle. Accordingly, we have described the symptoms of onset of the common infectious diseases, and given full directions as to the management of common ailments and the course to pursue in emergencies.

We would especially recommend any person who refers to this Dictionary without any definite object in view, to read first those articles which bear on the subject of *Hygiene*, and which will be found mentioned under that heading; and, then, those articles that deal with the question of personal health, such, for instance, as relate to the care of the skin, the use and abuse of alcohol, tea, tobacco, and the different articles of diet, the prevention of constipation, the use and abuse of exercise and physical training, the value of sleep, and the treatment of insomnia, as well as the causes and prevention of insanity, all of which are treated under their respective headings. And it is certainly highly desirable, if not absolutely a matter of duty, that everyone should be prepared to render efficient aid in the event of any sudden emergency. To qualify oneself for such a duty can only be satisfactorily achieved by a course of practical training in *First Aid*, but failing such training, the article under this heading will prove of material service if mastered before the time of action has come. Next in importance, perhaps, is the subject of *Nursing*. In most cases, the progress of the invalid towards recovery depends much upon the care of the nurse and her strict attention to the directions of the doctor. In most households the mother or daughter is sure to be called upon, sooner or later, to act as nurse to some member of the family In the article on the *Sick-room*, she will find some hints that are sure to prove useful, and she may be glad of a few recipes for the common articles of invalid dietary given under *Cookery*.

May we here give a word of warning on the question of *Drugs?* Their sparing use is more and more insisted on by the medical profession, and certainly their constant use in unprofessional hands is to be strongly deprecated. Throughout the following pages we have given drugs a subordinate place, since we regard them as extremely liable to misuse. The layman would do well in the treatment of disease to secure for the patient in whom he is interested, careful nursing, rest, fresh air, and suitable food, leaving drugs, as a rule, to the physician. At the same time all householders, especially those living in the country, and remote from a doctor's residence, would find a few medicines, kept under lock and key, of great service in cases requiring prompt attention. (See *Medicine Chest.*)

In the treatment of disease, *Alcohol* should be regarded as a drug, and therefore to be avoided if possible. Much of the cheap "invalid port" used by the public as a tonic, turns out on analysis to be crude spirit coloured with elder wine; and also much of the cheap spirit on the market is baneful from its immature condition, or from the impurities it contains. But even when the wine or spirit is pure, the risk of establishing a craving for alcohol has always to be borne in mind by those who first resort to it to relieve some symptom which is likely to recur. This danger appears to be more serious in women than men. The same objection applies to many other drugs, and is one great reason for leaving them in the hands of the physician. Unfortunately, drug habits are too often met with at the present day; morphia, cocaine, nerve tonics, sleeping draughts, and even strong aperients play their pernicious part in the lives of their unhappy slaves. A word of warning must also be most emphatically given in regard to many "soothing syrups" and "teething powders" now on the market, which contain opium, a drug often fatal to infants. We can only

express regret that any preparation containing this powerful drug can still be sold without the nature of its contents being stated on the label.

We must also enter our protest against the reckless way in which infants are fed, and which is responsible for the very high infantile mortality that is a disgrace to our civilisation. The number of *Infant Foods* advertised is very large. The law permits any one to put anything into a "tin," and sell that as a "perfect baby food"; and this is permitted, whilst a good food like margarine can on no pretence whatever (and quite rightly), be sold under a false name. The contrast between the laxity on the one hand and the stringency on the other, would be ludicrous were it not so disastrous in its results to health and life, and so fraught with suffering to many thousands of helpless infants. In the first book that comes to hand we find among the advertisements ten referring to baby foods, eight of which imply, or definitely state, that they are suitable for infants of all ages. As a matter of fact, these eight foods are widely different in composition, and certainly at times harmful when employed in the indiscriminate manner that their claim to be "suitable to all ages" would seem to justify. The physicians of our Children's Hospitals have devoted much attention to this subject, and the outcome of their investigations is clearly the best guide that can be obtained. And this we have given in the table under *Infancy*, in which the more valuable of these foods are tabulated according to the latest results of medical research. In the article on *Food* we have referred also to many other preparations, often useful in invalid dietary.

On calling in a doctor to see a member of the family who shows signs of "sickening for something," do not expect him to say right off what the disease will turn out to be. As a rule, it is impossible to tell at the moment; few experts could tell until time had been given for further symptoms to develop. This fact cannot be too clearly apprehended, as people often unreasonably demand a *diagnosis* from their doctor, at the first visit, which it is impossible to give. Many illnesses begin in the same way; thus a bad cold in a child may be the beginning of measles or whooping-cough, or be nothing more than a nasal catarrh. Moreover, the same disease may have many different modes of onset. We find, for instance, amongst cases of pneumonia that have been under our care, that, on the first day of illness—according to notes made at the time—the symptoms were of seven different varieties:—

(1) shivering, (2) shivering with pain in the side, (3) pain in the side with vomiting, (4) vomiting and diarrhœa, (5) diarrhœa and pain in the limbs, (6) vomiting followed by delirium, (7) sudden loss of consciousness.

Again, we find no less than eleven different modes of onset in such a small number as twenty-five consecutive cases of German measles, occurring in the spring of the same year. The symptoms before the appearance of the rash were:—

(1) none whatever, (2) a small lump noticed behind one ear due to an enlarged gland (3) large lumps complained of at the back of the neck on both sides, also due to enlarged glands, (4) headache, (5) headache and sore throat, (6) headache, cough, and malaise, (7) shivering, vomiting, and backache, (8) severe backache, (9) aching in the limbs and enlargement of the glands in the neck, (10) nausea and giddiness, (11) malaise for a week without other symptoms.

In many of these cases there was no reason to suspect German measles until the appearance of the rash; and even then English measles was closely simulated by some of them, and scarlet fever by others, though the subsequent course of each case, and the occurrence of others of more typical character in the same house, left no doubt as to their nature. Such examples could be multiplied indefinitely, but enough has been said to show the folly of expecting to know the nature of an illness in its earliest stage. Meanwhile what is to be done? The answer will be found under *Sickening for an Illness*.

In conclusion, we wish to emphasise the fact that, even in the present imperfect state of knowledge, most forms of illness are preventable. Any person who studies the rules of health, and steadily carries them out, has a fair prospect of a long and healthy life; and even when visited by sickness, nature's power of repair is so great that recovery, in the majority of cases, may be confidently expected if only the disease be promptly treated. To ignore the danger-signals at the onset of an illness, is to commit an offence nature rarely pardons. Too often the value of health is only realised when it is lost. Simonides, it is worthy of note, put health first, beauty second, and wealth third, in their relative value to man; and Bacon tells us that "a healthy body is the tabernacle, but a sickly one the prison of the soul." Though importance of obedience to the laws of health is obvious, yet unfortunately, in consequence of our defective knowledge, the most rigid observance of those laws will not ensure exemption from some diseases of the utmost gravity, such as cancer. This fact can only be accounted for in one way, namely, our ignorance of some of nature's laws concerning health.

To aid *research work* is thus a pressing duty. The rate at which discovery can proceed depends primarily, no doubt, on the genius and industry of the research-workers themselves, and on the advance of knowledge in allied fields of science, but it depends as much and possibly more on the attitude of the general public. There is no lack of men anxious to engage in research, but want of private means forces the majority into other callings. It is for the public themselves to supply the necessary funds. It is within their power to create an army of research-workers that shall discover the secret of the problems now awaiting solution. Surely the home of Jenner, Lister, Hunter, and Harvey must not fall behind her continental neighbours, nor must all the triumphs of bacteriology be left to Japan. When we note the advances of modern surgery since the introduction of anæsthetics and antiseptics, and also when we see those great barriers to colonial expansion—malaria, yellow fever, and sleeping-sickness—at last in a fair way of being successfully coped with, we can look forward with confidence to the conquest of such foes as cancer, consumption, and insanity, with which we are still face to face. In Medicine, the unknown is not unknowable, as it may be in some other branches of human enquiry, and hence no sacrifice in time or talent, whether of gold or mental gifts, can be looked upon as wasted, if spent in the cause of medical research.

A MEDICAL DICTIONARY.

ABDOMEN. The abdomen or belly is the largest cavity of the body. It is bounded above by the thorax or chest and below by the two pelvic bones which meet in front. From the cavity of the thorax it is separated by the great muscle of respiration—the midriff or diaphragm. Laterally and in front it is enclosed by the lower ribs and abdominal muscles. Behind, it is supported by the spinal column. The organs contained within the abdominal cavity are the liver, which lies under the right ribs and extends across to the left of the "pit of the stomach" or epigastrium; the gall-bladder and gall-ducts lying beneath the right lobe of the liver; the stomach lying under the left ribs and extending across to the right, and having its smaller end situated in the epigastrium; the intestines occupying chiefly the central portions of the abdominal cavity; the pancreas or sweetbread lying behind the stomach; the spleen or milt situated to the left of, and in contact with the large end of the stomach; the kidneys, placed one on each side of the spinal column and under the last two ribs of either side; the bladder, which lies at the bottom of the pelvis; the female organs of generation consisting of the uterus or womb, the Fallopian tubes, broad ligament and ovaries. These organs are wholly, or in part, covered by a membrane known as the peritoneum, which when inflamed gives rise to the disease termed "peritonitis." The diagnosis of disease situated within the abdomen is often more difficult than that of disease situated in other parts of the body, and non-professional investigation will be of very little use. The means at the disposal of the physician in the investigation of abdominal diseases are more limited in their application than is the case with diseases in other parts of the body, and clinical experience is to a greater extent drawn upon. Alteration in the form and size of the abdomen; pain, with or without a rise of temperature, and especially if the pain be of a severe, acute, or sickening character, or of sudden onset, ought always to suggest the necessity of prompt medical assistance.

Protrusion of some parts of the abdominal contents through the abdominal walls gives rise to the condition known as rupture or hernia. Accidental wounds of the abdominal walls with resulting protrusion of the intestines should be dealt with by the application of a perfectly clean soft towel rung out of hot water, which should be kept in position until the arrival of the doctor. On no account should any attempt be made to replace the intestines before they have been examined for punctures or other injury by the medical attendant.

ABORTION. See *Miscarriage.*

ABRASION. See *Wounds.*

ABSCESS. A collection of purulent matter as the result of inflammation. Inflammation of a tissue may result in the rapid breaking down of the substance of the tissue and the formation of pus or matter, or it may take place slowly. In the former case we observe what is termed an acute abscess; in the latter a chronic or cold abscess. The breaking down of the tissue substance is effected by micro-organisms of which the matter is full. Abscesses may occur in almost any tissue of the body, and may discharge either internally or on the surface. If seated near the surface, the usual signs of inflammation will be observed, viz., redness, heat, pain, and swelling. If deeply seated, external manifestations are usually absent, pain of a deep, dull, throbbing character often being the chief symptom. The pain is due chiefly to the tension and pressure of the abscess-contents, relief being obtained as soon as the abscess is opened and the pus evacuated. Acute abscesses if not opened by the surgeon very soon discharge through an opening in the skin produced by ulceration; but when deeply seated, or situated beneath dense structures, they may "diffuse" their contents along the paths of least resistance, and often by so doing bring about considerable damage. As soon as it is certain that matter has formed, the abscess should be opened by the scalpel of the surgeon, Waiting until the abscess "breaks" is, as a rule, the cause of prolonged pain, and greater disintegration of tissue and constitutional disturbance. Until the abscess is fit to be lanced, the part should be put at rest, fomentations, or the moist heat of a bread or linseed meal poultice applied and some mild aperient saline taken. Chronic abscesses usually betoken some constitutional fault or failure of health, and require, besides local treatment, general or constitutional treatment. After an abscess has burst, or has been opened by the surgeon, the walls of the abscess fall together and healing takes place with rapidity. In some cases, however, healing is not complete, and a small track or sinus persists leading from the site of the original abscess to the skin-opening. In such cases the aid of the surgeon is required so that this little canal may be effectively closed.

ABSINTHE is an alcoholic drink containing wormwood. It is largely used on the Continent, where it is responsible for much permanent damage to the nervous system of its devotees.

ABSTINENCE. See *Alcohol.*

ACCLIMATISATION. See *Climate.*

ACETIC ACID in its strongest form is known as *glacial* acetic acid. In this form it acts as a caustic and is used to burn out warts. Under the name *dilute* acetic acid a watery solution is sold which may be used as a refreshing lotion to apply to the skin in cases of headache or fever.

ACIDITY. This is a form of indigestion, which is due to an excessive formation of acid in the stomach. The symptoms are heartburn and a rising of wind and of bitter stomach contents into the mouth. Relief is obtained by taking a teaspoonful of bicarbonate of soda in a tumbler of water.

ACIDS are chemicals which combine with alkalies and metals to form salts; they all have a sour taste and turn red litmus paper blue. See separate headings—*Acetic Acid, Phosphoric Acid,* &c.

ACNE. This is the name of the skin disease which is so common in youth. *The symptoms* are pimples on the face and back, which have black points in their centres known as "black-heads." If the pimple be squeezed, a little maggot-like body escapes from the black point, which is made up of fatty material derived from the oil glands of the skin. *The treatment* consists in the free use of hot water and soap, followed by rubbing in sulphur ointment and zinc ointment in equal parts, twice daily. The skin may be sprayed with a "vaporiser." The bowels should also receive attention. [See also *Opsonin.*]

ACNE ROSACEA is the flushing of the face and nose so often seen in those suffering from chronic indigestion or alcoholic intemperance.

ACONITE, a drug only safe in medical hands. See *Drugs.*

ACROMEGALY, a rare disease, the chief symptoms of which are gradual enlargement of the face, jaws, hands, and feet. It is due to disease of the pituitary body, a gland at the base of the brain.

ACUPRESSURE is a mode of arresting hæmorrhage by passing a needle beneath the bleeding point and then out through the skin, so as to compress the blood vessel between the skin above and the needle below. (Acus=a needle.)

ACUPUNCTURE is a mode of counter-irritation applied by inserting needles deeply into the painful part. It is used in sciatica.

ADDISON'S DISEASE is a rare disease named after its discoverer, Dr. Addison. The cause is disease of the supra-renal capsules. The symptoms are weakness of the heart, anæmia and bronzing of the skin.

ADENOIDS is the term applied to an overgrowth of the third tonsil which is situated at the back of the nose. This is common in childhood. *The symptoms* are nasal obstruction, which compels the child to breathe with the mouth open; the nostrils are not used and fail to develop, whilst the bridge of the nose is abnormally wide, thus separating the eyes more than is usual; the mental vigour is impaired and the child is backward and inattentive at school. The tonsils are usually enlarged also. This condition runs in families. *The treatment* is removal of the adenoids by operation; the tonsils can be cut at the same time.

ADIPOCERE is a wax-like substance formed in the corpse during decay.

ADULTERATION of food and drink is widely practised. The term includes admixture of some other body by way of fraud, and sometimes for the preservation or the improvement of the flavour of the original article. For instance, pure malt whiskey is largely blended, that is adulterated with crude spirit, in order to produce an article which the public like. The public are protected by the "Sale of Food and Drugs Act."

AERATED WATERS are prepared by pumping carbonic acid gas into water under pressure. When the water is poured out the pressure is relieved and an escape of gas results, which produces effervescence. Seltzer and "Soda Water" are examples.

AGE. In most animals the average age attained is five times the length of time occupied in full development. If we regard man as grown up by twenty, this makes a hundred years the natural age for death to occur. Rarely as this is attained, there seems no reason for regarding it as abnormal under favourable conditions. It is confidently hoped that increased knowledge of the laws of health, increased self-control and general prosperity will greatly prolong life. Age is a most important factor in determining susceptibility to different forms of disease. Scarlet fever, measles, whooping cough are in the main diseases of childhood; phthisis of young adult life; gout, apoplexy, cancer, of middle life; and chronic bronchitis of old age. The chance of recovery from most diseases is less in the very young and the very old than in the ages between these limits.

AGRAPHIA is inability to express one's thoughts in writing.

AGUE, or malaria, or intermittent fever, is a fever common in marshy districts in various parts of the world. Since the fens have been drained it has become extinct in England, though commonly met with in those who have returned from the tropics. *The cause*, which has been discovered recently, is a microscopic parasite living in the blood. Infection is spread by a certain species of mosquito, the *Anopheles*, which sucks the blood of a man suffering from malaria, and in doing so takes in the parasite also. The parasite lives and multiplies in the body of the mosquito and produces spores, which pass into the salivary glands. When the mosquito bites it discharges saliva to make the blood flow, and in so doing injects the spores of the malaria parasite into the person bitten, who then becomes a victim to malaria. So far as is known infection is only spread by the Anopheles, the grub of which lives in marshes and it is from this fact that marshy districts are malarious, and not, as formerly thought, because the marshes give off poisonous gas which causes malaria. *The prevention* of malaria is essential, if Africa is ever to be a white man's country. Organised attempts to destroy the Anopheles are now being made in many places. They consist in the draining of all small pools near the towns and in pouring oil on the surface of the larger ponds to kill the Anopheles in its grub stage. The inhabitants also protect their windows with fine netting to keep the mosquito out, and they avoid being out after sunset as much as possible, because the Anopheles only feeds by night. *The treatment* of malaria has long been known; quinine is the drug used, it acts by killing the parasite in the blood. By returning to a temperate climate re-infection with fresh supplies of parasites is avoided and the original ones gradually die off or are killed by quinine.

AIR is essential to life. If withheld death results within three minutes. Pure air is essential to health, and inattention to this elementary fact is responsible for more disease than any other cause. The air is composed of a mixture of gases, of which oxygen, nitrogen, carbonic acid gas or (as it is now called) carbon dioxide, and water vapour are the chief. Animals in breathing absorb oxygen and give out carbon dioxide and water, and also certain organic impurities. It is to the last of these that the odour of a stuffy room is due, not to the carbonic acid, which is comparatively harmless. Plants in a small degree breathe like animals, taking oxygen in and giving carbonic acid out, but when the sun shines their green leaves do just the opposite, they take in the carbon dioxide and break it up into oxygen, which is set free, and carbon, which is retained and built up into starch. By this interaction of plants and animals the composition of the air is kept essentially the same in all parts of the world and from one year to the next. The air of the mountains and of the sea-shore is rich in another ingredient, *ozone*, which is highly stimulating, and it is largely to this that mountain and sea owe their value as health restorers. Ozone is produced everywhere during a thunderstorm, the beneficial results of which are appreciated by all. The air of towns is often contaminated by street dust, composed of dried horse-dung, by smoke, and by the acid emanations from certain factories. These are sources of danger to the public health. The air of workshops is of great importance to the health of the workers, especially in regard to the amount of dust it contains, as inhaling dust for hours every day induces lung disease. Much good can be done by wise factory laws in connection with this matter. [Refer also to *Ventilation*].

ALBUMEN WATER is made by dissolving the whites of two eggs in a pint of water. This is a useful substitute for milk in the hand feeding of infants when they are suffering from diarrhœa.

ALBUMIN is the principal ingredient of muscle and blood. Many varieties are recognised by chemists, one of them forming the whites of eggs is known as albumen.

ALBUMINURIA. Refer to *Bright's Disease.*

ALCOHOL is a drug potent for good or evil according to the way it is used. As a food its value is very inferior to the sugar from which it is prepared, but as a stimulant its value is great. There are times when a stimulant of some kind is essential to life. There is no evidence that the daily use of alcohol with the meals in moderate quantity is harmful. On the other hand there is ample proof that it is unnecessary. Whilst the excessive use of tea or coffee is injurious to health, the evil effects of alcoholic excess are incomparably greater. Moreover, it must never be forgotten that alcohol often begets such a craving for itself as to deprive its victims of all self-control. Its use as a beverage, therefore, is always more or less dangerous and requires the greatest watchfulness. In short, we regard alcohol as an excellent stimulant, but we hold a stimulant should be used either seldom, or, if constantly, only in very moderate doses.

The abuse of alcohol consists in using it (1) too concentrated; (2) in too large amounts; (3) between meals; (4) as a substitute for a meal; (5) to "keep out the cold."

Instead of keeping out the cold it increases the loss of heat by bringing the blood to the surface. Nansen was aware of this, and in his Polar explorations allowed his men no

alcohol, with excellent results. As a substitute for food, nothing could be worse, it not only does not feed to any appreciable extent, but by stimulating exhausts the energies, and by its corrosive action on an empty stomach leaves the appetite worse than before.

As a medicine it has this great danger—that it can always be obtained and taken without a medical prescription; hence in the case of a symptom like neuralgia, that is apt to recur, the prompt resort to alcohol in ever-increasing doses is apt to result from its use on the first occasion.

We give a few of the chief alcoholic liquors with the percentage of alcohol they usually contain: whisky and brandy from 40 to 50 per cent.; gin about 40; port and sherry about 20; claret about 13; cider and strong ale about 6; and small beer about 2.

ALCOHOLISM is the effect produced by an overdose of alcohol. Acute alcoholism or drunkenness is produced by an overdose recently taken. Chronic alcoholism by repeated overdoses in the past. In women this condition is often acquired by secret drinking before it is found out, the grocer's licence being largely responsible for this. The symptoms are loss of memory, deterioration of character, especially in regard to the love of truth, carelessness in the personal appearance, hoarse voice, chronic cough, tremor of the hand on waking, morning sickness, dilated veins on the cheekbones and nose, finally delirium tremens or pneumonia, gout or Bright's disease may occur. The *treatment* of acute alcoholism is easy; of chronic, very difficult. In acute alcoholism the stomach should be emptied by an emetic and a dose of Epsom salts given. In the morning, two drops of tincture of capsicum in two tablespoonfuls of water followed by some soda water will be welcomed.

In chronic alcoholism a habit has been formed far beyond the power of the victim to break unaided. The best course, consequently, is to voluntarily enter a Retreat for Inebriates and to undergo treatment there for a year or more. Travelling with a medical attendant who is a total abstainer is also recommended. Hypnotism is often useful but the results are uncertain. Raisins have been stated to relieve the craving for alcohol. Strychnine and other tonics are sometimes used. A large number of patent remedies are on the market, but as an analysis of fifty of these has shown alcohol to be often present in amounts ranging from 6 to 47 per cent., they are likely to do more harm than good.

ALIMENTARY CANAL is a general name for the whole food canal from mouth to anus. It is divided into the mouth, the pharynx or throat, the œsophagus or gullet, the stomach, the small intestine, the large intestine or colon, and lastly the terminal portion or rectum. The opening of the œsophagus into the stomach is the cardiac orifice, and that of the stomach into the intestine is the pylorus. Where the small intestine opens into the large intestine there is a valve—the ileo-cæcal valve guarding the orifice which only permits fluid to pass onward towards the anus. The large intestine presents an outgrowth just below the ileo-cæcal valve called the cæcum, which terminates in a worm-like blind extremity known as the vermiform appendix. [Refer to *Abdomen, Digestion, Appendicitis.*]

ALLOPATHY is a system of treatment in which remedies are given to counteract the morbid condition present. Thus constipation is treated by aperients, heart failure by stimulants, and so on. This method is the one in ordinary use and is intended to produce in the body a condition contrary to that of the disease; whereas Homœopathy is a mode of treatment in which the remedies used would produce in health the same symptoms as those of the disease they are intended to cure. [Refer to *Homœopathy.*]

ALMOND. There are two varieties—the sweet and the bitter almond. The former is edible, the latter poisonous, owing to the prussic acid it contains.

ALOES is a resinous substance obtained from the leaves of certain species of aloe tree. The majority of the patent pills contain aloes, but it is an undesirable aperient to use habitually, especially in the case of those suffering from piles.

ALTERATIVE is a medical term becoming obsolete, really used to cover ignorance. It was applied to those drugs which, while possessing no definite action, were yet supposed to possess the power of "improving the constitution."

ALUM is a powerful astringent, better not given internally, but is useful as a gargle in relaxed throat (two teaspoonfuls of the powdered alum with a little honey to the pint of hot water). Powdered alum may be used to apply to a bleeding part to check hæmorrhage.

AMAUROSIS. blindness due to nervous causes.

AMBULANCE. See *First Aid.*

AMMONIA, or spirits of hartshorn, applied externally in strong solution produces redness of the skin. It is used as a counter-irritant in certain liniments, e.g., compound camphor liniment. In dilute solution ammonia is soothing to the skin and is useful for insect stings. When inhaled it stimulates the heart, but it is irritating to the air passages. Hence smelling salts, which consist mainly of ammonia, must not be applied to the nose of an unconscious patient for long. Taken internally in the form of *sal volatile*, the heart and stomach are stimulated. It is thus useful for a fainting fit or to disperse wind. The dose of sal volatile is half a teaspoonful in water for an adult. [Refer to *Poisons.*]

ANÆMIA, literally "without blood," means poverty of the blood. One form, common in young girls, is named *chlorosis*, from the yellowish-green complexion it causes. *The cause* may be lack of fresh air and exercise, unsuitable diet and constipation or the presence of some constitutional disease such as phthisis, rheumatism, etc. *The symptoms* are pallor of the face, lips, and gums, lack of energy, shortness of breath, faintness, want of appetite, and often indigestion. *The treatment* consists in determining whether any constitutional disease is the cause, and if so treating this; if not, much can be done by rest, fresh air, attention to the bowels, and by a course of iron. Iron is best taken freely diluted by adding forty drops of the tincture of perchloride of iron to a pint of lemonade, drunk during the day after meals. The absence of the monthly loss should not be treated, as this will become normal when the general health has improved.

ANÆSTHETICS are drugs which produce insensibility to pain. General anæsthetics are those which produce insensibility of the patient, local anæsthetics are those which when applied to any one part produce insensibility to pain in that part without affecting the consciousness of the patient. The chief general anæsthetics are chloroform, ether and nitrous oxide or laughing gas. Quite recently a fourth general anæsthetic has come into vogue, viz., ethyl chloride. The danger of a general anæsthetic is much reduced when it is administered by a specialist. Two medical men or one medical man and a dentist should always be present. The giving of gas by a dentist in the absence of a medical man is unsafe, and should never be submitted to. Gas is the safest, chloroform the least safe, of the anæsthetics. Ether is the most unpleasant, but this unpleasantness can be much reduced by taking gas, followed by ether, before the effects of the former have passed off. After gas a patient is soon ready to walk home, which is not so after either chloroform or ether. The local anæsthetics include ice and salt, or the ethyl chloride spray, which produce numbness by freezing the part, and cocaine or eucaine, or novocain, which when injected under the skin temporarily paralyse the sensory nerves of the part. These are useful for minor operations of short duration. Cocaine has been injected into the spinal canal, and extensive abdominal operations have then been carried out without causing pain, or abolishing consciousness, but this method must be regarded as still in the experimental stage.

ANASARCA. See *Dropsy.*

ANCHYLOSIS is the adhesion of the two bones, which form a joint. The adhesion may be of a bony or a fibrous nature. In the former case movement of the joint is impossible, in the latter it is impaired and can be increased by massage and hot-air baths.

ANEURYSM OR ANEURISM is a tumour consisting of an artery that has yielded to the blood pressure within it and dilated. Aneurysms contain blood and pulsate with

each heart-beat. *The cause* is prolonged muscular strain in sufferers from gout, syphilis or intemperance. Hence it is common in middle-aged navvies, soldiers and sailors, and rare in women. It may also be caused by a wound of the artery, and many aneurysms have been thus caused by bullet wounds in the South African war. *The effects* of an aneurysm are pressure on the surrounding parts, which may cause much pain, and finally the artery may burst and cause sudden death from loss of blood. The treatment should be in medical hands.

ANGINA PECTORIS is neuralgia of the heart. It is most often seen in middle-aged men. *The symptoms* are a sudden seizure characterised by intense pain in the chest and down the left arm and by a fear of immediate death. The attack ceases as suddenly as it began. *The treatment* must be begun before the doctor arrives. Some hot brandy and water and sal volatile should be at once administered. If handy, the most effective is a glass capsule of amyl nitrite broken in a handkerchief, and inhaled. Sufferers from this disease carry these capsules in their pocket. Many great men, including John Hunter, have died during an attack.

ANIMAL MAGNETISM. See *Hypnotism.*

ANISEED. Two preparations are in use: aniseed water; *dose*, two to four tablespoonfuls; and oil of aniseed; *dose*, one to four drops on sugar. Aniseed is used to relieve flatulence.

ANKLES, WEAK. This is due to lack of tone in the muscles of the leg. The treatment is to develop the calf by walking upstairs on tiptoe, by skipping, and by other exercises combined with the avoidance of long standing and of such artificial supports as high-laced boots.

ANODYNE is a remedy that relieves pain, e.g., opium, hyoscyamus, or belladonna.

ANTIDOTES. Refer to *Poisons.*

ANTIMONY is contained in antimony wine, tartar emetic, James' powder and Plummer's pill. The drug is much less used than formerly, owing chiefly to its depressing effect on the heart. It is not safe except in medical hands. [Refer to *Poisons.*]

ANTIPYRETICS are means for lowering the temperature. Cold sponging and bathing do this much more safely than drugs do. The drugs which act in this way are antipyrine, antifebrin, phenacetin, quinine and alcohol.

ANTIPYRINE, known also as phenazone, is a colourless, soluble powder used in doses of three to twenty grains to relieve pain in neuralgia or to reduce high temperature. Phenacetin is a safer preparation for general use.

ANTISEPTICS are chemicals which check the growth of germs and so protect a wound from infection. [Refer to *Disinfection.*]

ANTISEPTIC SURGERY consists in the use of antiseptics in the treatment of wounds. This method, introduced by Lord Lister, has enabled surgeons to do much that was before impossible. It is now being superseded by *Aseptic Surgery*, in which an attempt is made to sterilise everything before the operation, so that no antiseptics are required for the wound because no germs reach it.

ANTITOXIN is the natural antidote to the poisons produced by disease germs. These poisons are known as toxins. In the process of recovery the blood becomes charged with antitoxins produced by the tissues. In certain cases, notably in diphtheria, this fact has been made use of in the treatment of disease. Horses are dosed with diphtheria toxin in steadily increasing doses until their blood becomes highly charged with diphtheria antitoxin. Some of the blood is then withdrawn, and from this the serum containing all the antitoxin is obtained. This serum is then injected into a patient suffering from diphtheria as soon as possible after the disease has been recognised. By this means the patient is provided with antitoxin before he has had time to produce it for himself, and thus much time is gained which often makes the difference between life and death. The mode of termination of the very mild and of the very severe cases is not altered, it is in the cases intermediate in severity between these that the value of antitoxin is so great.

ANUS OR FUNDAMENT is the outlet from the lower end of the bowel. This is kept closed except during an action of the bowels by a ring of muscle known as the sphincter. The anus is the seat of many troublesome affections, e.g., itching, piles, fissure, fistula and prolapse. These are treated under their respective heads. Rarely a child is born with the anus blocked by a membrane; this is imperforate anus. A surgeon has then to break through the membrane, or death from stoppage of the bowels must result. This point should be examined shortly after birth.

AORTA is the largest artery in the body. The outlet into it from the heart is guarded by valves, which in middle life are prone to become impregnated with lime salts and in consequence to be too rigid to act. Much extra work is thus thrown on the heart. This disease is known as *Aortic Regurgitation.*

APERIENTS, Refer to *Constipation.*

APHASIA is loss of speech. The most common cause is a hæmorrhage into the brain on the left side. This injures the speech centre and causes paralysis of the right side of the body.

APHONIA is loss of voice due to something wrong with the larynx or to hysteria. [Refer to *Laryngitis.*]

APHTHA. See *Thrush.*

APOPLEXY, OR STROKE, is caused by a blood-vessel in the brain breaking and allowing the blood to escape into, and to destroy, the surrounding brain substance. This accident is only likely in the case of those with arteries that are brittle from chalky material deposited in their walls and with sufficiently strong hearts to burst an artery thus made brittle. Hence, it is most common in middle-aged men who are gouty or intemperate and who lead active lives. The stroke most often happens after a full meal or during some fit of passion. *The symptoms:* a sudden loss of consciousness from which the patient cannot be roused; the breathing is noisy; the motions or urine are often passed; the limbs may be convulsed down one side and are usually limp on one side and stiff on the other. If recovery follows the mental power is regained in whole or part, but one side of the body is partially paralysed, the leg recovering before the arm, and the arm before the hand. The skilled movements of the fingers, acquired by special training, are the last to be regained, if ever.

In strokes down the right side the speech is affected. The eyes still act together after a stroke and the power over the bladder is retained, sensation also is retained even on the paralysed side. In two months' time, in most cases, the invalid is able to walk with the aid of a stick. *The treatment* during the attack consists in loosening the clothing round the neck and propping up the head and shoulders. Hot bottles may be applied to the feet, but they must be well protected by flannel for burns easily result. By turning the patient on his side the noisy breathing is often improved No stimulant must be given; this mistake is commonly made. Five grains of calomel should be placed on the back of the tongue.

The prevention of apoplexy can be effected by restriction of the diet and alcohol during middle age, together with the avoidance of such forms of exercise as involve sudden strains or great excitement, and by attention to the bowels. [Refer to *Cerebral Thrombosis.*]

APPENDICITIS is inflammation of the vermiform appendix. The disease was formerly called "peri-typhlitis." There is a pocket-like protrusion from the large bowel; the first part of this protrusion is large and called the cæcum, the terminal portion is narrow and round like a worm, blind at the far end, white in colour, three inches long, and containing a cavity that will only admit a stout bristle. This terminal portion is the vermiform appendix. (Vermiform means worm-like). By placing the hand in the upper part of the right trouser pocket the fingers are about over it. The cavity of the appendix secretes mucus or slime. If the outlet into the cæcum gets blocked, the mucus is pent up in the appendix and dries, to form a body formerly mistaken for a cherry-stone. It is clear that a cherry-stone cannot make its way into the appendix, because it only admits a stout bristle. In addition to the formation

of a stone from the dried mucus. Inflammation in the appendix itself is set up at the same time. This may quiet down in a few days or it may go on to abscess formation. This abscess is apt to burst into the general peritoneal cavity and set up a fatal peritonitis. *The symptoms* at the onset are vomiting, pain at the navel, shivering and a rise of temperature. There has generally been constipation off and on for some time. The disease may occur in later life, our king, for instance, had it in the year of his coronation, but it is much more common in youth. *The treatment* is to go to bed and send for a doctor; and directly an abscess forms a surgeon will be required also. If the attack passes off without an abscess occurring, the advisability of having the appendix removed subsequently will have to be considered in order to prevent recurrence.

The disease is not new, but the advances of surgery have greatly increased our knowledge of it. The majority of cases of "peritonitis due to chill" in the past have been cases of non-recognised appendicitis which have gone on to general peritonitis. It is this that the surgeon can now prevent.

APPETITE. in health, is the best guide to the quality and to the quantity of food eaten, provided that this be taken slowly. In disorders of the digestive system the appetite is impaired. During the convalescence from fevers, and in those suffering from tape-worm or diabetes, the appetite is often increased. In anæmia, pregnancy, and some forms of insanity, the appetite is often depraved or perverted, that is to say there is a craving for unwholesome articles, like slate pencils or chalk. This depraved appetite is also found amongst certain savage tribes. The love of sugar, so common in childhood, should be encouraged, and the loathing for fat tolerated, as both are results of a normal appetite, but sugar should be allowed only at meals.

APPLE WATER is made by pouring a pint of boiling water over a couple of roasted apples and allowing the same to stand in a warm place for three hours; it is then strained and sweetened to taste. This is a pleasant beverage for the sick room. Baked apples, cored, and peeled, are also useful.

AQUA FORTIS is fuming nitric acid. See *Poisons.*

ARNICA is not used internally. Half a teaspoonful of the tincture to half a pint of cold water is a popular lotion for relieving sprains and bruises. Any virtue this lotion may possess is due to the water and spirit it contains, and not to the arnica, the latter having no effect.

AROMATICS are vegetable products of the spice group, which owe their properties to a volatile oil. Mustard, peppermint and cloves are examples. They stimulate digestion.

ARROWROOT consists of pure starch, and therefore must never be used to feed infants before they are six months old. It is often used in convalescence from illness, especially in cases of diarrhœa. It is generally served in the form of gruel which may be prepared as follows:—a teaspoonful is made into a paste with a little milk, and is then slowly stirred into half a pint of boiling milk and kept stirred for five minutes.

ARSENIC in the form of "Fowler's Solution" is largely used in the treatment of anæmia and many nervous disorders. It is not safe in non-professional hands. [Refer to *Poisons.*]

ARTERY is a blood-vessel that carries blood from the heart. It is only in arteries that the pulse can be felt. The name is due to a former belief that they carried air. This error arose from the fact that after death the arteries are found empty. And this is due to the fact that they empty themselves by their own elasticity into the veins.

ARTHRITIS means inflammation of a joint.

ARTIFICIAL RESPIRATION. [See *First Aid.*]

ASAFŒTIDA is a drug of nauseous taste, chiefly used in the form of pills for the relief of flatulence. It is contained in the compound galbanum pill and the aloes and asafœtida pill of the Pharmacopœia.

ASCITES. See *Dropsy.*

ASEPSIS is the absence of germs. The germs present on the skin and in dust render a wound likely to fester. Hence arose the antiseptic treatment, in which the surgeon, when operating, washed the wound with chemicals, termed antiseptics, to kill the germs that gained entrance. As an improvement it is now proposed to secure asepsis by destroying all germs that can possibly come in contact with the wound before operating; thus the skin of the patient is wrapped in antiseptic dressings the night before operation, the dressings to be applied are previously sterilised by heat, the instruments are boiled, and the surgeon's hands are enclosed in sterilised rubber gloves. During the operation there is then no need to use antiseptic lotions, sterilised water being alone used, and the wound thus escapes the irritation which antiseptics cause, and so heals more quickly. [Refer to *Bacteria, Antiseptics.*]

ASEPTIC SURGERY. See *Antiseptic Surgery.*

ASPHYXIA, literally without pulse, is the name of the condition caused by want of air. In such a case the oxygen which the blood contains is rapidly used up, leaving the blood of a dark colour. Hence the sufferer rapidly turns blue and then "black in the face." During this stage violent efforts to breathe are made, and the heart beats violently; soon exhaustion sets in, the heart fails and blueness gives place to an ashy pallor, unconsciousness comes on, convulsions if they have occurred cease, and death results in less than five minutes, unless the obstruction to respiration can be removed. [Refer to *First Aid.*]

ASTHMA is a disease characterised by paroxysmal attacks of difficult breathing. The disease may begin in childhood, but more often develops later in life, and is frequently associated with other diseases, e.g., chronic bronchitis, Bright's disease, or heart disease. When no other disease is present there is generally a history of nervous disorders in the family. The symptoms that precede an attack are variable, but often are like those of a bilious attack. The attack itself most often occurs at night; the sufferer awakes with a distressing sense of want of breath, the respiratory movements become violent, and in a few minutes the attack is at its height; in spite of the most strenuous efforts very little air enters the lungs and still less leaves them. Respiration is prolonged and wheezy; signs of insufficient oxygenation of the blood supervene, the face becomes livid and bedewed with sweat, the pulse small, the extremities cold. Finally, improvement gradually occurs and with a fit of coughing relief is obtained, and the patient sinks exhausted to sleep. The duration of an attack varies from a few minutes to a few hours, and several attacks may occur in the same night. Death during a paroxysm is almost unknown. *The treatment* during the attack is very varied, some remedies acting like a charm in some cases but not in all. A dose of sal volatile, the inhalation of the fumes of burning nitre paper, or of nitre mixed with stramonium powder, either burnt on a plate or made up into cigarettes, and the inhalation of amyl nitrite, are remedies widely used. Morphia relieves most attacks but should be avoided, lobelia is too depressing to be recommended. *The prevention* of asthmatic attacks consists in avoiding those particular causes which individual experience proves to excite an attack. These causes are most varied and peculiar. They include a heavy supper, constipation, anxiety or mental excitement.

ASTIGMATISM is a defect in vision due to the front of the eye not being of the right shape. A point must be focussed as such on the back of the eye to be seen properly. In order that this may occur the curvature of the eye in the horizontal plane must be the same as that in the vertical plane. When the two curvatures are unequal astigmatism is present. Points are then seen as lines unless the internal muscular mechanism of the eye is capable of correcting the error. Such correction commonly occurs, but it involves a muscular strain that often induces headaches and bilious attacks, and when the health is run down the correction is incomplete and the sight blurred. *The treatment* consists in measuring the difference between the two curvatures and then in ordering special glasses so made as to compensate for the error. All muscular strain within the eye is thus relieved, though the glasses may have to be worn a few days before the eye loses the habit of straining, hence at first

the patient can often see better without the glasses, and the impression is given that the glasses are unsuitable. It will be seen that trying on various spectacles at a shop is useless for the above defect, and that the eyes require an accurate examination by an eye specialist. [Refer to *Eye.*]

ASTRINGENTS are remedies which produce contraction of the tissues with which they are brought in contact. Cold, alum, tannin, and lead salts are examples. They are used to check hæmorrhage and excessive secretion.

ATAXY means partial loss of control over the muscles, which renders movements irregular and unsteady. The symptom is well seen in the reeling gait of a drunken man and in certain diseases of the nervous system. See *Locomotor Ataxy.*

ATROPHY means diminished nutrition, which causes wasting. All organs tend to atrophy if they are not sufficiently used, or if their connection with the nervous system is interfered with from any cause.

AUTOPLASTY is the method of repairing one part of the body with tissue obtained from another part, as in grafting skin from the arm on to a wound in the face.

AUTOPSY is an examination of the body after death. See *Post-mortem.*

BACILLUS is a germ shaped like a long thin rod. See *Bacteria.*

BACTERIA, or germs, are microscopic fungi. The number of species already known is so great that there are probably as many species in nature as there are different kinds of flowering plants. Just as in flowering plants we find some adapted to the water, the mountain, the valley, the equator or the poles, so amongst bacteria we find the same range of habitat, the same variety of usefulness or harmfulness to man, the same wide range from extreme vitality to comparative delicacy. Air, earth and water, our skin, our clothes, and our mouths are all tenanted by bacteria of this species or that. Fortunate indeed is it that most of them are harmless, for the few specially adapted for preying on man cause more suffering and premature death than almost anything else. Boils, gangrene, festering wounds, erysipelas, lockjaw, consumption, and the various infectious fevers are each caused by the ravages of a particular species of germ. Indeed so great a danger is only kept in check by a most elaborate system of defence; the germs as they gain entrance to the body are attacked by the white corpuscles, and their poisons are neutralised by the formation within the body of antidotes specially adapted to each. This means of defence extends far down the animal scale, becoming simpler and less efficient as the lower forms of animal life are reached. Plants enjoy a comparative immunity from the attack of bacteria, but only to fall a ready prey to numberless parasitic moulds. The production of disease, however, is the work of only a small section of the bacteria, of in fact a few aberrant forms specialised to a parasitic life. The chief work of bacteria is to cause putrefaction, without which life would soon be impossible, as we should be buried beneath the dead leaves and the dead animals of a former age. Another group help to make soil by fixing the nitrogen of the atmosphere and changing it to nitrates, which are a valuable manure. This kind live attached to the roots of clover and other leguminous plants, a fact which the farmer now turns to account in the rotation of crops. Others again tan leather, make vinegar and ripen cheese, though others turn milk sour and butter rancid, whilst yet others live in our intestines and aid in the digestion of food and in the removal of any excess that may be taken. In short, bacteria are good servants but bad masters. [Refer to *Disinfection.*]

BALDNESS. Every hair is being constantly formed in health from a papilla placed at the bottom of a pit in the skin known as the hair follicle. The various organs of the body age at different rates, and the hair follicle is one of those organs which ages first; it then ceases to develop hair, and when sufficient follicles are in this condition, baldness results. The health of the hair follicle is often disturbed by the ill-health of the body, and in such cases the hair is shed either temporarily or permanently, as after certain fevers; again the health of the hair follicle depends on that of the surrounding skin, and in those who suffer from dandruff; unless this be treated, baldness follows. The treatment of baldness is preventive; once the follicles have atrophied nothing can be hoped for from any remedy. Dandruff must be treated by strict cleanliness of the brush, comb and hair. The brush and comb should be washed daily in a strong solution of washing soda; the hair should be washed every night with a one in five hundred solution of perchloride of mercury in alcohol and water (equal parts). The hair should also be thoroughly dried after the morning bath. The bowels and the general health should be attended to, and heavy head-gear and exposure to a hot gas flame just over the desk avoided. When the hair has already become thin, growth may be stimulated by increasing the blood supply to the scalp with Tincture of Cantharides, one ounce, vinegar and rose-water, each three and a half ounces, rubbed in night and morning; or by Tincture of Cantharides, one drachm, ether, camphor and vaseline of each three drachms, rubbed in as an ointment at night. If soreness of the scalp occurs the remedy should be omitted for a night or two. Most of the patent remedies contain cantharides or camphor.

Bald Patches in children are usually due to ring-worm.

BANDAGES. See *First Aid.*

BANDY LEGS means the bending outward of the bones, both of the thighs and legs, in contradistinction to "bowed legs," which is the bending of the leg bones only. The deformity is due to rickets making the bones soft, and to allowing the weight of the body to be supported by these soft bones. [Refer to *Rickets.*]

BANTING is a method of treating corpulency by a special diet consisting of an excess of nitrogenous food and a great restriction of the carbohydrates, that is, meat, eggs and cheese are eaten in excess and bread, potatoes, sugar, beer, champagne and cocoa are taken in the smallest possible quantity. In many cases good results, but in others the work thrown on the kidneys is too much for them, and serious harm ensues. The treatment should therefore be in medical hands. The name is derived from that of a man who treated himself for corpulency with success by means of the above method.

BARBADOES LEG is a form of elephantiasis, characterised by a chronic enlargement of the leg. See *Elephantiasis.*

BARK is the popular name for the cinchona bark, from which quinine is prepared. See *Quinine.*

BARLEY WATER. (1) *Clear.* Two ounces of pearl barley are to be well washed and then blanched by placing in a saucepan of cold water, bringing to the boil and straining. The blanched barley is then placed in a jug and a pint of boiling water poured on it; when cold the mixture is strained, flavoured with vanilla or lemon and sugar, and used as a refreshing drink. (2) *Thick.* Two good teaspoonfuls of blanched barley are boiled for twenty minutes in a pint of water in an enamelled saucepan and then strained. The fluid thus obtained is the barley water used for diluting milk in the artificial feeding of infants.

BARRENNESS may often be remedied, and the doctor should therefore be consulted.

BATHS for domestic purposes may be made either of metal or earthenware; earthenware presents the disadvantages that it absorbs a great deal of heat and that it is very slippery. Cold baths have a tonic effect, hot ones a soothing influence; hence a cold bath in the morning and a hot one at bedtime is the natural arrangement. For many people, however, the cold bath is found too severe, as they do not obtain the warm invigorating after-glow that is normal, but are chilled for some hours. In such cases the better method is to sit in a warm bath and with a large sponge douche the head and back with cold water for a few minutes, and to follow this by a brisk rub down. In all children this method is found better than the simple cold bath. The hip bath used warm is useful at the monthly periods, when the cold bath for the time should be discontinued. A salt bath, which is more invigorating than fresh water, may be made by adding four pounds of salt to every sixteen gallons of water used; sea-salt is on the

market, but ordinary table salt is just as efficient. In nursing the *sick*, different forms of baths are widely used. A bath is cold below 70° F., tepid between 85° and 92° F., warm between 92° and 98°, and hot between 98° and 110°. In bathing helpless patients they may be lowered into the bath, which has been prepared at the temperature ordered; for this purpose a blanket is much safer than a sheet as the latter may tear. After the bath they should be dried with towels previously warmed, wrapped in warm blankets and put back to a bed containing hot bottles. Hot baths are generally used to promote perspiration, for which purpose the heat may be applied as hot air, steam, or hot water, and their efficiency stands in this order. To give a *hot air bath*, the bed is prepared by covering the mattress with a waterproof sheet and a blanket, and the patient by stripping him and rolling him in a blanket. A long bed cradle is then placed over the patient, and is used to support more blankets so as to leave an air space between them and him. The air space is shut off from the exterior except at the foot of the bed, where the end of a funnel, heated over a special lamp, is placed. The funnel thus conveys the air heated by the lamp into the bed. The temperature is taken by a thermometer placed in the bed and the heating continued until the temperature ordered has been reached, it is then kept at this level for the time directed unless the patient becomes faint, when the lamp is withdrawn and a stimulant administered. The temperature commonly used is 150° F.; it will be found the bedclothes begin to scorch about 180° F. To give a *vapour bath*, the same preparations are made, except that the funnel is replaced by a steam kettle. The temperature that can be borne is much lower, 110° to 115° being about the limit. The time these baths are used is generally twenty minutes, after which the patient is rapidly rubbed dry and clad in warm flannel. Modifications of the vapour bath are the hot and the wet pack. To give a *hot pack* the bed is prepared as above, and the patient first stripped and then rolled in a blanket wrung out of boiling water, covered with a mackintosh sheet and one or more blankets and left for twenty minutes. In other words, a fomentation is applied to his whole body, and the perspiration thus caused is often great. A *wet pack* is given by wringing out a sheet in cold water and wrapping the patient in this, and again covering with a mackintosh and blankets. In this method the initial chill is followed by reaction and perspiration. The hot pack is most often used in disease of the kidney, and the wet pack to calm the nervous system and secure sleep in St. Vitus's Dance. *Cold Baths* are used in lowering the temperature in certain fevers, notably typhoid. The patient is lowered in a blanket into a bath at 90° F., and the temperature of the water then reduced to 70° F. by the addition of cold water. [Refer to *Typhoid.*] Cold is also applied by tepid sponging, and by the *cold pack*, which is given by wrapping the patient in a sheet wrung out of tepid or cold water, leaving him without further covering, and either changing the sheet for a fresh cold one every few minutes or chilling it by sprinkling it with cold water from the rose of a garden watering-pot. The length of time this treatment is continued is usually governed by the effect on the patient's temperature, which is taken at frequent intervals; if the temperature has fallen two degrees it may be expected to fall at least two more after the pack is discontinued. *Medicated Baths*, which consist of water with some chemical added, are often used. Those most often ordered are a mustard bath of a strength of twelve ounces of mustard to sixteen gallons of water; bran baths, for eczema, made by placing four to eight large handfuls of bran in a muslin bag and suspending in a hot bath; if the bran be not enclosed in a bag, the waste pipe will be blocked; oatmeal baths are prepared in the same way; alkaline baths by adding two ounces of washing soda or three of borax to the bath; sulphur baths by adding three ounces of sulphur and three of sulphide of calcium to the bath. Mud baths can now be obtained at Brighton as well as at Marienbad. *Turkish Baths* are often useful, but as a substitute for exercise in the fresh air they are bad and some complaints are unsuited to them, so that they are not recommended unless taken by medical advice.

BATTLEY'S SOLUTION. See *Opium.*

BEDROOM APPLIANCES. See the *Sick Room.*

BED-SORE is due to the death of the skin at a point exposed to prolonged pressure during confinement to bed. The pressure, by hindering the blood supply, reduces nutrition at this spot and normally relieves itself by causing a change of posture, but in the paralysed or in those exhausted by a long illness it does not do so, and the skin becomes first starved and then killed. Bed-sores are preventable by skilled nursing. The bed must be kept smooth and free from crumbs. The patient's skin must be kept dry and clean, and all parts exposed to pressure or to soiling with discharges, must be washed frequently with oatmeal water, well dried, rubbed with methylated spirit and then dusted with a powder made of zinc oxide and starch in equal parts. In very frequent diarrhœa or incontinence of urine the skin should be protected by zinc ointment. The appearance of the bed-sore is preceded by that of a red pressure spot; this should be constantly watched for and as soon as it is detected a water bed or a water ring pillow is required so as to relieve the pressure, and at the same time the spot should be painted with collodion. After the sore has formed, it should be dressed with an ointment composed of zinc ointment and castor oil in equal parts, and all pressure taken off it by means of a ring pillow. If the sore becomes gangrenous the separation of the dead part should be aided by boracic fomentations applied four-hourly.

BED-WETTING. See *Bladder.*

BEEF TEA. Remove all fat and skin from a pound of shin of beef; put it in a jar with a pint of cold water and a quarter teaspoonful of salt. Then place in a moderate oven and allow it to simmer only for three hours; strain and skim off all fat with paper and serve hot. A hot and palatable fluid is thus obtained which is stimulating but not really nourishing. During convalescence the addition of celery, carrots and other vegetables to the meat is recommended. Somatose, or Brand's essence, may be added, nourishment being thereby given as well as a stimulant. The addition of the juice of one green and rather sour grape to a bowl of beef tea alters the flavour pleasantly when the patient tires of the ordinary form.

BEER is nominally prepared from malt by fermentation, and by the addition of a solution of hops, but in reality much of the beer on the market consists of alcohol prepared from sugar, which is manufactured from rags or sawdust, and to which various cheap bitters have been added. It was in the sulphuric acid used in the manufacture of sugar that the arsenic was accidentally introduced, which caused the outbreak of arsenical poisoning in the Midlands during 1901. Much of the chemical beer is wholesome enough, but it seems only fair that the public should know when they buy it. Beer, when light is a wholesome dinner drink, because the bitter it contains stimulates the stomach, and the alcohol is in weak solution, 2 to 4 per cent; the sugar it contains, however, is not only fattening but disagrees with the digestion of many people, while the hops promote sleep, which makes beer unsuitable for lunch in many cases. Lager beer contains less alcohol and is often borne when the heavier beers are not, but the gouty and those liable to gravel should avoid beer entirely. The stronger ales contain about 6 per cent. of alcohol.

BELLADONNA is a drug, containing the alkaloid atropine, derived from the deadly nightshade. Belladonna plasters or glycerine may be applied externally for the relief of pain, or to check the secretion of milk. The internal administration of the drug should be left to the doctor only. [Refer to *Poisons.*]

BELL'S PARALYSIS is a paralysis of the facial nerve, named after Sir Charles Bell, who investigated the functions of this nerve.

BELTS to support the abdomen are valuable in pregnancy, corpulency and in rupture of the navel. Indigestion and constipation are at times relieved by their use. They should be made of suitable material, perforated for ventilation, and provided with lacing rather than elastic.

BERI-BERI is a disease characterised by progressive paralysis. According to Professor Osler it is known

to have occurred in the Roman army in 24 B.C., and the Chinese alluded to it in the second century, A.D. Epidemics occur from time to time in ships, gaols and asylums, and these places are then capable of infecting healthy persons, although direct infection from the sick to the healthy scarcely ever occurs. Though most common in the Malay Archipelago, serious outbreaks have occurred in the Japanese navy, in the fishing fleets off Newfoundland, and in the Richmond Asylum of Dublin. The cause is unknown, but bad hygiene, especially the prolonged use of bad rice and of fish, seems an important factor.

BILE is produced by the liver, stored till required in the gall bladder, and poured into the small intestine during digestion by being forced down the bile duct by the contraction of the gall bladder. About two and a half pints are formed daily. Bile in carnivorous animals is generally golden and in herbivorous animals green in colour, whilst in man it is either yellow, brown, or green. It is alkaline, and its chief function depends on this property, for it neutralises the acidity of the stomach contents when these are passed into the small intestine, and thereby enables the pancreatic juice to act. Its colouring matter is derived from the blood, and is in part discharged in the fæces, and in part reabsorbed and discharged in the urine. The normal colour of urine and fæces is derived chiefly from the bile. If the bile duct be blocked the bile cannot escape and is reabsorbed into the circulation and carried to all parts of the body, causing jaundice. When the bile is too thick and the bile passages chronically inflamed, the bile may solidify and produce stones known as gall-stones or biliary calculi. [Refer to *Colic, Jaundice, Liver.*]

BILIOUS ATTACK is a popular name for *migraine.* Migraine is not really dependent on disorder of the liver. The symptoms are headache, defective vision and vomiting of a few hours' duration only. The causes are eye-strain combined with excessive mental work and lack of exercise. In vomiting the stomach contents are expelled first, and then if vomiting is repeated, the contents of the small intestine are brought up and as these are bile stained, the liver was regarded as the cause of the symptoms. In reality it is a disturbed circulation in the brain which causes the headache, defective vision and vomiting. The *treatment* should be to go to bed in the dark and sip some hot tea, and after the vomiting is over to sleep. If attacks are frequent, the eyes should be tested and suitable spectacles worn if any defect is detected, plenty of fresh air, exercise, and plain diet should be secured, and reading in a bad light or in a railway train avoided. The term is also used to denote an attack of indigestion, due to disordered liver. Nausea, headache, pale motions, and high coloured urine are the chief symptoms. The treatment is a free purge and spare diet, followed by more exercise and fresh air.

BINDER. See *Childbirth* and *Infancy.*

BIRTH-MARK or nævus, is a patch of dilated veins and capillaries in the skin, which produces a port wine-like stain. As they can be destroyed by the surgeon and are apt to spread if left, advice should be sought early.

BISMUTH is a valuable remedy in certain cases of dyspepsia. In the form of the carbonate or subnitrate, it is a heavy, white, insoluble powder, largely used in the treatment of dyspepsia, specially when due to gastritis or gastric ulcer. The oxide and the subnitrate are also employed as dusting powders in the treatment of eczema and similar conditions of the skin. The subnitrate of bismuth may be snuffed up the nose to relieve a cold in the head.

BITES of insects should be treated by the application of dilute ammonia, failing this, a strong solution of washing soda or the blue bag should be used; dog-bites are best touched with silver nitrate or caustic potash and then dressed with boracic ointment. [Refer to *Snake-Bite.*]

BITTERS all stimulate the flow of gastric juice and so increase the digestive power at the time, but their continued use may result in diminished digestive power. Some bitters also act after their absorption into the circulation, but they then act in ways peculiar to each, thus hops promote sleep and strychnine wakefulness. The common bitters are hops, quassia, calumba and gentian.

BLACK CURRANT WATER. Allow two tablespoonfuls of black currant jam in a quart of water to simmer for half an hour, and then strain; when cold it forms a most refreshing drink.

BLACK DEATH. See *Plague.*

BLACK DRAUGHT is composed of Epsom salts, senna, liquorice and cardamoms. The dose is 1—2 fluid ounces for an adult. It is a useful aperient, taken before breakfast, but it is nauseous.

BLACK DROP. See *Opium.*

BLACK EYE is due to rupture of the small blood-vessels of the eyelids and to the escape of blood into the surrounding tissues. The escaped blood undergoes chemical changes which alter its colour and in time it is absorbed. The process may be hastened by applying hot fomentations. For the first few hours, cold should be applied to check the escape of more blood. The beef-steak so often used only acts by virtue of its coldness, and a handkerchief applied to the eye and kept moist with cold water acts just as well.

BLACK HEADS See *Acne.*

BLACK VOMIT is due to a broken blood-vessel in the stomach. The patient should be placed on a sofa or the floor and kept as still as possible, while a doctor is sent for; all tight clothing round the body should be loosened and a bag of ice may be placed over the stomach unless the patient is collapsed. A little ice may be allowed to suck.

BLADDER, GALL, is a small bag attached to the bile duct to receive bile and to store it until required.

BLADDER, URINARY, is a bag with muscular walls, situated deeply within the pelvis and having three openings, two above, which give entrance to the two ureters or tubes connecting the kidneys and the bladder, and one below, which gives exit to the urine by opening into the urethra. The function of the bladder is to retain the urine that it receives from the kidneys continuously, and to discharge the same at intervals. The exit from the bladder is guarded by a sphincter or muscular ring, which by contracting keeps the urine pent up in the bladder. When water is passed the bladder contracts and the sphincter relaxes. The bladder is under the control of the will to some extent, but when sufficiently distended, involuntary passage of urine normally occurs, though in many adults the urine can be held longer than is good for the bladder. Any quantity above a pint overdistends the bladder and does harm. In nursing unconscious or delirious patients the bladder must be constantly remembered. If urine is not passed four-hourly, the doctor should be summoned, and the bladder relieved by artificial means. Again, if the urine trickle away continuously medical aid is also required, as this symptom is often due to an overdistended bladder relieving itself imperfectly; too often in such a case the doctor is told that the patient is passing water freely, and is sent away with the impression that all is well.

Bladder, Irritable, causes inability to hold the water for the normal length of time, especially at night. The causes are numerous: the urine may be too acid, a stone may be present in the bladder, worms or polypi in the bowel may be the cause, circumcision may be required, or the nervous system may be at fault from over-pressure at school, fear, or at times from epileptic fits occurring at night. Parents should bear these facts in mind, as many of the cases finally brought to the doctor give a history of repeated punishment for wetting the bed, an act over which the wretched child had no control whatever.

Bladder, ruptured, is a rare accident generally due to a blow on the abdomen when the bladder is full, and at times due to retention of urine. The chance of recovery is slight.

Stone in bladder causes pain just after the bladder has been emptied and when the body is jolted; blood and slime in the urine; frequent passage of water, and at times stoppage of the water owing to the stone getting over the outlet and plugging it. The treatment is surgical.

Stoppage of the water is a serious accident requiring prompt

treatment. In childhood it is most often due to stone, in middle age to stricture; and in advanced life to an enlarged prostate. Before the doctor comes, the patient should be given a soap and water enema and be placed in a hot bath, when he may either pass water in the bath or when the bowels act. In the subjects of stricture or of enlarged prostate this accident is best prevented by avoiding alcoholic excess and chill. [Refer to *Stricture* and *Prostate*.]

BLANC-MANGE. It is useful during convalescence. To make it take cornflour two ounces, milk a pint, sugar one ounce. Mix the cornflour into a paste with a little cold milk and when the rest of the milk boils, stir in the cornflour and boil until the original quantity has been reduced by two-thirds; add the sugar and pour into a mould and allow to set.

BLAUD'S PILLS contain carbonate of iron, and are used in the treatment of anæmia. The dose is one to four after each meal. They disagree with many people, causing headache and constipation, and thus should only be taken by medical orders. Moreover, the majority of the ready-made Blaud's pills on the market are valueless, as the carbonate of iron rapidly degenerates into insoluble rust, and the pills must, therefore, be freshly prepared to have any medicinal value. Some makers colour the pills green, so that however long they are kept they still look on section to contain the green carbonate of iron, which in reality has long since changed to useless rust.

BLEACHING POWDER, or chlorinated lime, is used as a disinfectant for drains. It owes its value to the chlorine which it gives off. See *Disinfection*.

BLEEDING is now rarely performed, but is useful in cases of heart failure with blueness. [To arrest bleeding see *First Aid*.]

BLINDNESS is caused by injury or disease of the eye, or of the optic nerve which puts the eye in communication with the brain, or of that part of the brain concerned in vision. The chief cause amongst diseases of the eye is cataract, whilst the chief amongst disorder or disease of the brain are migraine, hysteria and cerebral tumour. Of these blindness due to migraine or hysteria are only temporary. *Colour-blindness* is due to a defect of the nervous structures of the eye, which causes inability to distinguish certain colours. The commonest form is that in which red and green are confused. [Refer to *Cataract*.]

BLISTER is a collection of fluid under the superficial skin. Its causes, which are numerous, include pressure, heat, chemical irritants and certain diseases, e.g., chicken pox and shingles. To *raise a blister* cantharides is used either in the form of a plaster or fluid. The skin should first be washed, and if fluid is to be used the surrounding skin should be protected by ointment. The fluid is then painted on and covered by cotton wool secured by strapping. If a plaster be used this is loosely strapped on. After an hour the blistering plaster or fluid should be removed and a poultice applied if the blister has not risen. After a blister has risen, whether its origin be due to accident or design, it should be snipped with clean scissors, the fluid dried by cotton wool and boracic ointment applied on linen. Blisters should not be applied over bony prominences or acutely inflamed skin, and are not used as often as formerly, except in the treatment of chronic inflammation of the joints. Flying blisters are those in which the plasters are removed as soon as redness has been produced.

BLOOD contains all the bodies required by the tissues as food and all the waste products which the tissues throw off. It consists of a fluid basis, the plasma or liquor sanguinis, in which float small microscopic bodies of two kinds, the red corpuscles and the white corpuscles. The red corpuscles are disc shaped and owe their colour to the possession of hæmoglobin, a chemical body containing iron, the function of which is to combine with oxygen in the lungs and to carry this to all parts of the body. The colour of oxy-hæmoglobin is scarlet, that of hæmoglobin deprived of its oxygen is bluish-purple, so that blood just left the lungs is scarlet, while blood returned from circulating in the body elsewhere is purple. The white corpuscles contain no hæmoglobin and their function is different; their use is to attack, to enclose and to destroy by digestion all foreign bodies in the blood, especially disease germs. They possess the power of independent motion and can leave the blood-vessels and attack germs situated in the surrounding tissues [Refer to *Inflammation*]. The blood is always alkaline, though in some diseases less so than in normal blood, thus the term acidity of the blood has no foundation in fact. The amount the human body is estimated to hold is five quarts, one half of which can be lost before death is inevitable. On exposure to the air or to any rough surface, blood solidifies to a jelly with a liquid residue, just as milk when curdled turns to curds and whey. This solidification, which is known as clotting or coagulation, is the natural process of stopping loss of blood from a wounded surface. Certain people suffer from a lack of this power and are known as "bleeders or hæmophilics" because the slightest wound gives rise to most prolonged bleeding. This defect is hereditary, being passed on from mother to son, the mothers presenting no symptoms and yet transmitting it to their sons, who suffer from the disorder all their lives. The danger of blood clotting is that when a blood-vessel becomes rough in its interior a clot is apt to form and so to block the blood supply to the area supplied by this vessel; many strokes and also gangrene in old people are thus caused.

BLOOD, LOSS OF. See *First Aid*.

BLOOD, POVERTY OF. See *Anæmia*.

BLOOD POISONING is a general term for any of three conditions, viz., sapræmia, pyæmia, and septicæmia. In the first the blood is poisoned by the absorption of the poisons produced by germs that have not entered the circulation; in the second by germs that are carried to some distant organ and there deposited, producing an abscess in this organ, which is usually a joint, the lung or the liver; in the third by germs that have invaded the blood and are actively multiplying therein. In all three cases the source of infection is some septic focus, such as a festering wound or a suppurating tonsil. The gravity of the affection is in the order stated. The *treatment* is to support the patient's strength with stimulants and easily digestible food, to remove the septic focus, to promote the discharge of the poison by keeping the bowels loose and to attempt to destroy the germs by the injection of anti-streptococcic serum. Such treatment requires medical supervision.

BLOOD-VESSELS are of three kinds, (1) those which carry blood from the heart, which are named *arteries*; (2) those which carry blood back to the heart, which are named veins; and (3) thin walled and microscopic vessels connecting arteries and veins, which are called *capillaries*. In the capillaries the fluid part of the blood leaks into and nourishes the surrounding tissues.

BLOWS over the *stomach* often produce shock, which should be treated by rest, warmth and a stimulant. Blows on the *head* often produce a cut in the scalp so clean and straight as to resemble a knife cut. If severe, a blow may only stun or may cause a fracture of the skull as well. In the latter case the symptoms are those of a man dead drunk, and a mistaken diagnosis of this nature is often made. From this condition of stupor the patient may rally or he may sink and die. If he rallies he will first vomit, then groan, and gradually regain consciousness, and will be very irritable for a few days, whilst his memory may be disturbed for months. The *treatment* is to put to bed and stimulate gently at first, and after the patient rallies to check the subsequent reaction by calomel, a milk diet and strict quiet. A long holiday before resuming work will be requisite.

BLUE OINTMENT is composed of metallic mercury, lard, and suet. When spread on flannel and worn next the skin, the mercury is absorbed. Mercury is often administered in this way. It is also used to promote the absorption of inflammatory swellings situated near the surface.

BLUE PILL owes its value to the metallic mercury it contains. The dose is 4—8 grains for an adult. It is a strong aperient, to be used with caution. Calomel is

more frequently used at the present day. Either remedy should be taken at night and followed by a saline aperient before breakfast.

BLUSHING is one of the modes by which emotions are expressed. Joy and shame are most commonly attended by it, anger usually causing pallor. The blush is due to a temporary relaxation of the muscular coats of the blood vessels in the skin of the face, neck, and chest, whereby the vessels are dilated and flushed with extra blood. A similar relaxation of the vessels may be produced by many causes, e.g. exposure to the sun, dyspepsia, alcohol, amyl nitrite, and many drugs, the condition then being termed flushing.

BOILS are abscesses in the skin. They contain a central core formed of a fragment of dead skin. The cause is debility combined with some local cause, such as the chafing of a collar. They are best treated by lancing and touching the interior with pure carbolic and not by the application of a linseed poultice, as this is apt to induce a crop of boils in the surrounding area. The general health should also receive attention, especially in regard to diet, fresh air and regularity of the bowels. The popular belief that boils throw off impurities from the blood has no foundation in fact. [See also *Opsonin.*]

BONES are adapted to form a framework capable of transmitting weight, of giving attachment to powerful muscles without bending, and in certain cases of protecting the organs they enclose, e.g. the brain or the heart and lungs. They develop either from gristle or from membrane, and some bones, e.g. the collar-bone from both; and differ from other organs of the body chiefly in the high percentage of mineral matter they contain. They consist of about two-thirds mineral matter, which is mainly chalk and phosphate of calcium, but in advanced life the percentage of mineral matter is higher and the bones in consequence more brittle at this time. In certain cases the bones are lightened by containing **cavities** full of air, thus the upper jaw is hollow and communicates with the nose. In birds this arrangement is present in nearly all the bones. The long bones, e.g., those of the arm or leg, contain marrow cavities. These contain in the child a red marrow that is concerned in the making of blood, but after growth is over the red marrow is largely replaced by yellow marrow. composed merely of fat. [Refer to *Broken Bone.*]

BONE DISEASE may be acute or chronic. In *acute bone disease* the membrane which covers them, known as the periosteum, becomes infected by a virulent germ and acutely inflamed, and at times this infection spreads through to the marrow within, when a condition known as osteo-myelitis is present. The symptoms produced are those of an acute fever and of intense pain and tenderness in the affected bone. The patient is usually a child. The treatment must be a prompt resort to surgery, or death from blood-poisoning will follow. When death of a bone as a whole occurs, "necrosis" is said to occur, but when an exposed bone dies on the surface only "Caries" is the term used. *Chronic bone disease* is most often due to the tubercle bacillus; this invades certain bones, especially those of the spine, ankle, knee and wrist, dissolves away the mineral matter and causes the bone to be replaced by a spongy tissue which soon breaks down into a cold abscess. The bone then crumbles and the cold abscess gradually makes its way to the surface; in the spine the deformity that results is the familiar hunch-back. [For treatment refer to *Spinal Disease.*]

BOOTS should have low heels, plenty of room at the toes, a flexible sole and no elastic sides. Boots need not be made with square toes in order to give the toes room, but the inner border should be as nearly straight as possible. Bunions, corns, hammer-toe and flat-foot are mainly caused by unsuitable boots.

BORAX is chiefly used as a mild antiseptic. The preparation known as honey of borax is a useful application to the mouth and gums in thrush and allied conditions. Glycerine of borax also makes a good mouth wash, if it be diluted with water seven times and ten drops of tincture of myrrh are added to each ounce of the mixture. An ounce of borax dissolved in half a pint of water makes a lotion that often relieves itching of the skin.

BORIC ACID is a mild antiseptic. A saturated solution of the acid in water may be used for washing wounds, whilst a teaspoonful of the acid to the pint of warm water forms an eye lotion useful in all cases of inflammation of the eye-lids.

BOWELS. See *Diarrhœa; Constipation; Stoppage of the Bowels* and *Inflammation of the Bowels.*

BRAIN is enclosed by the skull, between which and the brain are three membranes and a layer of fluid, so that the brain lies in a water bed, which protects it from concussion. The weight of the brain is about 49 ounces in the male and rather less in the female, this disparity being due to the weight of the average female being less than that of the average male. The relation of brain weight to body weight is in fish 1 to 5,000, birds 1 to 220, lower mammals 1 to 180, in apes 1 to 120, in man 1 to 50. The brain weight of distinguished men is on the whole higher than that of others, whilst that of Europeans is above that of savages; but there are many exceptions, quality being of more value than quantity. The brain of the lunatic can often not be distinguished from that of the normal man, nor can that of a criminal be recognised as such. Of the ultimate connection between brain and mind we are ignorant, but much knowledge has been gained during the last thirty years of the exact parts of the brain that are concerned in particular processes. Certain parts are now known to be concerned in the movement of the various parts of the body, and it is noteworthy that the right side of the body is controlled by the left side of the brain; other parts are concerned in vision, hearing and the other senses; it is thought, but it is not yet known for certain, that the frontal portion is concerned with mental processes alone. The bold claims of phrenology, which labels almost every spot in the skull with the name of a virtue or a vice, have no foundation in real science.

The diseases to which the brain is liable are numerous. Inflammation of its membranes is *meningitis.* This is commonly associated with *water on the brain,* because the brain is hollow and contains fluid, which normally is constantly overflowing through three minute pores into the space between the brain and its membranes, and when inflammation occurs the pores become blocked and fluid, which is being constantly formed within the brain, is locked up there. *Brain-fever* is a vague term in popular use to denote any condition accompanied by delirium, especially meningitis. Rupture of a blood-vessel within the brain causes *apoplexy;* clotting in a blood-vessel *cerebral thrombosis. Softening of the Brain* denotes the normal mental decay of advanced life, which may occur prematurely in certain cases. *Abscesses and tumours* also occur, in the treatment of which surgery has made great strides of late. [For *Concussion* refer to *Blows. Meningitis, Apoplexy, and Cerebral Thrombosis* are treated under their respective headings.]

BRANDY, Cognac and the best kinds are distilled from wine; the cheaper forms are prepared from malt. It contains 40 to 50 per cent. of alcohol and many ethers peculiar to itself. It is the best stimulant for medical purposes when a strong stimulant is required. When abused it is said to cause delirium tremens more often than any other form of alcohol.

BREAD consists of starch, gluten and salts chiefly. The finest flour consists of little more than starch, so that "seconds" flour is preferable for bread making. If more bran than that in seconds flour is used the bread is indigestible. In order that bread may readily be digested it must be thoroughly mixed with saliva. It is on this account that dough is made to rise in bread-making, either by the action of yeast or chemicals, or, as in "aerated bread," by pumping into the dough an aerated water. Bread made from such dough is porous and thus gives the saliva easy access to all its substance. Again, bread one day old is much more digestible than new bread, because being drier it soaks up more saliva, whilst toast or rusk is more digestible still, being still drier and also more brittle and therefore more easily masticated. French toast, on the other hand, made by soaking bread in melted

butter, is indigestible because the fat prevents the saliva reaching the bread. As bread depends on saliva very largely for digestion, a baby cannot digest it before six months after birth, as the saliva does not come till then. In diabetes bread is used, made from flour washed free of starch, which is known as gluten bread.

BREAST. Hard nodules in the breast in middle-aged women require immediate attention, as they may be cancer. [See *Child-birth.*]

BREAST-PANG. See *Angina Pectoris.*

BREATHING See *Respiration.*

BREATH, OFFENSIVE, may be caused by an unhealthy state of the teeth, throat, or stomach, and in children may be due to a piece of slate pencil or other foreign body that has been passed into the nose and not removed. If the teeth, gums or throat be at fault, a mouth wash such as the following will be useful :—Tincture of myrrh twenty drops, glycerine of borax one drachm, and water to the ounce.

BRIGHT'S DISEASE, named after the physician who first described it, includes all forms of inflammation of the kidneys. The two chief forms are acute and chronic Bright's disease. The *acute* form is caused by chill or by certain poisons, e.g. alcohol or that of one of the fevers, especially scarlet fever. The *symptoms* are dropsy, scanty urine containing blood, vomiting and a rise of temperature. The *treatment* should be rest in bed and rest of the kidneys by throwing their work on to the skin and bowels, which when stimulated are capable of doing much normally performed by the kidneys. The patient should be clad in flannel and the bed be stripped of the sheets, blankets alone being used. The skin is made to act by copious draughts of water followed by hot packs daily (see *baths*), and the bowels are stimulated by the free use of Epsom salts. Poultices may also be applied to the loins. Gin is a popular remedy, which irritates the kidneys and does much harm. The diet should be milk and bread and butter. The *chronic* form may result from the acute form but more often appears without obvious cause in middle age. It is very common in the gouty and those whose habits lead to gout. The *symptoms* are often for years confined to the presence of albumin in the urine, which may be only detected when the sufferer tries to insure his life. In time, however, the general health suffers, the mental power is not so good, headaches, attacks of vomiting and slight puffiness of the eyelids supervene, the arteries become hard and brittle and apoplexy may result. The *treatment* is to regulate the daily habits so as to reduce the work the kidneys have to do as much as possible. This is done by taking meat only once daily, by abstaining from alcohol and by making the skin and the bowels act freely. A daily sweat should be obtained and a daily bath taken ; chill carefully avoided. Epsom salts and an occasional dose of calomel taken, flannel worn next the skin, and plenty of water drunk. The best climate is an equable one. No drugs will cure the damaged kidney.

BROKEN BONES. Simple fractures are those in which the skin is intact, compound fractures those in which the skin is broken as well as the bone, impacted fractures are those in which one fragment is embedded in the other. They heal by throwing out much temporary tissue, known as callus, to act as scaffolding to hold the two ends of the bone together. The less perfectly the affected limb is kept at rest the greater the callus formation. In setting a broken bone no attempt is made to fit the fragments into each other, as all the sharp ends are absorbed in the process of repair, but the bones must be brought as near together as possible and the joint both above and below prevented from moving by suitable splints. A great change has come in the treatment of fractures. Up till quite lately the most rigid prevention of movement was secured for many weeks, with the result that while the bone healed the muscles wasted and the joints became immovable. Now the limb as a whole is considered, massage and passive movement are begun early and splints soon discarded. The X rays and the free use of anæsthetics have done much for the treatment of fractures. An anæsthetic is not merely to relieve pain, it is to relax the muscles which are preventing the bones from being brought together. [Refer to *First Aid.*]

BROMIDE of potassium, sodium, or ammonia, is used in the treatment of epilepsy and insomnia. It should only be taken by medical orders.

BRONCHI are the two air tubes which put the windpipe into communication with the lungs. They are liable to inflammation, a condition termed bronchitis.

BRONCHITIS may be acute or chronic, and either an independent affection or due to some other disease, especially certain fevers. The disease consists of inflammation of the lining membrane of the bronchi, which are the tubes into which the windpipe opens. The *symptoms* of an acute attack are a feeling of rawness at the top of the chest, hoarseness, and cough which is at first dry and hacking, and later in the attack loose ; the expectoration is at first scanty, then more copious and more frothy, and later becomes yellow and again scanty ; the temperature is usually not much raised. The treatment should be confinement to bed, in a room the air of which is moistened by a steam kettle and kept at an even temperature, of 60° in winter and 65° in summer. Special care is required between two and four in the morning not to let the temperature of the room fall. The diet should be light and plenty of barley water and imperial drink allowed. Counter irritation over the upper end of the chest is at times useful, which is effected by the application of mustard leaves or of turpentine liniment. Medicine is required to make the skin act and to check the useless cough in the early stage, and the best for this purpose for an adult is probably ten grains of Dover's Powder at bed-time. When the cough loosens, medicine to aid expectoration is required, such as sal volatile half a drachm, spirits of chloroform ten drops and infusion of senega to the ounce ; to be taken every four hours. In severe attacks of bronchitis the inflammation may spread to the lung, or the strain of coughing may dilate the heart and cause increased shortness of breath and blueness of the face ; brandy and other heart stimulants will then be requisite. Except in very mild cases the treatment should be in medical hands from the outset. *Chronic bronchitis* is common in those of advanced years who have been much exposed to all weathers in their work. The treatment should be flannel garments next the skin, especial care being taken to keep the upper part of the chest covered, avoidance of inclemency of the weather, and of dusty or stuffy rooms and the use of certain medicines when the cough is tight to "cut the phlegm" ; for this purpose syrup of squills is recommended in half-teaspoonful doses in a small quantity of either water or linseed tea. The cough should not be suppressed by opium, especially at night, as this is dangerous, and a word of caution is necessary because many patent cough cures contain opium. Chronic bronchitis in youth should receive prompt attention, as it may be the onset of consumption.

BROW AGUE is a form of neuralgia. [See *Neuralgia.*]

BRUISE is of the same nature and requires the same treatment as a black eye. [See *Black Eye.*]

BUBO is inflammation of a lymphatic gland. The lymphatic glands strain the lymph passing through them, and if germs be present stop them. The germs then cause inflammation in the gland instead of reaching the blood and poisoning it. All the lymph from the hand and arm drains through the glands of the arm pit, hence a sore on the finger may cause a bubo in the arm pit ; again the lymph in the foot, leg, and thigh passes to the glands of the groin, and a bubo here is a common result of a sore heel, whilst a sore throat may cause a bubo at the angle of the jaw. The *treatment* should be rest and the local application of fomentations ; if an abscess forms this should be lanced. A light diet and a purge should also be taken.

BUNION is caused by the prolonged use of pointed toed boots. By such boots the big toe is thrust towards the centre line of the foot and the base of the toe exposed to pressure unduly. The frequent repetition of pressure always excites the growth of the part pressed on, hence the base of the big toe enlarges and the bursa or water

cushion between the bone and the skin also enlarges. The swelling thus caused is known as a bunion. It is very apt to become inflamed. The treatment should be preventive, but when the bunion is present further pressure should be avoided by special boots, and in severe cases a surgical operation may be resorted to.

BURNETT'S FLUID is a useful disinfectant for drains. The chief ingredient is chloride of zinc, and it is, therefore, poisonous. It is best used undiluted if a thorough disinfectant is required.

BURNS AND SCALDS are dangerous when severe. The depth to which a burn penetrates is of less importance than the area it involves; there is always hope of recovery if less than one-third of the whole skin is destroyed. The dangers of burns are at first shock to the nervous system; later blood poisoning, pneumonia, or exhaustion, and finally deformity may result from contraction of the scars. (1) Treatment when *severe*. Wrap the child in a blanket and put it to bed at once without removal of the burnt clothes. Apply hot bottles, wrapped in flannel, to the feet and place one on each side of the child. Give it brandy and hot water, the right dose of which is a teaspoonful of brandy if under two years of age and half a teaspoonful more for each year that the child is over two, until a dose of three teaspoonfuls has been reached. The brandy should be given in two tablespoonfuls of hot water. Any part of the burnt surface which is exposed to the air should be at once protected by clean rag or unstarched muslin, spread with vaseline or soaked in olive or carron oil, and failing this by flour shaken from a dredger. Nothing further should be attempted till the doctor comes. Plenty of hot water should be ready, as it may be decided to place the child in a hot bath, when the doctor arrives, in order to combat shock and soak off the burnt clothing. (2) Treatment when *slight*. While remedies are being prepared the burnt part should be plunged into cold water. Cotton wool and a bandage should be applied, or failing this a mixture of whitening and vinegar, or flour or oil on rag may be used. Next day boric or eucalyptus ointment spread on clean linen should be applied, and if the burnt surface is caked with flour, a bread poultice should be applied first, as this will leave the surface clean. Any blisters that form should be pricked. (3) Treatment of *scalds of mouth and throat*. This accident results from children drinking from the kettle. The doctor should be sent for and tracheotomy may become necessary owing to the subsequent swelling of the throat obstructing breathing. No attempt should be made to treat the burnt mouth before the doctor arrives, but the child should be wrapped in a shawl and nursed by the fire.

BURSA is a natural water cushion for relieving pressure. It forms in response to pressure, hence many are normally present at points where tendons pass over bones. The followers of many occupations present special bursæ formed as the result of their work; of these trades bursæ as they are called, the housemaid's knee is probably the best known. Bursæ are apt to become inflamed, a condition known as bursitis. The treatment then required is rest of the affected limb, and if an abscess forms free incision.

CACHET consists of two discs of wafer paper enclosing a drug between them. The cachet is swallowed whole, and the taste of the drug is thus avoided. Many nauseous drugs are administered by this means.

CACHEXIA, literally "bad condition," is a term used to denote the exhausted state produced by such a grave disease as cancer when it has existed for some time.

CÆCUM is a short piece of bowel, attached to the Vermiform Appendix at its lower end, opening into the large bowel at its upper end. [See *Appendicitis*.]

CÆSARIAN SECTION consists in opening the abdomen and the womb and then in removing the child with the after-birth. The operation is resorted to when other means of delivery are ineffectual. The name is due to the legend that Julius Cæsar was brought into the world in this way.

CAFFEIN is the alkaloid contained in tea and coffee. Caffein citrate is a white powder, devoid of smell, but possessing a slightly acid taste. A five grain dose may be taken to relieve a sick headache, and repeated twice, if desired, within the next four hours, but not more often. Phenacetin (dose: grains, five to ten) is usually more efficacious, but both may be often taken with advantage at the same time.

CAJUPUT OIL has a warm aromatic taste and a strong odour resembling camphor. One to three drops may be taken on sugar to relieve flatulence, or ten drops of spirits of cajuput may be taken in a tablespoonful of water.

CALCULUS is a stone formed within the body. It is met with most often in the biliary or the urinary passages. [Refer to *Bladder, Gall-stones*.]

CALOMEL, or subchloride of mercury, is an insoluble, tasteless powder. A dose of two grains taken at night acts on the bowels freely next morning. It is well to follow it by a Seidlitz powder before breakfast, otherwise it may act repeatedly throughout the following day. Calomel is too strong a purge to use frequently, and is best taken by medical advice only. It is not suited for administration to children.

CAMOMILE. See *Chamomile*.

CAMPHOR, when applied externally, produces redness of the skin, and acts as a mild counter-irritant. For this purpose camphorated oil or compound camphor liniment should be used. When taken internally, camphor relieves flatulence and acts as a heart stimulant. It should be taken in the form of spirits of camphor (dose, ten drops) in milk or on sugar, but not in water. In large doses camphor is poisonous. Though so often used in tooth powders, it probably does harm by making the enamel of the teeth crack.

CANCER is a malignant growth, having the property of giving rise to secondary growths exactly like itself in distant organs. The tumour grows faster than the new blood-vessels required to nourish it, with the result that in time the tumour mortifies, the skin over it breaks down, and a foul ulcerating wound is produced which gradually wears out the sufferer. The disease seems on the increase. The *cause* of cancer in spite of much research is not yet discovered. Certain facts are, however, known. Heredity plays some part, though the healthiest may be attacked; age also influences the liability to attack. One form of cancer, known as sarcoma, attacks specially the very young and the very old; whilst the other form of cancer, carcinoma, is rare before thirty and only common between forty and sixty. (Many of the higher animals are liable to the disease). The disease is most common in wooded districts and along the banks of rivers, like the Thames, which flow through a clay district and flood their banks often. Many examples are now on record of houses, in which one tenant after another has died of cancer, as though the houses were infected; and recently a group of cases, in which all alike had frequented the same bar of a village inn, has been reported. Again, a cancer, at times, gives rise to a second cancer in skin that rubs constantly against it, as in the case of a paralysed arm that lay on a cancer of the breast; so that there is evidence for the infectivity of cancer; and this suggests a parasite as the cause. This view is also supported by the fact that cancer is apt to develop at points that have long been exposed to injury, such as the friction of a broken tooth against the tongue or of the constant pressure of the shoemaker's last against his stomach. Many observers have found bodies that look like parasites in cancer, but no one has yet isolated the parasite and with it caused undoubted cancer in animals. If not due to a parasite, cancer may be due to tissue that has remained latent since birth, and which in response to injury or other cause, late in life takes on an abnormal activity of growth. The *symptoms* of cancer vary with the organ attacked. In women the breast and the womb and in men the tongue, lips, stomach and bowel are the chief organs attacked. The presence of any wart or of hard lumps under the skin or on the tongue, and any offensive or blood-stained discharge at any time of life, should receive prompt attention, because while probably examination will prove it due to nothing serious, yet it may be cancer, and delay prove fatal. If only cancer

be recognised sufficiently soon and the surgeon be sufficiently thorough, cancer may be and often is completely eradicated. The *treatment* of cancer by caustics, by radium and by various serums has so far failed, though in the closely allied rodent ulcer the X rays and the Finsen Light treatment have been of some service. [Refer to *Rodent Ulcer.*]

CANCRUM ORIS. See *Noma.*

CANTHARIDES is a drug derived from a beetle. Though occasionally given in medicine, it is mainly used externally to raise blisters, or to promote the growth of the hair. [See *Blister, Baldness.*]

CAPILLARY is a bloodvessel, microscopic in size, which connects an artery to a vein. A network of capillaries is present in all parts of the body except the hair, the nails, the surface of the skin, the gristle, and the transparent part of the eye-ball. Capillaries were first demonstrated by Malpighi in 1661. The name is derived from *capilla*, a hair, though capillaries are really of much smaller diameter.

CAPSICUM, when dried and powdered, is known as red pepper or cayenne. Three drops of tincture of capsicum in a tablespoonful of water may be taken to relieve flatulence.

CAPSULE is made of gelatine, and contains a dose of some drug, the taste of which it is desirable to avoid. Capsules are taken like pills.

CARBOLIC ACID. See *Disinfection, Toothache.*

CARBUNCLE is like a large boil, but is more deeply situated and it discharges through several openings in the skin instead of one. The commonest site is at the back of the neck. Carbuncles occur most often in men who are gouty, alcoholic or diabetic. The effect on the general health is always great and may be fatal. The treatment is to make two incisions freely into the carbuncle at right angles to each other and then to apply boric fomentations every three hours until the wound is clean and healthy; the general health requires ample support by stimulants and nourishing food; the bowels also should be attended to.

CARCINOMA. See *Cancer.*

CARIES. See *Teeth* and *Bone Disease.*

CARMINATIVES are remedies which relieve flatulence. Most of them owe their value to an essential oil; peppermint, ginger, cloves, cardamoms and cajuput are examples.

CAROTID is the main artery of the neck.

CARRON OIL is composed of lime water and linseed oil in equal parts. It is a useful application for burns.

CARTILAGE is the technical name for gristle, a tissue adapted to act as elastic padding. Hence we find a pad of cartilage between each of the vertebræ in the spine, and a lining of cartilage in the joints. In the knee joint there are, in addition, two semicircular pads of cartilage, one of which is apt to become displaced, an accident common on the football field. The majority of the bones exist first in the form of gristle, changing to bone gradually; in old age much of the cartilage becomes impregnated with chalky material, and thus loses its elasticity.

CASCARA is a drug of bitter taste and aperient action. Tablets containing two grains of the dry extract of cascara form a safe and useful laxative in cases of chronic constipation. They should be taken at night. The dose is from two to eight grains, but two grains usually are sufficient; if not, it may be followed by a dose of salts before breakfast. The liquid extract (dose, a half to one teaspoonful) is a rather more active aperient, but has a nauseous taste that can be only partially disguised by the addition of liquorice or sal volatile.

CASEIN is the nitrogenous part of the curd of milk. It is now prepared on the large scale, and used to increase the nutritive value of other foods, e.g., soups, chocolate, etc. [Refer to *Food.*]

CASTOR OIL is one of the safest aperients, but it requires disguising not to be nauseous. Many ways have been recommended; of these giving castor oil in tea, coffee, soup and yolk of egg we do not advise; as subsequent distaste for these articles may result. We recommend that the oil, the medicine glass and the milk used to dilute the oil be all well warmed, and the glass then wetted round the margin, some warm milk placed in the glass, then the oil and then some more milk; the dose should then be administered without shaking the glass. The sense of taste may be blunted beforehand by a pinch of salt on the tongue; after the dose, eating a raisin cleans the mouth very well. Instead of giving the oil in milk it may be given to adults in hot brandy and water.

CATALEPSY is a disease of the nervous system in which consciousness is modified or absent, power of motion and sensation lost, and the limbs remain in whatever position they are placed. The daily press is always referring to some one or other alleged to have been buried alive while in a cataleptic state, but in reality catalepsy is infinitely rare.

CATARACT is an opacity in the lens of the eye. The public think it is on the surface of the eye, whereas it is really deeply placed. Certain kinds of cataract occur in childhood, but the most common form is a disease of advanced life. The symptoms are gradual failing of vision, not at first so marked in a dim light. The treatment is to wear dark glasses if these are found of service, and to wait until the cataract is ripe and then have it removed, afterwards the place of the lens in vision will be taken by a suitable spectacle glass.

CATARRH, literally "flowing down," indicates an inflammation of a mucous membrane, accompanied by an increased discharge of mucus. A cold in the head is the most familiar example of a catarrh.

CATHETER is an instrument for drawing off water from the bladder. The material of which they are made is either metal, gum elastic, or rubber. Catheters for the female are also made of glass, but these are not recommended. In certain cases the frequent passage of a catheter may be necessary for years, and the sufferer may have to do this himself. Let him bear in mind the following points:—only soft catheters are safe in his hands; the catheter used must present no flaws or rough surfaces, and it must be sterilised before and after use. The gum elastic kind are best sterilised by keeping them in glycerine which contains perchloride of mercury of a strength of one in two thousand; the rubber catheter should be boiled before and after use.

CAUSTICS are substances which destroy the tissues by their chemical action. They are used to remove warts, to touch dog-bites and to stimulate ulcers, which heal slowly. Caustics have done much harm in cancer by partially destroying it and stimulating it to renewed activity, but in the form of secret remedies for cancer they are still in use. The chief caustics in use are fuming nitric acid, glacial acetic acid, silver nitrate or lunar caustic, caustic potash, pure carbolic acid, and arsenic.

CAUTERY is a means of destroying tissue by heat. It may take the form of a white hot iron heated in the fire or more often at the present day of an electric-cautery in which the heat is produced by the electric current. The electric cautery is of especial value in operations in the nose, as it can be passed cold and only made white hot by turning on the current when the exact spot to be burnt is in contact with it. Another form of cautery in wide use is the Paquelin's benzoline cautery, in which the cautery is kept hot by a jet of benzoline vapour.

CAYENNE. See *Capsicum.*

CELL is the term used to denote the elements of which the body is built. All living matter is composed of cells; in the lowest forms of plant and animal life, the organism consists of one cell only, in the higher forms of more than one cell, except at the beginning of life. The beginning of each individual is an ovum or egg, which is a single cell; but directly the egg begins to develop, it divides so that the one cell becomes two, and the two four, and so on, until a mass of cells results which differentiate into the various organs of the future animal. In certain cases the cells secrete material in which they lie imbedded; for instance in bone, which consists of few cells and much intercellular chalky material. In other cases the cells remain in contact with one another with a minimum of intercellular material; in fact, only just enough to cement the cells firmly together, skin is an example of this form. In yet a third variety of

tissue, the cells secrete fluid and produce a tissue composed of fluid with cells floating in it; for example, blood. The cells, together with the intercellular material they produce, form a "tissue." Cells always arise by the division into two of a pre-existing cell, and hence tumours always arise by the abnormal activity of the cells at the site of the future tumour, a fact of great import only realised comparatively recently and first expressed by Virchow in the classic phrase, "Omnis cellula e cellula."

CELLULAR TISSUE is a term used to denote the loose connective tissue the meshes of which form spaces that contain lymph.

CELLULITIS is inflammation of the cellular tissue, and most often occurs in the cellular tissue beneath the skin. The symptoms are high fever and great swelling, heat, pain and redness of the skin of the affected part with a marked tendency to spread up the limb. The tension caused often leads, if unrelieved, to the death of much tissue and subsequent abscess formation; general blood-poisoning is to be feared. The *treatment* is to make free incisions into the inflamed area and then to apply boracic fomentations and to place the limb in a boracic bath for an hour or two a day; the general condition requires free stimulation and nourishing diet. A doctor is of course essential.

CEREBRAL THROMBOSIS is a clotting of a blood-vessel in the brain. By this accident the part of the brain supplied by the blood-vessel is cut off from the circulation and its functions abolished. The causes are a sluggish circulation combined with arteries that are roughened in their interior. Such a condition most often occurs in old people with Bright's disease or gout, and as the circulation is feeblest during sleep, cerebral thrombosis most often occurs at night. When the patient wakes he finds himself unable to get out of bed because he has had a stroke down one side, and if this be on the right side, the speech is often affected also. As a rule some recovery takes place, but often a second stroke occurs due to the clot spreading or forming on the other side of the brain. The leg recovers before the arm and the arm before the hand; in two months, if any recovery is to be expected, signs of improvement should be present. The *treatment* should be such as to stimulate the circulation and thus hinder further clotting. The paralysed limbs should be gently massaged and the joints moved twice daily to prevent contracture developing. [Compare with *Apoplexy.*]

CHAFING is best avoided by keeping the parts dry and clean. Oatmeal water should be used for washing the affected part, and after drying by dabbing with a soft towel, a dusting powder of zinc oxide and starch in equal parts should be applied.

CHALK, in the form of prepared or precipitated chalk, may be used to check mild diarrhœa. The dose is ten to sixty grains every two hours till the diarrhœa is controlled. A more convenient form of this drug is chalk mixture (dose, one to two tablespoonfuls). It may be given to children. Precipitated chalk may be used as a dusting powder for moist eczema or as a tooth powder.

CHALK STONE is a deposit of urate of soda, which occurs in the ears or fingers of the subjects of gout. [Refer to *Gout.*]

CHALYBEATE. Though chalybeate waters contain much iron in solution, they are seldom the best means of administering iron.

CHAMOMILE. An infusion of tea prepared from the flower heads of this plant is an old-fashioned remedy for flatulence (dose, two to six tablespoonfuls). In larger doses it often causes vomiting. Poultices prepared from chamomile have no special advantage over an ordinary linseed poultice. To make chamomile tea, pour a pint of boiling water on an ounce of the dried flower heads, and after allowing to stand for a quarter of an hour, strain through muslin.

CHAMPAGNE contains only twelve per cent. of alcohol, but when effervescing is very stimulating. It is much used in medicine in cases of obstinate vomiting and in pneumonia.

CHANGE OF LIFE, or the climacteric or menopause, is the name of the time of life at which menstruation normally ceases. The symptoms most often met with at the climacteric are at the outset irregularities in menstruation, a change of weight, which is generally a gain but may be a marked loss; troublesome flushings often followed by sweating; emotional disturbance passing into insanity in certain cases. The age is usually forty-five to fifty, and the duration of the change of life often extends to two years. The only treatment required is to avoid worry as much as possible and to live a quiet, healthy life. The symptoms described, having not been experienced before, often give rise to the belief that they indicate some grave disease, which is best combated by impressing on the mind that these symptoms are normal and will pass away in time.

CHAPS on the hands are best avoided by washing in cold water and by the use of equal parts of glycerine and lotio rubra just before the hands are dried. When present chaps are best treated by rubbing in glycerine or glycola, and wearing clean cotton gloves all night. Deep cracks may be stimulated to heal by touching with lunar caustic. *Cracked lips* are best treated with cold cream. [For *Chapped nipple* see *Child Birth.*]

CHARCOAL has little or no action, and is not recommended either as a poultice or for internal use. It may be used as a tooth powder, but there are many powders which are better.

CHEESE. See *Food.*

CHEST is bounded above by the root of the neck, below by the diaphragm, in front by the sternum or breast bone, behind by the backbone, and on each side by the ribs. The chest contains the heart with its great vessels enclosed in a bag—the pericardium—which is attached below to the diaphragm: the lower end of the wind-pipe dividing into the two bronchi, to each of which a lung is attached. Each lung is covered by a membrane—the pleura—which passes from the root of the lung over the pericardium to the breast bone, and thence over the inner surface of the chest wall to the backbone, and from there back to the root of the lung. The space between the lung and the chest wall is thus lined with pleura, and is known as the pleural cavity, which is normally very small, because the lung remains in contact with the chest wall. The pleural cavity contains a little fluid, and when the pleura is inflamed this fluid is often much increased, the lung is compressed, and the pleural cavity enlarged. Lastly, passing down in front of the backbone behind the heart are the gullet, the descending aorta, the two sympathetic and vagus nerves and the thoracic duct.

CHICKEN POX is a highly infectious disease due to a germ, which is not yet discovered. Usually there is only a slight feeling of illness and little or no fever. The rash is often the first symptom, and this appears as red spots, which rapidly change to blisters, and some of these to mattery heads. The spots usually dry to scabs, which separate in a few days, leaving at times deep scars. Infectiousness is at an end when all the scabs have fallen off. The *treatment* should be strict isolation till all the scabs are off; confinement to bed will only be necessary for a day or two while the child is feverish; scratching should be discouraged and if necessary prevented by cutting the nails short and placing the hands in gloves without fingers. Warm baths are recommended as aids to the separation of the scabs. No medicine is required and no complications need be dreaded, but the toys and clothing used by the invalid should be disinfected. [Refer to *Fevers; Sick Room; Small Pox.*]

CHILBLAIN is due to the paralysis, by cold, of the blood-vessels in the affected part. The fingers, toes, ears and more rarely the tip of the nose are most often attacked, and certain people with a sluggish circulation are more prone to chilblains than others; many children grow out of them. In the first stage of a chilblain the part is white and cold; in the second stage congested, hot, red and itching. The treatment should be preventive; in cold weather loose woollen gloves should be worn and tight boots avoided, exercise encouraged, and the skin kept clean and dry. When a chilblain has formed it should be painted with collodion or anointed with 10 per cent. ichthyol in lanolin, or dusted with starch and wrapped

in cotton wool. Care should be taken that the skin does not break; but if this happens the sore should be treated with boracic ointment.

CHILD-BIRTH. About a fortnight before delivery more ease in breathing, combined with greater difficulty with the bowels, occurs. This symptom is a sign of approaching labour, but the actual onset of labour is indicated by recurrent abdominal pains. It is the occurrence of pains regularly every quarter of an hour which indicates the time to send for the doctor. The preparations necessary for labour comprise the preparation both of the labour room and of the patient. The room should be clean; the bed narrow with a hair mattress, which should be covered by a mackintosh, a blanket, a sheet, and by a second mackintosh and sheet, so that after the labour the top sheet and mackintosh can be removed and the bed left ready without further manipulation. As the life of the patient depends chiefly on the hands of the attendants being clean, a nail brush, soap and water must be provided and a bowl of strong Condy's fluid. The hands having been washed thoroughly are soaked in the Condy's fluid, whilst one hundred is counted, and are then dried on clean towels; furniture, fireirons, etc., should be held also in a clean towel and not by the naked hand. The following articles are requisite:—night table, bed pan, douche can, enema syringe, female catheter, medicine glass, sal volatile, glycerine, carbolised vaseline, smelling salts, a fan, plenty of clean towels and diapers, the binder and safety pins, needle and cotton, the materials for washing and clothing the child and treating the cord; and a good fire with a large kettle of hot water. The patient should be prepared by being suitably clothed and by the administration of an aperient. A dressing-gown, night dress, flannel petticoat, stockings and slippers are recommended as the most suitable clothing. In the management of labour, the golden rules are to be patient, clean, and prompt in detecting anything abnormal. Only one attendant should be present in the room whilst another should be within call.

The mother should remain in bed ten days and only get up on a sofa for the next four or five days. The temperature should be taken night and morning, and whenever above 100° F. the doctor at once informed. The diet should be a spoon one until the bowels act; the latter require to be moved by an aperient as a rule, given on the second night. The milk does not come freely till the third day, when the breasts become full and tender and the temperature often reaches 100° F. If the baby fails to relieve this fulness, the milk should be drawn off by a breast pump, otherwise an abscess may form. The nipples must be carefully dried every time they have been used, or they will crack. Such cracks may cause an abscess of the breast and are best treated by touching them with lunar caustic. Flat or badly formed nipples may require the use of a nipple shield to enable the baby to suck. Should the baby be stillborn, the milk may be dried up by applying belladonna plasters to each breast, a central hole allowing the nipple to protrude, the diet taken should at the same time be dry and rather scanty and a dose of Epsom salts be taken. The chief dangers are puerperal fever, which most often sets in with a rigor on the third or the tenth day; and rarely an acute form of insanity occurs.

CHILDHOOD. Infancy, or the first two years of life, is dealt with under that heading. After this age the diet should be varied, and much the same as that of the parents. Milk should be used freely, plenty of water allowed, tea and coffee used moderately and no food or sweets between meals permitted; highly spiced and all smoked foods except bacon are unsuitable; fat is best given in the form of good butter and of milk, sugar in puddings, etc., is good food; buns, new bread, pastry and cheese are unsuitable; the last meal should be light. The clothing should be flannel next the skin unless the skin is irritable, when silk or fine calico has to be used and flannel worn over this; the top of the chest and the legs, the feet and the hands are the parts that require keeping warm; all tight belts, hats and garters are harmful. Neither coddling nor hardening methods are recommended, but the same common sense should be used in the daily habits of the child as the parents employ for themselves. Sleep should be ample and regular, the bedtime should be early, the bed should have a hair mattress, the covering should be light and on no account should the child be allowed to sleep with the head under the clothes; the bedroom window should be open at the top; the best night-dress is flannel combinations, as most children kick off the bed-clothes during sleep; a fire in the bedroom is not recommended. Restless sleep is probably due to indigestion. Mouth breathing and snoring during sleep may be due to adenoids, and should be reported to the family doctor. In the day time the minimum of restraint is the object to be aimed at. To laugh, romp, make weird noises and to get spotted with dirt are essential to health and to normal growth both of body and mind. A child should be taken for a run in the country just as a dog is taken—not on the chain—he should be kept in sight and encouraged to poke about and find for himself objects of amusement; the ball should be used early, as the best introduction to sports, the skipping rope is also valuable; all toys will be introduced into the mouth, and on this account must not be coloured with poisonous paints.

A child should be taught self-control from an early age. Implicit obedience should be insisted on, so that this becomes habitual before the child is three. It should be clean in its habits by the time it is two, and if not so by this age either the parents are to blame or the child is weak-minded. Book-learning should not be pressed till the child is seven or eight, but much mental training can be acquired before this age from the surroundings in the home, the street and the country, and the natural inquisitiveness of the child's mind should be encouraged. This is best done not by telling the child not to ask foolish questions but when necessary by the frank statement that the question cannot be answered. To deceive a child is to lose his confidence and to teach him to be untruthful. [Refer to *Growth.*]

CHLORODYNE. See *Opium.*

CHLOROFORM. See *Anæsthetics.* **CHLOROSIS.** See *Anæmia.*

CHOCOLATE. See *Cocoa.*

CHOKING is best treated, if any treatment be required, by a smart slap between the shoulders. Fish bones sometimes become fixed in the throat. They are best dislodged by copious draughts of water or by eating some bread and butter. Rarely a doctor may be required.

CHOLERA is an infectious disease caused by a germ, that is spread in water, and characterised by profuse diarrhœa, rapid loss of strength and by a fatal ending in most of the cases. Cholera nostras or British cholera is the name of the epidemic diarrhœa that breaks out often in the summer months. The symptoms are similar but less severe.

CIDER made from apples, as well as perry from pears, contains over 5 per cent. of alcohol, and both are therefore stronger than small beer. They are slightly aperient.

CIGARETTE. See *Smoking.*

CIRCULATION is the passage of the blood from the heart to all parts of the body and back to the heart. The blood is now known to pass from the left side of the heart to all parts of the body except the lungs, and thence to the right side of the heart, which sends it back to the left side of the heart by passing it through the lungs, where it is purified. The passage of the blood from right heart to left heart through the lungs was discovered by Servetus in 1553, but the completion of the circuit was only demonstrated as recently as 1628 by Harvey. The result of this discovery was to prevent any patient consulting Harvey for ten years, so absurd were his views considered. The actual passage of the blood through the capillaries was first seen by Malpighi in 1661 with the aid of a lens. Up till Harvey's time the chief arteries were thought to carry air and not blood. [See *Blood-vessels; Heart.*]

CITRIC ACID is a colourless powder of acid taste, readily soluble in water. Two ounces to the pint of water make a solution rather stronger than lemon juice. The dose of citric acid is five to twenty grains. It is often used to produce an effervescing draught, a saltspoonful

of citric acid dissolved in a tablespoonful of cold water may be mixed with a similar solution of bicarbonate of soda, or potash, and the draught taken whilst it is effervescing. Such a draught forms a refreshing summer drink, and has a slightly diuretic action. Although not so effective as lemon juice, citric acid helps to ward off scurvy when fresh food cannot be obtained.

CITRINE OINTMENT contains nitrate of mercury. It is used to destroy the various animal and vegetable parasites which infest the skin, and to relieve itching. It should at first be applied to only a small part of the skin as it may prove too strong for some people.

CLARET contains 15 per cent. of alcohol. Its slightly acid quality makes it very acceptable when the mouth is parched, but like all red wines it is more astringent than white wines like Hock.

CLEFT PALATE is due to an imperfect development of the palate. The defect can be remedied by the surgeon most easily whilst the patient is still an infant.

CLERGYMAN'S SORE THROAT is a chronic inflammation of the throat due to over-use of the voice. An astringent gargle, such as alum, five drachms to the pint, should be used, the voice rested, and the general health toned up.

CLIMACTERIC is the change of life. [See this heading.]

CLIMATE. Various races of man live in widely different climates and maintain their health, nevertheless climate has a bearing on the prevalence of certain diseases. In Great Britain those river valleys which run south-west and north-east are ventilated freely by the prevailing winds, and are comparatively free from rheumatic fever and heart disease. Cancer is most prevalent along those rivers which frequently flood their banks, whilst consumption is least prevalent in these valleys and most prevalent in dry and exposed districts where cancer is not common. During convalescence certain health resorts are much more suitable than others. [See *Health Resorts.*]

CLINICAL MEDICINE is the study of medicine at the bedside, by the examination and observation of individual cases.

CLOTHING. See *Childhood; Infancy.*

CLOVES. One to three drops of oil of cloves may be taken on sugar to relieve flatulence. Cotton wool soaked in the oil may be placed in the cavity of a decayed tooth to relieve toothache.

CLUB-FOOT is a mal-position of the foot either dating from birth or from some form of paralysis, especially infantile paralysis. The deformity is caused by the paralysis of certain muscles and the over-action of others, which normally antagonise the action of those that are paralysed. In club-foot dating from birth it is probable that abnormal position of the child in the womb is the cause. Much can be done by splints, and if necessary by operation to remedy the condition, more especially if treatment be begun as soon after birth as possible. It is a great mistake to go direct to an instrument maker, as a surgeon generally uses much simpler and cheaper appliances.

CLYSTER. See *Enema.*

COCAINE is an alkaloid much used in surgery to numb the part on which the operation is to be performed. Coca leaves are chewed by the natives of Peru in order to deaden the pangs of hunger during long journeys without food. In this country there are, unfortunately, many slaves to the baneful habit of taking cocaine, a habit often combined with alcoholism. For this reason cocaine should never be used except in obedience to medical orders.

COCOA is more nutritious than tea or coffee and is like them a stimulant. The stimulating properties are due to theobromine, whilst that of tea and coffee are due to caffeine. Plasmon-cocoa is cocoa to which more nitrogenous food, viz. the casein of milk, has been added, and is still more nourishing though not so palatable to some people. Chocolate is cocoa and sugar worked up together, and is a most nourishing food suitable for a walking tour and for children. Milk-chocolate is prepared with milk, and is both nourishing and digestible.

COD-LIVER OIL is one of the most digestible forms of fat. Its taste may be covered by giving it as cod-liver oil and extract of malt mixture. A treacle-like mixture is thus formed which children take readily. Cod-liver oil is also advantageously given as an emulsion. Another way of giving cod-liver oil is by pouring away the oil from a tin of sardines and substituting cod-liver oil. After a few days the sardines will have soaked up the oil and be ready for use. The dose is from one to four teaspoonfuls twice daily after food.

COFFEE is a wholesome stimulant, which the stomach tolerates better than tea. The active ingredient is caffeine. Adulteration with chicory is widely practised, which is not deleterious though often fraudulent.

COLD IN THE HEAD is usually a disease in itself, but may be the onset of measles or influenza. The symptoms are too familiar to need description. The old saying, "three days coming, three at its height, and three going" is an accurate description, and should it last much longer medical advice should be sought, as neglected colds may be the onset of consumption. The prevention of colds may be effected with some success by an open-air life, cold baths in the mornings, plain diet, and by suitable clothing and sound boots; the stuffy room is the place in which the cold is caught. An attack should be treated by inhaling menthol or eucalyptus, or steam, by an aperient and by the use of cold cream locally.

COLD ON THE CHEST. See *Bronchitis.*

COLIC is a severe abdominal pain due to the irregular muscular contraction of some abdominal organ. There are three chief forms (1) intestinal, (2) renal and (3) biliary colic. The first form results from irritation of an obstruction within the bowel; the second is caused by the passage of a stone from the kidney to the bladder; the third is caused by the passage of a gall stone from the gall bladder to the intestine. The *Symptoms* are similar in all three forms. Intense abdominal pain of sudden outset is combined with sweating, coldness of the extremities and vomiting. The pain may double the sufferer up or he may roll on the floor in agony and unlike the pain of peritonitis it is relieved by pressure. The treatment should always be in medical hands, more especially as a small rupture may have become nipped by the abdominal wall through which it passes and be the real cause of the colic, for in such a case every hour of delay diminishes the chance of recovery. Before the doctor's arrival an olive oil enema at a temperature of 102° F. and about a pint in quantity may be injected and linseed poultices applied to the abdomen. A special form of intestinal colic occurs in painters and other lead workers due to the irritation of a daily dose of lead over long periods. The malady can be largely prevented by carefully cleansing the hands before meals and by avoiding the production of an atmosphere laden in dried paint. [See *Lead Poisoning.*] The *treatment* of an attack is a good dose of castor oil containing ten drops of laudanum, an olive oil enema and poultices to the abdomen.

COLLODION is made by dissolving gun cotton in ether and alcohol. Though not explosive, it is inflammable, and should be kept in glass bottles with good glass stoppers. Collodion is useful for clean cuts, chilblains, and corns. [See *Separate Heads.*]

COLON is the large intestine, from its origin at the ileo-cæcal valve to the sigmoid flexure, which is situated near the termination of the intestine. Inflammation of the Colon is *Colitis*, one form of which is dysentery.

COMA is a state of unconsciousness, so deep that the patient cannot be roused. The breathing is usually slow and the pulse also slow and easily felt, thus differing from the pulse of a fainting fit, in which the pulse is weak and difficult to feel. The causes fall under two groups, (1) injury to and (2) poisoning of the brain. Injury may be due to fracture of the skull or to rupture of a blood-vessel within the brain (that is apoplexy); poison may have been swallowed or injected under the skin, e.g., opium or carbolic acid or great excess of alcohol, or it may be produced within the body by constitutional disorders, e.g., Bright's disease and diabetes. Medical aid should be obtained, the head and shoulders meanwhile kept raised, no stimulants given and if necessary artificial respiration performed. Any

suspicious looking drinking vessel or powder that may suggest poison should be carefully preserved.

COMMINUTED FRACTURE denotes a bone splintered into fragments. Many people wrongly call such an accident simply a fracture, using the term broken bone to denote a bone broken in two cleanly. Properly speaking, however, any form of broken bone is a fracture. [Refer to *First Aid.*]

COMPLEXION varies with different races and in different phases of health. A good complexion is best obtained by living a healthy life. A yellow skin with marked whiteness of the eyes is due to a form of anæmia, but a yellow skin with yellow eyes is due to jaundice; a muddy complexion is common with indigestion, worry and overwork; a pasty complexion results from an excess of starchy foods with a deficiency of open air exercise; a bright flush on the cheeks with prominent veins on the temples and a thin wasted form is common in consumption; dilated veins over the cheek bones with a sallow complexion and slightly jaundiced eye are common in sufferers from disease of the liver due to chronic alcoholism; an engorgement of all the vessels of the face, nose and eye with bluish ears is seen in those liable to apoplexy; blueness of the lips and at times of the face also occurs in defective circulation due to heart disease or other cause; pimples most often indicate constipation; freckles occur in the thin skinned. The face may be protected from sunburn by a blue-green veil, and in the Himalayas the natives apply a protective powder with good results; probably calamine lotion would answer the purpose. Freckles are best not treated. Bathing the skin in lemon juice has been widely recommended and probably does no harm, though only curing by giving the freckle time to fade. More active measures are not advised, as the freckle is deep in the skin. Freckles may be prevented in the same way as sunburn. [Refer to *Acne* and *Acne Rosacea.*]

CONCUSSION. See *Blows.*

CONDY'S FLUID is a safe and useful antiseptic for domestic use. Sufficient should be added to water to make the mixture a bright pink.

CONFECTION is a powdered drug made into a paste with syrup; e.g. confection of senna (dose, half a teaspoonful), which forms a useful aperient that should be taken at bedtime.

CONFECTIONERY may be wholesome if properly made. Pastry made with good butter often agrees, when if the butter be replaced by fat or bad butter it disagrees. Sweets should only be allowed at meals, and they should be coloured with harmless material. The danger from poisonous colouring matter is far less than formerly, owing to the increased uses of the aniline dyes; carmine, cochineal and the juice of various fruits, e.g., cherry, currant, etc., are harmless; so also are indigo, saffron, spinach juice and Chinese ink. The dangerous colouring matters include lead chromate, Prussian blue, Scheele's green, vermilion made of oxide of mercury and white lead. The flavour of oil of bitter almonds used in almond paste, etc., is poisonous, and except in small quantities food flavoured with it is not wholesome.

CONGESTION denotes an excess of blood in any given area. The condition may be due to some obstruction to the circulation in the large veins that carry off the blood from the part. This variety of congestion is *passive* congestion. It occurs from heart disease, varicose veins, etc. On the other hand the congestion may be due to an increased supply of blood to the part. This variety is *active* congestion. It occurs usually as the first stage of inflammation, and is due to the presence of some irritant, e.g., a chemical, like turpentine, or a germ. [Refer to *Inflammation.*]

CONJUNCTIVA is the membrane which connects the eye to the eye-lids. Inflammation of the membrane is known as conjunctivitis. [Refer to *Eye.*]

CONSTIPATION, or Costiveness, is present when the bowels are not relieved thoroughly once a day.

The symptoms this causes vary. In certain cases, especially in women, no bad effects appear to result; in the majority, however, very definite symptoms result, such as bad taste in the mouth, coated tongue, headache, pimples on the face. Worse than these symptoms are the mental effects; good temper, a happy disposition, or a keen intellect are rarely possessed by those who are constipated. The peevish child, the nagging woman, the irritable man, the morbidly religious and the would-be suicide have this one fact in common, they are all constipated. A dose of castor oil is, in fact, very often the wisest form of corporal punishment for a child.

The treatment of constipation may be summed up in one word—prevention. Whereas the popular method is to allow violent purging to alternate with several days of constipation, or to produce chronic dilatation of the large bowel by frequent copious enemata.

To have to resort to a pill is in itself a confession of failure. First then acquire a regular habit of obtaining relief for the bowels at the same time each day. This should always be after a meal, because the taking of a meal is a natural stimulus. This stimulus may be increased by the use of tobacco after the meal in the majority of men. The best time is after breakfast, but for the city man who must catch his train, it is often wise to substitute for this the time after his evening meal. Otherwise he is tempted to omit obtaining relief whenever a little late; it is thus that much trouble begins. Regular exercise must be taken without profuse sweating; of the suitable forms, horse exercise is far the best, but cycling and walking are also good. Fresh air must be obtained as much as possible to improve the general muscular tone. It will be found, however, that the sudden change from a stuffy dwelling to the cliffs of the sea shore will cause constipation at first. This is only temporary, and demands a mild aperient. It is not true that the air is too strong, as is commonly said. A cold bath in the morning and massage of the abdomen are often useful. The diet should contain sufficient laxative materials, such as honey, prunes, wholemeal bread and fruits that contain seeds. In obstinate constipation, however, to continue the use of much fruit rich in seeds is a mistake, as it aggravates the condition. It is when the use of these avoids the necessity for medicine that they do good. When the above methods fail, medicine will be required. This medicine must be as little irritating as possible; castor oil, Epsom salts and senna are safe but nasty. Cascara in tabloid form is a little more irritating but is good and widely used. Three to six grains of extract of cascara at night, followed by two ounces of white mixture in the morning, is good. [White mixture is made by adding sixty grains of Epsom salts to one quarter this amount of carbonate of magnesia and shaking up in an ounce of peppermint water.]

This treatment should not be applied once only except in the case of very occasional constipation. If there is a marked tendency to constipation, it should be applied every day until a regular habit has been formed. As soon as the bowels are regular on this treatment the cascara is omitted and the white mixture alone used. After another week this can generally be omitted also, provided that it is resumed if the bowels do not act regularly without it. A pleasant substitute for white mixture is Hunyadi Janos. In the event of cascara and white mixture being ineffectual, the addition of nux vomica, belladonna or aloes to the cascara may be necessary. Of these aloes is to be avoided if possible, especially if piles are present. The majority of the patent pills contain aloes. All strong aperients must be avoided as much as possible and left off as soon as possible. For convenience of reference the following list may be of service:

> *Laxatives;* syrup of figs, syrup of senna, sulphur, fluid magnesia, castor oil in small doses, honey, treacle, and raisins or prunes. *Aperients;* liquorice powder, Epsom salts, cascara, senna or castor oil in larger doses, belladonna, hyoscyamus, nux vomica, aloes, rhubarb, blue pill, grey powder, calomel, and seidlitz powders. *Drastic Purgatives;* colocynth, jalap, scammony, asafœtida, gamboge, and croton oil. These drugs are not to be given without medical orders.

For the approximate composition of the chief patent pills see the "Lancet" for Nov. 28, 1903, Analysis by Dr. R. Hutchison. In this connection we may remember to

advantage the epitaph quoted by Dr. W. B. Cheadle, namely:

"If I had stuck to Epsom Salts
I shouldn't be lying in these here vaults."

"The best tonic is three drachms of Epsom Salts," wrote Dr. Hare in "Good Remedies out of Fashion."

Enemata are injections into the lower bowel. These should not be used without medical advice. In the same way the introduction of the tallow candle or the conical piece of soap so commonly practised by nursemaids on the infants under their charge is not recommended, whilst the introduction of paper is to be strongly condemned. The treatment of constipation in childhood consists in establishing regular habits, aided by massage, bathing, exercise and a mixed diet. If a drug is required, select one from the heading "laxatives" in the above list. Great pains must be taken to establish regular habits as early in life as possible, and to avoid the necessity for a resort to drugs.

CONSUMPTION, phthisis or pulmonary tuberculosis, is a disease of the lungs due to the attack of the tubercle bacillus discovered by Koch in 1882. The *causes* which enable the germ to successfully invade the body are various; an inherited tendency, dusty trades, indoor work, over-crowded dwellings, alcoholic excess, insufficient food, rapid child-bearing and prolonged suckling are the chief causes, and generally two or more of these are at work; thus a dusty trade is generally combined with alcoholism and insufficient food with an over-crowded dwelling. The tendency to consumption is not inherited by all the members of a family necessarily; for instance there was a nurse at the Brompton Hospital for nearly thirty years, who retired quite well and who had lost all the other members of her family from consumption, though none of them had been exposed to infection as much as herself. The age most liable is youth, but all ages are susceptible, indeed many of our aged paupers with chronic coughs have consumption of a slowly progressive kind. The *mode of infection* is nearly always by means of infected air or food; it is very rarely by direct transmission of the germ from mother to child during pregnancy. Consumptives infect the air around them only slightly by talking and coughing, but they infect it seriously if the expectoration is allowed to dry and float in the air as dust, hence spitting in train or tram cars is a public danger. The other chief source of infection is infected milk; cows suffer from tuberculosis of the udder, and their milk then contains the germ; such milk is unfit for human food unless thoroughly boiled. Koch has denied that infection can occur in this way, but the work of subsequent observers both in his own country and in ours points to his being wrong. The *mode of onset* varies, the chief forms are:—(1) a cold on the chest which does not get well, (2) a gradual loss of energy with indigestion, anæmia and some loss of weight, (3) the sudden expectoration of blood may be the first symptom, and (4) it may follow influenza or pleurisy, measles or whooping-cough. The *symptoms* are cough, wasting, night sweats, and a nocturnal rise of temperature. The illness may last months or many years, and it may end in recovery if taken in time, but more often temporary improvement alternates with relapses over a series of years; the mode of death is usually from exhaustion, or is sudden owing to a fatal hæmorrhage from the lungs. The prospect of recovery depends mainly on early treatment. The *treatment* should be preventive, and as one-tenth of the total death rate is due to phthisis public money will be well spent on prevention [See *Fevers*]. Those with a consumptive family history should feed well, take little alcohol, if any, and live much in the open air as well as sleep in well ventilated bedrooms; their place of residence should be such as to give the maximum of out-of-door life and their occupation also selected from the same point of view; it is noteworthy that sailors are prone to phthisis, so that the sea is not recommended as a calling. The treatment of consumption has made a great advance by the introduction of the open-air method combined with rest, abundant fatty food, no alcohol and no drugs. The fat, in England, is generally given as milk and butter, four pints of the former and a quarter of a pound of the latter being given daily in addition to a full meat diet. As the patient becomes convalescent he is allowed exercise; which is gradually increased as his condition permits. Cases are now also treated by Dr. Wright's method. (See *Opsonin*). The treatment should be begun at one of the Sanatoria, but when the right habits have been formed there the treatment can be easily carried out at home, even though this be in a large town; the use of a night cap in sleeping out is warmly recommended, as it both keeps the ears warm and shuts out the noise of the early morning street traffic. The material coughed up should never be swallowed, and it should be received into rag, instead of handkerchiefs, and at once burnt or else into a spittoon containing chinosol, sanitas or other disinfectant; the rooms occupied should be dusted with damp cloths daily; the invalid should sleep in a room alone; the consumptive mother should not suckle her child. If these precautions be adopted, other members of the family can mix with the invalid without risk, and their doing so will aid recovery. District visitors and all workers amongst the poor might do much good by diffusing these simple rules. [For treatment of *Hæmorrhage* from the *Lungs*, See *First Aid*.]

CONTAGION. See *Disinfection.*

CONTUSION is a bruise. See *Black-eye.*

CONVALESCENT INSTITUTIONS are given in full in the Medical Directory.

CONVULSIONS is the term used to denote an attack of involuntary muscular action, in which a stage of rigidity is followed by one of alternate contraction and relaxation. In these attacks consciousness is often lost. The poor use the term "internal convulsions" to denote gripes. The *cause* of convulsions is some irritation of the nervous system, which may be conveyed to the brain from the skin or bowel, or be due to the blood supply to the brain containing some impurity, or be due to disease or injury of the brain itself. Thus teething, indigestible food or worms or a pin in the clothing may induce convulsions, or the blood may be poisoned by the onset of pneumonia, measles or other fever, or the nervous system injured by an attack of infantile paralysis. The *treatment* is to detect and if possible remove the cause. The child should be stripped, and then placed in a hot bath containing mustard and kept in until the arms of the nurse begin to tingle. Medical aid should meanwhile be obtained, but if not obtainable an enema should be given next and a dose of grey powder placed on the tongue.

COOKERY. Recipes for the common articles of invalid cookery such as certain beverages, meat extracts, preparations of milk and farinaceous food and jelly are given under the following heads:—

Albumen water	Arrowroot Gruel
Apple ,,	Blancmange
Barley ,,	Cornflour
Black Currant water	———
Tamarind water	Jelly
Toast ,,	Milk, including junket, whey, etc.
Rice ,,	———
Imperial drink	Beef tea
Lemonade	Raw meat juice
Linseed Tea	Mutton broth
———	Veal broth
Custard	
Eggs	

CORN is an overgrowth of the horny layer of the skin caused by repeated pressure, such as that due to a tight boot worn daily. Between the toes, where perspiration is often copious, the soft variety develops. The treatment should be preventive by seeing that the boots fit and that the feet are kept dry. When present a corn should be destroyed by painting it night and morning with a saturated solution of salicylic acid in collodion, and by protecting it, if between the toes, by a perforated felt plaster having the corn in the centre. Many other remedies have been tried for corns, such as soaking the feet in hot water and cutting with razors, the use of a file, and the application of galbanum plaster, but we recommend the salicylic collodion.

CORNFLOUR may be prepared as follows:—a tablespoonful of cornflour is worked into a paste with a little water; a quarter pint of milk is then mixed with a quarter pint of water and heated in a saucepan without boiling;

the cornflour paste is then stirred in and the stirring is continued for three and a half minutes after the mixture has thickened, when it is ready to serve. If it is desired to *pancreatise* cornflour, the mixture should be allowed to cool to 99° F. and then a teaspoonful of liquor pancreaticus and enough bicarbonate of soda to cover a threepenny piece is added; the saucepan lid is then put on and the whole allowed to stand in a warm place for twenty minutes and then is ready. It will be found much thinned by the pancreatisation. [Refer to *Blanc Mange.*]

CORPULENCE. See *Obesity.*

CORYZA is a cold in the head. See *Cold.*

COSMETICS should never be used; many of them are poisonous, and most of them if used repeatedly spoil the complexion permanently. The only real cosmetics are the laws of health.

COUGH is a symptom of irritation which is generally situated in some part of the respiratory tract, such as the throat, bronchi or lung substance but may be due to irritation of some distant organ, e.g., the heart and stomach, or to disturbance of the brain, as in hysterical cough. The folly of attempting to apply a cough cure for all coughs alike is thus apparent. In the old and young, suppressing a cough with some soothing syrup containing opium is very easy and very dangerous; a cough should not be suppressed but treated by removal of its cause, and if there be some tenacious secretion in the bronchi, the secretion requires thinning by ipecacuanha wine, sweet spirits of nitre, and salines; the cough will then loosen and relief be obtained. If on the other hand the source of irritation is in the throat, the use every three hours of astringent gargles, such as alum of a strength of half an ounce to the pint, followed by a dose of glycerine and lemon juice, may give relief. Unless the cough shows signs of ceasing within a few days, medical advice is requisite. [*Asthma; Bronchitis; Consumption; Sore Throat; Whooping Cough.*]

COUNTER-IRRITATION is a mode of treatment consisting in the application of an irritant to the skin over some deeper organ affected by disease. The congestion in the skin thus produced is often accompanied by relief of congestion in the deep organ, whilst pain is also much relieved. The counter-irritation is applied either as a chemical irritant or as a burn by cautery. The three chemicals used are cantharides, mustard and turpentine. The mustard leaf or the mustard and linseed poultice are familiar remedies. In chronic joint disease touching the skin over it with the actual cautery is often most efficacious, though not safe in non-professional hands. [Refer to *Blister.*]

CRADLE is better without rockers.

CRAMP is a painful spasm of the voluntary muscles most commonly occurring in the calves. The condition may result from cold, as in bathing, or be due to irritation of the stomach or intestines, as in severe diarrhœa or arsenical poisoning. Cramps of the back and the abdominal muscles also occur in lockjaw and strychnine poisoning. Cramp in the hand is generally due to strain of certain muscles overworked in the course of the daily work, as in writer's cramp and other forms of trade cramp. For simple cramp in the calves the best treatment is to push forward the heel and draw back the toes, or brisk friction with the hands or with compound camphor liniment also. Other forms of cramp require medical aid. So-called "Swimmer's Cramp" is a spasm of the arteries by which the circulation is seriously obstructed and heart failure induced. The treatment is warmth and stimulants. Colic corresponds to cramp, but attacks the involuntary muscles instead of the voluntary.

CREAM OF TARTAR, or acid tartrate of potash, is a gritty powder, fairly soluble in water, and of a pleasant acid taste. In doses of twenty to sixty grains, dissolved in water, it acts as a cooling drink and a diuretic, but in doses of a quarter to one ounce it is an aperient, which acts within two or three hours of being taken.

CREOLIN is prepared from coal tar. It is a valuable disinfectant, and if added to a bath of warm water till the water is just milky it is useful for relieving itching in nettlerash and allied conditions.

CREOSOTE is a yellowish liquid with a strong odour and burning taste. Cotton-wool soaked in creosote may be placed in a hollow tooth to relieve toothache, but some dry wool should be placed over it to protect the tongue, for it is a caustic. It is administered internally in certain chest diseases.

CRETIN. The thyroid gland in the neck pours into the blood a secretion which influences nutrition and growth. Enlargement of the thyroid gland produces the well known goitre or Derbyshire neck; absence of the thyroid secretion produces cretinism. The secretion may be absent because the thyroid is absent from birth, or because later in life the thyroid wastes away, or whilst enlarging and producing a goitre it yet fails to produce its secretion. The symptoms are most marked in those with no thyroid from birth, they ore stunted growth, the height rarely exceeding five feet, prominent abdomen, coarse features, dry skin, a slow pulse, sub-normal temperature, placid temper and defective intellect. In cretinism developing later in life —or myxœdema as it is called—the growth having been completed is of course unaffected, but the skin and mental changes are prominent. The treatment is to replace the secretion by thyroid extract obtained from the sheep, which fortunately is not destroyed by digestion and so can be given by the mouth instead of under the skin as was done at first. The effect of this treatment is remarkable, the growth is stimulated, the excessive weight lost, the temperature rises and the mind improves—a stunted idiot being thus changed into a comparatively normal being. The treatment to be safely carried out should be in medical hands. This treatment is one of the contributions to practical medicine which experimental physiology has furnished during recent years.

CRISIS denotes the sudden termination of a fever. Many fevers terminate in this way, the temperature falling five or more degrees within a few hours, the fall in the temperature being usually accompanied by sweating and more or less collapse. If this stage is passed through in safety the patient is usually out of danger. The term is also used to denote sudden paroxyms of pain occurring in the course of locomotor ataxy and other chronic diseases.

CROTON OIL is an oil expressed from the seeds of the croton oil plant. The oil is a powerful irritant, blistering the skin if applied to it, and producing violent purging if swallowed. Any dose greater than one drop is poisonous. It is seldom used medicinally.

CROUP is a spasm in the larynx or voice box due to inflammation. The commonest cause is diphtheria, but at times the inflammation is only of a temporary character and due to a cold or the onset of measles. The *Symptoms* of an attack are described under diphtheria. The *treatment* of simple croup is to apply a hot sponge or fomentations to the throat and to inhale steam. The use of ipecacuanha wine as an emetic is recommended by high authorities, but as this is dangerous in diphtheritic croup, and as the two forms of croup cannot be distinguished except by an experienced eye, we advise this treatment to be postponed till after the doctor's arrival. Seek medical aid at once.

CROWING, or Spasmodic Croup, is due to a spasm in the larynx of nervous origin without any inflammation locally. The affection is common in rickety children at teething time. The child on being annoyed or on waking is unable to catch its breath for some seconds, until the spasm relaxes, and with a long drawn inspiration or crow, air is drawn into the lungs and relief is obtained. Between the attacks the voice is normal and the breathing easy, which is not the case with inflammatory croup. The *treatment* should be that of rickets; the spasms are rarely fatal though frequent.

CUMULATIVE ACTION denotes the sudden occurrence of symptoms of poisoning after certain drugs have been taken without harm for some time. Some drugs are not excreted as fast as they are taken, and thus accumulate within the body till they poison it. This effect is one amongst many which renders it wise to leave drugs to the physician.

CUSTARD. Beat up the yolks of four eggs with an ounce of castor sugar and three quarters of a pint of milk; pour

into a jug and heat in a saucepan of water, stirring all the time so that the custard thickens without boiling. Serve cold in wineglasses with nutmeg grated over the surface or flavour with a little orange flower water. *Baked Custard* may be prepared by pouring the above mixture into a pie dish instead of a jug and baking in a moderate oven for twenty minutes. *Savoury Custard* is made by substituting chopped meat, pepper and salt for sugar in the above.

CYANOSIS, literally "blueness," is the blue colour presented by the skin when the respiration or circulation is embarrassed.

CYCLING is a most healthy exercise. The nature of the saddle is important to women, and the handle-bars are often too low in the men's cycles, so that a cyclist's stoop is developed, the chest cramped and the heart strained. Much harm may be done to the heart by abuse of cycling, the strain of cycling uphill and against the wind is very great, and there is much truth in the remark that the notice boards of "dangerous to cyclists" would often be more truly placed at the bottom of the hill instead of the top. Much breathlessness, palpitation and faintness are danger signals that no one should ignore.

CYST, literally a bladder, is any tumour that contains fluid. The sebaceous cyst, or wen, is the most common. This cyst arises from the mouth of an oil-gland in the skin becoming blocked. The gland continues to produce oil, which can no longer escape. The gland thus becomes distended with retained oil and forms a cyst in the skin. It can readily be removed under cocaine by the family doctor, without chloroform or other general anæsthetic being necessary. [Refer to *Hydatid Cyst.*]

DAMPNESS should be avoided as much as possible, both in the choice of a site for a residence and still more in the dwelling itself. Rheumatic, catarrhal and neuralgic affections are common in damp situations, and catarrhal affections of the respiratory tract may lead to consumption.

DANDELION TEA is of some value in stimulating digestion, and it has also a diuretic action. It may be prepared as follows:—Clean the dandelion roots and cut them into thin slices; place two ounces of the sliced root, with a quarter of an ounce of orange peel, in a jug and pour in a pint of boiling water; stand the jug under a tea-cosy in a warm place for an hour, and then strain. The dose is a cupful before meals three times a day. Personally, we think this a very poor substitute for proper medicine.

DANDRUFF is the formation of greasy white scales formed partly of dead skin and partly of the secretion of the oil glands of the hair. The condition is most common on the scalp. It is common in infancy, and is often due to the head being kept too warm. In later life it is often associated with indigestion and with exposure to the heat from a gas lamp just over the head for many hours a day. In infancy the crusts that form may be removed by applying rags soaked in olive oil, and zinc ointment should be then applied, and the head in future clothed more lightly. In later life the condition should be attended to, or baldness may occur prematurely. The general health should receive attention; the hair brushes and combs should be washed daily in washing soda and hot water; the hair should be washed daily with soap and water and afterwards with an alcoholic solution of perchloride of mercury, one grain to the ounce and then thoroughly dried; this lotion must be kept locked up and be in a proper poison bottle, labelled poison. [Refer to *Baldness.*]

DANGEROUS TRADES include a large number of occupations, which can be rendered safer by an increase of knowledge of the causes and their prevention amongst the employers and the employed and by wise factory regulations. Much has been done already, but there is much to be done yet, and the folly of the workmen themselves, who often will not take the least trouble to protect themselves, is one of the chief obstacles to progress. The second chief obstacle is the increased cost to the employer that precautionary measures so often involve, and which handicaps the capitalist in England in his competition with those on the continent, where the factory regulations are of the slightest or are non-existent. Many trades involve exposure to *dust* which may be metallic, as in knife grinding, gritty as in quarrying, carbonaceous as in coal mining or chimney sweeping, or be of a variety of other forms from which millers and workers in cotton, hair, hemp, and many other materials suffer. The harder the form of dust inhaled the worse for the lungs. The three forms first mentioned are the most unhealthy, as they cause a chronic fibrosis of the lungs which gradually destroys them, and all the dusty occupations predispose to consumption. By the introduction of wet grinding and special respirators the mortality amongst knife grinders has been much reduced. By insisting on the men not rushing in directly after blasting (a time when the air is laden with gritty dust), much might be done to lower the mortality at present very high amongst the diamond miners. Various methods for reducing the dust in the air the worker breathes are always followed by a reduced mortality; thus the improved ventilation of mines has done much for the coal miner. Many trades involve exposure to *poisons.* Thus hat making, bleaching, fur dyeing and other trades cause exposure to irritating fumes, and in many trades some poisonous material has to be used which is liable to be absorbed and to accumulate in the system of the worker. Of these *lead* is the chief. The workers in lead materials include house painters, plumbers, fitters, accumulator workers, iron plate enamellers, white lead makers, chrome workers, japanners and glaziers, file cutters, compositors and the cappers of bottles. The mode of absorption varies, and is either by contamination of the food, by inhalation of fine lead dust, or by absorption through the skin, as the acid sweat dissolves lead dust. The burning of paint off doors instead of scraping it off as formerly, has done much to remove one cause of lead poisoning amongst painters, but the mixing of the paints still causes some to be inhaled, and carelessness in not washing before meals accounts for much of the poisoning. Coach painters, who work all the year round suffer more than house painters, who work only about half the year. The symptoms produced are painter's colic, and paralysis which causes loss of the power to grip or to use the wrist, and is termed "dropped wrist." The sensory nerves are not affected. Another disease that lead causes is Bright's disease with gout. One-third of the hospital cases of gout are in painters. The introduction of glaze free from lead for pottery making is much to be desired.

The best treatment to avoid lead poisoning is a daily bath, cleansing the hands before meals, if soiled by lead compounds, with turpentine, and the use of Epsom salts to keep the bowels freely open. *Arsenical* poisoning occurs in workers in arsenic, making emerald-green, artificial flowers and bird-stuffing. By the use of improved ventilation and of the "wet method," the health of the arsenic makers has been much improved. The symptoms produced are anæmia, lassitude and paralysis, and in certain trades sores on the skin due to the caustic action of arsenical dust. *Mercury* may be absorbed by breathing it, or by the skin or by the mouth. In barometer making, bronzing, skin and fur dressing, mercury or its salts are used. Formerly gilding and mirror making caused much mercurial poisoning, but recently electro-plating has replaced the old methods and mercurialism thus avoided. The symptoms are tremor of the limbs, diarrhœa and wasting. The treatment is plenty of milk, the use of sulphur baths and of sulphur internally, attention to the cleanliness of the mouth and good ventilation of the workshop. *Bisulphide of Carbon* is used in vulcanising india-rubber, and the vapour is prone to fill the workshop. The fumes are most injurious; headache, defective sight, faintness, fits, paralysis in wrist and ankle, madness, sterility and miscarriage may occur. Abundant air space and specially good ventilation are imperative and it is to be hoped that some less deadly chemical will be discovered that can replace carbon bisulphide. When symptoms have begun, the only treatment is complete removal of the victim to healthy surroundings. *Phosphorus* formerly caused much suffering by producing necrosis of the jaw, or "phossy jaw," and other grave symptoms, but the introduction of safety matches, in which harmless red

phosphorus is used instead of the dangerous yellow phosphorus, has done much to minimise this evil. *Anthrax* or wool sorters' disease attacks those who sort wool, when it takes the form of a fatal pneumonia, and also attacks those who carry raw hides, when it takes the form of a malignant pustule or sore, which causes a fatal blood-poisoning if not rapidly treated. The disease is due to a germ which attacks sheep and cattle, and their infected wool or hides conveys the disease to man. *Small-Pox* is not very prone to attack attendants on the sick, ambulance drivers, etc., if re-vaccination is efficiently carried out, as is well shown in the Asylum Board Reports for 1903. *Typhus*, on the other hand, causes a heavy death rate among the attendants. Another group of dangerous trades are those involving severe muscular *strain*, e.g. the army and navy; in these rupture and aneurism are common. The military style of riding causes rupture in a great number of men. *Exposure* to all weathers promotes bronchitis and alcoholism as in cab-drivers, etc. Exposure to extremes of temperature, as in bakers and stokers, also promotes bronchitis and other chest affections. *Attitude*, as in cobblers, may be a cause of disease. In this trade pressure is applied to the lower end of the chest for hours together, with the result that the chest is often deformed and indigestion and cancer of the stomach are common. The frequent repetition of one movement causes the different *craft palsies*, e.g. writer's cramp, the treadler's cramp of the weaver, telegraphists' cramp, etc. In these affections the sufferer first becomes rapidly tired, and later loses the power altogether of carrying on the skilled movements of his trade. *Sedentary Occupations* cause dyspepsia, nervous irritability and gout. Lastly, many occupations promote alcoholism, not only public house work but many business pursuits.

DEAD, DISPOSAL OF THE. Burial is the almost universal custom in civilised countries. By this method decomposition occurs inevitably, and all attempts to delay the process are inadvisable, e.g. heavy wood or metal coffins and deep graves. Decomposition is much more rapid within a few feet of the surface; because the soil here contains sufficient air to enable many active bacteria to live which are absent deeper down; it is much more rapid if a wicker coffin be used instead of a wooden one, and if placed in a gravel soil instead of clay. Burial in quicklime gives the most rapid decomposition of all, a fact used in the burial of those who have succumbed to certain infectious diseases. Cremation is undoubtedly the most sanitary method and is growing in public favour; the method is, however, expensive, and it destroys the evidence of death from poison which burial often does not, so that the cause of death has to be certified by two medical men, one of whom must hold certain qualifications, before cremation is permitted. The law permits a body, that has died of an infectious disease, e.g. diphtheria or scarlet fever, to be sent abroad provided it be sealed up in a metal shell and a customs house official be present when the shell is sealed. The law does not permit a body to be removed from a fever hospital to a private house in England; it only permits removal to a public mortuary, such as that of the cemetery. But little is done at present, however, to remedy the evil occasioned by the presence of a corpse in the slums, where several people have to sleep in the same room. On the Continent the corpse is removed to a public mortuary within a few hours in such cases.

DEAFNESS may be due to many causes. The ear is a complicated piece of mechanism, and defect of any part is prone to throw the whole out of gear and cause deafness. We may, however, recognise four chief forms; (1) congenital deafness of both ears due to nerve defect, (2) throat deafness, often also attacking both ears, due in childhood very commonly to adenoids, (3) wax in the ear usually causing deafness more on one side than the other and more frequent in the elderly than in the young. (4) rupture of the drum membrane from injury or purulent discharge. Among the minor cases, certain drugs such as salicylate and quinine are worthy of note.

If deafness occur it is always safe to syringe out the ears, provided this be done as follows:—warm olive oil should be poured into the ear at night and a small plug of cotton wool placed in it; in the morning some water should be boiled and allowed to cool until it is comfortably warm and a teaspoonful of salt added to each pint; a syringe is then filled so that all air is excluded from it, a towel is placed over the shoulders of the patient and a bowl pressed firmly against the head just below the ear; the ear is then drawn upwards and backwards with the left hand, whilst the syringe is manipulated with the right. This treatment may be repeated for three or four days, and several syringefuls may be injected each time, care being taken that the nozzle of the syringe is not passed far into the ear. In throat-deafness any cold in the nose or sore throat should be attended to and relief may often be obtained in mild cases by the following plan:—close the mouth, compress the nostrils with the finger and thumb and make an effort to blow hard, and then swallow. By this plan air is often forced from the back of the nose into the ear through a passage known as the Eustachian tube. This tube is blocked from swelling due to inflammation that has spread from the nose or throat, and so has cut off the air in the throat from that inside the ear. As soon as the tube is opened up again either by the above method or with the passage of an instrument by the surgeon, the hearing returns. The above methods are the only ones we can safely recommend. Ear trumpets and other artificial aids to hearing should never be bought without medical advice, as the cause of the deafness may be capable of removal. For deaf-mutes much may be done by lip-reading, taught in institutions devoted to the subject. [Refer to ***Ear*** and *Ear-ache*.]

DEATH of the body as a whole occurs when the heart ceases to beat, but the individual organs of the body live on for varying lengths of time, ranging from a few moments to a few hours after the heart has ceased; thus the arteries empty themselves into the veins, the intestines continue to work, and the muscles can be thrown into action by an electric shock. In the lower animals the life of the individual organs is even less dependent on the life of the body as a whole; thus the heart of a tortoise removed after the tortoise has been killed by decapitation, will continue to beat for a day or two, and if cut into strips, each strip will go on working. Death generally begins with failure of (1) the circulation, (2) the respiration, or (3) the nervous system which keeps the two former functions working normally. Death from syncope, asphyxia or coma is said to occur according as (1), (2) or (3) is the mode of onset. The *signs of death* are cessation of the heart's action, cessation of the breathing, the gradual cooling of the body down to that of the room, the onset of rigidity or *rigor mortis* in the jaw and limbs, the formation of a film on the surface of the eyes, the pupil no longer contracting on exposure to bright light, the formation of dark patches, like bruises, on the skin of the under surface of the body due to blood gravitating there, and finally the onset of decomposition. The cessation of the pulse at the wrist only proves that the heart is not beating sufficiently strongly to make itself felt there, but if the heart is beating, by placing the hand just below the left nipple it can usually be felt, and by placing the ear to the same spot, heard. By placing a mirror over the mouth and nose the presence of breathing can be determined by the formation or not of a film of moisture. This is one of the best tests for the layman, as it combines simplicity with reliability. Placing a glass brimfull of water on the chest or upper part of the abdomen is also used to test breathing, as the slightest movement will spill the water, even though no movement appears definitely present. The other signs of death mentioned above require certain comments. The temperature of the body rises after death in certain cases for a few hours before the gradual cooling down to that of the surrounding objects begins. The onset of rigidity may be instantaneous, as in the case of certain soldiers shot on the battlefield, who have been found rigid in the act of waving a sword or taking aim with a musket or even retaining a firm seat on a galloping horse; on the other hand, in the aged and those exhausted by a long illness the onset of rigidity is delayed, ill-marked and of short duration. The usual time of onset is three hours after death, and the usual

duration is from one to two days. The formation of a film on the surface of the eyes is delayed in death from apoplexy, asphyxia and prussic acid. Death is *simulated* by catalepsy or trance, by asphyxia, and to a less extent by fainting. The appropriate treatment should be applied for some time without waiting to determine whether life is extinct, or the golden moment may be let slip. Catalepsy is infinitely rare and readily recognised by the pupil reacting to light and by the body retaining its warmth, so that the dread of being buried alive from which so many suffer is due chiefly to a sensational press and not to any essential difficulty in determining when life is extinct.

DEATH-RATE is the number of deaths per 1000 living that would occur in the course of a year were the death-rate of the week quoted to remain uniform during the year. The death-rate is published weekly by the Registrar-General, compiled by him from the death certificates. The returns show a fall in the death-rate of consumption, diphtheria, typhoid and many of the infectious diseases during recent years, but a rise in that from cancer and lunacy, whilst infantile mortality is still disgracefully high. The death-rate is higher in overcrowded districts than elsewhere. The high infantile mortality is due largely to ignorance of the way to rear a baby, but also to over-laying and to the free use of soothing syrups, many of which are readily obtained by the poor, though opium is the chief ingredient. In Germany over-laying is a criminal offence. There can be little doubt that many a death from over-laying and from soothing syrup is deliberate murder, a crime incited by the disgraceful system of child-insurance, which is still legal. The comparative mortality of different occupations shows that clergy and farm labourers have the lowest death-rate, that doctors have a higher death-rate than most occupations, higher even than coal miners, that the dusty trades, like knife grinders and sweeps, have a high death-rate, and that the highest is that found amongst costers, general labourers in large towns and public-house servants.

DEBILITY has many causes which fall into three main groups (1) overloading the system with more nutriment than can be made use of, (2) lack of nutrition, the result of defective teeth or disordered digestion, unsuitable diet, lack of fresh air, or mental strain, and often to most or all of these causes combined, (3) the presence of organic disease, e.g., typhoid, consumption, etc. The common mistake made is to forget group (1) entirely and to assume that want of energy demands extra nourishment, port wine, tonics, cod liver oil, etc., when more often than not a spare diet, a free purge and more exercise in the open air are urgently needed. "Talk of champagne," said Byron in one of his letters, "there is nothing which cheers your spirits up like a dose of Epsom salts." Group (1) is the common cause of debility amongst the middle-aged city men and also, be it noted, amongst the children of the upper classes. Group (2) is more common amongst the shop-assistants and female clerks. In debility we shall be fairly safe in recommending more fresh air and sunlight, and unless anæmia be marked or the temperature raised more exercise also. In anæmia fresh air without exertion, such as can be obtained on an electric tram, is what is wanted. Again, in most cases of debility the bowels are irregular and require attention. The diet should consist of regular meals, easily digestible, eaten slowly with nothing between meals. In group (2) it will generally be found that tea, butter and buns form the mid-day meal; this should be exchanged for a hot dinner of meat and two vegetables, followed by a little stewed fruit. In group (1) amongst adults a heavy lunch is followed by a heavier dinner in the evening, so that two substantial meals a day are eaten and exercise is limited to one afternoon a week or less. The prolonged use of tonic drugs without medical advice is not recommended, as congenial surroundings, sleep, exercise, cold baths, fresh air and sunlight are tonics beside which alcohol, strychnine and other poisons are worth little indeed, and when debility fails to react to the natural tonics just mentioned, the cause is likely to belong to group (3) and medical examination be urgently needed. [Refer to *Anæmia; Alcohol; Constipation; Gout.*]

DECAY. See *Teeth* and *Change of Life.*

DECLINE. See *Consumption.*

DEFORMITY. See *Bandy-legs; Club-foot; Flat-foot; Rickets; Spine; Wryneck.*

DELIRIUM is mental wandering. The symptom is a common one in the febrile disorders of childhood, and may occur in any illness in which the brain is fed by impure blood. There are two chief forms, active delirium and low muttering delirium. In the former there is excitement and often violent struggling if resistance has to be offered; in the latter the patient picks at the bed clothes and mutters incessantly, but, being exhausted, offers little resistance. In the adult the condition is graver than in the child. In either case the patient must never be left, and if possible two people should always be present. The treatment will necessarily be left to medical hands.

DELIRIUM TREMENS is a special form of delirium due to chronic alcoholism. It is apt to occur when pneumonia or a broken leg confines the patient to bed, and also follows a specially severe drinking bout. Distaste for drink is often an early symptom, which has given rise to the erroneous belief that witholding alcohol induces delirium tremens. The chief *symptoms* are fear, tremor and restlessness; the patient always asks for his trousers to get up and do some imaginary business round the corner, or will if not restrained go out without troubling to dress and may take the shortest route, viz., through the window; he is in fact always trying to get away from himself. Next the appearance of imaginary objects, usually black and crawling, occurs, which inspire further fear. These objects vary with the patient's occupation: the miner just home from the Cape picks up diamonds all day, the soldier back from the war sees Boers and shouts for help, the potman incessantly polishes imaginary glasses, the cabdriver sees horses on the ceiling, which he directs in stentorian tones, whilst two men, who both saw imaginary rats, and who were confined in the same ward, spent all night looking for the man who had put the rats there, and finally picked their mattresses to pieces to see if he was inside. For from one to four days the patient is incessantly moving, talking freely, refusing food and showing no sign of sleep, nor do sleeping draughts have much effect unless dangerously powerful. Finally the sufferer sinks exhausted to sleep and wakes up after many hours sane, but he may die of exhaustion before this sleep comes on. The *treatment* is to avoid mechanical restraint as much as possible, and the best of all is to turn the patient loose in a padded room, kept well warmed and allow him to wander round and round until he sleeps. Such a padded room is to be obtained at the nearest poor-law infirmary. Failing this, sufficient nurses must be always present to prevent him from coming to harm. An enema should be given early in the attack, as it quiets the patient more than any sleeping draught. A little beef tea and somatose is the best nourishment, which can often be administered by coaxing judiciously. The patient is rarely dangerous to others.

DELIVERY. See *Child Birth.*

DEMULCENTS are remedies which give the upper part of the digestive canal a protective coating. They include barley water and linseed tea, gelatine and isinglass, marsh mallow, liquorice, gum, and raw white of egg, honey and glycerine. They are safe remedies in sore throat, irritable stomach and after irritant poisons. [See *First Aid* for *Poisons.*]

DENTIFRICE. See *Teeth.*

DEODORANTS should never be used to disguise an offensive odour if this can possibly be removed by free ventilation, but at times, as for instance in cases of a patient dying of spreading gangrene, deodorants as well as free ventilation may be required; iodoform is then used in dressing the gangrene. The use of trays of charcoal, etc., about a room do little or no good. [Refer to *Disinfectants; Bad Breath.*]

DERBYSHIRE NECK, See *Goitre.*

DIABETES is a disorder in which sugar is not used up in the body as it should be, but accumulates in the blood and is discharged in the urine. The *causes* are various. Overwork, overeating and lack of exercise combined seem an

important cause in many cases; in others heredity, or disease of the pancreas (or sweet-bread) is the cause. The last cause is of interest as being discovered comparatively recently. Physiologists have shown us by experimental removal of the pancreas in animals that one function of the pancreas is to pour into the blood a secretion which regulates the nutrition of the body, the absence of which causes the sugar to be discharged in the urine. Attention was thus directed to the pancreas in diabetes with the result that a certain variety of this disease was found associated with pancreatic disease. The *symptoms* are thirst, the passage of an excess of urine, a voracious appetite, and either loss of flesh or obesity. The chief complications are carbuncle, consumption, and nervous symptoms, especially mental depression. The course of the disease varies; in childhood it is often rapidly fatal, but in middle age it may last for years. In the cases due to over-eating the chance of recovery is good. The *treatment* is chiefly dietetic. All sugar and farinaceous food requires reduction, and the amount of fluid drunk should equal the amount of urine passed and no more. Animal food, except oysters and liver, all sharp fruits like lemons, all vegetables that grow above ground, except peas and beans, are suitable. Thick soups, which are thickened with flour, are not allowable. Flour consists of starches and gluten, the former is not allowable but the latter is useful, hence as a substitute for bread, flour from which the starch has been removed is used and made into a bread known as gluten bread and almond bread. (It may be obtained at Callard's, of Regent Street. The Protene Company also make a bread free of starch, which they prepare from milk and egg.) If any ordinary bread is allowed, it is usually given in the form of toast. As substitutes for sugar, glycerine and saccharine are used.

DIACHYLON PLASTER. See *Plaster*.

DIAGNOSIS is the recognition of the cause of any ill-health. Correct diagnosis must precede rational treatment, and until it has been made treatment should be of a simple and cautious nature. It is for this reason more than any other that medical aid is so valuable and in the future will be of more and more value according to the progress made in the perfection of diagnostic methods (*cf* the value of the stethoscope, thermometer, or X rays). Disease should be dealt with by the detection of the cause and then by methods directed to the removal of that cause. A diagnosis is made in the following way. The symptoms for which the patient seeks advice are first enquired for; next the account of the illness given by the relatives is often taken, this is often useful, as in the description of a fit for instance, and then the patient is carefully examined, beginning with the organ which from the history of the case is apparently at fault; for instance the patient has a cough, night sweats and loss of weight, the chest is then sounded in the expectation of finding signs of consumption; or paralysis, when the nervous system would be taken first, but all the organs receive attention, for it is important to know whether these are sound or not in addition to knowing the state of the organ principally affected. Questions relating to family history, and to personal habits in regard to food, work, tobacco, alcohol, regularity of the bowels, monthly loss and the like have then often to be asked or are asked at the beginning, and it is of great importance that such questions should be answered fully and honestly. Diagnosis at home is necessarily limited, because the layman cannot sound a chest or test the urine, etc., and the parent should be prompt to distinguish ill-health from laziness or temper amongst his children rather than attempt to decide what illness his child has. No one should spend time in attempting to diagnose his own condition, to do so by concentrating attention on a symptom is to exaggerate it and do harm. Moreover, the possible causes of any one symptom are so great that diagnosis cannot be made except by a broad view of the patient, his habits, his past history and his inherited tendencies. There are at least twenty distinct groups of causes of headache, each of which are subdivided further. There are quite half as many possible causes of pain in the back, ranging from a strain to an aneurism and so on. Hence the habit of buying so and so's tincture, pills, pastilles or what not because you are breathless on exertion, have a bad taste in the mouth on waking, or suffer from pain in the back, etc., is a custom only worthy of the middle ages, if that, and is as different from the usual way of doing business as it is possible to imagine. In *detecting illness* from health amongst children the following points deserve attention. A good tempered child that becomes irritable or a mischievous child that is suddenly quiet is probably ill; a child, which not only does not want to go to school but also does not want to play is almost always ill. Loss of appetite, headache, vomiting, diarrhœa and sore throat should receive prompt attention, and a rash in such cases should be looked for as any of these symptoms may be the onset of one of the fevers, and if the temperature is found raised, isolation for a day or two is wise. The *attitude* of a healthy child asleep is with the cheek in contact with the pillow and often with the back up and the abdomen in contact with the bed. If the child be on its side with its head drawn back and the neck rigid, meningitis has to be feared; if it lies on its back with its legs drawn up and its abdomen distended and hard it probably has colic due to wind or something wrong in the abdomen; if it presses its forehead into the pillow persistently, it may be because the light is painful owing to conjunctivitis or the onset of measles. The *movements* during sleep are normally absent, hence twitching or rolling of the head from side to side are signs of illness, the latter symptom may be due to earache. The *expression* is a valuable sign, especially to the parent who knows the usual expression so well. The *cry* is altered in illness. It is lost when the child is very short of breath, as in bronchopneumonia, and in extreme weakness, when the features look as though the child were crying, but no sound is produced; it is often paroxysmal in colic and incessant with earache; a shrill scream at intervals with drowsiness between whiles occurs at the onset of meningitis. *Shortness of breath* occurs at the onset of bronchopneumonia and other chest affections, to detect this the margin of the nostril should be watched, as this does not dilate with each breath, except during shortness of breath; the breathing will be at the same time noticed to be hurried. The *pulse* in an infant is too fast to count, and the slightest excitement sends up the pulse rate to 180 even in an older child; irregularity in the pulse is common in a healthy child. The gap between the bones of the top of the skull which does not close till the end of the second year, should be felt instead of the pulse at the wrist. If the scalp here is found sunk in or bulged out the infant is ill. The *temperature* is raised by trifling causes and need not cause the alarm that corresponding rises of temperature would cause in the adult. [Refer to *Infants* and the separate heading of the disease suspected.]

DIAPHORETICS are remedies which produce perspiration. They include hot baths and packs, copious draughts of hot water or tea, sweet spirits of nitre, citrate, tartrate, and acetate of potash, and pilocarpine.

DIAPHRAGM, or midriff, is the membranous partition which separates the chest from the abdomen. It is composed of muscle and tendon, and its action is to move downwards when a breath is taken and upwards when the breath is expired. By these movements the chest is first enlarged downwards, and so air is sucked in and then diminished so that air is driven out. Spasm of the diaphragm causes hiccough; paralysis of the diaphragm is one of the serious complications of diphtheria.

DIARRHŒA has many causes. These belong to one or other of the following groups; (1) irritation of the bowel by its contents being abnormal; (2) irritation of the nervous system; (3) irritation of the skin by a chill. Group (1) includes the causes of most importance to us: they are errors in diet, intestinal worms, hard fæcal lumps due to previous constipation, and certain poisons. Group (2) includes fright or other painful emotion. Group (3) explains itself. In addition to these, diarrhœa may result from disease of the bowel, e.g. cancer or tuberculosis in it or from some general disease, like typhoid-fever or blood-poisoning. Three forms of diarrhœa deserve mention:—

(1) If babies are fed in the wrong way and are kept under filthy conditions a chronic diarrhœa is common which the ignorant call "consumption of the bowels." This is nearly always not tuberculous ulceration but a condition brought on by carelessness which can be prevented.

(2) The diarrhœa of teething is the result of unsuitable food, together with the irritation to the nervous system which teething causes. The ignorant regard it as a safety valve, whereas it is a condition which must be treated at once.

(3) Epidemic diarrhœa carries off large numbers of infants every summer. It is probably due to a germ, which exists in filth and which becomes virulent whenever the ground is warm. It reaches the intestines with the food and attacks those infants who have indigestion at the time. It produces poisons, which cause vomiting, diarrhœa, fever, exhaustion and death.

The prevention of diarrhœa is of great importance, especially in the rearing of infants. From a study of the causes given above it is clear that a suitable diet, a regular action of the bowels, a pure water supply free from the eggs of worms and other parasites, an avoidance of fright and of chill, especially of chill to the abdomen, are the objects we have to attain. [See *Artificial Feeding of Infants.*] In addition, a few words of advice in relation to epidemic diarrhœa may be useful. This disease does not attack the breast-fed, hence in weaning avoid August and September as months to begin doing so. It is most prevalent in crowded cities, especially in the parts where unpaved courts and badly swept roads are common; therefore if you have an infant recently weaned take it if possible out of town at this time of year. As the germ is introduced with the food, boil the milk directly before use; avoid sour milk altogether, condensed milk freely diluted is far better. [See *Infants.*] The germ attacks specially those with indigestion already, therefore call in the doctor for the least indigestion at this season.

The first thing to do in the *treatment* of diarrhœa is to take the temperature, and if this is either above or below normal, whatever the age of the sufferer, a doctor is required at once. Or if blood be present in the motions a doctor is required also. If the diarrhœa is due to some poison having been swallowed, refer to the Article on *Poisons.* In cases of diarrhœa with a normal temperature treatment for a few hours can be safely attempted. First consider the cause. Is there (1) an irritant to cause it, such as those given above; or (2) has there been a fright; or (3) a chill very recently. If the answer is, (1) the removal of the irritant is to be attempted, nature is already doing so by diarrhœa, we must aid nature by a suitable purge. This must not be of an irritating character, as there is some irritation already. The safest is castor oil. If vomiting is present the best is grey powder for a child, or half grain doses of calomel given hourly for four to six hours for an adult. If there is much griping, in the case of adults it will be safe to add to the castor oil ten minims of laudanum. The application of fomentations to the abdomen will also be grateful. An enema of half a pint of warm olive oil may be tried. The diet in infancy is to be not milk but the whites of four eggs beaten up in a pint of water, given every two hours in quantities proportionate to age. In later life the diet should be spare, e.g., soda water, toast, arrowroot and jelly. It is wise to put the patient to bed. If diarrhœa is thought due to cause (2), if the child be put to bed it will soon be well. If on the other hand cause (3) is regarded as responsible, the sufferer should go to bed with hot bottles, hot fomentations or bran poultices or turpentine stupes to the abdomen. He should have a spare diet and some brandy. If in the course of a few hours improvement in these cases is not occurring, a doctor is required. If he is not obtainable, two to four bismuth lozenges are to be given three-hourly, and if necessary a starch enema [See *Enema.*] If collapse occurs brandy is required.

DIATHESIS is the constitution, either inherited or acquired, which renders the subject liable to certain diseases. Thus those with a gouty diathesis are liable to gout. [See *Heredity.*]

DIET. See *Food.*

DIGESTION consists in rendering the food eaten soluble and capable of absorption into the circulation. The means by which this is effected are in part mechanical and in part chemical. Food having been rendered digestible by cooking is taken into the mouth, when it is thoroughly crushed by the teeth and thoroughly mixed with saliva. Saliva is the product of salivary glands which are placed behind and below the jaw. The saliva changes starch to sugar. If the teeth are deficient or the food is bolted this first stage of digestion is prevented and harm results. The food is next rolled into a ball by the tongue and swallowed. It thus reaches the stomach which secretes from its walls an acid juice called the gastric juice, which dissolves the meat part of the food and puts an end to the action of saliva. From the stomach the food passes into the small intestine.

Here three juices act on it, viz., the bile, the pancreatic juice and the intestinal juice. All three are alkaline, and thus neutralise the acidity produced by the gastric juice and stop its further action. In the small intestine the digestion of the starchy foods, like bread and rice, which was begun in the mouth, is completed. This digestion consists in changing the insoluble starch into a sugar, which is soluble. The digestion of meat is also completed here. Fat is changed into minute drops of oil that are capable of absorption. The bile is produced by the liver, the pancreatic juice by the pancreas, or sweet bread, and the intestinal juice by the intestinal wall. In the small intestine the meat and starch when digested are absorbed into the circulation, the fat on the other hand does not pass directly into the blood but into the lymphatic circulation and from this into the blood by the thoracic duct, which opens into the veins of the neck. The residue passes from the small intestine into the large intestine. Here it is dried so that the undigested residue is solid by the time it reaches the end of the digestive canal. The external opening is known as the anus and the solid residue as the fæces.

The whole digestive tube from mouth to anus is called the alimentary canal, the word aliment meaning food. The food is propelled through the alimentary canal by the movement of the walls of the canal. These are muscular for this purpose; their movement is termed peristalsis. If peristalsis be too active the food will pass through before absorption is complete and frequent fluid motions must result; that is, diarrhœa. If too sluggish, the motions will be too dry and will be delayed, that is, constipation will be present. When one remembers that seven quarts of gastric juice and upwards of one quart of bile are produced normally in twenty-four hours and that this production is under the influence of the nervous system and is secreted from the blood, it is clear that a healthy nervous system and a pure blood supply are essential to a good digestion. Emotional disturbances and withdrawal of blood from the digestive organs after a meal by imprudent exertion are potent causes of indigestion. In addition to the digestive agents mentioned above the intestine is full of bacteria or germs. The different species of these occupy different parts of the alimentary canal, the smallest number being in the stomach; indeed one use of the gastric juice is to kill germs introduced in the food. The germs normally present in the intestine aid in digestion; their functions are not yet fully determined, but they are responsible for the formation of gas, a certain amount of which is normal. In disease this gas formation may be carried to excess. [See *Indigestion; Flatulence; Lymph.*]

DILL-WATER is useful for relieving griping, especially in infants. The dose is two to eight teaspoonfuls, according to the age of the patient.

DINNER PILLS are pills taken regularly after each meal. Their use is chiefly confined to the treatment of chronic constipation. They should consist of a grain each of euonymin and cascara, made into pill-form with soap. A quarter grain of extract of nux vomica may be added if the former is not strong enough, and aloes should be avoided as much as possible. The use of dinner pills before meals to stimulate the appetite is not recommended. [Refer to *Constipation.*]

DIPHTHERIA is a disease named from the Greek for a membrane, that is a skin-like substance. The cause is a bacillus or germ which attacks the throat, nose or windpipe and multiplies therein. It produces there a white or grey membrane from which poison is absorbed into the blood and carried to all parts of the body. The bacillus itself does not enter the blood. The predisposing causes are those which render the body a suitable soil for the diphtheria bacillus to grow on. They are exposure to sewer gas from bad drains in the house, or to foggy or damp weather. Infection is conveyed either directly from a case of diphtheria or indirectly by means of infected clothing, books, dust, milk or such domestic pets as cats.

The *symptoms* at the onset are slight; they are pain in swallowing, a feeling of languor, a quickened pulse, a rise of temperature and often vomiting. In infancy the symptoms are different and are described later. Within a few hours of the onset patches of grey membrane appear on one or both tonsils. To see this it is essential to have a good light and an assistant to hold the head and hands of the child. If now the child says "Ah!" whilst the observer presses down the tongue with the handle of a spoon or tooth brush a good view of the throat is obtained. To disregard these rules is sure to result in frightening the child without seeing its throat at all.

In mild cases the membrane does not spread much; it separates within the week and comes away piecemeal; it is either coughed out or swallowed. Recovery in these cases is rapid, the temperature falls, the appetite returns and the patient is convalescent in a week. In severe cases on the other hand the membrane spreads, extending to the nose, and often to the windpipe. This causes fœtor, discharge from the nose, swelling of the neck, great prostration. In the worst cases the blood is so badly poisoned that the blood-vessels rupture and hæmorrhage occurs under the skin or from the stomach or throat. Such cases terminate in death within the week, vomiting and gradual exhaustion preceding this. The convalescence of the severe cases, and less often of the mild also, is apt to be interrupted by certain forms of paralysis. Paralysis of the heart, of the palate, of the eyes, of the lips, of the diaphragm may occur in this order of precedence in time. The first is to be feared, specially at the ninth day, the last at the thirty-sixth day. The first and last are highly dangerous, the others are transient. Paralysis of the palate causes fluids to return through the nose during the act of swallowing. Jelly and semi-solids of this kind are then swallowed more easily than fluids. Paralysis of the eyes may cause either inability to read or else a squint.

In children under three diphtheria is prone to attack the windpipe, either by spreading down from the throat or by beginning in the windpipe. This condition is known as membranous croup, because it is only recently that this has been proved to be a form of diphtheria. The symptoms are hoarseness and cough, both often having a metallic ring in their sound, laboured breathing and restlesness.

Such an illness is often mistaken for bronchitis until it is too late. As the attack progresses paroxsyms occur in which the child springs up and fights for breath. In such attacks the colour of the child changes to a dusky blue, the eyes start nearly out of the head, the hands clutch at the rails of the cot, until air is drawn into the lungs with a long hissing inspiration and the child sinks down relieved temporarily but exhausted. The frequent occurrence of such attacks rapidly exhaust a child and make tracheotomy necessary. This operation consists in inserting a tube into the windpipe below the obstruction. The relief this affords is immediate and complete. It is well worth having it done, even though the attack of diphtheria is avowedly too severe for recovery to occur.

Treatment. In a suspected case of diphtheria carry the child to a bedroom at the top of the house. It is unsafe to allow it to walk upstairs. Put it to bed, isolated from the others, and keep the child lying flat. The great danger of diphtheria is sudden failure of the heart, which any sudden exertion may induce. Let the child never be left on this account. Send at once for the doctor, without waiting to see how the child is in the morning, because every hour is of importance. In the event of your suspicions being confirmed, a hospital nurse will probably be required in addition to the mother. Failing this the advisability of sending the child to a fever hospital will have to be faced. The life of the child must be your only consideration; the grief of parting with it for a time must be bravely borne. It is surprising how soon young children settle down to hospital life. If nursed at home the room must be prepared as directed in the article on scarlet fever. [Read also the articles on *Fevers*, on the *Sick Room* and on *Antitoxin*.]

Except in the very mildest cases antitoxin must be given at once. On the promptness with which this can be done the chance of recovery largely depends. The diet is that for scarlet fever (which see). When fluids are returned through the nose, milk thickened with arrowroot should be given. Syringing out the throat will probably be ordered; this requires a trained nurse, the mother may be required to help; the child is sure to struggle for the first few times at least from fright at this new experience; this is not the fault of the nurse. In the event of the throat being blocked and swallowing not possible, the child is fed through a soft indiarubber tube passed through the nostrils and down into the throat. This again requires a nurse aided by the mother; it is wise to pour down a little water first to make sure the tube is not in the windpipe before anything thicker, like milk, is added.

The child may cough membrane into the face of the mother while she is engaged in the above duties. This should be avoided if possible, but if it does occur there is reason for prompt action, none for panic, as this accident is common in fever hospital life. The treatment in such a case is to wash the face at once in plain soap and water. If the membrane be coughed into the eye, let the nurse syringe this out for you at once with warm boric lotion. Emphasis must be laid on a few other points in nursing this disease. The value of fresh air cannot be grasped too thoroughly, both for the sake of the patient and the nurses. The health of the nurse must be cared for by two hours daily spent out of the house; the dress must be changed first; a ride on the top of an electric tram is better than a walk; any soreness of the throat must be reported to the doctor at once; the dress is to be of cotton; over this an apron and sleeves are to be worn; these are to be clean daily and must always be taken off before meals; cracks in the hands must be protected by flexile collodium; these cracks are to be avoided by not using disinfectant lotions; plain soap and water is all sufficient. The ordinary case is confined to bed for two or three weeks and sent to the seaside in six weeks.

Disinfection of the house is then undertaken by the sanitary authority. The room must be repapered and the ceiling lime washed. The drains should be tested and defects corrected.

DIPSOMANIA is a form of alcoholism in which temperance alternates with intense craving for alcohol. The craving may occur only annually, or at even longer intervals, but when present is so strong that confinement in a home for inebriates is generally essential, if the temptation is to be resisted. [Refer to *Alcoholism*.]

DISINFECTION means the destruction of the infection which spreads disease. The infection consists of a living germ. These germs are low forms of plant life allied to moulds. We know how a damp dark cellar with little or no ventilation is the best place for any object to become mouldy. It is clear that sunlight and fresh air destroy moulds and it is not surprising that they are found experimentally to destroy germs also. This is Nature's method. This method has been supplemented by two artificial methods; (1) heat, (2) chemicals. Heat is the chief method for sterilising instruments, dressings, bedding and clothing. Fur and leather are much damaged by heat and are better disinfected by chemicals (formalin). *Heat* can be applied in the form of hot, dry air or as steam. The latter is far more efficient, because the steam when it condenses gives out so much heat. To prevent excessive condensation, with the resulting saturation of the goods to be disinfected, the steam is applied under pressure in a

Lyon apparatus. By this means also a bulky object like a mattress is penetrated more quickly. The pressure must not be too great to prevent some condensation of the steam, or disinfection will not be nearly so thorough. Hardware is best sterilised by boiling. *Chemicals* are required to sterilise those objects to which heat cannot be applied.

A chemical may not be sufficiently powerful to kill the germs, but it may retard their growth; when this is so the chemical is not a disinfectant but an antiseptic. A chemical may neither kill nor retard the growth of germs, but may deodorise their products, in such cases the chemical is a deodorant merely. To use a deodorant or an antiseptic under the belief that it is a disinfectant is a serious mistake commonly made by the public. Ignorance in this matter is turned to account by quack vendors. We mention as examples of sham disinfection the wearing of camphor, and the placing of a tray of disinfectant in a room in which a patient is being nursed in the hope of purifying the air. Disinfection has to be much more thorough than this; such imperfect methods are not equal to the natural method of free ventilation and abundant light. Chemicals for disinfection are applied in either the liquid or the gaseous state. The solution must be of sufficient strength, when it falls below this standard it is not disinfectant but only antiseptic. The following table may be of service.

Chemical.	Strength necessary for the solution to be disinfectant.	Strength suitable for use as an antiseptic.
Carbolic Acid	1 in 20	1 in 60
Perchloride of Mercury	1 in 1000	1 in 2000
Biniodide of Mercury	1 in 1000	1 in 4000
Zinc Chloride	1 in 250	1 in 500
Chloride of Lime	1 in 100	1 in 200
Creolin	1 in 60	1 in 160
Burning Sulphur	3 lbs. for each 1000 cubic feet of air space	

Izal (1 in 200) and Chinosol (1 in 1000) are useful as they are active, without being poisonous to Man. Sanitas, though less powerful, is also non-poisonous. Jeyes' fluid, like Creolin, contains one of the higher phenols and is a strong disinfectant.

Iodoform is of only doubtful value, permanganate of potash in the presence of much organic matter also is of less use than commonly thought. Boric acid in saturated solution is a good antiseptic, but not powerful enough to be disinfectant if allowed only a reasonable time to act. As an antiseptic, permanganate of potash should be added to water until the latter is a bright pink and lysol be used in a strength of four teaspoonfuls to the pint of water. It will be seen from the above that a momentary dip into an antiseptic solution does not sterilise the hands, and that pouring a little disinfectant down a large drain is likewise futile; abundant flushing with plain water is far more useful. To *sterilise the hands* they should be thoroughly scrubbed with nail brush and soap and then soaked, whilst one hundred is counted, in one in a thousand biniodide of mercury in alcoholic solution. But even then disinfection is not perfect, and many surgeons now avoid this difficulty by operating in sterilised gutta percha gloves.

Disinfection of a house after a case of fever is usually undertaken by the Sanitary Authority, if not the following rules are to be carried out:—Either roll sulphur or formalin must be procured to use as a disinfectant. The latter can be used in liquid form by means of a special lamp sold for the purpose, or in the solid form known as paraform, which is the handiest for a small room. (Two tablets to each 100 cubic feet of air.) First disinfect all metal work with carbolic lotion, and remove from the room such as is not fixed. The latter having been disinfected may be protected by vaseline, as the fumes of sulphur corrode it. Over a large metal tray or tub of water place a tripod with an iron pan. On this place the sulphur; allow three pounds of sulphur for each thousand cubic feet of space. Then close the window and close all cracks with paper pasted on; close the chimney. Now light the sulphur by placing a shovelful of red hot coal on it; leave the room, paste paper round the cracks of the door quickly. The room is left for a day. After this the room is freely ventilated till all the fumes have been swept out. It is best to destroy the bedding, as the fumes do not well penetrate it. The room should now be repapered, the ceiling lime washed, and the floor thoroughly scrubbed. The last traces of the odour of formalin may be removed by ammonia, if necessary.

DISLOCATION. See *First Aid.*

DIURETICS are remedies which promote the action of the kidneys. They include water, nitre, spirits of sweet nitre, citrate, tartrate and acetate of potash, alcohol, squill, digitalis, turpentine, broom and oil of juniper; gin, which is composed of alcohol and oil of juniper, is largely used by the public. Diuretics are in lay hands dangerous remedies, because many of the diuretics, like turpentine and gin, are irritating to the kidneys and are the worst treatment possible when inflammation is present, and a slight congestion or inflammation is thus often changed into an acute one. The diuretics above mentioned before alcohol are the only ones that can be called safe in lay hands, whilst the tendency in modern medical practice is to use these almost entirely.

DOCTOR. In the medical profession there are four classes of practitioners, the family doctors or general practitioners, consulting physicians, consulting surgeons and specialists on the eye, throat, etc., who, like dentists, confine themselves to one part of the body. Each household should have one good family doctor, whom they always consult when ill, and one dentist to whom they pay at least an annual visit. The family doctor should decide when a consulting physician or surgeon is required, and also whom to call in, though the patient or his friends may if they desire a second opinion tell the family doctor so, and may also say whom they prefer. It is much better, however, to leave this to the doctor, as the fashionable physician of the day is not always the best man, but merely the one whom attendance on some celebrity has brought into note. The family doctor, on the other hand, has usually two or three consultants, whose opinion he values highly and whom he knows to be good. It is important that no doctor be consulted during the attendance of the family doctor without his knowledge, as to do so is to commit a breach of confidence for which there is no excuse. In the event of the doctor not giving satisfaction, he may be told that his services are no longer required, and the patient is then free to call in any other doctor he chooses. The hours of consultation for a family doctor at his house are usually up till eleven in the morning and again in the evening, whilst consultants may be seen by appointment usually in the mornings only. The rest of the day is occupied by going his rounds in the case of the doctor, and by work at the hospitals and learned societies in the case of the consultant. Consultants do not usually visit patients at their own houses except in consultation with the family doctor. The *fees* of the family doctor range from half a crown to half a guinea a visit, according to the house rent of the patient, and night visits are usually charged double. The fee for consultation at the doctor's house is usually less, and where two or more invalids are present in the same house a reduction is made. Vaccination is from five shillings upwards, and midwifery from one guinea upwards, two or three guineas being the common fee. The consultant's fee is usually arranged by the family doctor; at his consulting rooms it is usually two guineas for the first visit and a guinea afterwards; for operations the fee ranges from ten to a hundred guineas, according to the nature of the operation and the experience of the surgeon. The consultant is paid at the end of the consultation, the doctor usually half yearly or yearly. For those who cannot afford medical advice or who cannot afford the unexpected expense of an operation, the hospitals are open and entrance on the recommendation of the family doctor is readily obtained, but the public as well as the doctor ought to see that this charity is not abused. The *choice* of a family doctor should be made chiefly by the recommendation of friends. Failing this

the Medical Directory should be consulted, in which are recorded the examinations that the doctor has passed and the posts he has held. If he has been house-surgeon, house-physician or resident obstetric officer to his own hospital, he is fairly certain to be a good man, as these posts are awarded to the more successful students of the year when they are qualified. The examinations passed are of less importance; the diploma of the Royal College of Surgeons of England and of the Royal College of Physicians of London, indicated by the letters M.R.C.S., L.R.C.P., respectively, is the usual diploma of the family doctor, and is quite as good as many of the provincial, Scotch, or Irish degrees of M.D., though from at least an academic point of view is not equal to the M.D. of London, Cambridge or Oxford.

DOSE of medicine according to age can be roughly calculated by the following fraction. At one year give $\frac{1}{1+2}$ the adult dose, and for each year above the first add the number to the top and to the bottom of the fraction so that for two years of age give $\frac{2}{2+2}$ or $\frac{1}{2}$, for four years of age $\frac{4}{4+2}$ or $\frac{1}{3}$, and so on up to fifteen years of age. Children, however, take purgatives and belladonna in relatively much larger doses than adults, whilst they are poisoned by doses of opium much smaller than the above fraction indicates.

DOVER'S POWDER contains opium and ipecacuanha and is given in doses of from five to fifteen grains to an adult. Ten grains is the common dose. It is largely used in colds in the head, and in youth for the early stages of colds on the chest, and in many other cases.

DOWSING SYSTEM of treatment is applied to joints that are stiffened by rheumatism, or other cause, and often yields very satisfactory results. The skin over the affected joint is first wrapped in lint rendered fireproof by a previous immersion in a solution of tungstate of soda, and the joint is then enclosed in a box fitted with electric lamps, prepared so as to emit more heat than light when the current is passed. A high temperature, up to 400° F., can be borne for twenty minutes at a time.

DRACHM is one-eighth of a fluid ounce, and is composed of sixty minims or drops. A teaspoonful is about a drachm. The term is also used to denote a weight equal to that of sixty grains.

DRAINAGE TUBES (Surgical), made of indiarubber, silver or bone, are inserted into deep wounds to drain them of pus, and thus promote their healing. Care must be taken to keep the discharging end covered with antiseptic dressing.

DRAINS must be in good order if the house and the town are to be healthy. The chief points in good drains are that they are (1) water tight, (2) well ventilated, (3) without direct connection between those carrying sewage and those carrying waste from baths, washbasins and the like, (4) well flushed. (1) In order to be water-tight the drain pipes should be made of iron, but owing to the expense this involves they are generally made of earthenware. The joints between the earthenware pipes were formerly filled only with clay, but as this was proved to cause leakage in a very short time, they have recently been generally filled with cement, which is much better, but which is apt to expand and produce leaks by bursting the joint; long iron pipes with lead joints is the most water-tight system invented so far. Next the bed in which the pipes are laid must not be liable to sink or the joints will give, even though firmly cemented. For this purpose care is taken not to sink the original trenches deeper than necessary, as any filling in with fresh earth promotes subsequent sagging. At times drains are laid in beds of concrete, though this is not as efficient as at first hoped, owing to cracking often taking place. (2) The ventilation of the drains must be very thorough, or sewer gas will find its way into the house in spite of the most careful traps to prevent it. (3) The waste pipes from baths, etc., should never open directly into the sewer, even though the connection is guarded by a trap. They should pour their water into an open receiver or gully placed outside the house, and the gully should be connected with the sewer. Then if any sewer gas escapes from the gully it will pass off in the open air without being conducted into the house. In the same way the water used to flush the water-closet should not come direct from the chief cistern, but from a special small cistern, the water of which is never used for drinking purposes. By this arrangement if sewer gas pass into the small cistern, it will be absorbed by the water in it without passing on to the chief drinking water cistern. (4) In order that a drain may be well flushed, not only must an ample supply of water pass down it, but the drain must be laid at such an incline that the flow is sufficiently rapid, and must be fairly narrow and as straight as possible for the same reason; and again, friction must be reduced by making the internal surface smooth. By these means the accumulation of filth is reduced to a minimum. *Testing* the drains is best done by plugging the outlet of the suspected drain at the nearest man-hole and then filling it with water from the water-closet. If a leak is present, the water soon sinks, and if many leaks are present it may not be possible to fill the drain at all. Suspected leaks may also be tested by pouring down strong oil of peppermint or asafœtida in hot water, whilst a second person in the room below determines whether the odour escapes or not, but this method is not so thorough as the former test, though more easily performed by the householder. [Refer to *Typhoid Fever, Diphtheria, Water Closets*—Sewage Disposal.]

DREAMING is mental action during sleep. It is only present in the lighter forms of sleep, which form intermediate steps between the sleeping and the waking states. The chief characteristic of mental action of this kind is the absolute faith possessed at the moment, the sense of probability being in abeyance, whilst the imagination seems remarkably active, so that every mental picture is, to the dreamer, reality. Dreaming is induced by all causes that disturb sleep; the chief of which are unsuitable food before retiring to rest, unsuitable bed-clothing, an impure blood-supply to the brain due to heart disease, excessive use of tobacco, kidney disease or constipation, or it may be mental strain arising from anxiety or study pursued till bed-time. The treatment is the removal of the cause. Night-mare is common in nervous children, and is generally due to indigestion and to mental causes combined; school work, ghost stories, a visit to the Zoological gardens or to the pantomime will on enquiry be often found to be the immediate cause of an attack. A dose of castor oil, fresh air and mental rest, is the treatment that should be adopted.

DRESSINGS for wounds should be clean and simple. The dressing is not intended to heal the wound but to keep out the dirt and to prevent friction which would delay the healing process. For *cuts* dry dressing is the best, made of a piece of clean linen or lint, the smooth side of which goes next the wound; this should be covered with a layer of cotton wool secured with a bandage. Dry gauze soaked in collodion and applied in several layers one at a time is also a good dressing for clean cuts. Friar's balsam and lint is also used. If a *cut festers*, fomentations are required, which are made by wringing out lint or linen rag in boiling water containing as much boric acid as it will dissolve. The wringing should be done thoroughly by placing the lint in a clean towel, and if possible two people should wring, one at each end of the towel. The lint is then covered by oiled silk cut larger than the lint, and this in turn is covered by wool and secured with a bandage. The fomentations should be applied every three hours. For burnt surfaces and *ulcers* ointment spread on lint is usually the best dressing. In such cases the patch of ointment should be no larger than the wound. The best ointment is boracic, vaseline, or eucalyptus ointment, and when a more stimulating ointment is needed, as in dealing with chronic ulcers, yellow oxide of mercury, seven grains to the ounce of vaseline, is useful.

DRINK. See *Cookery, Alcoholism.*

DRIPPING is an excellent substitute for butter, best given on hot toast with salt. Beef dripping is the best. It must be borne in mind that dripping dissolves the glaze of newly glazed earthenware vessels, and can thus cause lead poisoning. It also absorbs copper from copper vessels and produces copper poisoning.

DROPPED WRIST. See *Lead Poisoning* in *Dangerous Trades.*

DROPSY is the accumulation of lymph at any one part of the body. When the abdomen presents dropsy, the term "ascites" is used, but when the dropsy is beneath the skin the term "anasarca" is used. The *causes* of dropsy are either obstruction to the circulation or certain changes in the quality of the blood, the latter being produced most often by Bright's disease or anæmia. When due to mechanical obstruction, the heart or the liver is usually at fault, and the dropsy in these cases appears first in the abdomen and the legs. When due to impurity of the blood, puffiness of the face on waking is the commonest form for the dropsy to take. It will be thus seen that dropsy is a symptom and not a disease in itself. The *treatment* varies with the cause, and should be in medical hands. The indiscriminate use of gin as a cure for dropsy can only be strongly condemned. Care should be taken to keep the legs and feet, if dropsical, well clothed in loose stockings, garters should be avoided, and all chafing prevented.

DROWNING. See *First Aid.*

DRUGS may be classified according to their effects on the different organs of the body, though many drugs, which act on more than one organ, have to be mentioned more than once.

1. BLOOD. To increase the formation of blood:—	To remove impurities from blood:—	To arrest bleeding:— (Hæmostatics).
Arsenic Iron	Potassium iodide Aperients Diuretics	Adrenalin Ergot Astringents

2. HEART. Stimulants:—	Depressants:— (which weaken the heart).	To relieve pain in the heart:—
Digitalis Strophanthus Squill Convallaria Caffeine Ammonia Alcohol Ether Strychnine Amyl nitrite	Over doses of the stimulants Antimony Aconite Apomorphine Chloral Hemlock Emetics	Amyl nitrite Ether Atropine

3. LUNGS. To loosen cough:— (Liquefying expectorants).	To strengthen cough:—(Stimulating expectorants).	To suppress cough:—
Ipecacuanha Salts of potash and soda, the sulphates excepted	Ammonia Squills Ether Senega	Opium Codeine Heroin Acids

To deodorise the phlegm:—	To strengthen respiration:—	To relax spasm in asthma, etc.:—
Eucalyptus Creosote Balsam of Tolu Benzoin	Ammonia Strychnine Ether Atropine	Belladonna Stramonium Opium Nitre

4. STOMACH. To relieve Acidity:—	To aid Digestion:—		To counteract Flatulence:—	
(After food) Bicarbonate of soda Bismuth Magnesia Ammonia	(Before food) Bitters Alkalies Hot water	(After food) Pepsin Hydrochloric acid	(By dispersing) Peppermint Ginger Asafœtida, etc.	(By preventing) Creosote Carbolic β Naphthol

To relieve pain:—	To cause vomiting:— (Emetics).	To stop vomiting:—
Bismuth Alkalies Prussic acid Morphine	Mustard Warm water Salt Alum White vitriol Carbonate of ammonia Tartar emetic Ipecacuanha Apomorphine	Bismuth Weak alkalies Soda water Cocaine Prussic acid Chloral Bromide

5. LIVER. To increase the bile:— (Cholagogues).	To expel more bile in the motions:— (Cholagogues).	Drugs bad for the liver:—
Podophyllin Euonymus Aloes Jalap Nitro hydrochloric acid Colocynth Iridin Salts of soda	Mercury Calomel	Opium Lead

6. KIDNEYS. To increase the urine:— (Diuretics).	Drugs that diminish the urine:—	To disinfect the urine:—
Alkalies, except ammonia Water Juniper Caffeine Alcohol Broom Buchu	Opium Fairly large doses of alcohol, turpentine and cantharides	Benzoic acid Sandal wood Urotropin Copaiba Cubebs

To make urine more acid:—	To make urine less acid:—	To relieve spasm:—
Benzoic acid Salicylic acid	Alkalies, except ammonia	Hyoscyamus Opium

7. SKIN. To cause sweating:— (Diaphoretics).	To check sweating:—	To lower the temperature:— (Antipyretics).
Jaborandi Opium Many diuretics	Belladonna Picrotoxin Zinc oxide	Antefebrin Antipyrin Quinine Antimony Aconite Alcohol

8. NERVOUS SYSTEM. Stimulants:—	Depressants:—	Depressants that are useful as sleeping draughts:— (Hypnotics).
Strychnine Ammonia Valerian Opium Indian Hemp Alcohol Ether Chloroform Cocaine Belladonna	Stimulants in larger doses Chloral Bromide Prussic Acid Sulphonal Trional Carbolic Acid	Bromide Chloral Chloralamide Veronal Opium Trional Sulphonal Paraldehyde Hyoscine

9. EYES. To dilate the pupil:—	To constrict the pupil:—	10. EARS. Drugs that cause deafness:—
Belladonna Atropine Cocaine	Physostigmine Eserine Opium	Quinine Salicylic acid

[For drugs acting on the intestines refer to *Constipation, Diarrhœa* and *Worms*. See also *Anæsthetics, Counter-irritants, Disinfectants.*] It will be noted from the above table how many different uses certain drugs can be put to: for instance, opium. It is also noteworthy that many drugs in large doses have an action just the opposite to that which they exert in small doses. Drugs having similar actions are commonly given combined in a mixture. Drugs are also combined to neutralise the bad effects of one of them, whilst its useful effect is left unchanged. Thus opium and belladonna are often given together, for opium will then relieve pain, whilst its depressing action on the heart and respiration, its tendency to constipate and to produce sweating, are counterbalanced by the belladonna. Drugs which mutually decompose each other by their chemical action are termed "incompatibles," e.g., chalk and an acid, and these combinations are carefully avoided in writing a prescription. The rapidity with which a drug acts after being swallowed varies greatly with its solubility, and this fact is always taken into account. When immediate action is required, the drug must be injected in soluble form under the skin. The dose has to be adapted to the age of the patient [See *Dose*]. It has also to be adapted to the particular individual, as tolerance to different drugs varies widely in different people, and also varies with the previous amount taken; thus, the amount of opium or arsenic that can be taken by those addicted to their use would be fatal to a healthy man.

DRUM. See *Ear.*

DUCT is a tube that acts as a canal for the passage of a fluid. Thus the bile duct, and lachrymal duct, convey bile and tears respectively.

DUMBNESS is almost always due to deafness, which dates either from birth or began before speech was acquired. Speaking and lip-reading are now taught with much success in institutions devoted to the purpose.

DUST is a potent cause of disease. All the dusty trades have a high death rate, especially from consumption and other diseases of the lungs. Street dust is composed largely of dried horse-dung, and this settling on milk is one of the chief causes of the epidemic diarrhœa, so fatal to infants every summer. In the workshops the dust is largely determined by the nature of the trade, and the more gritty the nature of the dust the worse, hence knife-grinding and stone-dressing are particularly deadly. In the country the pollen of the grasses every spring forms a considerable fraction of the total dust, and it is the irritation of this pollen which is the cause of hay-fever. It is to be noted that the nose is the natural filter for stopping dust, and breathing through the mouth is thus unhealthy. But even when breathing through the nose is habitual, the lungs of the town-dweller receive sufficient smoke and other forms of dust to change them from pink to blackish grey in the course of a lifetime. The microscope shows this discolouration to be due solely to particles of dust deposited in the lung substance. It is much to be desired that each house should consume its own smoke, and that the motor car should be the means of reducing the amount of horse-dung on our streets, in the near future.

DUSTING POWDERS are best made of starch, combined with some other body, such as boric acid or zinc oxide. Starch 20, boric acid 3, zinc oxide 2 parts in 25 of dusting powder, is an excellent preparation. Fuller's earth is also used. Dusting Powders are used to secure thorough dryness of the skin, and are valuable in caring for the delicate skin of babies, and for placing inside the socks and between the toes in those who are liable to blistered feet or to corns. [Refer to *Infants.*]

DYSENTERY is the name of a group of diseases, not yet fully understood, which present inflammation and ulceration of the large bowel with diarrhœa; and in which blood and slime are passed frequently and much painful straining is induced. The disease is most common in the Tropics, but a form of dysentery, known as "Asylum dysentery," occurs in Europe from time to time, when over-crowding and other forms of bad hygiene exist in institutions. Tropical dysentery is apt to be followed by tropical abscess of the liver. The treatment formerly adopted was the free use of ipecacuanha, but recently repeated doses of Epsom salts have been given, and it is said with benefit, but the whole subject is still *sub judice.* Some forms of dysentery are due to an amœba or animal parasite, but other forms are due to a bacillus or germ. Against the latter form of dysentery the Jenner Institute has recently obtained an anti-toxin.

DYSPEPSIA. See *Indigestion.*

EAR is divided into three portions, the external ear or visible portion, the middle ear or drum, and the internal ear or labyrinth. Fish have the internal ear only, but that they hear is clear from the possibility to teach carp to come and be fed when a bell is rung. Birds and reptiles have the middle and internal ear. What in them and in mammals is the middle ear corresponds to the first gill cleft in fish. As they do not breathe by gills, the gill-clefts, which all appear in the embryo, close again with the exception of the first one, which becomes the middle ear and is thus adapted to a different function. Mammals have the external ear in addition, the purpose of which is to collect sound and focus it on the drum. It will be noted that in aquatic mammals e.g., seal, whale, etc., the external ear is small or absent, whilst in many mammals, especially those much liable to the attack of carnivora, the ears are very large and movable (cf., of rabbit, deer), and that in man the ear is intermediate in size between these limits and can be moved but little, if at all, though three rudimentary ear-muscles still exist. The value of a large external ear as an aid to hearing is turned to account in deafness by the use of the ear trumpet. The ear-hole leads into the outer passage or external auditory meatus, a tube composed of gristle in the outer part and bone in the inner portion. The passage is lined by hairs and wax. The latter is secreted from special glands which replace the sweat glands of the skin. The purpose served by hair and wax in this case is the same as when they are found in plants, namely, protection against the entrance of insects and moisture. The wax gradually passes out of the ear, and it should not be forcibly removed by instruments, as this is not safe. The end of the outer passage is blocked by the membrane of the drum or tympanic membrane. The middle ear or drum is a cavity in the bony wall of the skull, shut off from the exterior by the membrane of the drum, but communicating with the external air by means of a passage that opens into the back of the nose, known as the Eustachian tube. So long as the Eustachian tube is open, the atmospheric pressure on the outside of the drum membrane will equal that on the inside, and unless this equality is maintained the membrane is sucked in or forced out and deafness is caused. Extending across the drum from the membrane on the outer side to the internal ear on the inner side is a chain of small bones. Vibration, set up in the air by ringing a bell or by other source of sound, is thus conveyed to the external ear and focussed on the drum membrane, which is thrown into vibration; the membrane sets in vibration the chain of small bones, which in turn stimulate the internal ear from which impulses are carried by the auditory nerve to that part of the brain concerned with hearing. By this series of steps the ringing of the bell is heard. When the passage is blocked, the drum membrane disabled, or the chain of bones damaged, hearing can still occur by conduction of the vibration by the bones of the skull to the internal ear. Such a mode of conduction is the only one possible in fish, but in man it is a poor substitute for the normal mechanism, unless the source of sound be in actual contact with the skull. However, by holding a sound collector of some kind between the teeth, sufficient vibration may be collected to produce hearing, and fan-shaped and other instruments are made for this purpose. The internal ear, besides being an organ of hearing, also contains the three semicircular canals, the function of which is to give information about the position of the body. Hence disease of the internal ear causes giddiness as well as deafness, a condition known as "Menière's disease."

EAR-ACHE may be due to a wisdom tooth [See *Teeth*], or to inflammation of the middle or outer ear. If examination

of the teeth shows nothing wrong, warm olive oil containing an eighth part of laudanum may be dropped into the ear or poured in from a teaspoon, and a fomentation applied directly afterwards every four hours. If relief is not soon obtained, or if though the pain ceases ear discharge begins, medical aid is necessary. Chronic discharge from the ears always requires medical attention. If from one ear only, it may be due to a foreign body in the ear that has been neglected. A foreign body in the ear should receive immediate attention. Should a bead or other such body be introduced, the head should be turned on one side with the affected ear downwards and a smart tap given to the head on the opposite side. This treatment may shake it out but will probably fail. Syringing should be tried next, directions for which will be found under "deafness," and if this fails nothing more must be done till the doctor comes, as any attempt to remove it by a hair pin or other instrument will almost certainly drive it in against the drum and do much harm. When a seed like a pea has been introduced, syringing must not be attempted till the doctor comes, because it makes the pea swell and great pain is thus caused if the pea is not dislodged. When a cockroach or other insect has entered the ear it cannot of course go further in than the membrane of the drum, but by kicking against this great pain is caused. As insects breathe air they are readily drowned, and the ear therefore should be filled with warm olive oil and laudanum, and wool placed in the outlet. An hour later syringing should be practised to wash the dead insect out, and if this fails a doctor is required. Ringing in the ears may be due to some medicine which is acting on the auditory nerve, e.g., quinine and salicylates. If no medicine is being taken a doctor should be consulted. In lunatics ringing in the ears is often interpreted wrongly and changed in their minds to the voices of some familiar friend or enemy, or to that of some good or evil spirit. [Refer to *Deafness.*]

EARTH-CLOSETS. See *Sewage.*

ECZEMA is an inflammation of the skin accompanied by the discharge of a serous fluid that stiffens linen, and by itching. The term is popularly used for any inflammation of the skin. The causes of eczema probably vary in different cases, for as many as eighty different germs have been isolated from the skin in cases of eczema, and it has not been determined which of them is the actual cause. Amongst the causes that promote the occurrence of eczema are (1) irritants applied to the skin, e.g., friction, heat, dried sweat, and carbolic, washing soda, soap and other chemicals; (2) poisons present in the blood supplied to the skin such as occur in the subjects of gout, indigestion or nervous exhaustion; (3) deficient circulation in the skin due to varicose veins, garters, etc. The *treatment* is the removal of the cause and the application to the affected skin of remedies which vary with the stage the eczema is in. The problem is too involved to be dealt with by any one but the doctor. The patient need have no fear that curing the eczema will injure his health. There is a prevalent myth that a weeping eczema is a safety valve by which impurities are discharged from the system. This idea, though very consoling to both doctor and patient when a chronic eczema defies all treatment, is none the less without foundation in fact. Another point we would emphasise is that the eczematous skin should be washed in bran or barley water and never in soap and water. [Refer to *Baths.*]

EDUCATION in relation to health. See *Childhood.*

EFFERVESCENCE is the bubbling of a liquid owing to the rapid evolution of a gas within it. The usual way of obtaining effervescing medicine is to have two powders or solutions, one of which contains citric or tartaric acid, and the other bicarbonate of potash or soda. A still better acid to use is fresh lemon juice. On mixing the two, carbonic acid is formed and causes the effervescence. Effervescing drinks are refreshing chiefly because they clean up the tongue and throat so well; the carbonic acid is also sedative to the stomach, and after absorption into the circulation the tartrate or citrate of soda or potash, which is formed, promotes the action of the skin and kidneys. If the dose of tartrate of soda be sufficient it is also purgative, as in the familiar Seidlitz powder. Insoluble powders may be taken in suspension in effervescing mixtures; thus quinine, which is only soluble in a strongly acid medium, and magnesia and caffeine are often taken in this way. In mixing the bicarbonate with the acid, the former should be in slight excess, twenty grains of the former to fifteen of the latter is a suitable dose.

EFFUSION is the pouring out of fluid into any part of the body from some morbid cause; for example, pleuritic effusion, and water on the knee.

EGGS. Like milk, eggs contain all the food that the young animal requires to live on, and as they are also very digestible when properly served, they form an important food for the sick. They are most digestible when beaten up raw and least digestible when boiled hard. Hard boiled eggs are too indigestible for invalid purposes. The fresh hen's egg is the most suitable. They may be served as custard, plain boiled, scrambled, poached or fried. The yolks of eggs are used to form an emulsion with castor oil and other oils that have to be administered. The raw whites of eggs beaten up in water is a useful food in diarrhœa. [Refer to *Custard, Albumen water.*]

ELBOW-JOINT is a hinge joint, that is, one that permits motion in one direction only. Dislocation and fractures in its immediate neighbourhood are both common and often associated, so that in cases of injury here examination by the X rays is well worth the extra expense involved.

ELECTRICITY is still in its infancy in relation to physiology and medicine, as indeed probably to most branches of knowledge. Like all powerful agents of which little is known, it serves the purpose of the ignorant impostor in his dealings with the mystery-loving public only too well, but in medicine proper its use as a curative agent is still very limited. When Galvani found that the legs of a decapitated frog could be made to kick by a galvanic current, he hoped he had grasped the secret of life itself; but subsequent research has forced a far more modest view on the scientific world. We now know that living matter reacts to many stimuli, which include injury, heat, light, chemical irritants, and also electricity. Further, we have learnt that chemical activity is always accompanied by electrical activity, and that living matter presents a continuous series of chemical changes, and therefore of electrical changes also. Each beat of the heart, each movement of a muscle or transmission of a nerve impulse, and even the falling of light on a green leaf or on the back of the eye, has been shown to be accompanied by the production of an electric current. The direction of these currents has been determined, and it has been demonstrated that the most active portion of the organ under observation corresponds to the zinc plate of the galvanic cell. The electric currents thus produced are too weak to be felt, and yet only one-tenth part of the current produced is permitted to flow through the apparatus used to detect it, so delicate is the instrument used. The strength of the currents produced during vital activity has not been measured with absolute accuracy, but it is clear that the greater the activity the greater the current; thus fatigue, the action of anæsthetics or the approach of death, are all accompanied by marked diminution in the electric activity of the organ under observation. In the medical practice of to-day all these minute electric changes are ignored; but will this always be so or will they form a valuable guide to the detection and treatment of morbid conditions in the future? At present electricity is used to stimulate organs over which the patient has lost control, and to soothe nerves suffering from neuralgia. In many affections of the nerves or the spinal cord, temporary paralysis of the muscles supplied occurs, and if these muscles are not exercised they waste away. To prevent such wasting the muscles should be thrown into action for ten to twenty minutes daily by electrical stimulation, and they should be massaged also. Such treatment to be effective and safe must be in medical hands, a knowledge of anatomy as well as of electricity being requisite. For neuralgia the passage of a continuous current along the affected nerve for twenty minutes or so is often tried, but the results are not very successful. For hysterical patients and for malingering the sudden application of an electric

shock often works wonders. This is not due to any hidden virtue in the electricity but to the suddenness, novelty and unknown nature of the remedy applied. The writer has seen cases of hysterical paralysis, blindness, dumbness and the like, relieved instantly but such cases have often relapsed by the time they reached home, and although again repeatedly relieved, the tendency has been, when the novelty of the treatment wore off, for its efficacy to diminish greatly. The grave calamity of submitting a genuine case of blindness or other serious condition to the painful ordeal of severe electric shocks, under the impression that the patient is hysterical or shamming, is one that has not infrequently occurred and will again occur so long as the public allow themselves to be taken in by quacks. [For *Animal Magnetism*, See *Hypnotism*. Refer to *Dowsing System* and *X rays*.]

ELEPHANTIASIS is a tropical disease caused by a worm, named the *Filaria nocturna*. The disease is prevalent in parts of Africa and the East Indies. The embryo worm is introduced into the blood by the bite of a mosquito. The embryo passes into the lymphatic system and grows into an adult in that situation, feeding on the lymph with which it is bathed. The female worm normally discharges embryo worms and not eggs. The embryo worms make their way into the blood and are removed by the bite of the mosquito and transferred to another host. It is of interest that the embryoes are only found in the blood at night, and that the species of mosquito—the Anopheles—which spreads the disease only bites by night, which is a good example of the minute adaptation so often to be found in parasites. No great harm results so long as the process is normal. When, however, the adult worm is injured, it discharges its eggs before they are hatched, and these block the lymphatic circulation. The region from which this lymph comes is thus swollen and inflammation often follows. Such a condition frequently repeated results in a permanent enlargement of the affected organ, which may reach truly gigantic proportions. The legs and scrotum are most often attacked. "Elephantiasis Græcorum" is an obsolete name for leprosy.

EMACIATION or loss of flesh to a serious extent is a condition that requires attention. The causes fall into three groups; (1) the food taken is insufficient, as in starvation and in hysterical loss of appetite; (2) the food taken, though sufficient, is not absorbed into the circulation owing to indigestion or to the presence of a tape worm, which absorbs the food itself; (3) the food taken is sufficient for ordinary purposes and is absorbed, but the due nutrition of the body is prevented by poisons in the blood owing to consumption, cancer, matter pent up in a deep organ or some other serious condition. The treatment is the removal of the cause.

EMBOLUS is any body which has got loose in the circulation and been carried into a blood vessel too narrow to allow it to pass, the blood vessel is thus plugged, and the area supplied by it is cut off from the circulation.

EMBROCATION. See *Liniment.*

EMERGENCIES. See *First Aid.*

EMETICS are remedies for the production of vomiting, They include hot water and mustard, salt and water, or copious draughts of tepid water, sulphate of zinc, and tickling the throat with a feather or putting the finger down the throat. These act by irritating the throat or stomach. The second group act after their absorption into the blood by irritation of the vomiting centre in the brain, and therefore take longer to act than the remedies in the first group, though they are less unpleasant. They include ipecacuanha in large doses (20 grains of the root) apomorphine, antimony or tartar emetic. For poisons, the *best emetic* for household purposes is a tablespoonful of mustard in a tumbler of water. For unloading the stomach after an indigestible meal, twenty grains of the powdered root of ipecacuanha or a tablespoonful of ipecacuanha wine will produce vomiting in twenty minutes. [Refer to *Poisons, Croup.*]

EMOLLIENTS are substances which soften the skin, e.g. oil, ointment, or hot fomentations.

EMOTION has a remarkable effect on digestion, circulation, and the secretion of the various body fluids, especially on milk, sweat and saliva. Anxiety often arrests or prevents digestion, intense joy or fear may cause fainting or even a fatal stoppage of the heart. Infants have often been poisoned by the milk from the breast of a mother who has just been enraged. St. Vitus's Dance often dates from a fright.

EMPHYSEMA is a term applied to two conditions, (1) surgical emphysema or bubbles of air under the skin, a condition which often follows tracheotomy, and (2) a dilated state of the air-cells in the lungs. Such a condition is very common in elderly men who are the subjects of chronic bronchitis. The lung substance loses its elasticity, which is the chief agent by which the breath is expelled, hence the subject of emphysema suffers from an accumulation of air within the lungs, which he has great difficulty in getting rid of. The lungs are distended and the chest so changes in shape as to have the maximum capacity, that is it becomes more spherical than normal; the breath is short, and the blood being deficiently aerated, imparts a bluish hue to the lips and ears. The over-distention of the lungs obstructs the circulation through them, which throws more work on the heart; a heart moreover no longer young, and symptoms of circulatory failure usually ensue. The disease is very common in the natives of the mountains and in those exposed to all weathers and irregular habits, e.g., cabdrivers. The *treatment* is to avoid the causes of chronic bronchitis and to live a temperate, even life. [Refer to *Bronchitis.*]

EMPYEMA is matter in the pleural cavity. [See *Pleurisy.*]

EMULSION is a mixture in which oil is suspended evenly throughout in the form of microscopic drops. Milk is the natural emulsion. In such a form the oily feeling in the mouth is abolished and the digestibility much increased as the digestive fluids can act on each drop separately. Oil is emulsified by yolk of egg, soap, gum and other bodies. Cod-liver oil is commonly administered as an emulsion.

ENAMEL. See *Teeth.*

ENEMA or clyster is an injection into the lower bowel. Such an injection cannot pass further than the junction of the large and small intestine because the ileo-cæcal valve prevents this. The purpose for which enemata are given varies. They may be classified thus:—

Purpose.	Composition.	Mode of Administration.
1. To open the bowels.	(a) Yellow soap and one pint of water.	Injected at blood-heat with a Higginson's syringe or douche-can.
	(b) Glycerine, two teaspoonfuls.	Injected cold with a small glass syringe.
	(c) Gruel or barley water, starch mucilage or olive oil one pint.	As in 1 (a).
2. To lock up the bowels.	Laudanum one teaspoonful in starch mucilage, four or five tablespoonfuls.	Injected at blood-heat with a glass syringe.
3. To expel wind.	Oil of turpentine two tablespoonfuls in gruel or starch mucilage, half a pint.	As in 1 (a).
4. To quench thirst when water is not allowed by the mouth. To be given twice daily.	Water one pint, table salt one teaspoonful.	As in 1 (a).

Purpose.	Composition.	Mode of Administration.
5. To feed the patient when food is not given by the mouth. (These are nutrient enemata usually given every four hours).	Peptonized milk or beef-tea eight tablespoonfuls, or beef-tea and peptonized milk, of each four tablespoonfuls. The above to be thickened by the addition of the yolk of an egg. Beef-tea eight tablespoonfuls and somatose one half teaspoonful dissolved in it is another recipe. A teaspoonful of grape sugar and of brandy is often added also.	The bowel is first washed out and the nutrient then allowed to run in slowly from a glass syringe, to which a piece of soft india-rubber tubing is attached. The tubing should be lubricated at the tip with vaseline, not glycerine. The fluid should run in by its own weight; the piston of the syringe should be removed. The temperature is blood-heat.
6. To stimulate a patient who is too unconscious to swallow.	Brandy two tablespoonfuls, in coffee six tablespoonfuls.	Allowed to run in at blood-heat as in 5.
7. To kill thread worms.	Infusion of quassia chips, or a strong solution of salt in water. For a child half a pint.	As in 1 (a).

To *administer an enema*. The enema is first prepared and the temperature taken with a bath thermometer. The enema is injected at 99° F., and therefore should be about 105° in the jug to allow for cooling, the smaller the bulk of fluid the more important this is. The bed is prepared by placing a mackintosh and clean towel beneath the buttocks of the patient. The patient is placed on the left side and the buttocks brought to the edge of the bed. Stimulants should be handy as occasionally the patient faints, though this is very rare. The syringe is then filled till all air is excluded, as it is important not to inject air. In the case of the Higginson's syringe this is best done by placing both ends in the fluid and squeezing the ball until no more bubbles appear. The nozzle is then softened in hot water, lubricated with vaseline, and gently inserted. The fluid to be injected is generally put into a bowl and either the right amount only put in or the number of squeezes of the ball of the syringe counted. Each squeeze may be considered to inject two tablespoonfuls, and a pint contains forty tablespoonfuls. A douche can, raised two feet from the bed, may be used instead of a Higginson, and for self-administration is better. If an enema is to be retained it must be given more slowly than when it is not, but in any case there should be a slight pause between each squeeze of the syringe. By pressing the buttocks together with a cloth and by letting the patient lie still with a low pillow or none so that the buttocks are rather above the level of the head, enemata can often be retained which are otherwise rejected.

With regard to the preparation of the enemata themselves directions for peptonising milk are given under *milk*, whilst to make starch mucilage the following directions may be useful:—Work up two teaspoonfuls of starch into paste with a little cold water and then add half a pint of boiling water and stir. Next, to judge the quantity of an aperient enema suitable for different ages, a rough guide is to allow two tablespoonfuls for each year of life up to twenty years. Nutrient enemata should, however, not exceed eight tablespoonfuls, or rejection generally follows. *Suppositories* are made of gelatine or cacao butter, which melts at blood heat, and they contain nutrient material or drugs. Their use is not recommended, as they are apt to cause irritation and to fail to melt.

ENTERIC FEVER. See *Typhoid Fever.*

ENTERITIS. See *Diarrhœa.*

EPIDEMIC DISEASES are such as attack a large proportion of the population at about the same time. Such diseases are generally due to a germ. The causes at work to render so many people susceptible, who at other times are not so, are various. Climatic conditions are the chief of these causes, as is shown by most of the common fevers being prevalent at a particular time of year. Though whether the changes of the season exalt the virulence of the germ or depress the resistance of the population is not yet determined. The effect of season on epidemics is well shown in scarlet fever, the prevalence of which steadily rises from October to the end of December and then suddenly diminishes, although the climatic conditions of the end of December and the beginning of January cannot be said to be strikingly different. Again, the closely allied German measles is dormant all the autumn whilst scarlet fever is common, and fully active from April to the end of June, when scarlet fever is comparatively rare. English measles again is common in the spring and autumn and comparatively rare between whiles. Most epidemics are more common in the tropics than in the colder regions, but scarlet fever is very rare in India and never reaches epidemic form, though on the same latitude in the Western Hemisphere it is generally epidemic. A disease which is epidemic in certain months or in certain years is prevented from dying out by the occurrence between whiles of a few isolated cases here and there. The disease during this time is said to be "endemic." When, on the other hand, the epidemic is so great that practically no one escapes, as in certain outbreaks of influenza, the disease is said to be "pandemic." Epidemics not due to a germ may be due to some poison in the food supply, like the outbreak of arsenical poisoning due to bad beer that occurred in 1901. Again, epidemics of nervous disorder break out from time to time as the result of hysterical mimicry. The classical example of this is the pandemic chorea of the middle ages, when epidemics characterised by great excitement, gesticulation and dancing, broke out several times under the influence of religious fervour. The fainting of nearly fifty young girls in a college chapel, the ventilation of which was no different from that on any other day, is an example of hysterical mimicry that occurred in the experience of the writer. [Refer to *Fevers.*]

EPIGASTRIUM is the central part of the upper portion of the abdomen. [See *Abdomen.*]

EPIGLOTTIS is the lid of gristle that guards the entrance to the larynx or upper end of the wind-pipe. In swallowing the larynx is drawn forwards and upwards and the epiglottis shut down over the glottis or aperture that the larynx presents; food is thus directed backwards into the gullet and is prevented from falling into the wind-pipe.

EPILEPSY is a disorder characterised by fits in which the sufferer is unconscious and may also be convulsed. In *minor epilepsy* or "petit mal," there is a lapse of consciousness for a few minutes, in which unconscious acts may be performed but in which the sufferer does not usually fall. In *major epilepsy* or "grand mal," the unconsciousness is accompanied by convulsions and by falling, hence the name, falling-sickness. *Jacksonian Epilepsy* is a disease in the motor area of the brain which produces convulsions without loss of consciousness, and is distinct from true epilepsy in which no disease of the brain can be detected after death with any of our present methods of examination. The *causes* of epilepsy are heredity, chronic alcoholism in the parents, syphilis, alcohol, or blows on the head. The age of onset is usually under fifteen, but may be delayed to sixty.

The *symptoms* of a fit differ in the different stages. A fit may be divided into the onset, the rigid stage, the convulsive stage, and the stage of recovery. At the onset there is in many cases a warning sensation, the duration of which is often long enough to enable the patient to lie down, but in other cases the patient is struck down unconscious without the least warning and may fall in the fire or drown in his bath. The nature of the sensation is most frequently giddiness or an unpleasant sensation in the stomach, but noises in the ears, flashes of light and other hallucinations occur, and the

patient may throw up an arm and cry out, or run backwards, or spin round. The rigid stage begins by the patient falling with every muscle strained, hence breathing is impeded and the face turns blue. This stage which lasts only a few seconds passes into the convulsive stage, in which the joints are alternately bent and straightened, and the tongue thrust out and in, whilst the mouth is alternately opened and shut, with the result that the tongue is often bitten. The water and less often the motions also are passed in this stage. The convulsion rarely lasts more than two minutes. When it ceases the stage of recovery begins, in which the return of consciousness occurs gradually and only after some time; not infrequently a second fit follows the first before recovery has occurred, and a series of fits may occur which ultimately endanger life. After the fit, and also instead of a fit, the patient may be seized with temporary insanity, in which he may commit a crime.

The *treatment* during the fit is to prevent the convulsion injuring the patient. There is no fear at this stage of his injuring other people. The clothing should be loosened, the head, arms and legs pressed firmly against the ground, and a cork, tooth brush handle or pebble wrapped in a handkerchief be placed between the teeth to guard the tongue. Between the fits, treatment is directed to the reduction of their frequency. Cure, unfortunately, is practically out of the question. Attention to the bowels, abstinence from alcohol, a quiet life out of doors such as the occupation of gardener affords, is the treatment required. Lack of self-control being a prominent feature in epileptics, the discipline should be strict from an early age, and attendance at a well-disciplined school is desirable, though, of course, competitive examinations are unsuitable. Great care must be taken that the epileptic does not ascend heights, bend over a fire, or otherwise expose himself to a sudden fall in a dangerous place, and he should always have companions round him. The frequency of the fits can generally be reduced by bromide given in sufficient doses under medical supervision, but this treatment often reduces the patient to a drowsy state with defective memory, and produces a skin eruption on the face, so that if the fits occur only once in six months, it is better to have the disease than the remedy. For the imbecility, which often accompanies epilepsy, little can be done except perhaps in institutions devoted to the purpose, Mental power is not always affected, and in certain cases amounts to genius, thus both Julius Cæsar and Napoleon were epileptics.

EPSOM SALTS. See *Constipation.*

ERUCTATIONS are small quantities of stomach contents, either fluid or gaseous, that rise into the mouth. [See *Indigestion.*]

ERYSIPELAS, or "St. Anthony's Fire," is a spreading inflammation of the skin due to a germ, the *streptococcus erysipelatis.* This germ lives outside the body in dirt and gains entrance through a wound or even a mere scratch, if contaminated by dirt. The disease also spreads readily by actual contact with infected clothes or patients. The incubation period is one to four days. The *symptoms* are a sudden rise of temperature to 104° with shivering and often vomiting, and shortly afterwards the redness of the skin is visible. The region attacked is most often around a wound or on the face. The red area is remarkable for its well defined margin and raised edge. Blisters frequently form on it and there is usually sufficient swelling on the face to prevent the eye being opened, and if the throat be attacked, suffocation may occur from the swelling. The temperature remains high four or five days and then falls suddenly. The redness of the skin fades in the course of a week or two and is followed by peeling. If the inflammation spread to the deeper tissues, matter forms. In spite of the shortness of the illness, the effect on the general health is severe and delirium is common. The *treatment* is to isolate the patient and give a purge followed by quinine and iron three times a day. The diet should be light and nourishing and given every two hours by day. For the thirst, water but not milk may be allowed between whiles. Brandy will be required in the severer cases. The inflamed skin should be dusted with flour or boric acid powder and be covered with cotton wool. If matter forms, prompt surgical treatment is required. The case should be in medical hands from the onset if possible.

ERYTHEMA is any abnormal redness of the skin which disappears on pressure. It is due to dilatation of the capillary blood-vessels from one of many causes, e.g., irritation by heat, cold, light, chemical irritants, blows, and the presence in the blood that supplies the skin of some poison such as that of scarlet fever, rheumatic fever, etc. Sunburn and scarlet fever have been confused at times. [See *Scarlet Fever, Sun Burn.*]

ETHER. See *Anæsthetics.*

ETHYL CHLORIDE is a colourless liquid which evaporates so rapidly when sprayed on the skin that it freezes it. It has been used to numb the skin before minor surgical operations for a long time. Recently it has been administered like chloroform to produce general anæsthesia with very good results. Consciousness is lost very rapidly, without any preliminary struggling, and the after effects are so soon over that the patient can walk home a short time after taking it.

EUCALYPTUS OIL is useful for inhalation in catarrh of the nose or bronchi. It is mildly antiseptic, and as an ointment is largely used in treating burns. It has been widely recommended as a "cure" for scarlet fever and for influenza, but experience has shown this to be false.

EUSTACHIAN TUBE. See *Deafness, Ear.*

EXCRETION is the process of separation from the blood and the expulsion of waste products from the body. In *secretion,* on the other hand, the substance formed is used up within the body. The chief excretions are urine, sweat, and carbon dioxide, which are discharged by the kidney, skin, and lungs respectively. The excretions also include the colouring matter of the bile, which is formed from worn-out blood corpuscles and is discharged in the motions and also in the urine. Deficient excretion is a serious matter. Death results within ten days if urine cannot escape from either kidney; and bad health ending in gout, skin eruptions and defective mental power results from chronic defects in excretion. The skin and bowels should be kept active if the maximum health is to be maintained. Excretion is promoted by diaphoretics, diuretics and purgatives. If the skin is active, the kidneys usually excrete less, and *vice versa,* whilst by promoting watery motions from the bowel some excretion can be obtained so as to relieve if necessary the work thrown on skin and kidneys. The term "excreta" is popularly used to include the fæces. The normal fæces, however, are not a waste product discharged from the blood, but are merely those portions of the food which have not been absorbed. They are coloured, however, by bile pigment, which is the only portion of the fæces that is a true excretion.

EXERCISE is essential to the full vigour of mind and body. It promotes the circulation, stimulates digestion, ensures healthy sleep, and by making the skin active relieves the kidneys from overwork. Exercise of the mind and body together in the open air is the best form obtainable; that is to say, horse-exercise, foot-ball, and the like are better than dancing, and dancing better than dumb-bells and Indian clubs. Exercise as far as possible should be taken daily; too often in business life no exercise for five or six days alternates with a football match or long cycle ride, whereas a walk or cycle ride should form part of each day's work, either in going to or coming from the office, whilst the gymnasium, swimming bath and riding school should be borne in mind of an evening. In childhood, exercise should be of short duration and frequently repeated. In later boyhood, training for sports must be watched with care, as rapid growth often makes great calls on the strength at this time. In middle age the more active sports and gymnastic feats of youth should give place to those forms of exercise like golf, or country walks, in which there is little call for sudden spurts. This is owing to the fact that the strain thrown on the heart and arteries during any sudden exertion is great, and in middle life the arteries are often older than the muscles and unequal to the strain the latter can cause them. In convalescence exercise should

be resumed gradually, sitting up in bed must precede sitting in a chair, and carriage exercise is often necessary before much walking can be undertaken.

EXHAUSTION demands rest, especially sleep, and not alcohol or other stimulants nor a large meal. At the end of a long day on the mountains it is much better to take a little soup and to turn in early and eat a hearty breakfast next morning than to eat a big dinner, which the stomach is too exhausted to deal with and to awake next morning, if not before, with a bad attack of indigestion.

EXPECTORANTS are remedies which promote the secretion of the air passages and aid its expulsion. Expectorants fall into two groups, (1) those which loosen a cough by liquefying the secretion and (2) those which do not alter the character of the secretion but which stimulate cough. At the onset of bronchitis the secretion is scanty and tenacious, and though the irritable state of the bronchi causes frequent cough, there is really very little material to be expelled. If then, an expectorant belonging to group (2) is given, the painful useless cough will be increased, but if one from group (1) is given the secretion will be liquefied, cough made easy and much relief obtained. Later in the attack of bronchitis the secretion becomes copious, and further increase is undesirable, whilst remedies which stimulate cough and promote expectoration do good. Hence group (2) is used at this stage. Group (1) includes ipecacuanha, spirits of sweet nitre, citrate, and acetate of potash; group (2) includes ammonia, ether, and senega.

EXTRACTS are made by steeping the raw material in water, spirit, ether or other solvent until the active principle has been dissolved out and then in filtering and evaporating down the fluid thus obtained. In some cases the evaporation is continued until a solid residue is obtained, in others a liquid extract of known strength is produced.

EXTRAVASATION is the escape of a fluid from the vessels which naturally contain it into the surrounding tissues. When a blow is given with a blunt instrument, the smaller blood vessels beneath the skin are ruptured, and blood is then extravasated into the surrounding parts, hence the colour of a bruise or black eye. Rupture of the bladder causes extravasation of urine.

EYE is the organ of vision placed in a socket in the skull known as the orbit. Between the orbit and the eye is a padding of fat and certain muscles for the movement of the eye and the raising of the eyelid. The eye communicates with the brain by the optic nerve which passes through an aperture in the bony wall of the orbit behind the eye. The blood supply to the eye consists of the ophthalmic artery and veins. These vessels also pass from within the skull through apertures in the bony wall of the orbit to the eye. The eye consists of a transparent coat in front known as the cornea and of a tough opaque coat behind, the white of the eye or sclerotic. Dividing the eye into an anterior and a posterior chamber and attached just at the junction of the cornea and sclerotic is the crystalline lens, which is a transparent double convex lens, that focusses light on to the back of the eye. Within the sclerotic are two inner coats, known respectively as the choroid and the retina. The choroid contains blood-vessels and is black so that any light that reaches it is not reflected. The retina contains the sensory organs which communicate with the optic nerve. The space between the lens and the cornea, known as the anterior chamber, contains a watery fluid, the aqueous fluid, whilst the space between the lens and the retina is filled with a transparent jelly known as the vitreous, which gives the eye its shape and elastic consistency. In front of the lens is a circular muscular membrane—the iris or coloured part of the eye—presenting in its centre a circular hole—the pupil—which looks black because the interior of the eye is visible through it. To keep the cornea from becoming opaque by dust settling on it, it is continually washed by the tears and by the eyelids, which blink every few seconds and thus polish the cornea. Vision is effected by the following series of steps:—

> Light is focussed in passing through the cornea, the aqueous fluid, the crystalline lens and the vitreous, and finally is thrown on the retina, where it forms an inverted picture of the object from which it came. The retina is stimulated by the light, and its different parts are stimulated differently by the different parts of the picture which is focussed on it. Such differences are transferred, not as light, but as nerve impulses along the optic nerve to that part of the brain which is concerned with vision, and although the picture on the retina is inverted, the mental impression produced is erect.

In focussing light the cornea is the most powerful agent. The use of the lens is to enable objects at different distances to be accurately focussed. Such focussing in the camera is done by altering the distance between the lens and the plate without changing the lens. In the eye the distance between the lens and the plate (retina) is constant and the lens is altered in shape instead. The nearer an object the more convex the lens has to be. Such alteration is effected by a ring of little muscles placed round the edge of the lens, and the process is termed "accommodation." Accommodation for objects nearer to the eye than ten inches is effected with difficulty. The iris or coloured part of the eye regulates the size of the hole in its centre through which light is admitted, and corresponds to the diaphragm of optical instruments. In strong light the iris contracts the pupil and shuts off light and *vice versa* in faint light; and in looking at a near object it also shuts off all light except that near the centre of the pupil, the purpose of which is to produce a more sharply focussed image on the retina. It is thus clear that the eye is an optical instrument very similar in principle to optical instruments of human invention, though infinitely more perfect in its power of rapid adaptation. The health of the eye is often maintained when the general health is much disturbed; there are, however, many abnormal conditions of the eye, the chief of which we will now briefly describe.

Any *foreign body* in the eye is best dealt with by closing both eyes and rubbing the normal one, a flow of tears is thus induced, which often dislodges the foreign body. If this fails, the lower lid should be drawn down, and if the body can be seen, it should be touched with the tip of a clean handkerchief or piece of blotting paper. Eversion of the upper lid, that is turning it up to expose the inner surface, requires practice and is best not attempted. Splinters of iron, grit, etc., embedded in the cornea, should not be touched till a doctor is obtained, but a drop of castor oil should be applied to the inside of the lower eyelid drawn down for the purpose, and the affected eye should be bandaged up to prevent the sufferer doing damage by rubbing it, and in children the hands should be secured also. *Lime* in the eye is best treated by dropping in castor oil or weak vinegar and water. Water alone is bad treatment. *Ulcer* of the cornea is common, due either to injury or to constitutional causes. In healing, ulcers leave an opacity on the cornea, which often takes years to clear up. By perseverance, however, much can be done. Special spectacles are generally required. The treatment from the first must be in medical hands.

The membrane which lines the inner side of the eye-lids and connects them with the eye is the conjunctiva, inflammation of which is *conjunctivitis*. Of this there are many forms, e.g. (1) simple, (2) purulent, and (3) granular. (1) The simple form is set up by many causes, such as a foreign body in the eye, a chill, etc. The symptoms produced are smarting in the eye as though something was in it, pain on looking at the light, discharge which gums the lids together during the night, whilst the eye itself is bloodshot. The treatment is to syringe the eye twice daily with warm boric lotion and to smear the margin of the lids with cold cream, the eyes should be protected from strong light, and in the severer cases small pads of lint or linen soaked in iced water should be applied frequently, whilst all rubbing with the fingers should be carefully avoided. (2) "Purulent ophthalmia," or the ophthalmia of the new-born infant, causes many cases of blindness amongst the poor. In such cases conjunctivitis begins within five days of birth. The symptoms are great swelling of the eyelids, a mattery discharge and burning pain; the cornea may be destroyed by ulceration and blindness result. Until the

doctor's arrival the treatment should be that for simple conjunctivitis, except that the syringing should be hourly and greater care taken to burn all linen soiled by the discharge. (3) Granular Ophthalmia, or conjunctivitis, is the eye-trouble that is so apt to break out in epidemic form in large institutions, especially in such as are crowded with the children of the working-classes. The affection is very chronic. It may be recognised on drawing down the lower lid, when instead of the normal smooth surface a number of little raised bodies the size of a pin's head are seen. These bodies scratch the cornea and produce ulceration and much irritation in it. The discharge from the eyes, like that in gonorrhœal ophthalmia, is highly contagious. The treatment is strict isolation and protection from the light until the doctor's arrival.

Iritis is inflammation of the iris or coloured part of the eye. The chief causes are rheumatism and syphilis. There is pain, dimness of vision, the iris becomes mud-coloured and the eye blood-shot. The affection can thus be readily mistaken for conjunctivitis if the iris itself be not carefully looked at. The treatment is to protect the eyes from the light and send for a doctor. *Optic neuritis* or inflammation of the optic nerve, retinitis or inflammation of the retina and choroiditis or inflammation of choroid also occur and produce blindness, partially or wholly, either for the time or permanently. [*Cataract, Squint, Blindness, Astigmatism* are discussed under their respective heads, and long and short sight under *Sight.*]

EYE-LIDS are folds of skin for protecting the eye. They are lined with a vascular membrane, the conjunctiva, inflammation of which is conjunctivitis [see the last article.] An abscess round the root of an eye-lash is a stye. This is best treated by bathing it with hot water till it bursts and by attention to the general health. The eyelid contains a gland which secretes a lubricating fluid. If the mouth of the gland becomes blocked the secretion which is still produced cannot escape and being pent up forms a cyst or swelling containing fluid, known as a meibomian cyst. A stye is most common in the upper lid and a meibomian cyst in the lower lid. The cyst requires an incision by a surgeon. A wart at the inner corner of the eye may be the beginning of rodent ulcer. [Refer to *Rodent Ulcer, Tears.*]

FACE-ACHE. See *Teeth.*

FACE-BURNING, A symptom of indigestion, which if allowed to continue for some time may give rise to acne rosacea. [See *Indigestion* and *Acne Rosacea.*]

FÆCES are the evacuations from the bowel. [See *Motions.*]

FAINTING is due to a deficient blood supply to the brain usually caused by a temporary weakness of the heart's action. The *causes* are sudden emotion, impure air, want of food, loss of blood, disease of the heart, the early stages of pregnancy and the time of quickening. The symptoms are too well known to need description. The duration of the attack is usually short, but it may last longer and in rare cases end in death. The *treatment* for a faint should be loosening the clothing, giving fresh air, putting the head down and the feet up, and applying smelling salts and wet handkerchiefs or eau de Cologne to the face; stimulants are rarely necessary.

FAITH in a remedy often has a remarkable effect. A hypodermic injection of water will frequently induce sleep if the patient thinks morphia is being given even when the patient is by no means hysterical. Bread pills have also been often known to produce purging. Many other examples are on record. The phenomenon is allied most likely to hypnotism. It is probably one factor in the success of homœopathic remedies in which the doses of the drugs given are infinitesimally small.

FARCY. See *Glanders.*

FASTING in the literal sense of total abstinence from food is rarely wise. Regularity in the time and amount of our meals is always to be aimed at. The occasional exclusion of butcher's meat or other article of diet is no doubt harmless, and positively beneficial to those who habitually over-eat or shirk exercise. On the whole, however, in youth plenty of food and plenty of exercise are much better than little exercise with correspondingly little food. In middle life, when the exercise taken is often reduced, the diet is unfortunately often increased, and it is at this time that partial fasting is likely to be wise. Total fasting, even with a free supply of water, usually proves fatal in twenty days, though the time may be prolonged in certain cases to forty days.

FAT. See *Food.* **FATNESS.** See *Obesity.*

FATIGUE. See *Exercise, Exhaustion, Debility.*

FAVUS or Scaldhead is a disease of the scalp rare in England but common in Scotland and Normandy. Yellow cup-shaped masses form on the scalp and the hair falls out. A mousy odour is usually present. The cause is the Achorion Schonleinii, a fungus. The *treatment* is removal of the crusts with a linseed poultice the surface of which is smeared with olive oil, shaving the scalp or cutting all the hair short and the repeated application of white precipitate and sulphur ointment mixed together in equal parts.

FEAR produces well marked effects on the body as pallor, tremor, sweating and diarrhœa testify. In those with unstable nervous systems a fright may induce St. Vitus' Dance or epilepsy or hysteria. In the management of the nursery and the schoolroom these facts require to be borne in mind.

FEBRICULA denotes a feverish attack of short duration and unknown cause. The patient should be confined to bed on a light diet whilst the temperature is raised, and the case watched to see if further symptoms will develop.

FEBRIFUGE is a remedy for relieving fever. Some febrifuges act by increasing the heat lost by the body, e.g. cold baths; others, known as antipyretics, act by diminishing the amount of heat produced, e.g. quinine and antipyrine. [Refer to *Fever, Fever Drinks,* and *Drugs.*]

FEEDING BOTTLES should be boat-shaped and without india-rubber tubing, as it is essential that they should be kept scrupulously clean. [See *Infants.*]

FEES. See *Doctor.*

FEET, CARE OF. The feet are often troublesome, owing to ill-fitting boots. Corns, bunions, hammer toe, and many other morbid conditions are the result. A boot need not be square toed, but the inner border should be straight. The boot in common use thrusts the big toe towards the centre of the foot, which tends to produce bunion at the root of the big toe, and hammer toe in the one next it. In the same way the pressure to which the other toes are subjected produces a hard corn on the little toe and soft corns between the other toes. The boot should be long enough to enable the toes to lie flat, and the heel should not be so high that the weight is thrown on to the front of the foot. The present fashion of allowing children to wear sandals is doubtless good, but it must be followed up by suitable boots, or by the time middle age is reached, when the increasing weight of the body demands good feet, it will be found, when it is too late, that the feet are hopelessly crippled.

Sweating feet are a frequent source of trouble. In such a case the feet should be washed in soap and water every night and then soaked in a saturated solution of boric acid. In the daytime boric acid should be sprinkled inside the stockings, and a cork sock placed inside the boot. The cork should be cleansed with boric acid solution every few days.

Sore feet may be due to sweating or to stockings that are darned. For a walking tour good stockings are as important as good boots. Sore feet should be treated every night with boric ointment or benzoated lard, to either of which ten grains of salicylic acid to the ounce may be added.

Cold feet require thick stockings and boots that are not tight; the general health should receive attention. Equal parts of camphor liniment and soap liniment may be rubbed into the feet night and morning. If cold feet cause sleeplessness, bed socks should be worn. [Refer to *Blister, Bunion, Chilblain, Corn, Flat Foot, Hammer Toe.*]

FERMENTATION is chemical action induced by the presence of a ferment. The ferment is a body which remains intact and apparently unchanged yet capable of producing chemical action in a suitable medium for an indefinite period, provided the temperature be suitable and the products of the chemical action be removed. The ferments are divided into organised and unorganised ferments. The former are living plants like yeast or certain bacteria, the latter are chemical bodies. The distinction is, however, artificial, as the yeast and other organised ferments only act by producing a chemical or unorganised ferment. The more important varieties of fermentation include the change of sugar into alcohol and carbon dioxide under the influence of the ferment yeast; the formation of vinegar from alcohol under the influence of the bacterium aceti; the formation of lactic acid from milk sugar by the bacterium lactis, a process that occurs whenever milk turns sour either before or after being swallowed. All natural decomposition is the work of ferments, most of them being produced by various kinds of bacteria. The eating of food already decomposing or sour is a common cause of indigestion and diarrhœa, whilst in many forms of indigestion food is fermented during its passage through the stomach and intestines and the gas and acids thus produced cause flatulence, heartburn, and other symptoms. Fermentation is checked by raising or lowering the temperature from that at which the process proceeds most actively and can be prevented by boiling, a fact made use of in making jam. It is also checked by allowing the products of fermentation to accumulate, hence it is that alcohol and vinegar are preservatives. In wine for instance, sufficient sugar to make it taste sweet is only permanent if the percentage of alcohol be sufficiently high, and spirit is added to most of the sweet wines for this purpose. Fermentation is checked by all antiseptics, e.g. carbolic, and the less poisonous of these are used in treating flatulent dyspepsia. They include creosote, β naphthol, sulpho-carbolates and bismuth salicylate.

FERMENTED LIQUORS. See *Alcohol* and *Beer, Wine,* etc.

FETOR. See *Disinfection, Breath Bad.*

FEVER is a term used to describe a group of symptoms of which a rise of the temperature above normal is always one. The other symptoms most often present are a rise of the pulse rate, a rise of the respiration rate, loss of appetite with coated tongue and diminished digestive power, scantiness of the urine which is often also high coloured, languor, headache and delirium.

The cause of fever is the invasion of the body by a germ. This multiplies and produces poisons known as toxins. These toxins are different for different germs. Hence each germ produces minor variations in the symptoms above mentioned. In addition, certain symptoms are also produced which are peculiar to each. Of these the different varieties of rash are a good example. By means of the symptoms peculiar to each germ, we are able to recognise the different species of fever. These species always breed true; a case of small pox gives rise to other cases of small pox but never to measles or chicken pox. At the present day so far as is known they never arise *de novo*, but always from a pre-existing case of the disease, although the connection may be difficult to trace. This is due to the fact that infection can be carried in the case of most fevers by clothing, air, water or milk. By infection we mean the germs in an active state. If these have the power of living outside the body infection can be carried to a great distance; if not then actual contact of the healthy with the sick is necessary to spread the disease. In the former case the fever used to be called infectious, in the latter case contagious, but this distinction is dying out.

Germs do not cause symptoms directly the body is attacked, because it is the toxins, not the germs themselves, which produce the symptoms. To form a sufficient dose of toxin takes time. This time during which the disease develops before the onset of symptoms is the *incubation period.* The length of this period varies within certain limits for each fever. Exposure to infection thus leaves it uncertain whether the fever has been caught or not, until the longest possible time for incubation has elapsed. A day or two over this time is commonly taken as the quarantine period. The *quarantine period* is the time during which one exposed to infection must be isolated before he can be said to be free of all risk of having the disease. For convenience of reference we append a table of these times.

Disease.	Age most likely to catch it.	Incubation Period.	Quarantine Period.
Chicken-Pox	Childhood	12–19 days	20 days
Diphtheria	2–15 years	1–7 days, usually 2	8 „
Influenza	All ages	2–6 days	7 „
Measles	Childhood	10–14 days	16 „
German Measles	Youth	11–18 days	21 „
Mumps	Childhood	14–23 days	24 „
Small Pox	All ages	12 days	16 „
Scarlet Fever	5–10 years	1–7 days, usually 3	10 „
Typhoid or Enteric Fever	Young Adults	5–21 days	—
Whooping Cough	Childhood	5–18 days	21 „

The chief advances made in our knowledge of fever during recent times consist in the discovery of (1) the actual germs which cause them, (2) the way to treat them, (3) the part played by insects in the spread of infection.

With regard to (1) we must admit much remains to be done. As to (2), we have learnt to feed fevers instead of starving them. Formerly the patient was starved, bled, and purged with the object of leaving the fever no food to feed on. Now the patient's strength is supported as far as possible, to enable him to produce the natural antidotes to the poisons formed by the germs attacking him. Moreover we have obtained for one fever at least, diphtheria, an antitoxin that has considerably reduced the percentage of fatal cases. (See *Antitoxin*) As to (3) we would mention the relation of the mosquito to the spread of malaria and of elephantiasis, the part played by flies in spreading enteric fever in the South African War, and the tsetse fly in producing the "sleeping sickness."

The *prevention* of fever still remains one of the great problems of the day. We have two courses open: either to render the germ extinct, or to so alter the constitution of those exposed to attack that the germ is harmless to them. Whether to adopt the former or the latter method, or a combination of the two, depends on the fever with which we have to deal. We attempt to banish the germ (1) by the isolation of infected cases, (2) by the disinfection of infected houses and clothing. In certain cases isolation may serve the purpose; thus rabies has been stamped out in England by muzzling all dogs for two years and quarantining all imported ones. In other cases isolation comes too late to be effective; in whooping-cough, for instance, a case is infectious a fortnight before it can be recognised and isolated. In such cases our only chance of success is to so alter the constitution of those exposed that the germ becomes innocuous.

This can be attempted in two ways: (1) by sparing no effort to improve the general health; (2) by inducing a mild or modified form of the fever. The adult of to-day in robust health is infected with great difficulty by most germs. On the other hand, the less healthy individual, be his resistance lowered by drink, poverty, overwork or what not, is infected far more readily. If then we can secure for the masses temperance, sanitary dwellings, wise factory regulations and a knowledge of the laws of health, we shall go far to stamp out many of the fevers. Already in England plague, cholera, and typhus have gone; typhoid is going. Phthisis still stands out defiant. To attempt to annihilate this by isolation in Sanatoria of the infected cases, and by the disinfection of infected houses is futile. Hundreds of cases will escape detection until the later stages, and these must always keep the infection amongst us. It must be attacked chiefly by sanitary dwellings, with more space and air, by more wholesome food and less "drink."

There are certain fevers, however, which the healthiest

at the present day cannot resist if they are exposed to infection. *Influenza* and *Small Pox* are two such fevers. Against the former we have no means of protection; against the latter we have in vaccination an effective weapon. We want inoculations, corresponding to vaccination, in the case of certain other fevers. Inoculation against typhoid was a failure in the late war, but improved methods may yet succeed. Inoculation against cholera and snake-bite are both practised in India. For protection against influenza this method can never be useful because an attack of influenza provides immunity for so brief a time. It can only be useful in such diseases as small pox or typhoid, in which one attack is rarely followed by a second, even in the course of a long life with frequent exposure to infection. [Refer to *Disinfection*, *Sick Room*, and the *individual fevers*.]

FEVER DRINKS. Suitable drinks are described under the following heads:—Aerated Waters, Apple Water, Black Currant Water, Claret, Imperial Drink, Lemonade, Tamarind Water and Toast Water.

FILTERS in domestic use are not so useful as the public think and are often actually causes of disease. Many of those in use do not stop the passage of germs although they may stop the eggs of intestinal worms. Many stop some of the germs, which then flourish in the substance of the filter and infect all subsequent water that passes through. Hence purification of the water by boiling, although more expensive, is a much safer method. Among the more reliable filters are the Pasteur-Chamberland and the Berkefeld. In the Pasteur-Chamberland filter the water passes through a thick walled unglazed earthenware tube, which stops germs. It has been recommended to clean this by brushing the outside with a stiff brush; as, however, the germs are not only outside but probably also distributed through the substance of the porcelain, to be thoroughly cleansed it should be boiled or a new tube substituted.

FINGERS, DEAD. *Raynaud's Disease.*

FIRST AID. Under this heading we propose to give a few directions for the management of the commoner emergencies. In this subject a few practical lessons are worth much theory, but a few words for purposes of reference may nevertheless be of service. The subjects to which we shall refer are:—Ambulances, bandaging, removal of clothing from injured limbs, fractures, dislocations, sprains, fits, drowning, suffocation, and bleeding. Burns, poisons, sunstroke and injuries to the eye or ear will be found under their respective heads.

AMBULANCES have often to be obtained or improvised for the removal of the injured. In the large towns the police undertake this duty in the case of accidents, and the Metropolitan Asylums Board supply ambulances both within and without the metropolitan area for the removal of fever cases at a moderate charge. Hand ambulances may also be obtained from the St. John's Ambulance Association, St. John's Gate, Clerkenwell. Occasions, however, must often arise when an ambulance has to be constructed on the spot. A hurdle or shutter can be used as a stretcher and a coster's barrow is also convenient. Two poles and two coats may be used as a stretcher by turning the sleeves of the coats inside out and running a pole through the two sleeves on one side when the two coats are placed with the lower margin of each in contact. The pole will then traverse the left sleeve of one coat and the right sleeve of the other. The two sleeves on the other side receive the other pole in the same way and the coats are then buttoned up, the row of buttons coming in a straight line, midway between and parallel to the two poles. Another method is to make a lattice work of rope or belts between the two poles. Whatever method is used it is essential before placing the patient on the litter to test it first to make sure it will stand the necessary weight. In carrying the stretcher the two bearers should keep step but start with opposite feet, and the patient should travel feet foremost except in going upstairs or up a steep hill.

BANDAGING. To learn to bandage, a few simple practical lessons are requisite, such as the classes of the St. John's Ambulance Association afford. The two chief forms of bandage in use are the triangular bandage and the roller bandage. A large handkerchief with two opposite corners in contact forms a triangular bandage, which may be used in its triangular form as in making a sling, or rolled up like a scarf to form a bandage for fixing a splint or covering a wound.

To bandage an eye roll a handkerchief like a scarf, place the centre of the bandage over the eye, pass one end below the ear of the same side, pass the other end over the most prominent part of the forehead of the opposite side and tie the two ends firmly at the back of the head.

To bandage the scalp bring two opposite corners of a very large handkerchief in contact so as to make a triangle, place the triangle on the scalp with the apex behind, bring the other two angles round the forehead just above the brow till they meet behind, low down and covering the apex, tie them firmly and secure the apex to them with a pin. The triangular bandage recommended by the St. John's Ambulance Association has a base four feet long and two sides of two feet ten inches each and on it are printed figures showing the way it may be applied. The roller bandage is the one chiefly used by medical men. It must be applied evenly and firmly without being tight, or serious consequences may ensue.

REMOVAL OF CLOTHING from injured limbs. Always slip out the sound arm first in taking off the coat, as it is then easy to slip the coat off the injured arm. Trousers may often be drawn straight down after unbuttoning as much as possible, but if a leg be broken or seriously injured it is much better to slit the trouser up along the seam. In putting clothing on, the injured limb is clothed first.

FRACTURES may be simple or compound. In the former the bone only is broken; in the latter case the skin is broken, so that germs can reach the broken bone. Compound fractures must be first treated as wounds (See *Wounds*), and then as in simple fractures temporary splints applied to prevent movement until the doctor comes. In fractures of the *thigh or leg*, after the trousers and boot have been removed by cutting them, the best splint to use is the sound leg. After placing a folded handkerchief between the knees and another between the ankles, the limbs may be tied together by one handkerchief applied above and a second just below the knees whilst a third is applied above the ankles.

N.B.—A bandage must never be applied over the fracture itself, unless the skin is broken at this spot.

Fracture at the middle of the *upper arm* is best treated by three slips of wood or stout cardboard secured above and below by handkerchiefs. The arm must then be placed in a sling with the hand well raised, and the patient will then do well to walk rather than ride to the doctor. Fracture at the *wrist* requires a splint that passes from the root of the fingers to the elbow. The fingers can then bend comfortably over the edge of the splint. A second splint on the back of the hand and forearm is also desirable. A piece of wood padded with wool or flannel or several layers of stout cardboard may be used and the splints should be secured by three handkerchiefs placed round the hand, just above the wrist and below the elbow. The arm is then placed in a sling. Fracture of one of the bones in the *hand* is best treated by placing a small door-handle, tennis or billiard ball in the palm of the hand and bandaging the fingers over it.

Fracture of the *collar bone* is best treated by passing one end of a duster or large handkerchief over the shoulder and under the arm and securing this end to the rest of the handkerchief with safety pins. A loop is thus formed, which encloses the shoulder. The other shoulder is treated similarly. Each handkerchief thus presents a free end and these are now firmly knotted together over a third handkerchief which is folded and placed in the small of the back. The shoulders are thus drawn back as far as possible, and the arm of the injured side is then supported in a sling. Fracture of the *jaw* requires two handkerchiefs, one passing from below the chin to the top of the head, where it is firmly tied, and the other from just above the chin to low

down at the back of the head where it is tied and the two handkerchiefs should then be tied together.

DISLOCATION is the displacement of one of the bones that forms a joint, a condition which involves the tearing of one or more of the ligaments that keep the bones in position. Pain, deformity and impaired movement result and continue as a rule until the dislocation is reduced, though rarely the displaced bone has been known to hollow out for itself a new socket and produce a joint in its new situation. The joints most liable to dislocation are the jaw, finger and shoulder; the knee, be it noted, is very rarely dislocated, and when popularly said to be "put out" either the joint is damaged internally or the knee cap is broken. The *jaw* is often dislocated in yawning too widely, when the sufferer finds he cannot close his mouth. Dislocation generally occurs on one side only. The treatment, after protecting the operator's thumbs by wrapping them up well in handkerchiefs, is to press on the back teeth of each side firmly with the thumbs whilst the fingers are placed outside the mouth, and below the jaw, and the chin pressed well upwards by them. The *finger* when dislocated may be treated by a steady pull so made as to tend to straighten the finger.

N.B.—Dislocation of the thumb, shoulder and other joints should not be treated beyond placing the affected limb in a sling until the doctor comes.

SPRAINS are the ill effects presented by tendons and ligaments, which have undergone a strain. The best treatment is absolute rest at first and cold. The latter is usually applied by bandages soaked in some evaporating lotion such as plain water, eau de Cologne, or methylated spirit and liquor ammonii acetatis of each an ounce, and water six ounces, so that the whole makes eight ounces.

FITS, using the term in the broad sense to include loss of consciousness from any abnormal cause, require "first aid." The first point to observe is whether there are convulsions or not. If convulsions are present, loosen the clothing, hold the patient firmly down by pressing on the limbs and forehead, and *not* on the chest or stomach, and place some hard body between the teeth to guard the tongue from being bitten. In childhood, repeated convulsions may be relieved by an enema, by some grey powder on the tongue and by a mustard or a simple hot bath. If convulsions are absent, the loss of consciousness may be due to fainting, to apoplexy, to alcohol or other poison, or to fracture of the skull. The circumstances of the case and the odour of the breath may help in deciding if poison or drink is the cause; examination may show bleeding from the nose, mouth or ear, which would point to fractured skull; in apoplexy the patient is usually a middle-aged, well-nourished man, the face is usually flushed, the unconsciousness prolonged, the breathing snoring in character, and the onset sudden; in fainting the patient is usually a young girl, the face is pale, the breathing quiet and shallow, and consciousness is usually soon regained.

Having ascertained the above points, if the case be regarded as a *fainting fit*, make sure that loss of blood is not the cause, as a burst varicose vein in the leg is not rare, and much bleeding may occur under a skirt before it is noticed. The treatment for a faint should be loosening the clothing, giving fresh air, putting the head down and the feet up and applying smelling salts and wet handkerchiefs or eau de Cologne to the face; stimulants are rarely necessary. In fainting due to loss of blood, the latter should be treated first. In *apoplexy* and *fractured skull*, it is very important to withhold all stimulants, which unfortunately are usually immediately given; the head should be well raised, and the patient turned on the side as breathing is then less laboured. In unconsciousness due to *poisoning* by alcohol or otherwise the patient should be roused if possible and an emetic then given, hot water and mustard being the best. Artificial respiration may be necessary and care should be taken to keep the patient warm.

DROWNING may cause death after two minutes' submersion, but life is often retained for a much longer time, and one apparently drowned may be clutched from the jaws of death by persevering treatment of the right kind. The Royal Humane Society have issued most valuable instructions which may often be seen at riverside resorts. The instructions may be summed up by saying, first, clear the air passages; secondly, perform artificial respiration; thirdly, restore the warmth of the body whilst medical aid, blankets, and dry clothes are sent for.

The air passages are best cleared by turning the patient over on his face with one arm under his forehead, and compressing the lower part of the chest. The patient should then be turned on his back, a rolled-up coat placed under his shoulders and the tongue drawn well forward, and if necessary held in a handkerchief by an assistant. The braces or stays are then loosened and artificial respiration begun. The method usually adopted is that of Sylvester.

> The operator stands at the head of his patient, grasps both arms just below the elbow and draws them up above the head, when he pulls on them, as this often stimulates inspiration. The arms are kept in this position while one, two are counted. The arms are next grasped just below the elbow, and then carried down against the sides of the chest and firmly pressed together. The chest is thus compressed and the air expelled. One, two is again counted and air then drawn into the lungs, by drawing the arms up over the head as before.

The method is a simple but fatiguing one, and it may be necessary to continue it without interruption for two hours. Meanwhile, if assistance can be obtained, the circulation should be stimulated by briskly rubbing the legs. As soon as natural breathing begins it may be discontinued, and treatment then directed to promoting warmth. Hot blankets, dry clothes and hot bottles or bricks wrapped in flannel to the feet are required, hot coffee or brandy are given as soon as the patient can swallow or, if he cannot, these should be given as an enema. Later on injuries due to the patient having struck against piles or rocks may require attention, and pneumonia has to be feared.

SUFFOCATION, from various causes, may require the same method of artificial respiration, followed by warmth and stimulants, as in the case of *Drowning* (which see).

HÆMORRHAGE OR LOSS OF BLOOD may be from an artery, a vein or a capillary. In arteries the blood flows *from* the heart and escapes from a wound in a bright scarlet intermittent stream; in veins the blood flows *to* the heart and escapes in a dark continuous stream; in capillaries the blood is flowing from arteries to veins and escapes as a steady oozing. Owing to these facts it is widely taught that arterial hæmorrhage should be arrested by compression of the wounded artery at a spot nearer the heart, whilst venous hæmorrhage should be treated by pressure over the vein further from the heart than the wound. The writer has seen so many amateur attempts at this method sent to the casualty room, which have been complete failures, that he recommends pressure in all cases to be applied to the wound itself whenever possible. The limb should always be raised, and all tight clothing, garters, bandages and the like between the wound and the body removed. A firm pad can always be improvised by placing a smooth pebble or cork in a clean handkerchief and folding it up. The pad may then be secured in position by a second handkerchief folded like a scarf. While the pad is being prepared, the bleeding may be controlled by pressure with the fingers. If pressure on the wound itself fails to arrest hæmorrhage, as happens at times, additional pressure may be applied—nearer to the heart than the wound for arterial hæmorrhage, and further from the heart for venous hæmorrhage. Wounds in the palm are best treated by placing the pad in the closed fist, then binding up the fist firmly, and finally bending the elbow and securing the hand to the upper arm.

When the wound is too extensive to apply pressure to it, and arterial hæmorrhage is present, a *tourniquet* improvised as follows should be applied higher up the limb. A pad made as above is placed over the main artery and secured in position by a handkerchief folded into a scarf and firmly tied. The size of this pad should be about that of half

a tennis ball and the round side be next the skin. A stick is then inserted beneath the handkerchief on the opposite side to the pad, or it may be included in the knot of the bandage. By twisting the stick round and round the bandage is steadily tightened until hæmorrhage is arrested, when the stick must be prevented from unwinding by a bandage at each end.

In capillary oozing, the application of an astringent as well as of pressure is useful. The best is suprarenal extract or adrenalin, or hamamelis, sold also under the name hazeline; perchloride of iron and alum should be avoided, if possible, as they make the wound very slow in healing. Warm applications promote hæmorrhage, but ice or very hot applications check it and may be of service. Cobwebs check capillary oozing, but are a bad application because of the dirt and germs they introduce.

Bleeding may occur from a site to which pressure cannot be applied, e.g., the nose, lungs, stomach, rectum, bladder, or womb. The treatment for these must be considered separately:—

NOSE BLEEDING. Do not lean forward with the head over a basin, but snuff up cold water and then lean back. The collar should be loosened and cold may be applied to the back of the neck, as in the old fashioned method of putting a large key down the back. In severe cases a doctor will be required, to plug the nose with gauze soaked in hamamelis or adrenalin.

BLOOD SPITTING may be profuse in consumption and other conditions. The treatment is complete rest in bed, talking in a whisper only, a little ice to suck and a sponge bag containing ice may be placed over the heart. Coughing should be checked as much as possible, and when the doctor comes, he will probably inject morphia for this reason. No stimulants should be given.

VOMITING BLOOD may be due to blood that has come from the nose or the lungs, and been swallowed, but if not it is due to bleeding from the stomach and may be very severe. The patient should then be kept lying still, a little ice, but very little, should be given him to suck, and no medicine given by the mouth, as anything which may cause vomiting will increase the bleeding. The doctor will probably inject adrenalin under the skin, as this will circulate in the blood and contract up the mouths of the bleeding vessels in the stomach.

STOMACH, RECTUM, ETC. In cases of bleeding from the stomach, rectum, bladder, or womb, the patient should be kept lying down until the doctor arrives.

FISH. See *Food.*

FISSURE of the anus is a crack in it, difficult to heal, generally caused by piles. The symptoms caused are great pain on passing a motion and for an hour afterwards. The treatment is best in medical hands.

FISTULA, literally a pipe or flute, is a canal with rigid walls, opening at one end into a hollow viscus, whilst the other end is either blind or opens on to the surface of the body; it is caused by disease and discharges slime or matter. Such a condition is most often found near the anus or in the lower bowel. The treatment is surgical.

FITS. See *Apoplexy, Convulsions, Epilepsy, Fainting, First Aid, Hysteria.*

FLAT FOOT or Splay Foot is due to the normal arch of the foot giving way so that the inner border of the foot comes in contact with the ground and much pain with a clumsy gait results. In the normal foot, the weight is borne by the heel, the outer border of the foot, and the toes and ball of the big toe, whilst the inner border is not in contact with the ground and bears no pressure. The normal condition of the arches of the foot is maintained by the muscles of the calf, and the muscles and ligaments of the foot. All conditions, which debilitate these, predispose to flat foot. The chief of these is prolonged standing. Hence policemen, shop assistants and laundry women are specially prone to suffer. Other causes of flat foot include those which displace the normal position of the foot, such as high-heeled boots and knock-knee. In the latter the feet are separated, and the soles turned outwards, and the weight thrust on to the inner border of the foot instead of the outer border. The *treatment* in most cases is to wear low-heeled, broad-toed boots, to reduce the amount of standing, and to increase the amount of exercise suited to strengthen the calf muscles. Going upstairs on tip-toe, dancing, skipping, and cycling are such exercises. If this fails, rest in bed for a week should be tried, and the above treatment resumed, and if necessary special boots or an operation may be resorted to under medical advice.

FLATULENCE is due to an excessive formation of gas in the stomach and intestines. It is mainly produced by yeasts and bacteria, which either live normally in the intestine or have been introduced in the food, but is partly due to swallowed air. As a certain amount of gas formation is a normal part of digestion, it is not surprising that indigestion is often accompanied by an excessive production of gas. The chief *causes* are constipation and certain articles of diet, e.g. new bread, pastry, an excess of sugar, thick soup and partially fermented alcoholic liquors, but in the course of typhoid fever, peritonitis and certain forms of hysteria, an acute flatulent distension sometimes occurs, which cannot be thus explained. The *treatment* in most cases consists in taking a purge combined with one of the carminatives recommended below, and in restricting the diet by excluding the articles named above. Carminatives are remedies which expel wind, the most useful of which are peppermint water, spirits of camphor, sal volatile and cajuput oil, and in severe cases of flatulent distention the best is a turpentine enema. [Refer to *Enemata.*]

FOMENTATION is best made as follows. Lint or clean flannel is soaked in boric lotion (a saturated solution of boric acid in water), or in carbolic lotion (1 in 40), either of which are boiling. The lint is then wrung out quite dry. This can only be done by placing the lint folded up in a wringer—a clean towel serves very well—and then forcibly wringing the towel and the enclosed lint until no more fluid can be expressed. As this should be done quickly, before the lint has time to get cold, it is desirable for two people to work together, one at each end of the towel. The lint is then applied to the affected part and immediately covered by oilskin or mackintosh so cut that it overlaps the lint completely. It is a common mistake to cut the oilskin too small, and this spoils the fomentation, as it is our purpose to shut in the warmth and moisture of the lint completely, or evaporation will occur and cold instead of warmth result. The oilskin is then covered with a pad of wool or tow and a bandage applied lightly. Instead of the antiseptic fomentation above mentioned, which is the customary treatment for a suppurating wound or whitlow, fomentations are often used instead of poultices to apply to unbroken skin, and may have belladonna, laudanum, or turpentine sprinkled on them just before they are wrung dry. The two former act as pain soothers, the last as a counter-irritant. The term fomentation always refers to a *hot* application. It is, therefore, a mistake to talk of "hot fomentations" as though they had to be distinguished from cold ones.

FOOD is composed of five classes of food stuff, viz., proteid, fat, carbohydrate, water and salts. The proteid class includes lean meat, the gluten of bread, the legumin of peas, and white of egg; the fats include butter, cream and oil; the carbohydrates include sugar and starch (the latter is the chief ingredient of bread, potatoes and rice); salts include in addition to table salt or sodium chloride, phosphates and carbonates, but not sulphates. Submitted to ultimate analysis proteid is found to consist of carbon, hydrogen, oxygen, nitrogen, sulphur, and in some cases of phosphorus; fat and carbohydrates to consist in different proportions of carbon, hydrogen and oxygen only. Hence proteids are the only nitrogenous foods. It was formerly taught that nitrogenous foods were flesh formers and the fats and carbohydrates were heat producers, but this view is obsolete. In round number it is found that 5,000 grains of carbon and 300 grains of nitrogen are required per diem, to maintain the health of a man of average weight doing average work.

These amounts are obtainable by a great variety of different diets, but unless a certain quantity of food rich in proteid be taken, a great excess of carbon must be taken to obtain the requisite nitrogen. For instance, two pounds of bread and threequarters of a pound of lean meat provide the necessary amount of carbon and nitrogen, whereas a

dietary of bread alone necessitates four pounds of bread a day being eaten. This gives the 300 grains of nitrogen but an excess of carbon to the extent of 4,000 grains. A dietary in the same way limited to lean meat necessitates six pounds being eaten daily. This gives the carbon necessary with an excess of nitrogen amounting to 1,000 grains. It is clear then a mixed meat and vegetable diet is the most suitable. This is so not only because the inclusion in the dietary of an excess of nitrogen or carbon is wasteful, but because this excess has to be got rid of, and the body may fail to do this. The excess of nitrogen may cause gout, and an excess of carbon may be stored as fat.

A GOOD DIET. In selecting a diet we have to consider how best to combine palatability, efficiency and economy. With regard to *economy*, the cost of the nitrogenous foods is much higher than the fats or carbohydrates. Nitrogen is much cheaper in the form of dried peas or beans, and of eggs and cheese, than in the form of fish, flesh or fowl. The cost of vegetable oils is far less than of animal fats. With regard to *efficiency*, the cheaper foods above mentioned are equal to the dearer, provided they can be digested. Unfortunately, peas, cheese and olive-oil are not so easily digested as good meat and good butter. Hence those engaged in sedentary occupations do wisely to rely on meat and butter, and to leave cheese and peas in any quantity for the use of the labouring man, engaged in healthy outdoor work. Muscular work requires much more food than mental work, and fortunately carries with it an increased appetite and greater digestive power. The popular belief that fish is good for the brain is merely an expression of the need for easily digested food in the case of the brain worker. The diet should include raw fruit, the vegetable acids of which are good for the health. Greens are also desirable, because the green colouring matter contains iron, which is required to make blood, whilst the remainder forms an indigestible residue that prevents constipation by stimulating the intestinal movements.

In childhood the desire for sugar and the loathing for fat is to be respected, but the sugar should be eaten at meals, and never between them. The colouring used must be of a harmless material. [See *Confectionery*].

INVALID DIETARY includes especially the following articles on which detailed information may be required:—meat extracts, meat juices, milk, casein, gelatine, eggs, peptonised foods, malt and farinaceous food, easily digested forms of fat and refreshing beverages.

(1) *Meat Juices and Extracts.* We must carefully distinguish the "meat extract," like beef tea, from the "meat juice," like raw meat juice. The former stimulates the appetite but contains far less nourishment than its appearance suggests. The meat juice on the other hand contains much nourishment in an uncoagulated and therefore digestible state. Whenever possible both beef tea and raw meat juice should be home made and prepared only a few hours before use. The recipes will be found under the separate heads. But when such preparation is not possible, the tinned extracts and juices will be found most valuable, provided care be taken in the choice of a brand, as adulteration with blood and other undesirable bodies has been detected in certain cases. The reliable meat extracts include Liebig, Bovril, Armour's Extract and Brand's Essence amongst others. The meat juices are prepared by forcing out the juice from inside the meat fibres in great presses and then concentrating this by evaporating down in vacuo at a low temperature so as to avoid the coagulation that heat would cause. Examples are the meat juices prepared by Brand, Armour and Valentine.

In most forms of illness the above are well borne, but in gout and diseases of the kidney, all meat extracts should be withheld, as they necessarily increase the work of the kidneys, which in the diseases mentioned require rest.

(2) *Milk* is invaluable in invalid diet, though it often requires to be rendered more digestible. The subject is discussed under *Infancy*. One of its nourishing ingredients, "casein," is now extracted on the large scale and sold as a soluble concentrated food, which it certainly is. This may be used to advantage to enrich a fluid diet. Casein is prepared in different ways by various makers and sold under such names as Casumen, Eucasin, Protene, Plasmon. With the addition of egg, protene is also made up into material like bread, which is used as a starch-free substitute for bread in diabetes and obesity. Casein combined with glycero-phosphates is a valuable nourishment, sold under the name *sanatogen*.

(3) *Gelatine*, though not itself nourishing, makes the other food taken more so, and is of undoubted value in the sick room, as a great variety of jellies can be made and many forms of food may be given in it. [See *Jelly*.]

(4) *Eggs* beaten up raw are readily digested and most nourishing. Lightly cooked they are suitable to convalescence in most cases. The white of the egg dissolved in water is also largely used. [See *Albumen Water*.]

(5) *Peptonised Foods* are foods digested artificially, and used to reduce the work of the digestive organs. They are often of great use for short periods, but their prolonged use results in the loss of digestive power from lack of exercise. Of the many forms on the market Somatose is the one chiefly used at present. This consists of albumoses and is in the form of a powder that dissolves in water, milk, etc., and may be added to liquid food or to nutrient enemata. [To peptonise milk or other food see Peptonised Food.]

(6) *Malt and Farinaceous Foods.* [See *Infants*.] Farinaceous puddings are often used too freely in sick cooking; rice, unless well cooked, cornflour, arrowroot and the like are not very digestible and often cause flatulence. Rusks, toast, or other material of a hard, dry, and brittle nature is often better, as thorough mastication then brings the saliva into play. Malt extracts provide sugar in a partially digested form that is often useful. Honey also provides predigested sugar that has been digested by the bees, but this disagrees with many invalids, though it should be borne in mind during convalescence.

(7) *Fat* is best given as milk, fresh cream and good butter. Amongst the other ways in which fat may be given, cod liver oil is the chief, and this may be emulsified to advantage or given with malt extract. The use of the mineral oils has been tried, but it has been proved that they are not absorbed into the system.

(8) *Refreshing Beverages* are of much importance: lemonade, imperial drink, aerated water, and black currant water are the chief. [Refer to *Cookery*.]

The following tables may be of service, though the dietary for such diseases as require special care will be found under the names of each.

Suited to Invalids.	Suited to the Healthy only.
Whiting. Turbot. Sole. Plaice. Cod. Fresh Haddock. Flounder. These are more digestible when boiled than when fried.	Oily fish, e.g., Salmon. Mackerel. Herring. Eel. Preserved Fish, e.g. smoked haddock. Fish eaten whole, e.g., white bait.
Oysters.	Crab, lobster and shell fish, other than oysters.
Fowl (wing and breast only). Pheasant (not high). Pigeon.	Fowl leg. Duck. Goose.
Mutton. Beef. Lamb. Fried Bacon. Stewed Tripe.	Pork. Veal. Venison. Preserved meat. Sausage.

Suited to Invalids.	Suited to the Healthy only.
Junket.	Cheese.
Grapes free from skin and pips. Bananas. The juice only of orange, lemon and currants. Baked apples without core or peel.	Rhubarb. Cucumber. Melon. Stone Fruit. Gooseberry and Strawberry. Figs. Preserved Fruits. Nuts.
Boiled floury potato. Spinach.	Mashed, fried, baked, or new potato, greens other than spinach. Roots, e.g., carrot, turnip, etc.
Beef-tea or Broth. Thin Soups, not highly spiced. Jelly. Well cooked farinaceous puddings. Custard. Raw or lightly cooked eggs.	Highly spiced and thick soups. Sauces made with melted butter. Heavy puddings. Pastry. Fritters. Hard boiled eggs.

FORENSIC MEDICINE is medicine in relation to law. It deals with such matters as the detection of the cause of death in cases of alleged murder or suicide; the duties of a medical witness, and the like.

FRACTURE. See *Broken Bones, First Aid.*

FRECKLES. See *Complexion.*

FRIAR'S BALSAM, or compound tincture of benzoin, is a useful application to cuts when clean, but should not be used when there is dirt in the wound. A teaspoonful of it to the pint of boiling water makes a useful inhalation for cold in the head or on the chest.

FRICTION. See *Massage.*

FRIEDRICHSHALL water contains sulphate and chloride of soda, and forms a useful, mild aperient; a wineglassful should be taken before breakfast.

FROST-BITE. Even though the part appears lifeless, recovery can often occur provided the temperature be raised very gradually. The patient must not enter a warm room, and the affected part should be rubbed, preferably with snow. When the part comes to life, inflammation should be expected, which may be treated with fomentations or by wrapping up the inflamed organ in wool. The avoidance of alcohol or hot drinks in the early stage is also important.

FRUIT. See *Food.*

FUNCTIONAL DISEASE includes all disorders which are not accompanied by any change in the affected organ that can be detected either by the naked eye or the microscope. Of these diseases hysteria is the most common.

FURUNCLE is a boil [which see].

GALL BLADDER, a small bag attached to the under surface of the liver and communicating with the bile ducts. It receives the bile and stores it until the digestive processes require it, when its muscular walls contract and discharge the bile into the small intestine. Though present in most vertebrates from fish upwards, it is absent in the horse and the deer.

GALL STONES are stones developed within the gall bladder or the bile ducts. There are two kinds, red and white. The former arise from the bile, the latter from the walls of the gall bladder and ducts. The size varies from that of fine grit to that of a hen's egg. So long as the stones remain in the gall bladder no symptoms may occur, as post-mortems are constantly showing, but if a stone is forced down the bile duct acute pain, followed next day by jaundice, results. [Refer to *Colic.*]

GALVANISM. See *Electricity.*

GANGLION in physiology means a collection of nerve cells, but in surgery it denotes a swelling due to the sheath of a tendon having been forced out into a little pouch. It is most often met with on the back of the wrist, where it forms a little swelling like a marble under the skin but elastic to the touch. Before surgery had become aseptic these were treated by smashing them with a blow from a book, but such treatment is now replaced by pricking them under strict aseptic conditions. Before this treatment is resorted to wearing a disc of lead over them sewn into a wrist-band may be tried if desired.

GANGRENE is the death of part of the body from any cause. Obstruction to the circulation or very severe inflammation are the chief causes. If the obstruction be arterial the limb is dry and shrivels into a mummified condition known as dry gangrene, but if the obstruction be in the veins, the limb is engorged and active decomposition results; this is moist gangrene. The treatment adopted is usually amputation far above the gangrenous part, but at times the patient is not considered capable of standing such an operation. The gangrenous portion is then dried up as much as possible with zinc oxide and starch powder, and if there is much fœtor iodoform is used also. The part is kept in wool. Nature at times succeeds in separating the dead portion, but as a rule if the surgeon does not do this, death occurs, though often not for two or three months, especially in the dry form of gangrene.

GARGLE is commonly thought to cleanse the throat, but in reality does not in most people get further back than the tonsils unless it is swallowed. The following may be useful:—

To cleanse the tonsils:—Bicarbonate of soda, chlorate of potash, borax of each half an ounce, white sugar one ounce. A teaspoonful of the powder to be added to a tumbler of warm water; or, Bicarbonate of soda a drachm and sixteen drachms of a solution of carbolic acid of a strength of 1 in 20, to be put in a pint measure and water added to the pint.

To act as an astringent:—Alum half an ounce, water one pint, or port wine or stewed tea.

GASTRALGIA means neuralgia of the stomach. The treatment should be in medical hands.

GASTRIC FEVER. See *Typhoid Fever.*

GASTRIC JUICE is the secretion of the glands in the stomach wall. It is acid in reaction owing to the presence of hydrochloric acid and contains two ferments, pepsin and rennet, which act on lean meat and on milk respectively. The juice is germicidal and is only poured out when food is tasted, smelt, eaten, or is introduced into the stomach. Anxiety and other nerve disturbances prevent its formation. Normally as much as seven quarts are secreted daily.

GAS POISONING kills by asphyxia. Unconsciousness is rapidly produced. [See *Poisons.*]

GASTRITIS. See *Stomach, Inflammation of.*

GELATINE, a useful ingredient in sick diet. [See Food and Jelly.]

GENTIAN is the best of the bitter drugs. The dose of the compound infusion for the adult is one ounce. Taken shortly before meals it stimulates digestion.

GERMAN MEASLES. A disease distinct from English measles and affording no protection to an attack of English measles. Although the symptoms are very similar, the attack is milder. Young adults suffer from it more commonly than children. The patient himself is free of infection three weeks from the onset. There are no complications; recovery is certain; the after effect on the general health is trifling. Treatment is the same as for a mild case of measles. [Refer to *Fevers.*]

GERMS. See *Bacteria.*

GESTATION. See *Pregnancy.*

GIDDINESS. Dizziness, vertigo, are names for the same symptoms which has many possible causes. Looking down from great heights and many other causes are familiar to all, but it must be borne in mind that giddiness may be a symptom of indigestion, anæmia, Menière's disease, or epilepsy (to all of which refer).

GIN is a whisky to which oil of juniper is added. It contains 45 per cent. of alcohol. The juniper makes it a diuretic. It is largely used by the public whenever any trouble with the urine occurs. This is a serious mistake, because juniper is irritating to the kidneys and so is alcohol. Diluted and sweetened it is known as "Old Tom." No improvement occurs by keeping.

GINGER may be taken to relieve flatulence and stimulate digestion. Doses:—powdered ginger, ten to twenty grains; tincture of ginger, a half to one teaspoonful; syrup of ginger, a half to one teaspoonful. They should be taken in a little water.

GLAND. The term is applied to two distinct groups of bodies—lymphatic glands and secreting glands. The glands in the neck so often enlarged in tuberculous children are the lymphatic glands. *Lymphatic* glands act as filters to the lymph which passes through them by arresting the foreign bodies, including germs, which the lymph contains. Normally the gland destroys any germs it arrests, but abnormally the latter succeed in destroying the gland.

Secreting glands, e.g., the liver or kidney, produce some fluid of a characteristic nature like bile, called the secretion, which is made use of elsewhere, or else an excretion, like urine and sweat, which is expelled without being used in the body. Secretions are subdivided into *external* ones that are poured on to the surface of the skin or mucous membrane, e.g., oil of hair glands, or saliva, and *internal* ones that are absorbed into the circulation and used to alter the character of the blood, e.g., the thyroid secretion from the thyroid gland in the neck. It has been shown of recent years that many glands formerly thought to produce an external secretion only produce an internal secretion also. Thus the pancreas produces an internal secretion the absence of which causes diabetes, the kidney one that effects nutrition, and the absence of which causes rapid wasting; and it is possible that all glands may be proved to have internal secretions. Professor Starling has recently shown that the intestinal juice besides containing the body that digests cane sugar has a second body, enterokinase, which is absorbed by the blood and on reaching the pancreas stimulates it to activity. Enterokinase may thus be regarded as the internal secretion of the intestinal glands. The subject has a great practical bearing, partly because the defective action of one gland may be entirely due to the failure of a far distant one, to which treatment should be directed, and partly because these internal secretions can be isolated and used in the treatment of those cases in which they are known to be deficient.

GLANDERS OR FARCY, a disease of horses, often attacking also the grooms. The disease produces serious ulceration in the skin, nose, and jaws with a profuse yellow fetid discharge. It is often fatal.

GLAUBER'S SALTS are sulphate of soda, a useful aperient, similar in action to Epsom salts, but less nauseous. The dose is a quarter to half an ounce dissolved in half a tumbler of water or peppermint water; it should be taken before breakfast.

GLAUCOMA is a serious disease of the eye, in which there is an accumulation of fluid within the eye-ball, the pressure of which produces blindness. It may have a gradual or an acute onset. In the acute form the earlier symptoms of headache and vomiting often cause it to be mistaken for a bilious attack at first. Medical aid is of the utmost importance.

GLUTEN, the albumin of bread. [See *Bread.*]

GLYCERINE, obtained in the manufacture of soap, is used both externally and internally. It protects the skin from excessive drying and is thus useful in chapped hands, lips or nipples. It may be used either pure or in the form of glycerine of starch. Glycerine of belladonna is largely used for the relief of pain by application to the skin *on* fomentations or otherwise. Internally glycerine is used as a paint for the throat in the form of glycerine and lemon juice, or if an astringent is required as glycerine and tannic acid. Glycerine of borax diluted seven times with water and a little tincture of myrrh added is a good mouth-wash. In diabetes, where sugar is not allowed, glycerine is often used as a sweetening agent, but in taking glycerine, for a throat cough for instance, it is well to acidulate it with a little lemon juice or other acid to reduce the intense sweetness. As an aperient, glycerine given by the mouth has but little effect, but given as an enema, a couple of drachms excites an action of the bowels almost directly.

GODFREY'S CORDIAL. See *Opium.*

GOITRE, or Derbyshire neck, so called from its frequent occurrence in Derbyshire, is a tumour of the neck caused by an overgrowth of the thyroid gland. In the common form no symptoms are produced other than pressure effects due to the pressure of the tumour, but in exophthalmic goitre the secretion which the thyroid pours into the blood is of an abnormal character and produces rapid pulse, prominence of the eye-balls, tremor and nervous excitability. Recovery occurs in the exophthalmic form in the course of some months, but a quiet life and medical supervision are requisite. [Refer to *Cretin.*]

GOLDEN OINTMENT contains two per cent. of yellow oxide of mercury in vaseline. It may be applied to indolent ulcers.

GOULARD'S WATER, or lead lotion, is a soothing and astringent lotion, which may be applied to bruises or to weeping eczema.

GOUT is a disorder in which the blood is laden with the soda salts of uric acid. The consequence is that deposits of urate of soda are apt to occur wherever the circulation is feeble, and inflammation is often set up around these deposits. The *causes* of gout are over-eating, over-drinking, lead poisoning and hereditary tendency. The disease is rare before thirty and occurs at an earlier age in the sufferers from lead poisoning than in other cases. The *symptoms* of acute gout usually begin in the night as intense pain in the big toe, which feels as though it were in the grip of a vice. Next morning the toe is hot, red, shining and very tender, whilst the whole foot is swollen. Other joints are often attacked next day, especially the fingers, wrists and knees, whilst the elbow is more often attacked in gout than in rheumatism. The urine either contains gravel or deposits a brick dust sediment when it gets cold. The attack usually lasts ten days and relapses are common, but pain can be relieved within forty-eight hours by suitable treatment. After an attack the general health is often much improved. Before the attack a condition known as suppressed gout often exists, in which the system suffers from being fed by blood laden with uric acid and symptoms result, e.g., nervous depression or irritability, dyspepsia, palpitations, bronchitis, and eczema. Suppressed gout also is common in the girls of a family who come of a gouty stock, the sons more often presenting gout in the joints. Repeated attacks of acute gout at steadily diminishing intervals often produce *chronic gout* in which the joints are permanently deformed and deposits of urate of soda known popularly as chalk stones, persist both round the joints and in the ears. A sallow complexion, rigid arteries and impaired digestion usually accompany chronic gout, though the mental power may remain unimpaired. Apoplexy is a common complication in these cases.

The *treatment*:—Those who come of a gouty stock can often ward off the disease by avoidance of alcohol and of excessive meat eating and by leading an open air life with plenty of exercise. Men engaged in the many trades entailing exposure to lead poisoning, must all be liable to gout so long as this evil is not remedied. Those who are the subjects of gout should eat butcher's meat only once daily, and should take plenty of green food; potassium chloride may take the place in the saltcellar of the usual table salt, or sodium chloride. Such persons should avoid rhubarb, asparagus, pickles, smoked foods, port, sherry, and beer. If any alcohol is taken, whisky, claret and hock are the least harmful. An attack of acute gout demands absolute rest, a milk diet, local applications to the affected joints and special gout medicine. The best local treatment is either hot soda baths or fomentations wrung out in strong solution of washing soda, but belladonna and glycerine,

opium, iodine and many other remedies are used. The best medicine in most cases is :—

> Two or three grains of calomel, followed by a black draught or seidlitz powder next morning, whilst citrate of potash one drachm, colchicum wine twenty drops, and chloroform water seven drachms, should be taken every hour for six doses, and then every four hours.

On this treatment patients usually obtain sleep on the second night, and obtain relief from acute pain by the following day. Chronic gout may be improved by hot air baths applied to the affected joints followed by massage ; such a course of treatment is best obtained at Bath or Buxton, though the Dowsing radient heat treatment, often obtainable near home, may be of great service.

GRAFTING consists in supplying small pieces of skin from a healthy part and placing them on the surface of an open wound. The wound is then covered with a protective dressing, and in a few days some of the grafts grow and help to cover the raw surface with new skin.

GRANULATIONS are the new tissues formed on the surface of a wound prior to the skin growing over it. [See *Wounds.*]

GRAPE CURE is a mode of treatment now obsolete, in which grapes formed the chief article of diet, as much as eight pounds being taken daily. The teeth and digestion were often injured, but obesity and other disorders are said to have been improved by it.

GRAVEL present in the urine when passed demands treatment, but if only present when the urine cools, and if it dissolves again on warming, the symptom is not serious. A cayenne pepper-like deposit of uric acid is often passed in gout. Phosphates may be passed and make the urine milky, a condition often popularly confused with spermatorrhœa. Oxalates are also present at times as crystals in the urine. For these symptoms medical advice should be sought, or stone in the bladder or kidney may result.

GRAVES' DISEASE or Exophthalmic Goitre. See *Goitre.*

GREEN SICKNESS. See *Anæmia.*

GREGORY'S POWDER is a most nauseous preparation of rhubarb that should never be given now that so many more palatable and equally efficacious aperients for children are obtainable. [Refer to *Constipation.*]

GREY POWDER, chalk and mercury. A most valuable aperient especially for infants. Dose :—One half to two grains, according to the age of the patient.

GRIPES. See *Colic.*

GRIPPE is the French name for Influenza.

GROWTH. The height of an infant at birth is usually from 18 to 19 inches. At the end of the first year the average height is 27 inches ; of the second year, 30 inches ; of the third year 34 inches ; and at the end of the fourth year, twice the height at birth. After this an annual addition of rather more than two inches is normal until the age of fourteen when, in the case of boys, the growth becomes more rapid. Between sixteen and eighteen the rate of growth usually diminishes, and as a rule at eighteen the full stature is reached. In girls the increase in height after fourteen years is generally much less than in boys.

An infant weighs as a rule about 7 pounds at birth. By the end of the first week it has recovered the weight lost during the first three days of life. During the next five months it should gain on an average an ounce a day. Its weight at the end of the first year is normally about 20 pounds, and at the end of the second year about 27 pounds. During the next seven years the child usually gains only four pounds annually, but after ten years of age the increase rises to eight pounds annually.

In rickets the weight is often excessive and the height below the average. In commencing phthisis there is often an arrest of growth and in fever a sudden increase of height. Bad sanitary conditions, want of light or food, indigestion, overwork and tobacco smoking all tend to stunt growth.

GRUEL. See *Arrowroot.*

GUAIACUM is a drug now being largely used in the treatment of chronic joint diseases.

GUARANA is a drug formerly much used to relieve sick headache, but it has now been supplanted by citrate of caffeine.

GUINEA-WORM is prevalent on the West coast of Africa, The adult worm lives beneath the skin of the legs and feet of human beings, and gives rise to ulcers. The worm discharges its eggs through the ulcer whenever it is brought in contact with water, as it often is when its human host fords a stream or bathes. The eggs hatch and the young worms attack small water-fleas (Cyclops) in which they pass part of their life history. It is probable that the disease is conveyed to man by drinking water containing water-fleas or infected by them. The natives are clever at extracting the worms through the ulcer by winding up a few inches a day on a stick without breaking the worm. Any attempt to pull the worm right out in the course of a few moments fails, as the worm breaks, and much irritation to the surrounding tissue results. Hence the native fashion of extracting a few inches a day until all is removed.

GULLET is the food canal connecting the throat to the stomach. It has muscular walls which force the food towards the stomach ; hence swallowing is possible with the head below the stomach, as in the case of a horse grazing. The length of the gullet is nine inches and the distance from the front teeth to the stomach fourteen inches. Obstruction in the gullet may arise from the lodging of a fish-bone, spasm due to hysteria, or stricture due to cancer, or aneurism of the aorta.

GUMBOIL. An abscess between the gum and the jaw due to a decayed tooth. It should be encouraged to burst internally by holding hot water in the mouth and should be lanced as soon as matter has formed.

GUM, SPONGY, may be due to scurvy. The local treatment required is an astringent mouth wash such as tincture of myrrh, half a drachm, in an ounce of water, or alum gargle.

GUN-SHOT WOUNDS. See *Wounds.*

GYMNASTICS. See *Exercise.*

HABIT-SPASM is a condition often mistaken for St. Vitus's Dance. The cause is unknown, though apparently the frequent repetition of some trick ends in its performance involuntarily in many cases. The symptoms are rapid, involuntary movement ; the same movement is repeated often every few minutes. Jerking of the head or raising the eye-brows are common forms. Rest, tonics and fresh air, gymnastics and avoidance of worry do good.

HÆMOPHILIA, a condition in which there is a tendency to excessive bleeding from trifling injuries. The cause is a defective power of blood clotting, hæmorrhage being normally checked by clotting. The disease is hereditary, the sons of a family suffering, whilst the daughters, though presenting no symptoms, transmit the disease more often than the sons do. Chloride of calcium has been recommended.

HÆMORRHAGE. See *First Aid.*

HAIR grows from a papilla at the bottom of a pit in the skin known as the hair follicle. When the hair has reached a certain length it is cast off and replaced by a new one formed from the same papilla. Should the papilla atrophy, no more hairs can grow in that follicle. With advancing years or prematurely as the result of inflammation such atrophy does occur in a large number of follicles and baldness results [See *Baldness*]. Each hair is oiled by two oil glands which pour their secretion into the follicle ; hence pomatum and the like is uncalled for and the complete removal of all grease by shampoo powders, containing caustic alkalis, is also unnatural, and does harm if frequently repeated, as it renders the hair brittle. Sponging the hair daily with water only and then rubbing it thoroughly dry is probably the best plan, and in the case of short hair does not take an inconvenient time. The colouring matter of the hair is removed in advanced life by wandering cells which make their way in from the skin, and the hair also contains some bubbles of air at this time. The two causes together produce the whiteness of the hair. This change of colour may occur as the result of emotion within a few hours. Natural curling of the hair is due to the follicle

having a spiral form. Artificial methods are all more or less harmful, as they either dry the hair too much or drag on its roots. Singeing is of no real use whatever. [Refer to *Baldness, Dandruff.*]

HAIR-DYES to turn grey hair dark are, as a rule, objectionable. They contain the salt of a metal, e.g. lead, silver, or bismuth, the sulphide of which is black. The necessary sulphur is either supplied by the skin itself or is contained in the mixture. The disadvantage is that the metal is apt to irritate the skin, and may be absorbed and poison the system. Cases of lead poisoning have occurred in this way. Bismuth is safer than other metals. To dye dark hair a golden colour peroxide of hydrogen is the chief dye used.

HALLUCINATION is a mental image, which has no corresponding object to cause it. Hallucinations occur in many mental conditions of which delirium tremens is the best known. In this condition, rats, coins, and other fancied objects are visible to the sufferer, who may even pick up an imaginary coin, hand it to a second person and receive it back again without doubting the reality of the object for a moment. Hallucinations are not absent from the healthy mind; for instance, a clock may appear to distinctly strike thirteen, the last stroke being then an hallucination.

HAMAMELIS is the witch hazel of America. The tincture of hamamelis may be applied on lint to a bleeding surface to stop bleeding. Hamamelis ointment is useful for chapped hands or piles. The drug is sold also under the name of hazeline.

HAMMER TOE is a deformity affecting, as a rule, the second toe, which becomes fixed in a bent up position, causing a corn to form at the top of the bend. It may usually be prevented by avoiding pointed boots. When present it may need an operation, and at times amputation.

HARE-LIP is often associated with cleft palate. The two conditions arise from a common cause, viz., arrested development before birth. At the eighth week of pregnancy hare lip and cleft palate is present in the normal fœtus, but long before birth the two halves of the lip and palate normally grow together and meet in the mid line. Failure to do so is the cause of hare lip and cleft palate. Maternal impressions, e.g., seeing a rabbit, etc., shortly before the birth of the child are thus seen to have no connection with the defect, as this arises from some cause unknown, before the third month. The surgeon can remedy the condition.

HARTSHORN. See *Ammonia.*

HARVEST BUG. The bites are best treated by dilute ammonia, or by a strong solution of washing soda or by the blue bag.

HAY FEVER is an affection of the nose, due to the irritation of the pollen of grasses. It attacks certain people only and runs in families. The symptoms resemble a common cold; asthma may be present as a complication. The treatment should be the avoidance of the hay-fields when the grass is ripe, and the use of tonics and soothing applications to the nose such as:—

Friar's Balsam a drachm to the pint of boiling water; inhale the steam; or Creosote ten drops to the pint of boiling water; inhale the steam.

HAZELINE. See *Hamamelis.*

HEAD-ACHE may be due to the brain being fed by poor or poisoned blood, or due to congestion of the circulation in the brain or to inflammation or to tumour within the skull. A very large number of possible causes are thus grouped together. The blood may be poisoned by constipation, by an abscess, scarlet fever, or chronic Bright's disease, etc., etc. In short, headache must be regarded as a symptom that should be considered in connection with the others present.

A cup of hot tea, sipped slowly, a wet handkerchief on the forehead, rest in a quiet dimly lighted room and a dose of ten grains of phenacetin may always be tried.

[Refer to *Bilious Attacks.*]

HEALTH depends on sanitary surroundings, e.g. a sandy soil, good drains, good ventilation, a pure water and milk supply, etc. It also depends on the habits of the daily life which should be regular in regard to meals, bowel action, sleep and exercise, but sufficiently varied in regard to work and recreation to prevent monotony. A hobby, that promotes out of door occupation, is always good and the work should be interesting if possible. An annual holiday is most desirable, and no effort should be spared to secure a complete change of air and scene by it, though it is often wise to have a few days near home first in order to get fit before going abroad. [Refer to *Childhood, Dangerous Trades, Death Rate, Exercise, Infants, Sewage Disposal, Ventilation.*]

HEALTH RESORTS may be divided into open sea, seashore, mountain, desert and woodland. The *open sea* in the form of a long sea voyage is not so often recommended as formerly, as the chance of prolonged sea-sickness, stuffy cabins and monotony outweigh many of the advantages, especially in the treatment of early phthisis. The more bracing *sea-side* resorts are suitable for scrofula and anæmia, indeed children with consumptive family histories are best sent to school by the sea, especially to Margate. The less bracing sea-side places are suitable for convalescence from acute illness, for advanced phthisis and bronchitis in the elderly; whilst cases of neuralgia, sleeplessness and nervous irritability are better away from the sea. The *mountains* are bracing, more so in Switzerland than in England, and are useful for anæmia, dyspepsia, mental overwork, early phthisis, and bronchitis in the young. They are bad for chronic bronchitis or emphysema in the elderly, for heart or kidney disease and for old age. The dry, even, and sunny climate of the *desert* and of dry plains suits gout, rheumatism, old age, disease of the kidney and such cases of bronchitis as suffer from excessive expectoration. The *woodlands* give shelter from winds, a moist atmosphere, even temperature and warm nights, and are suited to early convalescence, before the more bracing sea or mountain is thought desirable; also to the elderly, to nervous irritability, sleeplessness, and bronchitis accompanied by dry hacking cough. *Plateaus* suit heart cases best, as they give level walks, bracing air, and a cool temperature. *Places of interest*, e.g., Athens, Rome, etc., are often invaluable for nervous breakdown, melancholia, and the like.

There are many health resorts which owe their value to the presence of mineral waters that may be used either as baths or taken internally. Such health resorts or *Spas* may be subdivided thus:—

Simple Waters, often hot, as in Bath and Buxton, useful in the treatment of gout, rheumatism, and constipation.

Salt Waters, as at Droitwich, Woodhall, Harrogate, Kissingen, Nauheim, Wiesbaden, and Baden-Baden, which are used chiefly as baths, being more bracing than simple water. Cheltenham would come in this group were it not that the waters there contain sulphate of soda, as well as salt, whilst Ems contains alkalies as well as salt.

Alkaline Waters, as at Vichy and Mont Dore. They are used in the treatment of chronic catarrh of the respiratory and digestive organs, and in gout, gall stones, and acidity.

Sulphated Waters, containing Epsom or glauber salts and other sulphates as at Hunyadi Janos and Friedrichshall. They are used for obesity and piles when only a short course of treatment can be taken.

Alkaline Sulphated Waters, containing a mixture of sulphates and alkalies, are milder than the former group and are used when the patients are thinner or a longer course of treatment is taken. They are used in the treatment of gout, gravel, constipation, and obesity. Carlsbad and Marienbad are examples.

Sulphur Waters, containing sulphides of hydrogen, calcium and other bodies, occur at Harrogate, Strathpeffer, and at Aix-la-Chapelle. They are used in the treatment of syphilis and many skin diseases.

Iron Waters, as in certain Harrogate springs, and at Tunbridge Wells and St. Moritz, are not so much used in the treatment of anæmia as formerly. Those prone to constipation are made worse by these waters unless suitable aperients are also taken.

Of the Spas open in the winter, Aix-la-Chapelle, Aix-les-Bains, Baden-Baden, and Wiesbaden are the chief.

HEART is a hollow muscular organ divided by a partition into the right side and the left side. Each side is composed of an upper chamber, the auricle, and a lower chamber, the ventricle, which communicate with each other by an opening guarded by a valve. The valve permits the blood to flow in one direction only, namely from auricle to ventricle. The right auricle receives the blood from the veins and pours it into the right ventricle. The ventricle then drives the blood to the lungs, whence it passes to the left auricle. The left auricle empties into the left ventricle, which drives the blood to all parts of the body except the lungs. Valves guard the outlet from each ventricle in order to prevent blood being sucked back when the ventricle dilates. *Disease* of the heart is either a defect in one of the valves, which then permits blood to flow in the wrong direction, or is a disease of the heart wall, which may become fatty or fibrous, and so lose its muscular power. Such defects often result in dilatation of the heart, which causes dropsy, shortness of breath, blueness of the face, lack of sleep and of digestive power. The treatment is to give rest and to effect the relief of congestion.

HEART-BURN is a symptom due to acidity in the stomach and not to anything wrong with the heart itself. The treatment is a teaspoonful of bicarbonate of soda in half a tumbler of water, which usually gives immediate relief for the time. The diet, however, requires regulating, new bread, farinaceous and sweet food being the commonest causes of this disorder.

HECTIC FEVER is an intermittent fever, coming on usually every night and accompanied by flushing, sweating, and prostration. It occurs most often when a deep-seated abscess is present, or in the more acute stages of consumption.

HEMIPLEGIA is paralysis of one side of the body. [Refer to *Apoplexy.*]

HEMP, or **CANNABIS INDICA**, is a drug used in the East to produce a form of intoxication. Many become the slaves of this drug, just as the Chinese do of opium, with disastrous effects on the health.

HENBANE or **HYOSCYAMUS.** See *Drugs, Poisons.*

HEREDITY plays an important role in the causation and the prevention of disease. In most cases the disease itself is not inherited, but the tendency to it is. A constitution with only a low resisting power to the invasion of certain germs is often transmitted, and the offspring, when exposed to infection later in life, then take the disease. Similarly a constitution with a high resisting power may be transmitted to the offspring, who then escape the disease though often exposed to infection. Hence we have some families prone to consumption, others to cancer, and again some races prone to a disease, whilst other races living at the same spot escape. For instance, plague attacks the blacks far more frequently than the whites. Just as we have certain constitutions that offer a suitable soil for certain disease germs, so we have inherited constitutions liable to become deranged in one particular way; for instance, gout, diabetes, and insanity frequently run in families. In these cases it is the tendency and not the disease which is inherited, and by strict attention to the laws of health harm may be avoided as a rule. The unstable nervous system of those with insanity in the family break down under the stress of many causes, e.g. overwork, anxiety, alcohol, acute bodily disease, or child-birth, and insanity or hysteria result. Hence the regulation of the life by medical guidance in such cases is most desirable.

HERNIA. See *Rupture.*

HERPES is commonly known as *Shingles*, which see.

HICCOUGH is caused by spasm of the diaphragm, due generally to irritation of the stomach. Sipping cold water and also holding the breath may relieve it. If these methods fail a teaspoonful of bicarbonate of soda in a half tumbler of water should be taken. Obstinate hiccup in the course of a serious illness requires medical care.

HIP is the joint formed by the head of the thigh bone fitting into a cup-shaped socket in the hip bone. The joint belongs to the ball and socket class and permits considerable range of movement though not so much as the shoulder does. On the other hand the hip is dislocated far less easily than the shoulder.

HIP-DISEASE is another example of the ravages of the bacillus of tuberculosis. Consumption of the bone and lining membrane within the joint occurs, the diseased portions break down into a yellow material like matter, the thigh is shortened, the muscles waste and finally the matter makes its way to the surface, and the thigh becomes fixed, often in a faulty position with the knee drawn up. Subsequently infection of the lungs may follow and phthisis develop. It is thus clear that the recognition of the early symptoms is of much importance, for if taken in time recovery may be effected. The disease is common in childhood; a family history of consumption is frequent; the pain is often referred to the knee cap at first and only later to the hip itself; the attitude is important, the knee of the affected side is bent and the weight is thrown on to the sound leg; the gait should be noted as a slight limp may be detected early; the flesh round the hips should be inspected and slight wasting looked for on the affected side. Medical aid should be called in if any of the above symptoms are detected. The treatment is to give the inflamed joint rest and the patient food and fresh air. If matter forms an operation will be required.

HOARSENESS. See *Laryngitis.*

HOMŒOPATHY is a system of treatment based on the empirical statement that "like cures like." Thus vomiting should be treated, according to this plan, by an emetic. The system was elaborated by Hahnemann, who taught that the smaller the dose the better. As most cases of illness tend to get well with suitable food, rest and fresh air, there can be little doubt that the addition of microscopic doses of this drug or that may more often than not be followed by recovery, and is certainly preferable to the overdrugging, free bleeding, and the like, which a century ago was so much in vogue.

HONEY is a mild laxative, and is thus a useful article of diet in districts in which the water is hard. It may also be used in sore throat, to relieve cough, and aid swallowing; for this purpose it is best combined with a little acetic acid and water or lemon juice. Clarified honey eight parts, acetic acid one part, water one part, sold under the name of oxymel (dose, one to two teaspoonfuls), is the best preparation if honey be used for sore throat. Honey and borax applied to the mouth and gums is a useful remedy for thrush.

HOOPING COUGH. See *Whooping Cough.*

HORSERADISH root contains the same ingredient as mustard, and may be used as a condiment to stimulate digestion.

HOSPITALS are given in full in the "Medical Directory." Of the general hospitals those with a medical school attached are the best, and such hospitals have well equipped special departments for the eye, throat, ear, skin, etc. Fever Hospitals in London are under the care of the Metropolitan Asylums' Board, with certain exceptions, of which the London Fever Hospital and the South Mimms Smallpox Hospital are two, and these receive paying patients. Paying patients are also received at:—

> Guy's, St. Thomas, the German (Dalston), Grosvenor for Women and Children (Vincent Square), the Chelsea Hospital, the Soho Square Hospital and the New Hospital for Women (Marylebone), Queen Charlotte's Lying-in Hospital (Marylebone), Queen's Square Hospital for the Paralysed and Epileptic, Royal Westminster and the Western Eye Hospitals, National Orthopœdic for Deformities (Great Portland Street), Gordon Hospital for Fistula, Central London Throat and Ear Hospital, London Throat Hospital, Golden Square Throat Hospital, St. Peter's (Covent Garden) for Stone, St. John's (Leicester Square) and Stamford Street (Blackfriars) for Skin Disease.

In addition to the above are many nursing homes that receive paying patients only. [See *Lunatic Asylums.*]

HOUSE should be selected with reference to aspect, soil, site, drainage, ventilation, and lighting. A house with windows on the East and West has the best aspect,

as the early morning and late evening sun is thus caught and the intense sun of midday avoided. A gravel soil or chalk above the water level is the best. The nearness to neighbouring houses, stables, ponds or a stream likely to overflow its banks should be considered, as ample light, ventilation and absence of damp are important to health. Trees are desirable if not too near the house, as they aid in drying the soil; certain trees, e.g. eucalyptus, plane and poplar being specially useful. The drains are the commonest weak point and should be tested by the water test before they are considered beyond suspicion. The ventilation should be so arranged that every room ventilates into the outside air and not into a passage. [Refer to *Drains, Ventilation.*]

HOUSE-MAID'S KNEE is due to pressure and may be avoided by using a cushion to kneel on instead of the bare floor. [Refer to *Bursa.*]

HUNCHBACK. See *Spinal Disease.*

HUNGER. See *Appetite.*

HUNYADI-JANOS is a natural mineral water containing the sulphates of soda and magnesia and other salts. It is a valuable aperient, less nauseous than Epsom salts, though similar in action. The dose for an adult is a wineglassful before breakfast.

HYDATIDS are cysts or bags of fluid caused by a parasitic worm, the Tænia echinococcus. The adult form of this worm lives in the intestine of the dog. If the eggs, which pass out with the fæces contaminate watercress or other article of human food, they gain entrance to the body and hatch. The embryoes thus set free are carried in the blood stream to the liver and at times to other parts and produce cysts in the organs attacked. Inflammation may be set up around these and symptoms may also be caused by the pressure they exert. In Iceland and Australia, where men and dogs live much together, the disease is very common though rare in England.

HYDROCEPHALUS is water on the brain, a common complication of meningitis. When sudden in onset it is usually fatal; but if the fluid accumulates only slowly within the brain, the skull and brain may be gradually expanded to accommodate it, and the patient may then live for some years and display fair intelligence. In one case the skull became so thin, owing to the pressure within it, that in strong sunlight it was transparent. The condition can sometimes be relieved by the surgeon.

HYDROCYANIC ACID or **PRUSSIC ACID.** See *Drugs, Poisons.*

HYDROPATHY is the treatment of disease by water used either internally or externally, or both. Many of the mineral waters owe their value largely to the water rather than to the mineral they contain, though the public are slow to take a course of exclusive water drinking unless the water is in a more or less offensive condition. Water increases the flow of sweat, urine, and bile, and thus promotes the removal of waste bodies, many of which if retained are poisonous. Under medical guidance for certain ailments hydropathy may be of value, especially in gout, kidney disease and sluggish liver. [See *Baths, Health Resorts.*]

HYDROPHOBIA, a disease transmitted to man by the bite of dogs suffering from rabies. Rabies has been stamped out by the Muzzling Act, coupled with quarantine of all imported dogs. Hydrophobia is thus extremely rare in England. Treatment can be obtained if necessary at the Pasteur Institute of Paris.

HYGIENE, a science which treats of the laws of health. [See *Air, Climate, Dead, Drains, Exercise, Fevers, Food, House, Public Health, Sewage, Ventilation, Water.*]

HYPERTROPHY denotes the enlargement of an organ beyond the normal limits. Hypertrophy is usually protective in its effect: thus if one kidney be destroyed by disease, the healthy kidney frequently undergoes hypertrophy, and is thus enabled to do as much work as that normally performed by both kidneys together.

HYPNOTICS are remedies which induce sleep. [Refer to *Sleeplessness.*]

HYPNOTISM, Mesmerism or Animal Magnetism is the name of a curious mental state, of which much has yet to be learnt, and which occurs in animals as well as men. It was shown as long ago as 1646, that if a hen is placed with its beak to the ground and a chalk line drawn from it, the hen remains motionless for a considerable time, though the slightest thing will disturb it. Many other examples of hypnotism have been discovered since, and the phenomenon of fascination by snakes is one of these. To produce the hypnotic state in man, the attention of the patient must be removed from all external objects and concentrated on the statements and wishes of the operator. So great may this concentration become that the patient only feels what the operator permits and only believes what the operator states. As a rule, however, hypnotism cannot be effected so thoroughly except by a long course of treatment. Such credulity is in reality only an exaggeration of the normal tendency to believe what one is told. Statistics point to the majority of mankind being susceptible to hypnotism; the most difficult to hypnotise being those who cannot concentrate their attention, viz., the imbecile, hysterical, and many of the insane. The time required varies from a few minutes to a few hours. The value of hypnotism in the treatment of disease is still uncertain. It is used by some physicians in treating dipsomania and morphinomania, hysteria, insanity, obstinate insomnia, neuralgia and epilepsy, but the results are often none too good. The danger of the treatment, however, is stated by many authorities to be nothing whatever, though it is alleged by others that the self-control may be weakened and such a condition as dipsomania thus made worse.

HYPOCHONDRIASIS, literally "below the ribs," refers to a state of melancholia, caused by some fancied bodily ailment. The sufferer himself is termed a "hypochondriac." [Refer to *Insanity.*]

HYPODERMIC SYRINGE is used to administer certain drugs under the skin, in order that by entering the circulation more quickly they may act sooner and also to prevent them from upsetting the digestion. Morphia, strychnine, cocaine, and ergotin are the most often given in this way. A slight mistake may give fatal results, hence self-administration or administration by any one but a doctor or hospital nurse acting under his order is to be condemned.

HYSTERIA is a condition in which ideas react on the bodily functions to their detriment. Young girls at puberty are most often attacked, but after a serious accident such as a railway collision it may attack adult men. The Latin races are more susceptible than the Anglo-Saxon. The condition is essentially one in which the emotional part of the mind is allowed to overbalance the will and the judgment. The effect on the body is often most curious; for instance, fits, paralysis, spasms, pain, hiccough, loss of voice, frequent cough, refusal of food, flatulence, scanty urine, symptoms of joint disease, rises of temperature, and very rapid or very slow pulse rate may each be due to hysteria. The affection may be guarded against by bringing up children healthily and properly, giving them abundant fresh air and food, avoiding overwork and teaching them self-control from infancy. The recognition of the above symptoms as hysterical and their proper treatment require medical skill, and so closely are real diseases often simulated that great discrimination is necessary.

ICE is frequently used as a means of applying cold for the relief of pain or the reduction of inflammation or the arrest of hæmorrhage. It may be broken into fragments by means of a needle and a hammer, and it lasts much longer if not allowed to stand in its own water. Ice bags may be extemporised by using mackintosh sponge bags. In applying them care must be taken that they are secured in the position the doctor orders. Ice should be used internally with great moderation or indigestion and depression of the heart result.

IDIOCY is defective development of the mind dating from birth. It varies in extent from an inability to attend even to the calls of nature, to mental deficiency sufficient to prevent speech being acquired. In the majority, prolonged treatment in institutions devoted to the purpose improves the condition. Bodily as well as mental defect is generally present.

IDIOSYNCRASY, literally "a peculiar constitution," denotes the exceptional susceptibility or immunity presented by certain individuals to various drugs, foods, or mental impressions. Thus the presence of a cat in the room induces an attack of asthma in some people, the sight of blood induces fainting, and in some cases even the sight of beetroot has a similar effect. Amongst foods, shell fish invariably cause nettle-rash in some people, and mushrooms completely upset the digestion of others. In administering medicine, the dose has often to be much altered to suit the idiosyncrasy of the patient; thus most children can take large doses of belladonna, but often not even the smallest dose of opium; many adults cannot take quinine without unpleasant symptoms arising, and so on, "One man's meat being another man's poison."

IMITATION or mimicry is a mode of learning, which is unconsciously but extensively employed, especially in early life. Hence the importance of the mother being as far as possible in close touch with her children, and of the nursemaids and others being carefully chosen. Certain epidemics of nervous disorder have arisen from time to time by mimicry and many cases of fits, hysteria, and St. Vitus's Dance are said to date from the sight of a similar case. [See *Epidemics.*]

IMMUNITY from infectious disease is either inherited or acquired. The man, who is in good health, inherits immunity from many but not all of the infectious diseases. From those to which he is susceptible he may acquire immunity by having the disease once, or by having it in a modified form through vaccination, or by the injection of a suitable antitoxin. [Refer to *Fever, Opsonin, Antitoxin, Vaccination.*]

IMPERIAL DRINK. This is an excellent drink in fever and in diseases of the kidney. To make it:—

> Add an ounce of cream of tartar to a quart of boiling water. Flavour with the juice of four and the peel of two lemons from which all the white has been removed. The mixture is then sweetened to taste. Allow to stand till cold and then strain.

INCONTINENCE of Urine. See *Bladder.*

INCUBATION. See *Fever.*

INDIGESTION or **DYSPEPSIA** is readily induced by unsuitable food, irregular or hurried meals, imperfect mastication or mental worry, over-eating or over-drinking. The *symptoms* vary in different cases, and include loss of appetite, nausea, vomiting, a feeling of weight after eating and pain. Pain is felt, in front, in the lower part of the chest; or at the back, in the left shoulder blade; and it is usually increased by food. There is often flatulence and the food "repeats," causing a bitter taste in the mouth, sore throat and cough. The mental effects of chronic dyspepsia are even worse: the mind is gloomy and apt to concentrate attention on the bodily symptoms, thus aggravating the condition. The *treatment* should be mainly preventive. Let the food be simply cooked and well served, varied and palatable; let the meals be eaten slowly and, if possible, amid pleasant companions. After the chief meal of the day, rest amid pleasant surroundings is highly beneficial; breakfast should be a substantial meal and eaten slowly, even though it may be necessary to rise somewhat earlier; luncheon for most busy people should be light. Between meals it is unwise to eat or drink, as the stomach requires rest like every other organ. The teeth must be seen to, regular exercise in the open air taken, worry avoided, the bowels kept regular. No fixed rules can be laid down in regard to the kind of food to be eaten. "One man's meat is another man's poison"; experience is the best guide. The articles most commonly found indigestible are pastry, pork, new potatoes, new bread, sauces made of melted butter, very hot or very cold dishes or drinks, and malted liquors. An occasional attack of indigestion requires a purge, a spare diet for a few days, and comparative rest. A special caution against alcohol must be given. The sinking feeling which dyspepsia often causes is responsible for the condition of many a hopeless drunkard, especially among women. They have seldom plunged into this condition, but have drifted into it, in the course of years, by steadily increasing doses of alcohol at gradually decreasing intervals. [See *Digestion, Flatulence, Constipation, Diarrhœa.*]

INEBRIETY. See *Alcoholism.*

INFANCY. The period which extends over the first two years of life. Upon the wise management of the infant depends its future health and well-being.

1. *The bath.* Before the first bath the infant should be anointed with vaseline and then lathered all over with curd soap, applied with a soft flannel. The vaseline will not be required after the first bath. In placing the child in the bath support it with the left hand and arm and keep the head well out. The bath must be comfortably warm. It is now to be sponged with a soft sponge, beginning with the head. It is next to be thoroughly dried with a warm soft towel; this is to be done by dabbing rather than rubbing. All parts likely to chafe are then dusted with violet powder. The nurse should wear a flannel apron whilst engaged in the above duties. After the first month the best nurse is the mother herself. The above mode of bathing should be repeated every night from the first day onwards without fail.

The navel-string should be dressed directly after the bath, every day until it drops off, which usually occurs from five to fourteen days after birth. A dusting powder is to be used consisting of starch powder 10 parts, boric powder 1½ parts and zinc oxide 1 part. This is better than the Fuller's earth so often used. The navel-string is first dried thoroughly with a soft towel, then dusted with the dusting powder and finally wrapped up in a square of clean muslin or linen rag with a hole in the centre. The navel-string is then turned up towards the child's head and secured there by a flannel binder. Burnt rag is not recommended and lint is to be avoided for this purpose because the nap sticks and causes trouble. If when the navel string comes away, the navel is sore, this requires dressing with zinc ointment spread on clean linen. *Bleeding* from the navel may occur shortly after birth. This requires the navel-string to be re-tied at once, a little nearer the body than the first ligature.

2. *Clothing.* The flannel binder, put on after the first bath, should be used for three months. If after this time a cough occurs or the navel is prominent, the binder must be resumed. The diapers used must be washed at home in the following way. They should be washed in primrose soap and well boiled; next they must be thoroughly rinsed, dried if possible in the open air, and then well mangled but not ironed. If sent to a laundry they run the risk of being soaked in soda, which renders them irritating to a baby's skin. In clothing children the legs and the stomach require well wrapping up, but the head should be clad lightly. The reckless exposure of the legs is one of the fashionable errors of the day. No pins should be used. A child should be "shortened" at two months old in summer and three months in winter.

3. *Feeding.* This should be always carried out on the breast if possible. The whole mental and bodily vigour of the future may be sacrificed by neglect to breast-feed the infant. The only exception to the mother undertaking this duty is when she is physically unfit from consumption or other cause stated by her doctor. When this is so, a wet nurse is much better than a feeding bottle. The infant should be put to the breast about three hours after birth, and two or three times a day until the milk begins to come freely. It is to be fed every two hours and on the breast alone, until it cuts some front teeth. This is to be expected about the sixth month. If the child is thriving it may continue to be mainly breast-fed until the end of the eighth month, after which it should be weaned. This must be done gradually in the course of a month. August and September should be avoided for fear of diarrhœa and the child should be fairly well when the weaning is begun. In the event of the mother not having sufficient milk to suckle the child completely she should supplement her own with cow's milk and barley water. The breasts should be used alternately; and after each feed both the nipple and the mouth of the child are to be carefully wiped. If this is neglected the nipple will crack and the child get thrush.

If brought up by hand, its diet should consist of cow's milk diluted with barley water for the first six months. No patent food, bread, biscuit, or other material whatever is to be allowed. Until the teeth are cut and the saliva appears, the child is incapable of digesting anything but milk. The dilution required varies from one tablespoonful of water to one of milk, to three of water to one of milk. The addition of a teaspoonful of fresh cream to each feed is desirable. The cream sold in brown jugs is unsuited to this purpose. The bottle used should be boat-shaped; those containing india-rubber tubes are to be shunned. It must be thoroughly cleaned between each feed by boiling. If soda water is used in cleaning it, care must be taken that no trace of this remains when the milk is added. The cow's milk used should be boiled or sterilised by heating to 180° F. for twenty minutes. The slightest suspicion of sourness of the milk renders it unfit for a baby's food. In such a case it is well to fall back on condensed milk, using a teaspoonful diluted with six tablespoonfuls of water. Regularity is just as important to the infant as the adult, to feed it every time it cries is to bribe it to cry, and not only that, but to upset its digestion and cause endless trouble. If crying, between the feeds, is persistent, give a little water, as thirst is at times the cause of the fretfulness. The appended table may be found useful.

Age.	Interval between meals by day.	Number of meals.		Average quantity of fluid given.
		By day.	By night.	
1st week	2 hours	6	4	2 tablespoons
2nd week to 2nd month	2 hours	6	2	3 to 4 tablespoons
2nd month to 4th month	2 to 3 hours	4	2	6 to 8 tablespoons
6th month	3 hours	4	2	12 tablespoons

It is a mistake to dilute milk with lime-water in order to make bone, for there is less lime in lime-water than milk. Barley water forms the best diluent as a rule, though lime-water may be used if diarrhœa is present. The food must be given at blood heat, and the child should be encouraged to suck slowly and steadily; it is on no account to be left to suck an empty bottle, as the air thus swallowed will cause indigestion. If the child sucks badly it may be because it has thrush, is tongue-tied or has a cleft palate; but it may arise from the holes in the teat of the bottle not being large enough; this should always receive attention first. After the teeth begin to appear in the sixth or seventh month it is time to add starchy food to the diet, although milk is still the chief food. It is well to begin by adding one of the partially digested starchy foods, marked B in the table below, to the milk, and when this is well borne to pass on to rusks, biscuits, or one of the foods marked C. It is well to add these foods to alternate feeds and in only small quantities at a time. After the tenth month the child may take potatoes and gravy and it is ready for meat when the double teeth are cut about the eighteenth month. In the classified list of patent foods it will be seen that only group A ought to be diluted with water, as both B and C consist of starchy food and therefore must be diluted with milk if the necessary fat and proteid are to be given. Much harm is caused by ignorance in this matter. Many buy some food or other consisting mainly of starch, and by shaking this up with water they obtain a white mixture not unlike milk in appearance, though in reality only water and starch. On this they feed or rather starve their infant, perhaps only a few weeks old, under the impression that the food is desiccated milk.

For the information given below on the chief patent infant foods we are indebted to Dr. R. Hutchison's book on "Food and the Principles of Dietetics." *Condensed* milks are cow's milk boiled down, with the addition, in many brands, of cane sugar as a preservative. In some brands skimmed milk is used. All condensed milk is prepared with water for use, and the resulting mixture is often deficient in cream, especially when skimmed milk has been used, or when much cane sugar has been added, as greater dilution is then required to make it palatable. The cost of condensed milk is double that of fresh, and yet 500,000 cwt. are imported annually. Condensed milk has the advantage of greater digestibility in many cases. *Desiccated Milks* are condensed milks evaporated down still further. They are, as a rule, more deficient in cream, and in some brands starch has been added. The condensed unsweetened whole milk is thus the best form of preserved milk at present obtainable.

INFANTS' FOOD.

A. Preserved Milk (used diluted with water).		B. Flour partially digested artificially (used with milk), e.g. Mellin's, Benger's, Savory and Moore's, Allenbury No. 3.
Condensed.	Desiccated.	
1. Whole milk unsweetened, e.g. Ideal, First Swiss, Viking, & Hollandia brands. 2. Whole milk sweetened with cane-sugar, e.g., Nestlé, Rose, Milkmaid, Full weight and Anglo-Swiss brands. 3. Skimmed milk not to be recommended.	1. Without starch and with the excess of casein removed, e.g. Allenbury No. 1. 2. With the addition of starch or malt, e.g. Allenbury No. 2, Horlick's Malted Milk, Carnrick's Soluble Food, and Nestlé's Milk Food.	C. Flour not digested though often baked (used with milk), e.g. Ridge's, Neave's, Chapman's Whole Flour, Frame Food.

In the case of *invalid infants* humanised milk may be required, that is, milk so altered in composition as to exactly resemble the human composition. This can be obtained direct from the Aylesbury Dairy Company and Welford's. Ass's milk is more like human milk than any other, but it costs six shillings a day to feed an infant on it. A most valuable food is whey and cream. Curds and whey are made with milk and rennet in the ordinary way, and to the whey is added a teaspoonful of fresh cream for every two ounces of whey. Infants thrive on this mixture during the first six months, even when milk and barley water causes vomiting.

4. *Teething* often causes irritation of the gums. This may be reduced by allowing some hard body to be used, such as the india-rubber teething rings or the thumb. The latter is the natural teething ring. If sucking the thumb develops into a habit, this can readily be broken later by painting the thumb with aloes and water. If a gum is spongy and the tooth can be felt it may be wise to relieve tension by lancing the gum at this spot. "Teething Powders" often contain opium and other dangerous drugs, and must never be given without a doctor's orders. The results of careless feeding or dirty bottles cannot be explained away by the magical word "teething." It is probable that the well known red gum rash popularly attributed to teething is due to indigestion and lack of cleanliness.

5. *General Management.* In the management of an infant, a mother cannot attach too much importance to fresh air, exercise, and sleep. After the first few days the child should be taken out when the weather is fine. It is well to place the child on a thick rug on the floor daily and allow it to kick freely. It may also be danced up and down gently with advantage. Care must be taken not to let the child support its whole weight on its legs too soon. Sleep should be encouraged as much as possible, but not allowed while feeding. The *bowels* need special attention. The first few motions are dark olive green, afterwards they should become a bright orange yellow. The presence of a green colour, of curds, of slime, or of blood is a sign of something wrong. After an action of the bowels, the diaper should be changed without delay, oatmeal water,

not soap, being used for cleansing the child. Sore buttocks are best avoided by attention to these details. When present, a mixture of vaseline and Fuller's earth should be applied. Skin eruptions are best avoided by the daily bath. *Gripes* and *wind* require a simple aperient, e.g. castor-oil or fluid magnesia, and a restriction of the diet. A baby weighs from six to eight pounds at birth. For the first three days it loses weight, but regains this by the end of a week. After this it should gain about an ounce a day for the first five months. As a rule it is ready for *vaccination* between the age of four and six weeks. [Refer also to *Thrush, Rupture, Rickets, Night Terrors, Convulsions.*]

INFECTION. See *Bacteria, Disinfection, Fevers.*

INFLAMMATION is the name of a series of changes set up by an irritant acting on living matter. The purpose served by these changes is the removal of the irritant and the repair of the injury. In the lowest and simplest forms of life the irritant is attacked by the whole organism, but in the higher forms certain portions of the organism are specialised for the duty of defence, and these alone take part in the process. The chief agents of defence in the higher animals are the leucocytes, or white blood corpuscles which are present in both blood and lymph. When any irritant attacks any spot of the body, the neighbouring leucocytes are attracted and surround the irritant. They then pour out fluid, which kills the irritant if living, and may even enclose and digest the irritant. In animals without highly organised circulation, the defence falls mainly on the leucocytes in the immediate neighbourhood, but in those with elaborate circulatory organs the blood supply to the irritated spot is at once increased; hence the part becomes hot, red, and swollen, and the leucocytes, thus brought, leave the blood-vessels and attack the irritant. If they succeed in removing the irritant the leucocytes pass away in the lymph, the outpouring of fresh leucocytes ceases, and the blood supply to the part is reduced to the normal. The inflammation is then said to quiet down, the redness, heat, swelling and the pain, which the swelling causes, disappear, and the normal condition is resumed. If, on the other hand, the leucocytes are themselves destroyed by the irritant, more leucocytes are brought to the spot, which add their members to those already present, just in the same way as reserves are ordered up when, during a battle, there is risk of defeat. The dead leucocytes are the pus or matter, which continues to accumulate until the living leucocytes, continually brought to the spot, succeed in destroying the irritant. Inflammation is most likely to be accompanied by the formation of matter when the irritant is a living body capable of rapid multiplication. Such is the case when bacteria or germs are the irritant. The *treatment* is to give the inflamed part rest, and to support the general health by nourishing diet, by attention to the bowels, and by securing sleep. When inflammation is slight and unlikely to end in the formation of matter, the application of cold to the affected spot is good treatment. Cold may be applied by the use of evaporating lotions on a bandage or by an icebag. When the formation of matter threatens, heat is much better than cold, applied as fomentations, poultices, or as Japanese muff-warmers. When matter has formed it should be let out at once by the surgeon's knife, even though it be deeply placed, when an anæsthetic may be required. Chronic inflammation is best treated by rest and a counter irritant over the affected part, applied as a blister or with the cautery. The application of continued slight pressure by strapping suits some cases and massage others.

INFLUENZA is an infectious fever due to a germ—the *bacillus influenzæ*. Infection is conveyed in the air and also by direct contact between the sick and the healthy. The incubation period is two or three days. The *symptoms* begin suddenly with a rise of temperature to 103° or more, prostration, and pain in the back and head. After the onset the symptoms differ in different epidemics. In some the chief symptoms are bronchitis, with running at the eyes and nose, in others vomiting and diarrhœa, and in yet others severe headache, sleeplessness, and delirium. The duration of the attack is short unless complications occur, of which pneumonia is the most serious. Owing to the severe prostration, convalescence takes longer than in most fevers, and other diseases are apt to begin at this time, especially consumption. As to the *treatment* required: The patient should be isolated and put to bed. The diet, which should be nourishing and easily digestible, is best given every two hours by day and every four hours by night. If vomiting is severe, peptonised food may be necessary. Until the temperature is normal the patient should be confined to bed. This point is of more importance than is popularly thought, many of the serious after-effects of influenza being due to neglect of this simple precaution. The medicine used should be a mixture of acetate of ammonia, citrate of potash and similar drugs that promote the gentle action of the skin and kidneys; and after the fever is over a tonic is required. A good seaside holiday before work is resumed is strongly recommended.

INFUSION is made by pouring boiling water over some body and allowing it to stand and then straining. Tea is an infusion. The Pharmacopœia contains twenty-one infusions. They do not keep well.

INGROWING TOE-NAIL is the injury of the flesh by the edges of the nail. It is caused by the pressure of ill-fitting boots and by the habitual cutting of the nails in the wrong way. Nails should be cut square, the sides should not be pared, or the cut edges may sink into the flesh and start ingrowing toe-nail. When this occurs a surgeon should be consulted.

INHALATIONS are remedies administered in the form of vapour. They are chiefly used to act on the air passages. Some relief for a cold in the head, or for laryngitis, may be obtained if half an ounce of Friar's balsam with half a teaspoonful of oil of eucalyptus are added to a quart of boiling water and the steam inhaled for twenty minutes every three hours.

INHERITANCE. See *Heredity.* **INJECTION.** See *Enema.*

INOCULATION is the introduction of contagious matter by applying it to scratches made in the skin. Before the days of vaccination small pox was frequently inoculated in order to induce a mild attack of this disease, and thus provide immunity for the rest of the patient's life. The practice has been prohibited by law because it frequently gave rise to serious epidemics of small pox in the neighbourhood.

INSANITY is connected with sanity by many forms of mind lacking in balance. For practical purposes a man is usually regarded as insane only when the unsoundness of his mind prevents him from managing himself or his affairs, or causes him to be a source of danger to others. The test applied is thus one of conduct, not of beliefs, however much the latter may differ from those usually held. Abnormal conduct, however, may be due to vice or crime and not to insanity. By vice is meant self-indulgence at the cost of harm to self. By crime self-indulgence at the cost of harm to others. According to Mercier, insane conduct differs from vice or crime amongst the sane in the relationship of the self-gratification obtained to the punishment incurred. In insanity, self-indulgence is carried to such an extent that the present is everything, the future, even the morrow, is nothing. Whereas in vice or crime amongst the sane the gratification at the moment bears some proportion to the risk of punishment incurred, and especially to the remoteness or proximity of the punishment. The sane will incur severe punishment, if sufficiently remote, in order to obtain self-gratification for the moment, but a slight punishment, if certain and immediate, has a deterrent effect, which it has not on the insane. Thus theft carefully performed so as to avoid detection points to sanity, but theft immediately under a policeman's eye, with no effort at concealment, points to insanity. Occasional drunkenness is vice without suggesting insanity, but drunkenness to the extent of deliberately drinking to death in a few weeks, points to insanity; for the punishment follows the self-gratification so quickly, and is also so heavy, that there is no rational relation between them.

Different forms of unsoundness of mind are recognised. Defective mental development from birth gives rise to the *idiot*, if speech is not acquired, or to the *imbecile* if it is. Many imbeciles are highly intellectual in one narrow sphere of knowledge and quite lacking in the simplest matters outside these limits. *Lunacy*, or Insanity proper, is unsoundness of mind occurring in one whose mind has fully developed before becoming disordered.

Of the different varieties the chief are :—

1. *Mania*, exaltation with derangement of the reasoning power.
2. *Monomania*, disturbance of the mental balance in one direction only, of which kleptomania, dipsomania, and many other forms are recognised.
3. *Melancholia*, or great despondency, which has two chief subdivisions—despondency due to some fancied trouble in connection with money, love, or religious matters; and despondency due to some fancied bodily ailment (the latter variety is termed "hypochondriasis").
4. *Dementia*, or Progressive loss of mind, which comes on either independently or more often follows (1) or (3). Such a condition when advanced closely resembles that of the idiot or imbecile. The onset is usually with loss of memory, proper names being forgotten before common nouns, nouns before adjectives, verbs and interjections being the last to be retained. Next reasoning power, then ability to comprehend, and lastly the will is affected until finally hunger, cold, and the calls of nature excite but little if any attention.

Not infrequently mania and melancholia alternate. The two conditions are in many ways the exact opposite. The maniac is keenly alive to every passing event, which directs his thoughts this way and that, and renders the train of thought very similar to a series of nightmares. The melancholic is so concentrated on his own misery that he can think of nothing else. He is oblivious to his surroundings, and may sit in one attitude for hours apparently hearing and seeing nothing and refusing food. Such a condition has been mistaken for a trance.

Many lunatics suffer from hallucinations, illusions and delusions. An *hallucination* is a mental image perceived as an object which has no real existence in space. Examples are the hearing of imaginary voices and the seeing of imaginary rats. *Illusions* are erroneous perceptions derived from real objects. An example is seeing a stranger and mistaking him for a near relative. *Delusions* are false beliefs which arise either from reasoning correctly from hallucinations or illusions, or more rarely arise by correct perceptions but false reasoning. A lunatic, for instance, every night hears an imaginary voice telling him that he is commanded to sacrifice his children. For some time he probably resists and doubts if the voice is not the result of fancy; gradually its nightly recurrence, with increasing distinctness, convinces him it is an angel's voice; and a delusion thus arises, which may be the cause of homicide or of suicide to escape the command. Or a melancholic, astonished at his own misery, sets to work to consider why he is so miserable and builds up various theories to explain it, e.g., he is being secretly attacked by enemies undermining his health with wireless telegraphy, mesmerism or some other occult agent, usually the one most spoken of at the time. Or he concludes that his misery is due to religious causes, that perchance he has committed the unpardonable sin. The point we wish to emphasise is that the lunatic has not lost his reason, but on the contrary often uses it to excess, beginning with errors of perception or abnormal feelings, and from them building up delusions, which no argument shakes. As dementia develops, the hallucinations and delusions gradually fade and much anguish is thus relieved.

The *detection* of insanity is much more difficult than is commonly thought, the mono-maniacs being probably the most difficult. In this class the dipsomaniac, who at intervals is afflicted by a morbid craving for alcohol or some drug, but who is otherwise sane, is well known; but the variety known as moral insanity is less familiar. In this condition the intellect and the lower emotions are normal, but the sense of right and wrong is undeveloped, and no education succeeds in developing it. From childhood, lying, theft, and purposeless cruelty are frequently committed, and in adult life murder or other grave crime brings the perpetrator to the dock. It has then to be determined whether the man is a criminal or whether his case is one of moral insanity. The past history is the chief evidence used in determining this point. The murderer of Terriss the actor was diagnosed as a case of moral insanity, and it has to be considered whether many habitual criminals are not, at least in part, cases of moral insanity, that is to say, with moral faculties dwarfed, if not absent. If so, prolonged treatment in the criminal asylum is required instead of repeated short terms of punishment in prison. At present, however, only the most obvious cases of moral insanity are diagnosed as such, those affected by the slighter forms of the malady being treated as sane and wholly responsible for their actions.

Causes of Insanity: Disease of the brain, so far as present-day methods of examination can go, is not always found at the post-mortem examination, though certain forms of lunacy, like "general paralysis of the insane," are always associated with it. It is found that insanity increases as civilisation advances, and such an increase is going on now in England, though probably not to such an alarming extent as the statistics suggest. Heredity of the tendency to become insane is present in about one-third of the cases. Chronic blood-poisoning is responsible for a large number; the chief poisons being alcohol and syphilis. Mental strain from overwork, worry, or sudden loss of fortune, reputation or a near relative, is a potent cause. Injury to the brain by blows on the head, or by repeated epileptic fits, causes a minority of the cases. Insanity is prone to show itself at certain periods of life e.g., puberty, pregnancy, childbirth, change of life, and old age. The prospect of recovery is least hopeful when insanity begins in youth; it is most hopeful when the attack has arisen from childbirth, or the change of life, or as the result of a fever. The treatment is best in the hands of trained attendants such as the asylums provide. The relatives will be wise to remember that a lunatic should never be deceived, for the power to control him will be thereby much weakened.

The *Lunacy Law* permits any person, over twenty-one, having an interest in the case, but preferably a near relative, to sign an order for the admission of a lunatic to an asylum, such person being liable to damages if there prove to have been no sufficient ground for the order. Such an order must be accompanied by one medical certificate, which states that the alleged lunatic is insane and requires immediate removal. This order is known as the "Urgency Order," and must be replaced within seven days by a "Reception Order." The poor will find the relieving officer their best friend in the circumstances, for he will arrange the necessary formalities. When there is no need for immediate removal, a petition from a near relative, accompanied by two medical certificates, has to be sent to a magistrate of the district, who may grant the petition either with or without an interview with the alleged lunatic. The patient is then removed on a "Reception Order," which has to be renewed if detention is still required, after a year and a day. A lunatic under certain conditions can make a valid will. He must be able to recall the nature and extent of his property, and also the persons who have claims on his bounty, and his wishes must not be influenced at the time by any person or by an insane delusion. A doctor should be engaged to examine and certify to his ability to make a will, and the will should be made in the presence of the doctor and some disinterested person.

INSOMNIA. See *Sleeplessness*.

INTEMPERANCE. See *Alcoholism*.

INTER-MARRIAGE tends to perpetuate any peculiarity, whether advantageous or the reverse, that either parent possesses. Hence marriage between cousins is unwise if either of them has inherited a tendency to consumption, insanity, or other disease.

INTERMITTENT FEVER. See *Ague*.

INTESTINE. See *Alimentary Canal*.

INUNCTION is the introduction of drugs or food by rubbing them into the skin. The unbroken skin has

a slight absorptive power. Wasted infants, who cannot keep food down, are at times kept alive by rubbing cod liver oil into the skin thrice daily, and by wrapping them in flannel soaked in oil. Mercury also is sometimes administered by inunction.

IODINE is used externally as a counter-irritant in the form of tincture of iodine, but it is not to be recommended for domestic use. If swallowed, it acts as an irritant poison, and must, therefore, always be kept in a proper poison bottle and under lock and key. Iodine stains the skin brown and stains starch blue. It is thus useful to detect starch when present as an adulteration in bread for diabetics, and other preparations supposed to be free of starch.

IPECACUANHA is a drug much used to loosen a tight cough. Dover's powder is a preparation often used, containing opium as well as ipecacuanha. The dose of this powder for an adult is ten grains, and one dose may be taken at night at the onset of a cold in the head or on the chest, but must never be given to children. Ipecacuanha wine contains no opium, and may be given at any age. The usual dose for an adult is ten drops in a little water every four hours; and for an infant three drops in a teaspoonful of water every three hours. One tablespoonful of the wine for a child and two for an adult is an emetic which acts about twenty minutes after it is taken, and is thus not sufficiently prompt in cases of poisoning, though useful to empty an overloaded stomach after an indigestible meal.

IRIS, the coloured part of the eye. See *Eye*.

IRON is the most valuable drug we possess for the treatment of anæmia, but it requires considerable skill to so administer this drug that the anæmia is cured without the production of dyspepsia, headache, and other unpleasant effects. Iron should, therefore, always be taken under medical supervision. As iron blackens the teeth, fluid preparations of iron are best taken through a quill. Though perchloride of iron stops bleeding when applied to a wound, it is an undesirable application, as it makes the wound slow in healing, and leaves a considerable scar.

IRRITABILITY is a symptom of defective self-control, and may be expected in those convalescent from an acute illness, or the victims of an exhausting chronic one, as well as in those mentally defective or liable to fits. Persons in health, as fatigue develops, find the temper becomes shorter from the same deficiency of control. Pain, lack of sleep, worry, or chronic blood-poisoning arising from lack of exercise, over-eating, constipation, gout, Bright's disease, with other causes besides, are all likely to produce irritability. The treatment is the removal of the cause, if possible, and in any case the reduction of all sources of annoyance.

IRRITANT POISONS. See *Poisons*.

ISINGLASS is gelatine prepared from the air bladders of certain fish. Though more expensive than calves' foot gelatine, it is doubtful if it is of greater nutritive value.

ISOLATION. See *Sick Room, Fevers*.

ISSUE is a sore artificially produced and prevented from healing. Though formerly much in vogue as a means of applying counter-irritation over an inflamed organ, an issue is now very seldom employed.

ITCH, or Scabies, is a contagious disease due to a parasite, a spider or mite, the female of which burrows in the skin and causes great irritation. The female selects the thinnest skin obtainable to burrow in. In the adult, this is between the fingers and toes, at the wrists and round the navel; but in the infant the skin is everywhere sufficiently thin, and the above distribution is not present. Marks due to scratching are usually wide-spread, most of the eruption being due to this cause rather than to the burrowing of the parasite. The treatment consists in the destruction of the parasite both in the skin and the clothing. The clothing requires baking. The patient is treated by scrubbing with soft soap and nail brush so as to open up the burrows and expose the parasite. Sulphur soap is then used freely. Pulling tow to and fro between the closed fingers is also a good method of opening the burrows. After the bath the patient puts on disinfected clothing, and he repeats the treatment every other night for three times. He is then free of the parasites, unless he becomes reinfected from other members of his family, all of whom should be treated at the same time. Instead of sulphur soap, a sulphur bath (see *Baths*) may be given, and sulphur ointment rubbed in afterwards. He should not continue the sulphur treatment too long, or irritation of the skin will be caused, which he is apt to mistake for proof that the parasite is not yet destroyed. Indeed, calamine lotion is often required to soothe the skin after a short course of sulphur treatment. Less irritating, though more expensive than sulphur ointment, is naphthol, a drachm of which should be made up with an ounce of lard and about a drachm of precipitated chalk.

ITCHING is technically called *pruritus*. It may occur on the skin or at the anus. Itching of the anus may result from constipation, piles, or gout. It is best treated by removing the cause and by the local application of zinc ointment or hazeline cream. Confection of pepper by the mouth may be tried also. Itching of the skin results from many causes, such as rough flannel next the skin, sweat, dirt, parasites, eczema and other skin diseases. The cause must be detected and removed. The skin can be soothed by lead lotion and by a drachm of creolin to the pint of water applied as a lotion. Scratching must be avoided as much as possible. Pressure applied to the skin relieves irritation quite as well and does no harm. The nails should be cut short and the hands enclosed in fingerless gloves or socks at night, to prevent scratching during sleep.

IZAL is one of the modern disinfectants. A solution of one in two hundred of water is a powerful and safe preparation.

JALAP is a drastic purgative, too strong for domestic use.

JAUNDICE, or staining of the skin by bile, is a symptom of obstruction in either the main bile duct or its finer branches. The effect of such obstruction is to prevent or hinder the outflow of bile from the liver, and this pent-up bile is then removed by absorption into the circulation. From the blood the bile is discharged in the urine, saliva and sweat, and it is also deposited in the skin and other parts of the body. The whites of the eyes are tinged early in the attack, though the interior of the eye is affected very late, if ever. Putting on one side many rare cases of jaundice, we may say that jaundice is common shortly after birth, and clears up in a few days without treatment; that in youth jaundice is due to indigestion, which causes swelling, and therefore obstruction at the mouth of the bile duct, where it opens into the small intestine; that in middle age, especially in women who suffer from corpulence, jaundice is most often due to gall stones; and that in old age, especially when accompanied by wasting and dropsy, jaundice is usually due to cancer of the pancreas or liver. The effect of bile circulating in the blood is not often very great, though the skin usually itches and the spirits are depressed. The *treatment* of jaundice in youth is a light diet, a course of laxatives, avoidance of chill, and mental rest. The attack usually lasts from a fortnight to six weeks. Jaundice due to gall stones requires similar treatment, but gall-stone colic, so often present in these cases, requires the treatment given under *Colic*. Removal of the stones by operation may be advisable when the jaundice is prolonged for some months or is frequently recurring with attacks of colic. *Itching* of the skin may be relieved by lead lotion, creolin lotion one drachm to the pint, or bicarbonate of soda solution, one drachm to the pint.

JAW, dislocated or fractured. See *First Aid*.

JELLY is often required for sick cookery. Isinglass is a specially pure form, but dried gelatine, e.g. Cox's, or "Calves-foot jelly" may be used if necessary. Milk, egg, lemon and wine jellies are all used. *Grape Jelly* is much appreciated and may be made as follows:—

$1\frac{1}{4}$ lbs. of rather sour but juicy white grapes are pounded in a mortar or mashed with the aid of a wooden

spoon and steel fork, and strained, and the juice boiled in a saucepan; ½ oz. of Cox's or Nelaton's gelatine, previously soaked for two or three hours in enough water to cover it, is then added, and the whole is then strained through muslin previously soaked in hot water, and allowed to stand. In warm weather 1 oz. of gelatine will be required to make it set.

JELLY FISH STINGS may be received while bathing. The application of dilute ammonia is the best treatment.

JEYES' FLUID is a strong disinfectant containing a chemical allied to carbolic acid.

JIGGER WORM is a burrowing flea found in the West Indies and South America. It most often attacks the feet, and the natives acquire skill in extracting it with a needle, The best preventive is anointing the feet with eucalyptus oil and keeping them covered.

JOINTS are the junctions of two or more bones. In some the junction is effected by the one bone fitting immovably into the other, as in the skull. In others a layer of gristle intervenes, as in the joint between one vertebra and the next. In yet others free movement is permitted, the bones being only united by ligaments and muscles. The ball and socket joint like the shoulder, the hinge joint like the knee, and the pivot joint like that of the atlas on the axis, are examples of joints permitting free movement in one or more directions. The friction such movement causes is reduced by the secretion within the joint of a special lubricating fluid known as the synovial fluid, and also by the ends of the bones being covered with smooth gristle or cartilage; whilst in certain places special extra pads of gristle are so placed as to form buffers between the bones and thus lessen concussion. These pads at times may become detached, and being then loose in the joint they become nipped between the bones. Such an accident causes great pain with defective movement of the joint. It is most common in the knee-joint, and forms the most common accident on the football field.

The chief diseases from which joints suffer are inflammation caused by injury, gout, rheumatism, rheumatoid arthritis, dysentery, gonorrhœa and tuberculosis. Inflammation is accompanied by swelling due largely to an excess of synovial fluid, but after a wound the swelling may be due to matter.

The chronic inflammation of the joint caused by tuberculosis produces "white swelling," owing to the disorganisation of the interior of the joint by the growth of new tissue. Later, this tissue, which is deficient in blood-vessels, breaks down into dead liquid material like matter.

The *treatment* of joint disease varies with the cause. An acute injury or inflammation requires absolute rest, but gentle movement must not be delayed too long or stiffness results. Chronic joint trouble may require prolonged rest, as in tuberculosis, but more often hot bath treatment, followed by massage, such as Bath, Buxton, Droitwich and many of the Continental Spas provide, are the most suitable. The local application of heat may also be effected by bags of sand or salt heated in the oven, and of recent years the "Dowsing System" has come to the front. In this mode of treatment the joint is enclosed in a metal case containing a large number of electric lamps, the heat and light from which act on the joint. Stiffness of the joints, owing to the formation of adhesions within them, is a common result of chronic inflammation. If movement cannot be regained by hot baths and massage, it may be necessary forcibly to bend the joint under an anæsthetic, and to apply movement and massage subsequently. In tuberculosis arrest of the disease, with a stiff joint, is often the best result that can be hoped for; hence the indiscriminate bending of all stiff joints is fraught with danger. The "bone-setter" is in the habit of stating that all joints shown to him are "out," and he then treats them by forcible and sudden bending. Adhesions are thus broken down and movement re-established. By breaking the crutches he insures the movement being continued. In certain cases he thus achieves a great reputation, at the cost of infinite harm to those in whom such violent treatment is the exact opposite of that which is required.

JUGULAR VEIN. There are two veins, the internal or deep and important vein, and the external or small vein just beneath the skin. Hence, when it is stated that in an attempted suicide the jugular vein was severed, often only the external jugular was in reality wounded. Both veins return blood from the head to the great veins at the root of the neck.

JUNIPER contains an ingredient which has a powerful diuretic action. Gin, which is prepared with juniper berries, contains this ingredient. Either spirits of juniper or gin are frequently taken by the public when they imagine their renal organs are deranged. If renal mischief is really present, however, juniper and gin make matters worse.

JUNKET. See *Milk*.

KETTLE. A steam kettle is provided with a long spout so as to discharge the steam well into the room. In cases of bronchitis or cold on the chest, a steam kettle will be found valuable in the sick room. If the kettle be placed near the bed and heated by a spirit lamp it acts with greater effect, but care is of course required to prevent scalding, especially in the case of children, who are often restless when suffering from bronchitis, and are apt to sit up suddenly.

KIDNEYS, THE. Each kidney is placed in the loin close to the back-bone. Above, it is in contact with the diaphragm; on the outer side, it is crossed by the two lowest ribs which protect it; and its lower border is just above the navel. Behind, it is separated from the skin by the muscles of the back, and it is further protected by lying in a mass of fat and a fibrous capsule. To the inner border the ureter, the renal artery, renal vein and nerves are attached. The ureter, a kind of pipe, drains off the urine, which the kidney produces, and pours it into the bladder. The kidney serves a double purpose:—(1) to remove waste matter from the blood and discharge this in the form of urine, and (2) to pour into the blood a secretion, which regulates nutrition, and in default of which rapid wasting occurs. The latter function has been discovered recently by Rose Bradford. At times the two kidneys are fused into one *horse-shoe* shaped kidney, and at times only one kidney is present from birth.

Normally the kidney is so fixed that only a slight ascent and descent occurs with each breath; but often the fibrous capsule, enclosing both the kidney and the fat round it and anchoring the kidney to the back-bone, becomes slack, and then the kidney falls by its own weight until checked at the cost of severe pain, by the blood-vessels and nerves connected with it. Such a condition is termed *movable kidney* and may be brought on by tight lacing or child-birth. The symptoms caused are in slight cases unobserved, but in more severe cases they are pain in the loin with dyspepsia; and at times, when the ureter becomes kinked, pain, vomiting, fever and collapse occur. The flow of water is then checked until the attack ends by the passage of an unusual amount due to the ureter becoming unkinked. A suitable belt should be worn, and if this fails, an attempt to sew the kidney to the abdominal wall is the treatment usually adopted. The disease is not uncommon in women.

Inflammation of the kidney is treated under "Bright's disease." *Stone* may form in the substance of the kidney, uric acid or oxalate being the most common form. If the stone does not move it may cause no symptoms, but movement causes severe pain in the back, usually on the same side, and blood in the urine. If the stone enters the ureter, unless very small, it will only pass with difficulty, and its passage will be accompanied by renal colic. *Renal colic* is sudden in its onset, usually lasts some hours, and ends as suddenly as it began. The symptoms are paroxysmal pain shooting down into the groin and thigh, frequent passage of a few drops of blood-stained urine, vomiting, sweating, coldness of the extremities and shivering. The treatment of renal colic should be warm drinks and a hot bath, and if ordered by the doctor, a hypodermic injection of morphia.

Kidney *tumours* may be due to obstruction of the ureter and the consequent retention of the urine in the

kidney. Such a tumour is termed a hydronephrosis. Inflammation of the pelvic organs after childbirth is a common cause of this malady. Tumours may also be due to tuberculosis or to cancer. *Rupture* of the kidney occurs in railway-buffer accidents, but seldom in other accidents. Complete rest till medical aid is obtained is the only treatment. Disease of both kidneys, whatever its nature, if sufficient to prevent the waste products in the blood from being removed, produces a form of blood-poisoning known as *uræmia*. The patient passes into a drowsy state in which often occurs some delirium with cramps or convulsions. The face is sallow, the pupils contracted; vomiting and headache are common; the tongue is dry and brown, the breathing is often irregular and attended with hissing. The drowsiness deepens and death as a rule supervenes. The treatment is to promote the removal of the poisons by the skin and the bowels. Copious draughts of warm drinks, hot baths and hot packs, and free purging are recommended. [See *Baths*]. [Refer also to *Bright's, Colic, Gravel, Urine.*]

KING'S EVIL is an old name for Scrofula, a form of tuberculosis, which it was supposed a king could cure with a touch.

KNEE, a hinge joint, permitting flexion and extension with very slight rotation. Dislocation is very rare, but displacement of the internal semilunar fibro-cartilage is a common accident on the foot-ball field. The cartilage is a pad of gristle placed at the margin of the joint to lessen concussion. When torn from its attachments it lies loose in the joint, and then is apt to be nipped between the bones, thus limiting movement and giving rise to severe sudden pain. The knee is fixed in a bent position. It should be bent up still more and then suddenly straightened, whilst the patient either holds the limb as loosely as possible or has his attention diverted. In the act of straightening, the cartilage is forced back into its normal position. The joint may subsequently swell, a condition termed synovitis or water on the knee being set up, and will in any case require rest. A special knee splint is sold that permits the normal flexion and extension, but prevents any rotation and thus guards against a recurrence of the accident. The knee may be attacked by rheumatism, rheumatoid arthritis or gout, and in childhood is liable to tuberculosis, a chronic disease characterised by pain, limitation of movement, and swelling without redness of the skin. Hence the condition is known as "white swelling." Medical aid should be sought early. [Refer to *House-maid's Knee.*]

KNEE-CAP or *Patella*, is the disc of bone placed in front of the knee-joint. Above it is attached to the muscles of the front of the thigh, and below by a tendon to the upper end of the shin-bone. Normally it moves over the joint whenever the muscles of the thigh by pulling on it move the shin-bone and so straighten the leg. Abnormally it may snap across owing to the muscular pull from above, and to the leg being so fixed that it cannot straighten. Such a condition is termed *fractured patella*, and is one of the accidents popularly called "putting the knee out." It is very rare for the knee-cap to be broken by blows applied directly to it. The fracture is readily recognised, for the upper fragment is drawn up and a gap left between it and the lower one. The joint is rapidly distended with blood. A piece of board should be fixed to the back of the limb by handkerchiefs, placed at the ankle, just above and just below the knee and near the top of the thigh. The two lower limbs should then be fastened together, and the patient taken home, a bag of ice, if possible, being placed over the swollen knee. A doctor of course should be immediately sent for.

KOUMISS is fermented milk. It was first made in Tartary from mare's milk. It is now supplied, made from cow's milk, by the "Aylesbury Dairy Company," "Welford's Dairy Company," and others. It is at times better borne by the stomach than any other form of milk-food and is therefore of value in the treatment of obstinate vomiting.

LABURNUM. The seeds are poisonous to children. Treatment is that for Belladonna. [Refer to *Poisons.*]

LACTIC ACID is a colourless liquid of acid properties. It is produced when milk turns sour, and also when the food ferments in the stomach, in cases of flatulent dyspepsia, giving rise by its irritating properties to heart-burn. Hence the value of a dose of bicarbonate of soda in heart-burn, for it neutralises the lactic acid.

LAMELLA is a small disc composed of gelatine and glycerine, and containing a dose of some drug, which it is intended to insert between the lower eyelid and the eye. The Cocaine lamellæ of the British Pharmacopœia are valuable for relieving pain when splinters of emery or steel have become embedded in the eyeball. Such an accident is only too common in many factories, and it is a good plan to insert one of the lamellæ, together with a drop of castor oil, into the eye before sending the sufferer to a doctor.

LANGUOR. See *Debility.*

LANOLINE is composed of pure wool fat and water. It is one of the best ointments that can be used for softening rough dry skin, such as that of chapped hands.

LARYNGITIS is inflammation of the larynx. The chief causes are catarrh due to cold, diphtheria, tuberculosis and syphilis. The *symptoms* are huskiness or loss of voice, dry cough and some difficulty in breathing, which may at intervals be very great. The *treatment* is to give the inflamed organ rest by avoiding speaking above a whisper. The air breathed should be moist and warm, and hot flannels should be applied to the throat. When the laryngitis is part of a general disease, e.g. diphtheria, the treatment will be directed mainly to the latter.

LARYNGOSCOPE is the apparatus used for looking at the larynx. A light is placed by the patient's ear, a mirror is fixed to the doctor's forehead, and the light is reflected into the patient's mouth, whence a small mirror on a long handle directs it to the larynx, which is situated behind and below the tongue.

LARYNX is the upper end of the wind-pipe, specially adapted to act as a guard to the entrance and also to produce the voice. On each side is a fold like a watch pocket, in the free border of which is an elastic cord termed the vocal cord. The two vocal cords can be brought in contact so as to close the wind-pipe, or can be widely separated so as to admit air freely. With each breath the cords are separated, and they are allowed to come together partially between each breath. In speaking or singing the cords are brought close together and made to vibrate by the stream of air forced on to them from below. In coughing the cords are brought firmly together and the wind-pipe closed until the pressure within the chest has been sufficiently raised to overcome the resistance that the cords offer. The cords are then forced apart, and the air in escaping produces the noise of coughing. The walls of the larynx are composed of two rings of gristle, similar to those of the windpipe, but much larger. Whilst the lower of the two is complete, all the other rings of the wind-pipe are open at the back. A lid or epiglottis guards the entrance to the larynx from above.

LAUDANUM is Tincture of Opium; Dose for an adult is 5–15 minims for repeated administration and 15–30 minims for a single dose. [Refer to *Opium.*]

LAUGHING GAS is nitrous oxide, a valuable anæsthetic for minor operations of short duration. The name is due to the hysterical symptoms formerly often produced by its administration. When given properly, however, such symptoms are rare.

LAXATIVE. See *Constipation.*

LEAD POISONING is of frequent occurrence amongst workers in white or red lead and also in metallic lead [see *Dangerous Trades*]. Lead has been known to contaminate drinking water, aerated waters, food wrapped in tin foil, and cider or beer that has been allowed to stand in lead pipes. Lead salts have caused poisons by their presence in drinking water (owing to red lead used in jointing the pipes), as also in hair dye, confectionery (lead chromate being used instead of saffron), dripping preserved in lead-glazed vessels, and even in lead-glazed lining in hats. The treatment of acute lead-poisoning is given under

Poisons, and of chronic lead-poisoning under *Dangerous Trades*.

LEECHES are often used as an alternative to bleeding from a vein. A leech withdraws from one to two drachms of blood only, but by fomenting the wound after the leech has dropped off, nearly an ounce of blood is usually withdrawn before bleeding ceases. The application of six to eight leeches in heart disease and congested liver is often most useful. Care should be taken that they are applied over some bone if possible, in order that pressure can be readily applied to the bite if necessary. Loose tissue like that round the eye should be avoided and the nearest bony point, which in this case is the temple, chosen instead. Nor should a leech ever be placed over a vein. Leeches are best applied in a test tube, which is pressed on the spot chosen, or they are apt to wander from the spot and bite elsewhere. To get them to bite is often a matter of time. The patient's skin should be quite clean, and scented soaps avoided in cleansing it; if the leech still refuses to bite, the application of a little milk should be tried. To remove a leech a pinch of salt should be applied to it. If they are pulled off their teeth will be left in the wound and cause trouble. To stop bleeding from a leech bite a few strands of cotton-wool should be applied, and then a pad of wool and a bandage so as to secure some pressure. If necessary, the bites may be touched with hamamelis (sold also under the name of hazeline), and if this fails, recourse should be had to lunar caustic.

LEG, SWOLLEN. When both legs are swollen the cause may be tight garters, anæmia, pregnancy, or dropsy in the abdomen, or heart disease. When only one is swollen the cause may be varicose veins, clotting in the chief veins of the leg, or pressure on them from some swelling in the groin. After childbirth, if slight inflammation occurs in the womb, it is not uncommon for the veins of the womb to clot, and for the clot to spread to the great veins of the thigh. First one leg, and a few days later the other leg swells, usually a fortnight or so after childbirth. This condition is termed *white leg*. The treatment for swollen leg is the removal of its cause, and meanwhile the feet should be kept off the ground. In the more severe cases they should be wrapped in wool or fomentations of belladonna and glycerine applied. A case of "white leg" usually takes from six to twelve weeks to recover.

LEMONADE. To make this useful drink for the sick-room —

> Two lemons, an ounce of loaf sugar, and a pint of boiling water are required. The top and bottom of the lemons, as well as the white and the pips, (all of which are bitter), should first be removed. The lemons are then squeezed in a lemon squeezer, the peel cut fine, the sugar added, and lastly the boiling water. The whole is allowed to stand till cold.

LEMON JUICE, in the form of lemonade, is a useful summer drink, though if taken too freely it may cause dyspepsia. Lemon juice is a valuable remedy for scurvy. There is little doubt that lemonade made from lemons is far better than that prepared from citric acid. Lemon juice and water in equal parts is used as a lotion in the treatment of freckles, though seldom with much effect.

LEMON, SALTS OF, is potassium oxalate, a dangerous poison.

LENS. See *Eye*.

LEPROSY is a chronic disease caused by a bacillus or germ, and characterised by the presence of nodular swellings in the skin and mucous membranes, or in the nerves. The disease is at present chiefly one of the hot countries, though in the Middle Ages it prevailed in Europe, including England, as many of our churches testify; for they present the "squint holes" through which lepers were permitted to see the mass without being permitted to enter the church. At the present day leprosy is rare in Europe, except in Norway and some parts of Russia. That the disease dates from remote antiquity is clear from the Old Testament. The cause is a special bacillus conveyed from the diseased to the healthy by contact. It is not highly contagious; thus Professor Osler says, "Not one of the Sisters of Charity who have for more than forty years so faithfully nursed the lepers at Tracadie has contracted the disease." Mr. Jonathan Hutchinson has of late strongly urged his "fish theory" as the cause of the disease. According to this theory, the infection is either conveyed in rotten fish, or else only succeeds in establishing itself in those who frequently eat it. Except in South Africa, the distribution of leprosy and of the habit of eating fish imperfectly cured, or avowedly high, roughly correspond. On the other hand, it is not yet by any means certain that this is the only way in which leprosy can be caught. Nevertheless, the evidence is sufficient to make it desirable to withdraw the Indian tax on salt in order to promote the more thorough curing of fish.

LESION is a morbid change in any organ produced by injury or disease.

LETHARGY. See *Debility*.

LEUCOCYTE is the technical name of the white corpuscle found in the blood in large numbers. Its function is to attack and destroy all disease germs which gain entrance to the blood. The germs, in turn, secrete poisons to destroy the leucocytes. Matter, or pus, is composed mainly of dead leucocytes, killed in their fight with the germs.

LICE lay eggs or nits, that are attached to the hairs by a ring of cement, which makes them very difficult to remove. The affection is by no means confined to the children of the poor. The best treatment, short of removal of the hair, is the application of some lotion, which dissolves the cement, followed by the thorough use of a fine-toothed comb. In many hospitals, a lotion of vinegar and methylated spirit in equal parts is used. The hair is thoroughly soaked in this lotion and then rags steeped in it are placed on the hair, and the whole is enclosed in a mackintosh bathing-cap for the night. Carbolic lotion (of a strength of 1 in 20) is also used in the same way, but though efficacious, it has the drawback that the absorption of some of the carbolic causes the urine to be green next morning. This, however, is not serious, for once or twice, in a child otherwise healthy. Care should be taken to keep the lotion out of the eyes. "Izal," which is non-poisonous, is a good substitute for carbolic. If the odour can be tolerated, thoroughly soaking the hair in petroleum will destroy the lice and loosen the nits. Sores in the scalp should be treated with white precipitate ointment. In bad cases with numerous crusts, after cutting off the hair, a linseed poultice smeared with olive oil should be applied. This will remove the crusts, and white precipitate ointment may be then applied.

LIFE. See *Death-Rate*.

LIFTING is the cause of many accidents when improperly performed. The trick termed "seeing London," in which the child's head is grasped by the hands placed on each side of the head and the child then lifted, has caused death by dislocation of the spine. Again, the common mistake of pulling a child by one arm or even lifting it thus, often produces a dislocation of one of the bones of the fore-arm. No growing limb should ever be forcibly pulled. It should be remembered that a bone develops in three pieces—a shaft and a cap at each end. The latter is readily detached by a sharp pull, an accident which usually results in that limb being shorter than its fellow for life. For lifting helpless patients, see *Sick Room*.

LIGHT is of great value to health. It kills germs, stimulates growth, and promotes a cheery frame of mind. To keep the blinds always down in order to protect the carpet from fading is not the best policy in the long run. Light is used in the treatment of certain diseases. Finsen, of Copenhagen, demonstrated that sun-light passed through green screens, to remove most of its heat, and focussed on skin affected with lupus had a curative effect. The treatment is now widely practised, its introduction into this country being largely due to Queen Alexandra. Instead of sunlight electric light is utilised. Sun-baths are also used for many conditions. They consist of basking in the sun whilst lightly clad. It is doubtful if the sun bath merits all that is claimed for it. [Refer to *Lupus*.]

LIGHTNING may kill by burning or by shock. Not infrequently, though the horse is killed, the rider is stunned.

In one case a man's watch-chain was fused and burnt deeply into the flesh, yet the man himself was not burnt, and after many weeks of unconsciousness made a perfect recovery. His horse was killed and the saddle torn to ribbons. Recovery is often only partial, paralysis of some kind being permanent. The *treatment* is warmth, stimulants, and artificial respiration, if necessary.

LIME in the eye. See *Eye.*

LIME-WATER is often useful in diarrhœa. It contains less lime than milk does. By using the saccharated lime-water a much more concentrated solution is obtained. Lime solutions do not keep.

LINIMENTS are fluids to be rubbed or painted on the skin. The Pharmacopœia contains fifteen. They are used either to soften the skin and act as a lubricant in massage, e.g., soap liniment; to soothe the sensory nerves, e.g., aconite and belladonna liniment; or most often to act as a counter-irritant, e.g., compound camphor liniment, turpentine liniment, or iodine liniment.

LINSEED TEA is good for sore-throat. To make it:—

An ounce of linseed to the pint of boiling water is allowed to stand in a covered vessel in a warm place for four hours; it is then strained and may be flavoured to taste with lemon juice.

LINT is a dressing for wounds prepared from flax. It presents a rough and a smooth side, the latter being the one to place next the wound. As a dressing should contain some antiseptic, boracic lint forms a better dressing than plain lint.

LIP. Sores or warts on the lips, especially after middle age, should receive prompt attention, as they may, if neglected, become cancer. Cigarettes and broken clay pipes are common causes of such sores. *Cracked Lips* should be treated with cold cream every night. If they do not heal, flexile collodion should be painted on night and morning. *Herpes or Shingles* on the lip consist of a patch of small blisters on an inflamed base. They cause much burning and pricking. The application of zinc ointment is the best treatment. They do not last many days. [Refer to *Hare-lip.*]

LIQUORICE is useful in the form of a solid extract, sold in sticks, for sore throat. Liquorice Powder owes its aperient action chiefly to the sulphur and senna it contains.

LISP. See *Speech.*

LITHÆMIA, literally "stone in the blood," denotes the gouty state, a condition in which the blood is laden with salts of uric acid ready to crystallise out in the form of chalk stones in the joints, ears, and elsewhere. [See *Gout.*]

LIVER is the largest gland in the body situated under cover of the ribs, on the right side, but extending almost across to the ribs of the opposite side. Its average weight is fifty ounces. The blood supply is remarkable, as all the blood from the stomach, intestines, and spleen has to pass through the liver to reach the heart. The liver has many functions, the chief of which are these: (1) the secretion of bile; (2) the storage of the sugar derived from digestion, until the muscles require it; (3) the production of a body easily removed by the kidneys, named urea, from the waste products in the blood; (4) the separation of any poison from the blood and the discharge of this in the bile. Failure in function (1) causes dyspepsia and constipation; failure in (2) causes one form of diabetes; failure in (3) causes gout; and failure in (4) exposes the body to many poisons produced in the intestines by indigestion or to poisons accidentally swallowed. The liver thus acts as a sentinel guarding the entrance from the stomach and intestines into the general circulation.

Sluggish Liver is a common ailment in those engaged in sedentary occupations. The bile is produced at a much lower pressure than is the secretion from most glands, and in order to reach the intestine it has to pass through a complex network of ducts, the friction caused by which is considerable. With each breath the diaphragm descends and kneads the liver between the bowels below and the diaphragm above. It is in this way that the bile is mainly expelled. Hence all exercise promotes the flow of bile, especially horse exercise. The symptoms of sluggish liver are irregularity of the bowels, the motions being one day dark and scanty and the next pale and copious; a sallow complexion, slight jaundice in the white of the eye; a feeling of weight after meals and lowness of spirits. The treatment is suitable exercise, a course of mild aperients, avoidance of alcohol and rich food, and a tonic composed of hydrochloric acid and gentian.

Cirrhosis of the liver is a disease due to the repeated presence in the blood supplying the liver of some poison, the most usual being alcohol. The liver, at first, irritated by the poisoned blood, becomes congested, and, later, the fibrous framework of the liver grows at the expense of the more important and more delicate portions. Hence the liver changes to a fibrous mass containing but little of the original liver substance. Two results follow: (1) the functions of the liver must be most inadequately performed, (2) the fibrous tissue contracts as it grows and hinders the circulation through the liver, and congestion of the stomach, spleen, and intestines is thus caused. Such patients suffer from morning sickness, loss of appetite, piles and finally dropsy as the result of the congestion, and from wasting and feeble health as the result of a lethargic liver. The disease is also known as "gin drinker's liver," or "hob-nailed liver," although there are other poisons besides alcohol capable of producing it. The treatment is the relief of congestion by blue pill and Epsom salts, the removal of dropsy when necessary by tapping, and if there is much wasting, the use of peptonised foods.

Abscess of the Liver is rare except as a complication of dysentery. It causes pain, swelling of the liver and fever, and is treated by a surgical operation. *Cancer* is of frequent occurrence, generally secondary to cancer of the bowel. It is most frequent between the ages of 40 and 60. The symptoms are pain and enlargement of the liver (the weight may rise from 50 ounces to 20 pounds) with dropsy, great wasting and often jaundice. Death is to be expected within two years. *Hydatid Cyst*, due to a parasitic worm, more often occurs in the liver than in any other organ.

Drugs acting on the liver include mineral acids, podophyllin, rhubarb, euonymus, and salts of soda, e.g., those in Vichy and Carlsbad water. These drugs stimulate the flow of bile. Calomel and blue pill promote the expulsion of bile that has entered the intestine, before it has time to be re-absorbed, and thus indirectly stimulate the formation of fresh bile. It is a serious mistake to substitute pills for the regular exercise that is the natural way of promoting bile flow. [Refer to *Gall Stones, Hydatid, Jaundice, Constipation, Exercise, Food.*]

LOCK-JAW, or *Tetanus*, is an infectious disease in which spasm of certain muscles is the chief symptom and which is caused by a bacillus or germ, that lives in garden mould and manure, and gains entrance as a rule through a scratch in the skin. The old belief that a cut on the thumb causes lock-jaw is simply an expression of the fact that wounds of the hands, from their exposed position, are apt to become infected with dirt. Gardeners, stable-hands, and the bare-footed children of the poor are more often attacked than others. The poison produced by the tetanus germ has been isolated and shown to be about one hundred and fifty times as poisonous as strychnine. The incubation period is less than a week in the worst cases, but longer than this in the milder ones. The *symptoms* are at first difficulty in biting, with stiffness of the neck, and later the abdominal wall becomes hard and board like. Any irritation, e.g. a sudden noise, brings on a most painful spasm of the whole body, in which the breathing may be arrested. The temperature rises in the worst cases. The *treatment* consists in cauterizing the wound, putting the patient to bed in a quiet, dimly-lighted room, injecting tetanus antitoxin, or failing this giving chloral and bromide, of each ten grains, every three hours, and feeding the patient through the nose, or by the bowel, if it cannot be done through the mouth. The Greeks taught that such cases as survived four days recovered, and Professor Osler holds this to be true at the present time. The longer the incuba-

tion period the greater the chance of recovery, and the earlier antitoxin is given the more effectual it will prove.

LOCOMOTOR ATAXY, or *Tabes Dorsalis*, is a chronic and incurable disease of the spinal cord, usually caused by syphilis contracted many years before. That part of the cord is attacked which carries the sensory impulses from the limbs to the brain. Hence there is no lack of power, but as the position of the limbs is unknown unless they are seen, the normal control over them is absent, and the legs have to be looked at whenever the patient walks. If it is dark or the eyes shut the legs can no longer be guided correctly. As the disease progresses more and more careful nursing is required. No known treatment cures the disease, though temporary improvements are common. The patients often live twenty or thirty years.

LOGWOOD contains hæmatoxylin, an astringent body of nauseous taste, used to check diarrhœa. The chief preparation is the decoction, a dose being two to four tablespoonfuls for an adult every three hours till the diarrhœa is checked. It may be combined with chalk (which see). It colours the urine dark red, and stains any clothing on which it is spilt.

LOSS OF BLOOD. See *First Aid.*

LOTION is a solution of some drug used for bathing the skin, eye or other part. A liniment differs from a lotion in being rubbed in.

Antiseptic Lotions for bathing wounds, include boracic lotion (saturated solution), carbolic lotion (1 in 40); for bathing an eye, boracic lotion (a drachm to the pint, used at blood heat).

Cooling Lotions include methylated spirit and *liquor ammonii acetatis* of each two ounces, and water to the pint, and vinegar lotion (water and vinegar in equal parts).

Soothing Lotions include calamine lotion (calamine an ounce, zinc oxide an ounce, glycerine an ounce, made up to the pint with water); lead lotion (lead acetate twenty grains, glycerine an ounce, made up to the pint with water).

Astringent Lotions, red lotion (sulphate of zinc a drachm, glycerine three ounces, lavender water to the pint); alum lotion (two drachms of alum to the pint).

LOZENGES are widely used as a convenient method of carrying and administering medicine. The Pharmacopœia contains seventeen. Messrs. Burroughs and Wellcome have utilised the lozenge extensively in preparing medicine for the tropics and Colonies, and have invented a special mode of preparation which produces what they term a "tabloid." Medicine in tabloid form, each of known dose, is by far the most suitable for the domestic use of the colonist and others distant from home. For treating the throat, lozenges slowly sucked are often used, as most frequently gargles do not reach the back of the throat. Lozenges are termed trochischi in the Pharmacopœia, thus:—

Troch. acidi tannici or troch. krameriæ et cocainæ are useful for relaxed throat; troch. ipecac. et morphinæ for a hacking cough; troch. pot. chlor. for sore throat or tonsillitis; and troch. bismuthi co. is a cheap and convenient way of taking bismuth, which is difficult to prepare satisfactorily as a mixture.

LUMBAGO is an affection characterised by severe pain in the muscles of the loins. The pain is of sudden onset, and sufficiently severe as a rule to confine the sufferer to bed. It is recognised by an increase of pain on stooping. The cause is usually chill. It is uncertain whether it is of rheumatic origin or not. Labouring men suffer most from it. The treatment is rest, combined with poultices to the loins, and compound camphor liniment well rubbed in four times daily.

LUNACY. See *Insanity.*

LUNAR CAUSTIC is silver nitrate. It is used for destroying "proud flesh." If it comes in contact with the skin it will leave a dark brown stain unless iodide of potassium is applied promptly.

LUNGS. Early in fœtal life an outgrowth appears from the top of the gullet, which grows down in front of the gullet and bifurcates into two. The main stalk becomes the wind-pipe, the root of each of the two divisions a bronchus, and each division a lung. The wind-pipe remains in front of and in contact with the gullet throughout life. The lungs are elastic, so that they tend to empty themselves when they are inflated. They are richly supplied with blood, which is brought into contact with the air lying in spaces between the blood-vessels. By this means the blood is enabled to take in oxygen, and give out water-vapour and carbon-dioxide. The air passages are lined with cilia, or fine hairs, that keep up an incessant movement directing dust towards the mouth. Sufficient dust, however, is absorbed in a lifetime to change the colour from pink to grey, and if the air breathed be specially dusty, disease is caused (see *Dangerous Trades*). The air passages are moistened by the secretion of slime or mucus.

If the bronchi become inflamed—a condition termed "bronchitis"—the mucus is produced in excess, and is coughed up as phlegm. Inflammation of the lung substance is "pneumonia." Loss of elasticity is apt to occur with advancing age, which makes it difficult to expel the air from the lungs—a condition termed "emphysema." Sudden spasm of the air passages combined with swelling of their lining membrane greatly impedes the passage of air and gives rise to "asthma." Tuberculosis of the lung is "consumption." Cancer of the lung is very rare. [For an account of the diseases mentioned, see under their respective headings; see also *Breathing* and *Chest.*]

LUPUS VULGARIS is tuberculosis of the skin. The same germ which causes consumption when it attacks the lung produces lupus when it invades the skin. The disease nearly always begins before the age of twenty. The disease at first resembles a wart deep in the skin of the lip or cheek. The skin around becomes red and ulceration with spreading alternates with scarring and attempts at repair for a great number of years. Until recently scraping, burning and caustic ointments were in vogue; but Finsen, of Copenhagen, showed that concentrated sunlight, filtered through green glass to remove some of its heat, has a curative effect by killing the tubercle bacilli, which are sufficiently near the surface in this disease to be reached by the rays. The treatment is painless, but tedious, repeated sittings being indispensable. The treatment is now wide-spread, electric light being used instead of sunlight. Queen Alexandra was one of the first to introduce the treatment in London. The X rays are also used for the same purpose. Good results have been obtained recently, by Wright and others, by the injection of suitable doses of tubercular vaccine.

LYMPH, though quite as important as blood, is but little known to the public, probably because it is colourless. The fluid part of the blood, containing much nourishment, leaks through the walls of the finer blood-vessels and bathes the surrounding tissues, which it nourishes. This escaped fluid is "lymph." The excess of lymph is collected into lymphatic vessels, which ramify everywhere, and converge on larger vessels that finally unite to form the right or left thoracic duct. The thoracic ducts open into the subclavian vein, of their own side, at the root of the neck. The escape of blood from the vein backwards into the lymphatics is prevented by valves. Filters are situated at frequent intervals along the course of the lymphatic vessels in order to purify the lymph from germs, etc. The filters are termed "lymphatic glands." Obstruction to the circulation causes swelling due to the accumulation of lymph, and due to the same cause is dropsy in the abdomen or chest. The fluid contained in a blister is lymph. Hence lymph, in the public mind, means material for vaccination, because the contents of a vaccination blister are used for the purpose.

LYSOL is a disinfectant often used for scrubbing macintosh sheets and the like. The best strength is four teaspoonfuls to the pint of water.

MADNESS. See *Insanity.*

MAGNESIA. The *oxide* is insoluble and so less pleasant to take than either the carbonate, in the form of fluid magnesia, or the citrate, which effervesces when mixed with water. The *citrate* in doses of one to four teaspoonfuls, according to age, is useful for dyspepsia and constipation with dryness of the mouth. It is, however, too mild an aperient for most people. The taste is im-

proved by the addition of lemon-juice. The *fluid magnesia* in doses of one to two fluid ounces is a good aperient for children. The *oxide* in ten grain doses is used to correct acidity, though bicarbonate of soda is perhaps better for this purpose. As an antidote to poisoning by a mineral acid, oxide of magnesia is the best we have. It should then be given in large doses in a little milk or egg and water. *Sulphate* of magnesia is the same as Epsom salts, a valuable purgative. [Refer to *Constipation.*]

MALARIA. See *Ague.*

MALT EXTRACT is a treacle-like substance prepared from malt which has considerable nutritive value. Extract of malt, combined with cod-liver oil (dose, two teaspoonfuls after each meal for a child), is useful in the treatment of wasted, tuberculous, or debilitated children.

MALTA FEVER, till recently so prevalent amongst our troops at Malta, has been stamped out since the discovery that the germ is conveyed to man in goat's milk. Hence at Malta avoid goat's milk and use tinned milk instead.

MANIA is a form of insanity, characterised by excitement, the lunatic himself being then a maniac. See also *Monomania.*

MANNA. A piece the size of a lump of sugar may be added to the baby's bottle when a mild laxative is desired.

MARASMUS. See *Wasting.*

MARRIAGE. See *Heredity.*

MASSAGE is skilled rubbing. The purpose to be served is to promote the circulation in the part massaged. It is of great service in sprains that are slow in improving, in chronic joint troubles, in the later stages of the treatment of fractures, and for its effect on the nervous system. A more general massage is used in the treatment of insomnia, nervous exhaustion, and constipation. The movements used in massage are divisible into stroking, kneading, rubbing and striking. *Stroking* should be always up a limb, bony joints being avoided, and the friction is usually lessened by the use of boric powder or soap liniment. *Kneading* requires more skill. The hand of the operator with the skin of the patient should move together over the muscles beneath, to which the kneading is applied. *Rubbing* is performed in small circles, the finger tips and the ball of the thumb and the little finger being alone used. *Striking* is performed chiefly with the edge of the hand. Those unskilled in massage should confine themselves to stroking and rubbing.

MATERIA MEDICA, that branch of the science of Medicine which treats of drugs and curative agents, their properties, uses, and effects upon the human system.

MEASLES, *English,* is an infectious fever due to a germ which has not been discovered up to the present. Infection is conveyed by direct contact of the sick with the healthy, especially during the early part of the illness before the rash appears. More rarely, the infection is carried in infected clothing or toys. The season at which the affection is most prevalent is the spring and autumn. The age most liable to attack is childhood. Although one attack protects from subsequent ones in most cases, second and even third attacks may occur. [For incubation and quarantine periods see *Fevers.*]

The *symptoms* are gradual in their onset. They consist at first in running at the eyes and nose, sneezing, coughing, and pain on exposure to bright light. A faint rash may be visible behind the ears or at the margin of the hair during the first three days, but the real rash comes out on the fourth day. This rash is recognised by the presence of dull, red, slightly raised blotches and pimples which appear first on the face, especially around the mouth, and next day on the trunk and limbs. The blotches enlarge and unite with neighbouring ones, so that crescent-shaped patches are formed. In a week the rash fades, leaving staining in the skin for another week. The temperature rises at the onset of the cold in the head to 102° or 103° F. On the second day the temperature may fall and the child is thought to be getting over its cold. On the third day, however, the temperature rises again and remains high until the rash is fully out, which occurs on the fifth day. Within thirty-six hours the temperature then falls to normal and the patient feels very much better. If the temperature is not normal by the eighth day, some complication is present and a doctor is necessary.

The *complications* include, broncho-pneumonia, diarrhœa and convulsions, and in badly nourished children discharge from the eyes or ears is common. During convalescence tuberculosis of the lungs or the glands of the neck may occur. Broncho-pneumonia arises from the inflammation which in an attack of measles is always present in the mouth and nose extending to the bronchi and lungs. It should be suspected when the margins of the nostrils dilate with each breath, and the breathing is hurried and the voice weak. The condition is serious and a doctor urgently needed.

The *treatment* of an uncomplicated attack of measles is to isolate the patient in a room in which the atmosphere is warm but not stuffy. Much harm may be done by overheating, a mistake often made. The child should be confined to bed while the temperature is high and for two days afterwards. The clothing used should be flannel combinations, as nearly all children kick off the bed-clothes during sleep, and a chill in measles may start a fatal attack of broncho-pneumonia. The diet should consist of milk, barley-water, farinaceous food, and raw eggs beaten up. Owing to the tendency to diarrhœa, fruit, lemonade and beef tea should be used only moderately. For the same reason aperient medicine should be given with great caution. The medicine required is a cough mixture, e.g., carbonate of ammonia a drachm and a half, ipecacuanha wine one ounce, glycerine four ounces, water to twelve ounces; the dose for a child under two years is one teaspoonful, over two years two to three teaspoonfuls, given every four hours. The child should be guarded from strong light. The room should be darkened and care should be taken not to bring a candle near the child's eyes at night. A warm bath may be given if the fever is high. During convalescence, which begins when the temperature is normal, the child should have plenty of sunlight and fresh air, and a sea-side holiday, if possible, before returning to school. Some cod liver oil and malt, hypophosphites, or other tonic is commonly given. [Refer to *German Measles.*]

MEASLY MEAT is meat infested by the tape-worm in an immature stage, which covers it with small bladders about the size of a currant. If such meat is imperfectly cooked, the bladder wall is digested by the stomach, and the young worm being then set free attaches itself to the intestinal wall and grows into the adult form. Both pork and beef are liable to be thus attacked.

MEASURE GLASSES should always be used in the sick room. Two sizes should be obtained—a minim glass and an ounce measure. It must be borne in mind that 60 minims or "drops" make a fluid drachm, 8 drachms a fluid ounce, and 20 fluid ounces one pint. A drop, then, in medical work means the sixtieth part of a drachm and should always be measured. The minim glass is graduated for 120 minims. The ounce measure is graduated in drachms, and often at the four-drachm mark the word tablespoonful is inserted. Error may hence arise, for one ounce is two tablespoonfuls. Roughly speaking, one fluid drachm is a teaspoonful. For measuring urine, porringers can be obtained with the half pint and pint levels marked on the inner surface.

MEAT AND MEAT EXTRACT. See *Food.*

MEDICINE, *Administration of.* Accuracy in the dose and time of administration is important. The vessel in which the medicine is given should be scrupulously clean and thin-lipped, a medicine or wine glass being preferable to a thick china spoon. If any sediment is present, the bottle should be well shaken. Food should seldom be used to administer medicine in, for unpleasant associations are thus induced. Pills should be taken with the head upright or a little forward, and a little water should be used to aid in swallowing them. Powders are best placed on the back of the tongue, and a little water then taken. It is the rule in prescribing to order a drug at such a time that it may aid nature as much as possible;

thus aperients are so ordered that they would act after breakfast, sleeping draughts so that they will induce sleep at the natural time. Hence such aperients as castor oil or calomel, which take some time to act, should be given at bed-time, and those, like seidlitz powders and Epsom salts, which act quickly, are best given before breakfast. Most of the sleeping draughts should be given about two hours before the usual hour of sleep, though trional dissolved in hot brandy acts in an hour. Drugs that irritate the stomach are given freely diluted after a full meal; and those that damage the teeth, e.g., iron and acids, are best given in pill form or taken through a quill, or the teeth should be cleaned directly afterwards. Nauseous medicines are best taken in capsules or with the nostrils firmly pinched, and a little salt may be placed on the tongue first. A raisin is one of the best things to eat afterwards, especially after an oily medicine. When it is important that a drug should act as soon as possible, it is injected under the skin with a hypodermic syringe. When a patient is unable to swallow, medicine may be given by the bowel, injected with a small glass syringe, or by a Higginson's or a douche can.

MEDICINE CHEST. A small store of drugs and medical appliances are highly desirable in any home, and indispensable when medical aid is not easily procurable. The remedies to be kept handy, which we think desirable in any case, are given first, and afterwards a list of more powerful remedies to which recourse should be had only when no doctor is obtainable within twenty-four hours. In all cases, it is wise to have two medicine chests or cupboards —one for outward applications, and the other for remedies to be taken by the mouth.

APERIENTS.—Castor oil, Epsom salts or a natural water containing it, e.g. Hunyadi Janos, cascara in pill form, effervescing citrate of magnesia in a well-stoppered bottle, and other aperients, if desired, provided they are of a mild nature (see *Constipation*).

ANTISEPTICS.—Boric acid powder, and a stronger disinfectant, e.g. Jeyes' fluid, Izal, etc. (see *Disinfection*).

DRESSINGS.—See *Wounds*.

INVALID FOODS.—A tin of condensed milk, a tin of partially digested starchy food, e.g. Benger's, and a tin of meat extract, e.g. Liebig or Bovril.

MATERIALS FOR POULTICES.—Linseed meal, bran, flannel, and olive oil.

APPARATUS.—(1) Measure glasses, two in number, one for minims, and one for fluid ounces. (2) An ear-syringe. (3) Thermometer for taking the invalid's temperature.

OINTMENTS.—Vaseline, cold cream, zinc ointment.

USEFUL ADDITIONS:—Sal volatile, cognac brandy, smelling salts, bicarbonate of soda, citric acid, essence of peppermint, dill water, glycerine, chlorate of potash lozenges, sticks of liquorice, phenacetin in five grain tablets; and for outward application only, the dilute solution of ammonia, lead lotion, camphorated oil; and for inhalation at the onset of a cold, eucalyptus oil.

In addition to the above, for homes far from medical aid, some more potent drugs are requisite:—

Opium in the form of laudanum, Dover's powder, and the tincture of chloroform and morphia; bromide of potassium, quinine in powder or tablets, ipecacuanha wine, syrup of squills, salicylate of soda, calomel, colocynth and hyoscyanus pills; and for outward application, belladonna glycerine, Friar's balsam, tincture of hamamelis or hazeline, and a little pure carbolic acid for application to the cavity of an aching tooth. [Refer also to *Wounds*].

In the case of solid drugs, the more potent should be in the form of tablets of known weight each, so that no error can arise as to the dose taken; and for the same reason, the dose as well as the name of the preparation should be plainly stated on the label in all cases.

Travellers find the drugs provided in tabloid form by Messrs. Burroughs, Wellcome, and Co. of great service on account of their portability and their resistance to the high temperature of the tropics.

MEGRIM or **MIGRAINE.** See *Bilious Attack*.

MELANCHOLIA. A form of insanity characterised by severe mental depression. [See *Insanity*.]

MEMORY is liable to curious variations. It is diminished by fatigue and by a low state of the general health. It varies at different times of life, thus memory for disconnected facts, especially in the form of rhymes, is greater in childhood than at any other time. In old age recent events are remembered badly and past events are recalled with unusual clearness, hence the form of dotage aptly described as "anec-dotage." In infancy the memory is very rudimentary, the second birthday being with most people the earliest event that can be recalled, and it is only after this date that the power of learning the mother-tongue becomes active. Memory depends mainly on the impression made on the mind at the time of the occurrence; it is thus an advantage in learning to call into play two or more sense-organs concurrently, and if practicable some muscular movement besides. Hence note-taking helps to impress a lecture, and a skilled movement, e.g., cycling, once acquired is rarely forgotten. After an injury to the brain, a fever, or prolonged bout of intemperance, loss of memory is common. Abnormal acuteness of memory occurs in the course of drowning, &c., and in certain stages of intoxication with alcohol, opium, cocaine and other drugs.

It is from this fact that many a genius has become the helpless victim of a drug habit. Remarkable power of memory for a certain class of facts to the exclusion of all others is met with in certain idiots; thus, one inmate of a large idiot home knew the exact number of articles sent to the wash each week for years past, with perfect accuracy, but knew nothing else. The chief perversion of memory is that in which an event unconnected with oneself is remembered as if one was closely concerned with it. Such a condition is most often met with in insanity of alcoholic origin, and is often the starting-point of elaborate delusions.

MENIERE'S DISEASE is characterised by giddiness with deafness, and is due to disease of part of the internal ear. [See *Ear*.]

MENINGITIS is inflammation of the membranes that surround the brain. It is the commonest form of *Brain Fever*, a vague term in wide popular use. The condition is usually due to tuberculosis or to inflammation that spreads from disease of the ear. The chief *symptoms* at the onset are headache, vomiting, fever, constipation, convulsions and a shrill cry in which the child puts its hand to its head as though in pain. The child lies curled up in a drowsy state, but is sufficiently conscious to resent the bed-clothes being drawn down. The head is often drawn back. The outlook is always grave, and the case should be in medical hands from the outset. [Refer to *Brain*.]

MENSTRUATION. The time of onset is from thirteen to seventeen years of age in temperate climates, and before this in the tropics, especially amongst the natives. The duration of each period is about five days, though it varies from one to ten days in women apparently healthy. The period recurs every twenty-eight days with occasional exceptions, for about thirty years from its onset, though near the commencement and conclusion of this time irregularities are common. Menstruation is accompanied by certain effects on the general health, e.g. headache, backache, and languor. Abnormally it may be sufficiently painful to necessitate retiring to rest. Painful menstruation is best treated by hip baths, avoidance of chill, and rest. Alcohol, morphia, and other drugs, in an affection of this kind apt to recur, should not be employed, for a drug habit is formed much more quickly than the beginner imagines. Absence of menstruation occurs in anæmia, wasting diseases and nervous diseases. It will right itself as soon as the disease is cured. Irregular menstruation, should be promptly reported to the family doctor.

MENTHOL is a crystalline material, allied to camphor with the odour and taste of peppermint, insoluble in water, but readily soluble in olive oil. It should be kept in air-tight tins. Solid menthol, when applied to the skin, causes numbness, and is thus useful in relieving neuralgia or headache. It may also be applied in the form of menthol plaster.

MERCURY is the active ingredient in blue pill and grey powder. The compounds of mercury include calomel, dose 1-5 grains, a valuable purgative; perchloride of

mercury, a valuable antiseptic; yellow oxide of mercury from which a stimulating ointment is prepared. [Refer to *Dangerous Trades, Poisons.*]

MESMERISM. See *Hypnotism.*

MICROBE is a disease germ—a parasitic plant belonging to the class of fungi. [Refer to *Bacteria.*]

MIDRIFF. See *Diaphragm.*

MILK consists of water, proteid, carbohydrate, fat and salts. It thus contains the five essentials to make a complete food. It is, however, not sufficiently digestible to the adult to constitute a sole diet during active work, though two to three pints a day will often satisfy an invalid at rest in bed. The stomach of the infant is specially adapted for its digestion, and it should constitute the only diet of the infant for the first six months of life. The composition of milk varies slightly in different animals; that of the ass most resembles the human product. The proteid in milk is in the form of albumin and of caseinogen; the carbohydrate is a tasteless sugar—named lactose or milk sugar—and the fat is the cream, which is evenly distributed through the milk in microscopic drops, so as to constitute a natural emulsion. The salts include all the material necessary for the mineral part of bone, and as there is more lime in milk than in lime water, there is no need to attempt to improve on nature by adding lime water in order to "prevent rickets."

When swallowed, the rennet of the stomach juice changes the soluble caseinogen into insoluble shreds of casein, which form a sponge-like meshwork that entangles the cream in its meshes. The resulting mass is the curd. Rennet prepared from the stomach of the pig or calf is used to make curds and whey—a process exactly the same as the first stage of the digestion of milk. The curd is slowly dissolved by the stomach juice subsequently. It is owing to this fact that human milk is so much more digestible than cows' milk. Cows' milk contains a great deal more casein than human milk, and the result is the infant is usually unequal to the task of dissolving the masses of curd that form in its stomach after a meal of pure cow's milk. Such undigested curds turn sour, if not vomited, and poison the child. For infant feeding, cow's milk should be diluted with two or three times its bulk of barley-water, for a lighter and smaller curd is thus obtained [see *Infancy*]. For invalid diet, similarly, milk should be diluted, but soda water in that case is the best diluent. It should, moreover, be regarded as food and given at regular intervals only, thirst being relieved between whiles by water, lemonade, etc., but not by milk. When dilution does not render the milk sufficiently digestible, it may be peptonised, or the curd may be removed *in toto*, by making curds and whey, and using, instead of milk, whey with the addition of cream; we then give all the ingredients of milk without the casein. Appended are the recipes for the above methods:—

To peptonise milk. Take a pint of milk, add a quarter of a pint of water, and boil half of it; add this to the cold milk. The resulting mixture is roughly at blood heat. Add 20 grains of bicarbonate of soda (a saltspoonful), and two teaspoonfuls of liquor pancreaticus, and put aside in a warm place for twenty minutes. Then arrest the peptonisation by boiling or by standing on ice, otherwise the milk becomes too bitter. It should be kept in a cool place and made fresh every twelve hours. Pancreatising powders are also used instead of liquor pancreaticus. Fairchild and Benger are two reliable makers. If skimmed milk be used and cream added after peptonisation the peptonised milk is rather more palatable.

To make whey. Take half a pint of milk, boil half, and mix the hot and cold portions together. Add two teaspoonfuls of rennet, e.g., Benger's, and allow to stand in a warm place. The curd forms, and after some time it contracts and squeezes out the whey. Decant. One teaspoonful of cream to four tablespoonfuls of whey is the right proportion for infant feeding.

To Humanise Milk. Make whey as above; boil it, and stir in 110 grains of milk sugar for each third of a pint of whey. Allow to cool, and add twice as much new milk. For each pint of this mixture of whey and milk add two teaspoonfuls of cream and stir. The cream should be fresh as preserved cream usually contains boric acid or other preservative that is harmful. The food should be made fresh every twelve hours, kept standing in a cool place, preferably on ice, and warmed as required. If this fails to agree with the infant, equal parts of whey and milk should be tried, and finally whey and cream only.

To Pasteurise Milk. This is to sterilise milk without boiling it. The milk is placed in a double boiler and steamed for twenty minutes. It is then free of all the common disease germs liable to contaminate it and at the same time retains the taste and properties of raw milk. Instead of a double boiler, a bottle of milk may be stood on a drainer in a large saucepan, water added below the level of the drainer, the saucepan lid put on, and the whole placed on the fire so that the milk is steamed.

Milk made sour with lactic acid bacilli is now being used in the treatment of many forms of dyspepsia, as these bacilli destroy the harmful ones. Lactic acid bacilli can be obtained from Parke, Davis & Co., and from Roberts, 76 New Bond Street, London, with directions as to use.

MINERAL WATERS in common use are those which contain carbon dioxide gas dissolved under pressure, e.g., soda or seltzer water. The term also includes the medicinal waters of the Spas. [Refer to *Health Resorts.*]

MISCARRIAGE, or *Abortion.* Whenever a woman has reason to believe that she is threatened by abortion, she should at once go to bed and remain there quietly, avoiding all movement until medical assistance is secured. Abortion is not the trivial trouble so often imagined by women; it is always a possibly serious condition. Loss of blood may be rapidly fatal, or if not fatal, it may lay the foundation of a subsequent condition of weakness, local and general, which may require years to set right. In any case it is desirable that she should be careful to rest in bed for some few days after all hæmorrhage and pain have ceased. The food must be light and easy of digestion, and great cleanliness observed. Getting about too soon after an abortion is the cause of many of the ailments from which women so frequently suffer. The loss of blood must be made good by nourishing food and fresh air.

As means of prevention, all sudden exertion of the body, such as jumping, lifting heavy weights, riding on horseback or in a jolting carriage, or agitation of the mind must be avoided; strong purgatives should not be taken, and endeavour should be made to live an unexciting and quiet healthful life, which should include a moderate amount of exercise in the open air. After one abortion, great care must be observed, as a "habit" of aborting may very easily be set up.

MOLE on the skin is a patch of skin coloured brown and often hairy that dates from birth. The best treatment, if any is adopted, is destruction by the electric cautery. The hairy brown patch is then replaced by a scar, which is less conspicuous.

The term is also used to denote any semi-solid body discharged from the body, e.g. a blood clot, etc.

MONKSHOOD or **ACONITE,** known also as blue rocket and wolfsbane, is a common poisonous plant. [Refer to *Poisonous Plants.*]

MONOMANIA—madness on one point only. [See *Insanity.*]

MORPHIA—the alkaloid which is the chief ingredient of opium. [See *Opium.*]

MORPHINE is the active ingredient in opium.

MORPHINOMANIA. See *Opium-eating.*

MORTIFICATION—local death. [See *Gangrene.*]

MOTIONS—the *fæces,* or discharge from the bowel. The following variations occur. The quantity is increased by a vegetable diet, by previous constipation, by deficient digestion, as in jaundice, and in many forms of diarrhœa. The colour is lighter on a milk diet, browner on a meat one; iron and bismuth blacken the motions, and rhubarb and senna stain them yellow. Green "stools" point to fermentation in the intestine; very light drab stools to deficiency of bile, very dark brown stools to excessive discharge of bile, and tar-like stools to the admixture of blood at some distance from the anus, whilst bright red blood on the motions points to some source of bleeding near the anus. A slightly sour odour is normal in an infant on the breast, but any odour strikingly offensive points

to indigestion. In typhoid fever and in diseases of the rectum the stools are offensive. Liquid stools occur in the various forms of diarrhœa. In the worst forms, e.g. that of cholera or arsenical poisoning, the motions are like water. In typhoid fever they have the consistency of pea-soup. Very hard and dry motions point to constipation, even though liquid motions alternate with them, as the latter are then probably caused by the irritation due to the former. The passage of motions, as narrow as a pipe-stem, may be caused by stricture of the rectum. Abnormal ingredients include undigested curds, slime, matter, blood, worms. [Refer to *Worms.*]

MUCOUS MEMBRANE is the lining of all internal passages that communicate with the exterior, e.g. stomach, windpipe, or bladder.

MUMPS is an infectious disease due to a germ which has not been discovered at present. Infection occurs by direct contact of the sick with the healthy, but not by means of infected clothing. For the age most liable to attack, the incubation and quarantine periods, refer to the Table under *Fever.* The *symptoms* begin with fever, followed in a short time by inflammatory swelling of the salivary gland, known as the "parotid" which is situated in front of the ear and just behind the jaw. As a rule only one side is attacked. In opening the mouth pain is caused by the pressure of the jaw on the inflamed gland. The attack lasts about a week and recovery occurs without exception. The only complication of importance is inflammation of the testicle in boys and of the breast in girls. This complication is rare but demands attention if it occurs. The *treatment* is isolation from all under twenty years of age, with confinement to bed while the temperature is raised. The swollen face should be wrapped in cotton-wool or flannel. A chlorate of potash gargle should be used every few hours, but no other medicine is needed. The diet is necessarily a spoon one, owing to the pain of mastication. The complication above mentioned should be watched for, and when present at once reported to the doctor.

MUSCLES are of two kinds. Those under control of the will, or voluntary muscles, and those not under the control of the will, or involuntary. Muscles possess the power of "contracting," that is of shortening and at the same time widening. They contract in response to a stimulus, which normally is a nerve impulse transmitted along the nerves from the brain and spinal cord. The force with which a muscle contracts varies with its bulk in cross section but not with its length. It also varies with training and state of health, and is widely different in different people and in different animals. Thus insect muscle, bulk for bulk, is much stronger than that of most animals. Muscles may be attached to bone at each end. When they contract the two bones are drawn together. Usually one bone only moves, the other being fixed; for instance, the biceps bends the elbow joint by raising the forearm to the upper arm. Those muscles which are not thus attached to bone are usually circular, and by contracting narrow the organ they encircle. Thus the chambers of the heart are surrounded by muscle, which by their contraction empty the chambers of blood at each beat; again, the intestines are surrounded by muscular walls which propel the food along them. [Refer to *Training.*]

MUSHROOMS are dark brown on the under side, the upper side peels, and the odour is pleasant. Poisonous fungi are often mistaken for them.

MUSSELS are very indigestible, and if not quite fresh are poisonous.

MUSTARD is a useful counter-irritant when applied externally, though care is required in the case of children, as their skins blister easily. A mustard poultice or mustard leaf, when applied over the seat of pain in pleurisy, neuralgia, rheumatism, and so on, often gives relief. A mustard leaf should be dipped in tepid water and applied with a layer of muslin between it and the skin. Such a leaf applied to the pit of the stomach, to the left of the midline, often checks vomiting. A mustard poultice should be made in the way described under *Poultice.* A mustard bath (twelve ounces of mustard to sixteen gallons of water) may be used in the treatment of common colds, either the feet only or the whole body being immersed for ten minutes if it can be borne, and the patient then dried rapidly, wrapped in flannel, and put to bed. Taken internally, mustard is a useful emetic, the best dose for this purpose being a tablespoonful of mustard in a tumbler of tepid water.

MUTTON BROTH, often useful as an alternative to beef tea, is made as follows:—

> Ingredients required—one pound scrag end of mutton, one quart of water, one dessert-spoonful of pearl barley or sago, one teaspoonful of chopped parsley, salt to taste. Cut up the meat and remove the fat, put in a saucepan with the water and warm up slowly till it boils. Then skim and add the barley or sago and allow to simmer for three hours, again skim, and add the parsley. For invalid purposes the skimming must be thorough. The addition of carrots, turnips, celery and other vegetables to the meat is often desirable.

MYOPIA is short sight. See *Sight.*

MYXŒDEMA. See *Cretin.*

NÆVUS is a birth-mark, which see.

NAILS are formed from the horny layer of the skin. At the root of the nail the skin is folded back on itself so that two layers are facing each other with the nail between them. At this point the nail grows by the addition of horny matter from above, below, and behind, and it continues to receive additions on its under surface until the nail projects beyond the finger. The nails should be cleansed by the nail brush and soap only. Toe-nails should be cut square, finger-nails with the corners slightly rounded. If the nails be cut to any extent down the sides, ingrowing toe-nail results. The nails are curved in consumption and heart disease. They are fissured throughout their length in gout, furrowed across after fever, and dry, lustreless, discoloured, and fissured when attacked by ring-worm. [Refer to *Ingrowing Toe-nail.*]

NARCOTICS are drugs which depress the nervous system as a whole. Hypnotics, on the other hand, produce sleep without affecting the nervous mechanism of respiration, circulation and digestion, and are consequently less dangerous. Chloral, opium, hyoscine are examples of narcotics. They are used, under medical advice only, to secure sleep, when the hypnotics, e.g. bromide, fail. [Refer to *Poisons.*]

NASAL-DOUCHE is a mode of washing out the nose. A stream of fluid is injected into one nostril, whilst the mouth is held open, and the fluid returns, after a little practice, through the opposite nostril. The fluid may be injected by a syringe or from a douche can held about the level of the patient's eyes. Much force should be avoided. The fluid must be at blood heat. The best douche to use as a rule is made by adding a teaspoonful of salt to the pint of water, or by using the following powder:—

> Bicarbonate of soda, borax, and salt, of each one drachm, white sugar two drachms. One teaspoonful in half a tumbler of warm water. If an antiseptic is required boric lotion should alone be used.

NAUSEA is the feeling which precedes vomiting, which see.

NECK. See *Stiff Neck, Wry Neck.*

NECROSIS. Death of bone. [See *Bone Disease.*]

NEPHRITIS, the general term for various forms of inflammation of the kidney.

NERVOUS DISEASE includes many diseases which fall into two main groups: (1) those due to alteration in the structure of the nervous system; (2) those due to alteration in the mode of action of the nervous system without any change in structure. The prospect of recovery in the first group is necessarily bad, though often the functions of the diseased part can ultimately be undertaken, partially at least, by other parts of the nervous system. The prospect of recovery in the second group is much better. Group (1) includes general paralysis of the insane, many forms of idiocy, strokes, locomotor ataxy, infantile paralysis, progressive muscular atrophy, tumours of the brain, etc. Group (2) includes St. Vitus's Dance, habit spasm, hysteria, writer's cramp, many forms of tremor, many forms of

insanity and epilepsy. Nervous disease is always increased by civilisation. Roughly speaking, we may say that the chief cause of group (1) is intemperance, using that term in its broadest possible sense; and of group (2) is heredity. [Refer to *Brain, Insanity,* and the *separate headings.*]

NERVOUS EXHAUSTION, or *Neurasthenia,* is debility in which lack of vigour in the nervous system is the cause. Nervousness is one of the chief symptoms. [Refer to *Debility.*]

NERVOUS SYSTEM consists of a brain and spinal cord from which branches or nerves are given off that supply all parts of the body. The brain and spinal cord form the central nervous system, and the nerves the peripheral nervous system. The central nervous system is protected by a bony sheath, the skull and backbone, and further within this by a fibrous sheath and a water bed. The peripheral nervous system is only protected by the fibrous sheath, though the larger nerves are so situated as to be as little exposed to injury as possible. The nerves are composed of nerve fibres, which either transmit motor impulses from the brain and spinal cord to the muscles, and thus effect movement, or they transmit sensory impulses from the skin and organs towards the brain and spinal cord and give rise to sensation. Thus nerves are distinguished as motor nerves and sensory nerves. Most nerves contain both kinds of fibre, and are thus "mixed nerves." [Refer to *Brain.*]

NERVOUSNESS is a symptom of weakness. In this condition external stimuli produce more effect on the emotional side of the mind than is normal. The causes are numerous. A highly strung nervous temperament is often inherited and, so long as the general health is well maintained, is an advantage, for such people are usually clever. Over work, excitement, lack of sleep, indulgence, especially in "the three domestic poisons"—tea, tobacco, and alcohol; want of fresh air and constipation are all causes of nervousness. The treatment is the detection and removal of the cause. Tonics may be required, arsenic being often beneficial, but alcohol should be avoided.

NETTLE RASH, or Urticaria—from *urtica,* a nettle—is an eruption consisting of weals that come and go, accompanied by itching and burning and often swelling; in appearance it resembles the rash caused by the stinging-nettle. The *cause* is a disturbance of the nervous control of the blood-vessels in the skin. Many people inherit a tendency to the condition on the slightest irritation. The irritation of flannel garments, sweat, or of a flea-bite may produce a wide-spread eruption. More often an attack is induced by irritation in the stomach and intestines, brought on by constipation, and the consumption of certain articles of diet, e.g., shell-fish and strawberries.

In childhood papular urticaria is common. The weals in such cases are scanty and easily overlooked, and the rash consists mainly of red, hard pimples. The disease, however, is really the same. The *treatment* is to detect and remove the chief cause of irritation. Mental worry, stomach trouble, and clothing should receive special attention. Instead of flannel being worn next the skin, it should be worn over silk or cotton. A daily bath also will prove beneficial.

Grey powder for a child, and some mild aperient for an older person, should be taken and dietetic indiscretions avoided. The itching caused by the rash should be relieved by lead lotion, or by creolin (a teaspoonful to the pint of water). The use of a flesh brush will also be useful, scratching should be avoided, and pressure with the finger-tips substituted for it.

NEURALGIA, literally pain in a nerve, is a symptom of some disturbance, at present unknown, to which sensory nerves are liable. The nerves most commonly attacked are those of the face, the ribs, the loins, and the back of the thigh. The pain is of a most intense character; it comes and goes, often without apparent cause, affecting only one side at a time, and is not accompanied by any rise of temperature.

The *cause* may be disease of the bone through which a nerve passes; the pain in such a case is not felt at the bone, but at the extremities of the branches of the nerve. Disease of the back-bone should thus be borne in mind as a possible cause. In facial neuralgia, the ear, the eye-sight, the teeth, and, especially the wisdom tooth, require careful examination, though many cases have occurred in which tooth after tooth has been removed by a dentist without relief having been obtained. It is therefore wise to consult a doctor before submitting to the removal of sound teeth. Exposure to cold and damp often determine an attack. Neuralgia is also common in the course of certain diseases, e.g., malaria, Bright's and diabetes.

The *treatment* should be the improvement of the general health. Regular habits and a course of tonics, e.g., iron, arsenic, quinine and the hypophosphites all do good in certain cases. A country holiday is still better; the seaside, however, is not recommended. Remedies for the relief of the pain itself include gelsemium, butyl chloral hydrate, antipyrin, phenacetin, valerian, ether. Morphia and alcohol are dangerous. A liniment may be rubbed or painted on the painful area, e.g., the liniment of aconite, belladonna and chloroform in equal parts often termed the a, b, c liniment; menthol and cocaine, menthol and chloral, chloral and camphor are also used as liniments. Fomentations sprinkled with laudanum or belladonna glycerine may be tried, or a ginger poultice or blister may be applied. Galvanism has a temporary soothing effect. Finally, removal of the roots of the nerve attacked may be submitted to under anæsthetic, or hypnotism may be resorted to if the above methods have failed.

NEURASTHENIA, or Nervous Exhaustion. See *Debility.*

NEURITIS is inflammation of a nerve or nerves. It may be due to one of many causes, e.g. chill, injury, poisons, or germs. The diagnosis and treatment make a doctor essential.

NEUROSIS is a nervous disorder due to a disturbance in the normal working of the nervous system, but not to any morbid change of its structure, so far as present methods of research can discover. Neuralgia, hysteria, and some forms of insanity are examples.

NICOTINE is the most powerful ingredient in tobacco. In its pure form nicotine is a poison. [Refer to *Smoking* and *Poisons.*]

NIGHT-DRESS. It is best made of a mixture of wool and cotton. It is important to clothe young children, most of whom kick off the bed-clothes at night, in "combination sleeping suits."

NIGHT-MARE and **NIGHT-TERRORS.** See *Dreams.*

NIGHT-SHADE. The common shrub of the hedge-row is not the deadly night-shade, but the woody night-shade, and the berries, though poisonous, are much less so than are those of the rarer species. [See under *Poisons, Belladonna.*]

NIPPLE-SHIELDS may be used when the flatness of the nipple prevents the child from grasping it. They must be kept scrupulously clean.

NITROUS OXIDE. See *Anæsthetics.*

NODE is a small tumour due to inflammation of the periosteum or membrane that lines a bone. The shin is the common position. Syphilis or tuberculosis are the chief causes. The treatment should be in medical hands.

NOMA. Gangrene of the cheek or privates, seen in the starved children of the slums after measles.

NOSE is a cavity bounded below by the palate, above by the base of the skull, in front by the nasal bones and cartilages, whilst behind it opens into the upper part of the pharynx or throat. The cavity is lined by a mucous membrane, which secretes mucus and thus keeps the membrane moist. The nose is divided into a right and a left half by a partition, the "nasal septum." Each half is occupied by the three turbinal bones, which run horizontally from front to back, each being rolled up like a scroll. Below each bone is a space, which gives passage to the air. The purpose served by the turbinal bones is to increase the surface of mucous membrane to which the air is exposed in

order that it may be filtered, moistened, and warmed before reaching the lungs. The two upper turbinals are supplied with the nerve of smell, hence in order to smell, a slight sniff is given to draw the air into the upper portion of the nose. When the lining membrane is swollen during "a cold," the sense of smell is impaired, because the air does not then readily gain entrance to the upper part of the nose. The lachrymal duct carries the tears from the eye to the nose, and certain air-spaces in the skull and upper jaw, termed the accessory sinuses, also open into it. Hence a "cold" may spread to these and cause watering of the eye, pain over the brow or in the upper jaw.

In the case of any foreign body in the nose, as so commonly happens with children, the *treatment* is as follows:—Blow the nose with the nostril on the unaffected side firmly closed. If this fails, sneezing may be induced by the application of snuff to the nostril of the unaffected side. If these simple methods fail it is advisable to consult the doctor. If none is obtainable, warm water containing a teaspoonful of salt to the pint, should be snuffed up the nose, or it may be injected from a syringe into the nostril of the unaffected side, whilst the mouth is held open. Finally, a hairpin with the round end foremost may be passed into the nose beyond the body, and the two may then be withdrawn together. In unskilled hands, however, this manœuvre usually results in pushing the body further in or in making the nose bleed and thus obstructing the field of view. The patient should be seated, facing a good light, with the head well back, resting on the back of the chair, and preferably kept in position by an assistant. It must be borne in mind that the direction of the air passages in the nose is towards the ear, and not upwards, as commonly thought. If neglected, a foreign body may cause a fetid discharge from one of the nostrils. *Broken Nose* is not a rare accident in boxing or Rugby football. The symptoms are change in the shape of the nose and nose bleeding. The treatment is best in medical hands. The deformity may be corrected in part by the introduction of a pen-holder, padded with part of a clean handkerchief, and the elevation of the depressed bone by this instrument, aided by the fingers used externally.

Diseases of the nose include overgrowth of the turbinal bones, the growth of spurs from the septum, ulceration due to syphilis or lupus, the formation of polypi or stalked tumours in the nose, and atrophy of the lining membrane, a condition termed atrophic rhinitis. Spurs in the septum and enlarged turbinals block the air passage and promote mouth breathing. These defects can be remedied by surgical means. [Refer to *Colds*, *Hay Fever*, *Nasal Douche* and to *Nose-Bleeding* under *First Aid*.]

NURSE. A *hospital-trained nurse* is often invaluable, as there are many details of sick room management which require a practised hand. The reluctance of the public to call in a trained nurse is remarkable, but once the prejudice has been overcome, there will be but little hesitation in the matter in future illnesses. The *monthly nurse* should be a certificated midwife, preferably one who is a "Licentiate of the Obstetrical Society," indicated by the letters L.O.S. A *wet nurse* should always be chosen by the doctor, as it is essential that the nurse should be in sound health with breasts suited to suckling. The woman chosen should have a healthy child a little older than the baby she is to nurse. She should rise early, have a walk daily, and do some housework. Her diet should be plain and ample, and contain plenty of milk, whilst the taking of stimulants should be discouraged. There is a wide-spread belief in stout, which has but little, if any, foundation in fact. The bowels should be kept regular, without resort to strong aperients, which are apt to affect the milk. The temper should be kept as quiet as possible, as fits of passion affect the milk seriously. [Refer to *Sick Room*, *Child-Birth*, *Infancy*.]

NURSING. See *Sick Room*.

NURSING INSTITUTIONS. A list is given in the "Medical Directory."

NUTMEG contains a volatile oil that stimulates digestion. It is used in cooking. Spirits of nutmeg, the dose of which is from a half to one teaspoonful, is used to treat flatulence. In large doses nutmeg is poisonous.

NUTS contain either starch or vegetable oil. They are nourishing if they can be digested.

NUX VOMICA is the bean from which the alkaloid strychnine is obtained. [See *Poisons*.]

OATMEAL is to many people indigestible, though very nourishing if it can be digested.

OATMEAL WATER is made by placing a handful of oatmeal in a muslin bag and allowing it to soak in a gallon of water for an hour and then boiling for twenty minutes. The upper portion is then poured off gently. Oatmeal water is useful for cleansing the skin in eczema or infancy.

OBESITY, literally "on account of eating"—is the term used to denote an undue accumulation of fat in the body. The causes of obesity vary: heredity is responsible in some cases, but unsuitable diet in most cases. Thus the rickety child fed on a tinned food instead of on the breast is often very fat, and often wins the prize at a baby's show, as Dr. Cheadle has pointed out. The anæmic shop-girl, whose mid-day meal is tea and buns instead of meat, is often fat. The heavy beer drinker is usually fat. Many other examples of the relation of unsuitable diet to obesity will occur to the reader. Mental inactivity promotes it, as is seen in many idiots. On the other hand, great mental activity, as in acute mania, or even in business worries, is attended by loss of flesh.

To those approaching middle age who incline to be stout, our advice is take it in time, and, without resorting to any violent treatment for reducing weight, so alter the daily habits that gain in weight is kept well in check. However good Shakespeare's advice may be to have men about one that are fat, it is well to be oneself lean, for "obesity is not only a disease in itself but the harbinger of others," as Hippocrates taught long ago. The action of the heart and lungs become embarrassed, and the difficulty of taking the exercise necessary to health is great, if with advancing years, as the muscular power declines, the weight steadily increases. The golden rules are:—

> (1) Drink little; forego alcohol, especially beer and port, and avoid cocoa. Take a little hot water half-an-hour before meals, and but little fluid at meals. (2) Eat less, avoiding especially the starches and sugars which are more fattening than fat itself. Such articles of diet as peas, potatoes, pastry, new bread, puddings, and marmalade should be given up; and greens, toast, rusks, biscuits, and fruit substituted. Fish, flesh, and fowl, and butter in moderate quantities may be taken, but not duck, goose, herring, sardines, or thick soups. (3) Improve the general health by fresh air, more exercise, cold baths with brisk friction afterwards, and attention to the bowels. Turkish baths, though useful in some cases, should be taken by medical advice only. (4) Avoid all drugs, vinegar included.

Severe measures, such as banting, the Salisbury treatment, and other modes of reducing fat are only safe under medical supervision, and are best carried out at a Spa, e.g., Carlsbad, Marienbad, or Homburg, at which regular courses of treatment are given, often with much benefit.

ŒDEMA is the technical name for dropsy beneath the skin.

ŒSOPHAGUS is the gullet, which see.

OIL presents many varieties with very different effects on the body. They are divided into the fixed or non-volatile oils, and the volatile or essential oils. The *fixed oils* include animal, vegetable and mineral oils, of which the two former, with few exceptions, act as food, being stored in the body as fat and used up when required to produce heat; whilst the last or mineral oil, e.g., petroleum, has no such action. Cod-liver and olive oils are examples of the former class. As a rule the animal oils are digested more easily than the vegetable oils. In the course of digestion they are broken up into minute droplets, that is, they are emulsified. Hence artificially emulsified cod-liver oil is more suitable to those of feeble digestion than the natural oil. Several oils contain additional ingredients, which possess actions of their own. Thus castor oil and croton oil contain purgative agents. Castor oil is one of the best

aperients we have; croton oil, on the other hand, is the most violent and is only used on rare occasions by medical orders.

The *volatile oils* include a large number which give rise to the characteristic odours of flowers, spices, pinewoods, etc. They do not act as food, but are readily absorbed into the circulation and are as readily expelled by the kidneys and the lungs. Hence they may be used either for their action on the digestive organs, or for their action, after absorption, upon the lungs or kidneys. Those used for their action on digestion include oil of peppermint, cloves, cinnamon and cajuput. The pure oil would burn the tongue, so that they are either used dissolved in spirit or are taken on sugar. Their chief use is to aid digestion and to dispel flatulence. The volatile oils employed to disinfect the urine include oil of sandal wood and cubebs, and those that increase the blood supply to the kidney and promote the formation of urine are juniper, turpentine, and cantharides. Unfortunately these oils irritate the kidneys, and are thus not a wise remedy in kidney disease. Juniper in the form of gin is widely used and does much harm. The oils used to disinfect and diminish the amount of phlegm produced in the lungs and air passages include turpentine, terebene and oleum pini. Certain oils are sufficiently irritating to produce redness and blistering of the skin, and are used as counter-irritants to be applied over deeply-seated inflammation; for example, turpentine, mustard, and cantharides.

The volatile oils readily oxidise to form a resin. The solution of a resin in a volatile oil is an oleo-resin. The oils are frequently prepared from oleo-resins by distillation, when the oil distils over, and a residue consisting mainly of resin is left. Thus crude turpentine is the oleo-resin from which oil of turpentine and common resin are prepared by distillation.

OINTMENT is a mixture of an active substance with a fatty basis. It is important that the fat should not turn rancid, as it is then irritating and offensive. Some antiseptic, especially benzoic acid, is combined with the fat for this reason. Thus benzoated lard is very commonly used. Vaseline, which keeps fresh without a preservative, is also widely used. Lanoline, a purified fat obtained from wool, is another useful one, though irritating to some skins, whilst recently a cocoa-nut fat sold under the name *albene* has been introduced. Spermaceti, a fat derived from the whale, is not so much used as formerly, though a combination of beeswax, spermaceti, almond oil and rosewater forms the well-known "cold cream."

Ointment is bad for healthy skins, as it hinders perspiration, and it should, on this account, be applied strictly to the affected region only. The purpose served by the fat is that it softens and penetrates into the skin, carrying in also the ingredients that are mixed with it. Ointment may be applied by rubbing it in or by spreading it on cloth or lint, and binding this on. It may be used when :—

(1) The skin is too dry, as in chaps	Boracic ointment rubbed in.
(2) The skin is abraded or raw	Zinc ointment or vaseline on lint.
(3) A chronic ulcer is present	Yellow oxide of mercury ointment.
(4) The skin is inflamed	Cold cream (without any bandage or lint).
(5) Mattery heads are present	White precipitate ointment.
(6) There are parasites in the skin, e.g., itch or ringworm	Sulphur ointment.
(7) There is a scaly rash	Tar ointment.
(8) There is itching of the skin	Carbolic ointment or lead ointment diluted with zinc ointment in equal parts.

In acutely inflamed conditions of the skin, lotions as a rule act better than ointments. Cold cream is then better borne than most ointments. When the eruption is accompanied by much "weeping" of the skin, a paste is better than a pure ointment. Pastes are made by adding to the ointment flour, starch, or other powder that can absorb moisture. Thus a *paste* is made of zinc oxide, starch, lanoline and vaseline in equal parts. In the treatment of clean cuts, clean linen rag is better than ointment.

OLIVE OIL, known also as salad or sweet oil, forms a useful lubricant in massage. It is used to smear the surface of a linseed poultice to prevent it sticking, also to apply to burns to keep out the air, and to drop into the ear to soften hardened wax. It is not much given by the mouth, but forms a valuable enema in cases of fæcal impaction.

OPHTHALMIA. Inflammation of the inner surface of the eyelids. [See *Eye.*]

OPHTHALMOSCOPE is an optical instrument used to inspect the interior of the eye.

OPIUM is the dried juice of the white poppy. It contains morphine, codeine, resin, and other bodies. The drug is contained in a great number of preparations, such as :—

PREPARATION.	DOSE FOR AN ADULT WITH NORMAL LIVER AND KIDNEYS.
Powdered Opium	½–2 grains.
Laudanum or Tincture of Opium	5–15 minims.
Battley's Solution or Liquor Opii Sedativus.	5–10 minims.
Dover's Powder	5–15 grains.
Paregoric	½–1 drachm.
Nepenthe	5–15 minims.
Lead and Opium Pill	2–4 grains.
Compound Soap Pill	2–4 grains.

Morphine or morphia, which is the body to which the value of opium is mainly due, is isolated from the other ingredients and used in the following well-known preparations :—

PREPARATION.	DOSE FOR AN ADULT WITH NORMAL LIVER AND KIDNEYS.
Compound Tincture of Chloroform and Morphia	2–15 minims.
Chlorodyne	2–15 minims.
Liquor Morphinæ	10–60 minims.
Injectio Morphinæ Hypodermica	2–5 minims.
Morphia and Ipecacuanha Lozenges	1 lozenge.
Morphia Suppository	1 suppository.

From opium *codeine* is isolated and, in doses of ½–2 grains, is used in the treatment of diabetes. *Heroin* has been prepared recently and is of some service in checking a dry cough. In addition to the above well-known preparations of opium, most of the syrups for "soothing" infants contain a certain amount of opium, and should therefore be guarded against. It cannot be too clearly understood that no preparation of opium should be given to a child except by medical orders. Infants are readily poisoned by minute doses of this drug. It is much to be regretted that many of the preparations of opium are sold without the nature of their contents being plainly stated on the label. Such preparations are largely used by people of the working class to keep the baby quiet whilst the mother goes out to work. "There is no doubt that great numbers of infants perish every year in this country through the improper use of quack remedies containing opium," says the writer in Quain's Dictionary of Medicine. And again, "More than half the deaths by poison which occur in England and Wales are due to opium and its preparations . . . which are much given to infants and young children," write Guy and Ferrier in "Principles of Forensic Medicine."

The *action of opium.* It relieves pain slightly when applied to the skin. On entering the stomach it relieves pain there, but afterwards promotes nausea and vomiting. In the intestine it relieves colic and diarrhœa, but if there be no tendency to diarrhœa it causes constipation. Hence the effect of opium on the normal digestion is to disturb it, and it is for this reason that morphia is so often adminis-

tered by hypodermic injection. Some of the preparations of opium and morphine, e.g., nepenthe, have a less disturbing effect on the digestion than most of them. After absorption into the circulation, opium produces a marked effect on the nervous system. It is at first a soother of pain and a stimulant, causing a feeling of well being and a brilliancy of imagination, which is the cause of the vice of opium eating. The stimulant effect soon passes off and is succeeded by sleep, which may deepen if the dose is sufficient, into a condition of stupor. In stupor, the patient cannot be aroused, the breathing is slow, the extremities cold, and the pupils very small. Death may result from failure of respiration. The sleep produced by opium is rarely a natural one, and on waking unpleasant after effects, e.g., nausea and headache, are frequent. However, when lack of sleep is caused by pain, opium, in medical hands, is of great service. By soothing the nervous system, opium is also useful in checking a dry, hacking cough. It should not be used when the cough is loose, or the cough will be checked, and the phlegm accumulate in the air passages to a dangerous extent; but for a dry cough it is invaluable. Opium also acts on the skin, promoting perspiration, and is thus useful in the form of Dover's Powder at the onset of a cold. The action of opium is due mainly to the morphia it contains. Codeine relieves cough and pain to a less extent than morphia, but it checks the excessive formation of sugar that occurs in diabetes, and is used for this purpose. Morphia is often given combined with atropine, as the latter combats many of the ill effects of the former without reducing its power to relieve pain.

N.B.—Old people stand opium well, but the victims of liver or kidney disease are easily poisoned by small doses, and, like young children, should never be given opium or morphia without medical orders [Refer to *Poisons*].

OPIUM EATING and morphinomania is a vice more prevalent than is generally known. The craving for this drug, though it is often indulged for some time before the health is seriously affected, sooner or later ends in mental, moral, and physical degeneration. The amount of the drug taken is steadily increased till as much as a pint of laudanum has been known to be taken daily. At present the hypodermic injection of morphia is a common way of taking the drug. The danger of acquiring a craving for the drug must be borne in mind by all who resort to it for the relief of pain or sleeplessness, and if a doctor can possibly be obtained, it should never be taken except by medical orders. Victims of the habit can be cured if they will put themselves under medical care in a suitable nursing home, but they can seldom be treated successfully in their own home.

OPSONIN is a new term introduced by Dr. Wright, who has demonstrated that certain chemicals are formed by the blood which so enfeeble any microbes present that they fall an easy prey to the subsequent attack of the white blood corpuscles. These chemicals he has named *Opsonins*, literally "that which cooks or prepares a feast" for the white corpuscles. It is now possible to measure the amount of opsonin that the blood is producing at any given time, and thus one can say when there is the least possible risk of an operation being followed by blood-poisoning. Some surgeons already have turned this fact to account in their practice. When the opsonins are not present in the normal amount, they can be increased by doses of suitable vaccines. This method is now being given an extensive trial in the treatment of tuberculosis, and many other diseases.

OTORRHÆA is a mattery discharge from the ear, a condition which it is dangerous to neglect.

OXYMEL is composed of clarified honey eight parts, acetic acid and water of each one part. The dose is one to two teaspoonfuls. It is used to relieve soreness of the throat.

PACK. See *Baths.*

PAIN is essential to life. When the sensation of pain is cut off from any part of the body, by division of the nerves coming from it, sores are apt to form on the skin in that region. This is due to the fact that the skin, thus rendered free from pain, is no longer guarded from injury due to pressure, friction and the like, and ulceration results. In the same way ulcers form on the eye, if this is incapable of appreciating the presence of dust, and blindness is the result. Again, in inflammation, the first essential to recovery is rest of the inflamed part. There could hardly be a more certain method of securing rest than the process by which movement of an inflamed organ causes pain. The chief symptom that draws the sufferer's attention to the fact that something is wrong and which compels him to seek treatment is, as a rule, pain. As so often happens in nature, however, the great benefit the majority of the race receives is coupled with disastrous consequences to a minority. Pain that is ceaseless, that prevents sleep, destroys appetite and renders life a continuous burden, is in itself a distinct menace to life, and calls for energetic measures to suppress it, when its cause cannot be removed. As a rule, on the other hand, the cause of the pain should be removed, and not the pain suppressed whilst the cause is ignored. The treatment for pain then varies widely with the cause, and no universal panacea can be here recommended. The drugs used for suppressing pain are termed anodynes, of these morphia is the most potent, and is invaluable in the treatment of those dying of a painful and incurable disease, but it is obviously not a drug for domestic use. [Refer to *Anodynes, Colic, Headache, Lumbago, Neuralgia, Teeth* etc.]

PAINTER'S COLIC. See *Colic.*

PALATE, CLEFT. See *Hare-lip.*

PALPITATION of the heart is present when the beating of the heart makes itself felt. The chief *causes* are sudden emotion and indigestion, especially acidity with flatulence. The *symptoms* are either attacks of frequent and irregular action of the heart with a feeling of fluttering in the chest, or a more forcible action in which the whole chest may feel shaken. These symptoms are accompanied by giddiness, anxiety, pain in the chest, and other symptoms. They are apt to come on at night and awake the sufferer from his first sleep. The *treatment* during an attack should be a dose of bicarbonate of soda, one to two saltspoonfuls taken in some hot peppermint water, or a teaspoonful of sal volatile in half a tumbler of water. Between the attacks the causes of indigestion should be avoided, especially heavy and late suppers, tea, tobacco, rich and sweet food, constipation, etc. There is no ground for fearing the heart is diseased, it is the stomach that is out of order.

PALSY. See *Paralysis.*

PANCREAS, or Sweetbread, is a digestive gland, situated behind the stomach, which pours its secretion, or pancreatic juice, into the small intestine. The juice acts on meat, fat, and farinaceous food, and is a most important digestive agent. The active ingredient has been extracted and administered in those cases of indigestion in which bread and farinaceous foods disagree. For this purpose the pancreatin must be protected from the stomach juices by administration in capsules coated with keratin. The keratin does not dissolve until the small intestine is reached. In the opinion of most authorities, however, it is better in such cases to predigest the food by the use of liquor pancreaticus. Liquor pancreaticus is a liquid containing the active ingredients of the fresh pancreas of the pig, and a small quantity mixed with milk, gruel or soup and kept at blood heat renders the food much more easily digested. This method is termed peptonisation or pancreatisation [For details see *Peptonised Food*]. But little is yet known of the symptoms of pancreatic disease, though knowledge is being gained daily. The pancreas may be the site of cancer and of the formation of tumours that are known as pancreatic cysts. In addition to the formation of pancreatic juice, the pancreas pours into the blood a fluid that regulates the consumption of sugar by the muscles. If the pancreas fail in this duty, one form of diabetes is the result.

PARALYSIS may attack the power of motion or sensation, or both. The causes include hysteria, certain poisons (e.g., alcohol, lead, and the poisons of certain fevers), and disease or injury of the brain, the spinal cord, or the nerves, and more rarely the muscles. Of these, the first two causes

are the most likely to cause only temporary paralysis. The treatment adopted is to prevent the paralysed muscles from wasting as much as possible, whilst the injured part of the nervous system is recovering. The methods in vogue for effecting this purpose are electricity and massage. A paralysed limb must be kept warm and scrupulously clean. Care is necessary that it is not injured by the pressure of a boot or other article of clothing, and that it is not burnt by a hot bottle, as any sore that is produced will heal slowly, if at all. [Refer to the separate headings of the *Nerve Diseases.*]

PAREGORIC. See *Opium.*

PATELLA. The knee cap. See this *Heading.*

PATENT MEDICINE has to pay duty to the Government, and bears the Government stamp to show that the duty has been paid. The public often mistake this stamp for a guarantee from the Government that the virtues claimed by the Patent medicine are genuine. In reality it has no reference whatever to the nature of the medicine. Many of the Patent medicines applied in suitable cases are good remedies, others are pure frauds. A valuable pamphlet by Dr. R. Hutchison, on "Patent Medicines and Patent Foods," has been recently published, giving the composition of all the better known patent remedies, and we heartily recommend it to any one interested in this subject.

PATHOLOGY is the science that treats of the changes which occur within the body as the result of disease. In other words it is the Physiology of morbid processes. It is the rational basis for scientific treatment.

PEPPER Powdered black pepper may be used to relieve flatulence and the itching caused by piles. For this purpose the dose is five to twenty grains. It may also be taken in the form of confection of pepper (dose, one to two teaspoonfuls). The confection is prepared from powdered pepper two parts, caraway three parts, clarified honey sixteen parts, the three ingredients being rubbed up together. Cayenne pepper is also used to relieve flatulence, being most conveniently taken in the form of tincture of capsicum (dose, three drops).

PEPPERMINT is largely used to disguise the taste of other drugs and to relieve flatulent dyspepsia. There are several preparations of this drug:—oil of peppermint, dose, one to four drops on sugar; peppermint water, dose, two to four tablespoonfuls; essence of peppermint, dose ten to twenty drops in water; and spirits of peppermint, dose, one quarter to half a teaspoonful in water.

PEPSIN is the active ingredient of the stomach juice, which digests meat. It is obtained from the stomach of the recently killed pig or calf as a glycerine extract. This extract is administered as an aid to digestion in many forms of indigestion, especially those associated with dilatation of the stomach. The dose used is one to two teaspoonfuls of the glycerine extract. Pepsin lozenges are also used.

PEPTONE is the body produced by the digestion of meat and other proteids.

PEPTONISED FOODS are those which have been partially changed to peptone by artificial means before they are eaten. This change renders them more easily and quickly digested, and is of great service in many forms of indigestion; it is also of great use in the preparation of nutrient enemata, as the lower bowel has a very feeble digestive power of its own. The active ingredient of the digestive juice of the stomach —or pepsin—is rarely used for this purpose, as it only acts on acid food, and most food is alkaline. The active ingredient of the pancreas—*pancreatin* or *liquor pancreaticus*—acts only on alkaline food, and is thus the one used, especially as this acts on all kinds of food stuffs. To peptonise food:—

> The food must be rather above blood heat. In the case of milk, by boiling half and then adding the cold half the desired temperature may be obtained. To peptonise cornflour or beef tea, after they are cooked allow them to cool till they can just be tolerated in the mouth; a salt spoonful of bicarbonate of soda and two teaspoonfuls of Benger's Liquor Pancreaticus is added to each pint of food. The whole is then well stirred, covered with a tea-cosy, and put aside in a warm place for twenty minutes. At the end of this time it is boiled, and is then ready for use. It should be kept in a cool place, preferably on ice, as it goes sour readily, and must be made fresh every few hours. Instead of Liquor Pancreaticus and bicarbonate of soda, pancreatising powders, e.g., Fairchild's, may be used; one powder is required for each pint of food.

PERICARDITIS is inflammation of the pericardium or membrane round the heart. The chief causes are rheumatic fever and Bright's disease. The diagnosis and treatment require a doctor.

PERISTALSIS is the alternate contraction and relaxation of the walls of the alimentary canal by which the food is kept moving onwards.

PERITONITIS is inflammation of the peritoneum, a membrane lining the abdominal cavity. Chill was formerly thought to be the chief cause of this grave disorder, but it is now well known that chronic peritonitis is mainly due to tuberculosis or cancer, and acute peritonitis to perforation of one of the abdominal viscera, e.g. the vermiform appendix, the stomach, or the duodenum. Hence the treatment of acute peritonitis is operation without a moment's unnecessary delay. By adopting this line of treatment the mortality has been greatly reduced. Formerly it was the custom to give opium and hope for the best, and only to operate as a last resort, that is to say, when it was too late to save the patient's life. The mortality was then exceedingly high. Peritonitis, like many less serious affections, usually begins with vomiting and severe abdominal pains. Hence such symptoms, though probably only due to some trifling cause, should be at once reported to the family doctor, for if due to peritonitis delay may prove fatal.

PERMANGANATE OF POTASH is less useful as a disinfectant than is popularly thought, unless a very strong solution is used, the more recently introduced disinfectants, e.g., Izal, chinosol, and others being better. [See *Disinfectants.*]

PERSPIRATION. See *Sweat.* **PHTHISIS.** See *Consumption.*

PHARMACOLOGY. See *Therapeutics.*

PHARMACOPŒIA is an official list of the drugs and their preparations and doses. The chemist is legally bound to dispense prescriptions in accordance with the Pharmacopœia. Each civilised country publishes its own Pharmacopœia. The British Pharmacopœia first appeared in 1618, and many editions have since appeared in order to keep it up to date. At first most of the formulæ were of Greek or Arabian invention, and many worthless remedies were included; the formulæ were remarkably complex, thus one contained 131 ingredients, and 30 to 50 ingredients were common. The tendency has been in the editions after 1788 to greatly reduce the number of drugs and to simplify the preparations made from them. Digitalis first appears in 1677, ipecacuanha in 1721, quassia in 1780, but morphia, quinine and strychnine do not appear till after 1820.

PHENACETIN is an insoluble crystalline powder. It is most useful in relieving headache, and to a less extent neuralgia. Five grains may be taken in the form of powder or tablet every hour for four doses, if necessary, but not more frequently. Thirty grains in any one day should be regarded as a maximum.

PHLEBITIS is inflammation of a vein. The blood in the vein clots and the limb swells. Rest is essential and a doctor requisite.

PHOSPHORUS exists in two forms, the red variety and the yellow; the latter is highly poisonous, the former inert. By the use of red phosphorus instead of yellow in lucifer match making, the necrosis of the jaw, which formerly attacked the workmen, has now been practically abolished. In the form of phosphate of soda, iron, or calcium, phosphorus is largely used as a tonic. Of these drugs, syrup of phosphate of iron is one of the best; the dose is a half to one teaspoonful in a little water three times a day after food. Children take it readily in full doses. Recently the glycerophosphates have been introduced, and are proving useful. They are taken as a syrup in the same dose as the above. In the form of hypophosphite,

also, phosphorus acts as a tonic, though it is of less value than the phosphates.

PHTHISIS. See *Consumption.*

PICKLES are at times coloured with copper compounds. These, which are poisonous, may be detected by inserting a bright steel knitting needle into the pickle jar fluid. If copper is present it will be deposited upon the needle.

PILES OR HÆMORRHOIDS are varicose veins at the lower end of the lower bowel. They form small tumours projecting into the bowel, and may gradually pass through the anus and appear on the exterior. The *cause* is chronic obstruction to the circulation in this region. The more important causes of this are constipation, congestion of the liver, and pregnancy. Another cause of importance is the abuse of aperient medicines, especially such as contain aloes, which many of the patent pills do. The *symptoms* to which piles give rise may be very slight. On the other hand, they may cause troublesome itching; they may bleed freely; or they may become inflamed. Inflammation of piles is popularly known as "an attack of the piles." This causes much pain and irritation, and lays the sufferer up for some days. The *treatment* should be preventive. This consists in properly treating a tendency to chronic constipation. When present, constipation and the reckless use of strong aperients is to be avoided; all straining at stool must be avoided, especially after the motion has been passed; there is risk of this, because the piles act like a foreign body and excite an effort to expel them. If piles are extruded, they must be washed and replaced by steady pressure applied with the aid of a clean rag smeared with vaseline on one side. When inflammation occurs, bed, spare diet, and a course of Epsom salts are indicated; fomentations, spread with belladonna and glycerine, should be applied locally three hourly. If piles bleed, this can be checked by astringent injections or by hazeline ointment applied well inside. It is unwise to check this without medical advice. For itching, confection of pepper is recommended by the mouth daily. If piles are large and troublesome, a surgeon can remove them.

PILLS are made of some drug which is combined with a suitable basis. The basis most often used is either syrup of glucose, soap, confection of roses, or extract of liquorice. The whole is thoroughly mixed and then divided into equal portions, each of which is rolled into a pill and coated. Pill-making is now almost entirely in the hands of the manufacturing chemist, who uses special machinery for the purpose. The Pharmacopœia contains nineteen different pills. Of the *aperient pills* the Plummer's pill containing calomel, blue pill, colocynth and hyoscyamus pill, and compound rhubarb pill, the two latter containing aloes, are most often used [Refer to *Constipation*, however]. In *diarrhœa* the lead and opium pill is often useful, whilst the compound soap pill also, be it noted, contains opium. In *anæmia* the Blaud's pill and the aloes and iron pill, both containing iron sulphate, are largely used. Out of the very large number of pills offered for sale by different makers, the above have, at any rate, stood the test of time. To *swallow a pill* do not throw the head too far back. A little water should be taken before and afterwards.

PIMPLES are most often due to *acne*, though at times due to other causes, e.g. measles or typhoid fever. [Refer to *Acne* and *Skin.*]

PINS are often swallowed owing to the foolish habit of holding them in the mouth. A bowl of gruel should be taken, and an emetic avoided. In the vast majority of cases no harm results.

PLAGUE is an infectious fever caused by a germ—the plague bacillus—which was discovered by Kitasato, a Japanese, in 1894. Infection is spread by contact of the sick with the healthy, by infected articles, e.g., clothing, and by rats. Bad sanitary conditions and insufficient food facilitate the spread of the disease. The white races are less susceptible than the black and yellow. The disease is the same as the black-death of the Middle Ages, but it has gradually disappeared from Europe since then. The symptoms are fever, headache, pain in the back, delirium; buboes or enlarged glands appear in the groins and armpits two or three days later; hæmorrhages under the skin, common in the severe epidemics, have given the name of black-death. In severe cases death may occur in a few hours. In the mildest cases, slight swelling of the glands in the groin, preceded by malaise, are the only symptoms, and such cases, occurring amongst dock labourers and the like, have often been mistaken for venereal disease, and an epidemic has thus taken origin.

PLASMON is an albuminous food extracted from milk. See *Food.*

PLASTER is a preparation that adheres when applied to the skin. Plasters are made of an active ingredient combined with a suitable basis, e.g., lead soap, oil or resin, which is spread on linen or other material. Of the twelve which the Pharmacopœia contains, diachylon or lead plaster, belladonna plaster and soap plaster are the most often used. Sticking plaster is prepared from lead, resin and soap. It is much better not to put sticking plaster directly over a cut, but to first put on some simple dressing, e.g., clean linen or boric lint, which may then be secured in position by a strip or two of sticking plaster. This is because plaster is irritating and impedes the healing process, its only value being to keep out the dirt and to draw the edges of the wound together. Moreover, if the cut should be in the least dirty, the plaster shuts it in and mischief will result. Corn plasters are prepared with salicylic acid. Blistering plasters are composed of cantharides. [Refer to *Blisters.*]

PLETHORA is a condition in which the blood-vessels are over-full. The term is from the Greek "to fill." Subjects of plethora are usually middle aged, bull necked, florid, heavy, strong, active, and free livers. They are liable to apoplexy and to kidney trouble. They should moderate their diet, avoid constipation, alcohol, and sudden muscular strains.

PLEURA is the membrane that lines the surface of the lung, and also the inner surface of the chest-wall. The layer covering the lung is in contact with that covering the chest-wall. [See *Chest.*]

PLEURISY is inflammation of the pleura. There are two forms, the dry and the moist. In the latter form fluid is poured out by the inflamed pleura, and accumulates between the chest wall and the lungs, the latter being compressed. The fluid may be either a clear serous fluid or matter. In the latter case an "empyema" is said to be present. The cause of empyema is usually pneumonia or some fever. The cause of the other forms of pleurisy is chill or tuberculosis or rheumatic fever. It must be remembered that a large proportion of cases of pleurisy are due to tuberculosis, and are often the first symptom of a consumptive tendency, which, taken in time, is generally curable (in at least two-thirds, according to Osler). The *symptoms* of pleurisy are of sudden onset; acute pain in the side with each breath, a rise of temperature, and a cough. If fluid accumulates in the chest, the inflamed surfaces of pleura are separated by it and the pain thus relieved, but the lung being compressed shortness of breath is increased. The fluid, if not matter, will be reabsorbed, usually within a fortnight, though if sufficient in amount to displace the heart it may have to be drawn off by the doctor before this. If matter forms it must be let out by a small operation as it is rarely absorbed spontaneously, and if neglected it causes blood-poisoning. The *treatment* should be rest in bed, a spoon diet, a slight purge, and the application of either heat or cold to the painful part. Heat is best applied with a bran or linseed poultice, cold is applied with an ice-bag. The former is the most usual, though many authorities advocate the latter. Mustard, turpentine, and blisters are not recommended except by medical orders. A belladonna plaster or belladonna fomentations may be applied. All sudden movement is dangerous if much fluid be present, and until medical advice is obtained it is wise to act as though such fluid was present. Cases of sudden death due to getting out of bed to pass water have been recorded by Cheadle and others.

PNEUMONIA is a disease caused by a germ—the pneumococcus—which attacks the lungs of those whose resist-

ance is lowered by a chill, alcohol, typhoid fever, or other cause. An acute inflammation of the lungs is set up, having for its purpose the imprisonment of the germ in the lung in order to prevent infection being carried in the blood to other parts of the body. In certain cases such infection does occur, and inflammation of the pleura, membranes of the brain, joints, etc., then follows. In many of the lower animals, the lungs invariably fail to stop the entrance of the germs, with the result that a fatal blood-poisoning occurs instead of the inflammation of the lungs, that we are familiar with in man. The *symptoms* begin abruptly with an attack of shivering followed by a rapid rise of temperature, and a troublesome dry cough. The face is flushed, the breathing hurried. The pulse, though quickened, is not so much increased in rate as the breathing. The patient remains in this condition for five, seven, or nine days, when the fever terminates by a sudden fall or crisis, accompanied by sweating; the difficult breathing is relieved shortly afterwards. The chief danger is death from exhaustion on the day preceding what would normally be the crisis. In the later part of the attack expectoration of a typical rusty colour occurs. Lack of sleep is common, and delirium is of frequent occurrence. The *treatment* is to put the patient to bed; give a spoon diet at regular intervals of two hours; allow the thirst to be quenched between whiles by water or lemonade; have the room well ventilated; apply neither poultice nor ice-bag to the chest unless pain be severe, as any extra weight of this kind hampers the breathing, which is already much embarrassed, and also because no attempt to "draw out the inflammation" by such means will succeed. As the pulse shows signs of failing (by its rapidity or irregularity) brandy will be required in half-ounce doses given every one, two, or three hours, as the case demands. Besides alcohol, drugs that stimulate the heart are also used. The case should, of course, be in medical hands, if possible, from the outset. The chance of recovery is very good in those under thirty, and becomes progressively less as age advances. The risk of relapse, once the crisis is over, is practically absent. Pneumonia does not protect, like most fevers do, against a subsequent attack. [Refer to *Sick Room*.]

PODAGRA is a name for gout.

POISONS are divisible into two main groups:—(1) those in which an emetic is on no account to be given; (2) those in which an emetic should be given as soon as possible. Group (1) includes the *corrosive poisons*, which from their caustic action eat into the stomach wall and may perforate it. The corrosive poisons are the strong mineral acids, and the caustic alkalies, e.g., caustic soda, ammonia, and quick-lime. Although so different in most of their chemical reactions, mineral acids and alkalies, unless freely diluted, produce the same corrosive effect on living tissue. If vomiting is induced in such cases, the stomach is apt to burst at one or more of the weak spots that the poison has produced. Such an accident is almost invariably fatal. In all other cases of poisoning, in which the poison has been swallowed, an emetic should be given, unless the patient is unconscious.

HOW TO ACT IN A CASE OF POISONING.

(1) Send at once for a doctor. (2) Preserve any poison bottle, medicine, food or vomit just as it is till the doctor arrives, otherwise the most essential evidence will be destroyed. Look quickly for a label on any poison bottle found, and note the odour of the contents; prussic acid, carbolic, a fuming mineral acid, ammonia, etc., may often be thus recognised. (3) If the nature of the poison is known, it is possible to apply treatment specially adapted to it, as shown in the table below. (4) If there is no clue to the nature of the poison, follow these directions:—

(*a*) Note if the lips or clothing are burnt. If they are, the poison is a corrosive one, and an emetic must not be given.

(*b*) If the patient is unconscious, an emetic must not be given. The patient should be aroused either by speaking to him, shaking him, or flicking him with a wet towel, but not by holding smelling salts to his nose, as these may do harm to the air passages before the patient is aroused by them. If he is unconscious and the breathing is weak, artificial respiration, as described under *First Aid*, should be resorted to at once.

(*c*) Unless a corrosive poison has been taken, or the patient is unconscious, an emetic should be administered promptly, even though the exact nature of the poison is unknown. The best emetic is a tablespoonful of mustard in a tumbler of tepid water, though copious draughts of tepid water or salt and water may be used if necessary. The action of the emetic should be aided by the introduction of the fingers or a feather well down into the throat.

(*d*) In all cases of poisoning, if the patient can swallow, it is good treatment to give milk, or beaten up eggs, or strong tea or coffee, or salad oil. This may be done both before and after an emetic has acted. These remedies act as antidotes to many common poisons, and some of them also salve the irritated lining of the stomach.

(*e*) Lastly, treat the shock, which many poisons cause, with warmth and stimulants, and do not let the patient go to sleep until the doctor has arrived.

For convenience of reference, these rules are best expressed in tabular form:—

CORROSIVE POISONS.

Never give an emetic.

POISON.	TREATMENT.
Vitriol or Sulphuric Acid. Aqua Fortis or Nitric Acid. Spirits of Salt or Hydrochloric Acid. Burnett's Fluid.	Magnesia, Washing Soda, Chalk, or Whiting to be given in milk, in small quantities, frequently repeated. Afterwards salad oil and a little ice.
Carbolic Acid.	Lime water; then milk or salad oil; later on Glauber or Carlsbad salts.
Salts of Sorrel or Oxalic Acid. (This is the only crystalline powder that is a corrosive poison).	Chalk or Whiting in milk or water. (The plaster behind the wall-paper will do, if crushed and given in water). Afterwards give brandy and warmth. Prompt action is essential.
Ammonia or Spirits of Hartshorn. Caustic Soda or Potash. Quick-lime. Soap Lees.	Lemonade or vinegar in large doses in plenty of water. Afterwards ice to suck and salad oil.

NON-CORROSIVE POISONS.

(This group includes any not mentioned above).

Always give an emetic, unless the patient is unconscious.

If breathing is failing, resort to artificial respiration. After the emetic administer the antidotes given below.

POISON.	ANTIDOTE.
Aconite.	Brandy; Warmth; Castor Oil.
Alcohol.	Hot coffee; Epsom salts.
Antimony contained in tartar emetic and James' powder.	Tea or coffee or red wine.
Belladonna, Deadly Nightshade berries, Eye lotions that dilate the pupil. Liniments of a treacle-like appearance.	Brandy; Hot coffee; Lemons to suck. (Delirium may occur).
Conium or Hemlock.	Brandy, castor oil. Keep patient awake.
METALLIC POISONS, e.g., arsenic, copper, lead, mercury, zinc, etc., and their compounds, red or white precipitate, corrosive sublimate, emerald green, blue vitriol, Scheele's green, chrome yellow, Simpson's rat paste, etc.	Egg and Milk; Brandy. Warmth to the abdomen.
Silver Salts.	Salt and Water, followed by warmth to the abdomen.

Poison.	Antidote.
Nicotine. (In children due at times to using an old pipe to blow soap bubbles with.)	Stimulants.
Opium or Morphia.—This is contained in:—Battley's Solution, Black Drop, Children's Quietness, Chlorodyne, Dalby's Carminative, Dover's Powder, Godfrey's Cordial, Laudanum, Nepenthe, Paregoric, Powell's Balsam of Aniseed, Syrup of Poppies, Winslow's Soothing Syrup.	Half-a-pint of water made bright red with Condy's Fluid *or* Permanganate of Potash; Hot Coffee. Keep patient awake, and to do this successfully it may be necessary to squirt cold water in the face, or to flick with a wet towel, etc.
Phosphorus; contained in most rat pastes.	Condy's Fluid in water, sufficient to make a bright pink mixture; *or* Sanitas, a tablespoonful in water; then, Egg and Milk.
Prussic Acid and Cyanide of Potassium.	Apply Smelling Salts; Artificial Respiration.
Strychnine; contained in Nux Vomica, Easton's Syrup, and many Vermin killers, e.g., Battle's, Butler's and Gibson's.	Keep patient very quiet in a darkened room. Any sudden noise or light may induce a painful cramp.
Toadstools and other fungi.	Brandy; Warmth; Castor oil.

POISONOUS PLANTS. The number of poisonous plants growing in Great Britain is small. At the same time it is wise to guard children from eating any fungus and any wayside berry except the blackberry, raspberry, and bilberry. The berries of the yew, bryony and cuckoo-pint or arum, and the seeds of the laburnum are poisonous, so also are the berries of the deadly, and the woody, nightshade. The treatment in these cases should be that for Belladonna [see *Poisons*]. The common nightshade of the hedge row is not the deadly nightshade, as is usually thought, but the woody nightshade, *Solanum dulcamara*, the berries of which, though poisonous, are far less deadly. As the name "dulcamara" indicates, the taste of the berry is a sweet-bitter, and this is sufficiently nauseous to children to prevent a poisonous quantity of the berries being taken. The deadly nightshade, *Atropa belladonna*, on the other hand, has luscious sweet black berries as large as cherries, which children eat greedily. Fortunately the deadly nightshade is a rare plant. The treatment required, if any of the above berries have been eaten, is that given under *Belladonna* in the article on *Poisons*. The hemlock tribe includes a great number of harmless plants, e.g., wild carrot, fool's parsley, etc., the leaves of which are at times eaten by children in mistake for true parsley. Parents are often much alarmed as they fear hemlock, *Conium maculatum*, which is highly poisonous, has been eaten. The distinguishing features of this comparatively rare plant are given below. For treatment see *Conium* in the article on *Poisons*. The root of monkshood, *Aconitum napellus*, is at times eaten by mistake for horse-radish. Both plants are commonly grown in cottage gardens. As the monkshood contains a deadly poison, the distinguishing points given below are worthy of attention. Monkshood is a pretty blue flower not unlike larkspur; it is known also as wolfsbane and blue rocket. For treatment see *Aconite* in the article on *Poisons*. The sap of a few other plants is poisonous, e.g., that of henbane, the leaves and flowers of the potato, the thorn apple, foxglove, meadow rue and savin. These plants, however, present no part likely to be eaten by mistake. A hot-house plant, the *Primula sbconica*, produces a rash on the hands and face of those who handle it. The fungi that somewhat resemble mushrooms are the plants that most commonly cause serious mistakes. The distinguishing features are given below. The treatment should be an emetic, followed by warmth and stimulants.

	Deadly Nightshade.	Woody Nightshade.
Berries	Large; arranged singly; taste-sweet.	Small; arranged in clusters; taste sweet at first then bitter.
Flowers	Arranged singly; bell-shaped; purple at the border.	Arranged in clusters; star-shaped; violet with yellow centre.

	Hemlock.	Harmless Plants allied to Hemlock.
Stem	Smooth and spotted with red, on the larger stems.	Rough and not spotted.
Flower-head	Without bracts (bracts are little leaves like a calyx) at the base of the flower-head.	With bracts.

	Monkshood.	Horse-radish.
Root	Short, tapers to a point; with many little roots branching from it.	Long, tapers but little and ends abruptly; with few little roots branching from it.
When scraped	Soon turns pink.	Remains white.
Taste	Pungent at first, then numbing.	Pungent only.

	Poisonous Fungi.	Mushroom.
Odour	Often unpleasant.	Pleasant.
Taste	Often acrid.	Pleasant.
Surface	Often moist and rarely peels easily.	Always dry and the upper surface peels readily.
Colour	Often bright or intense white.	Whitish above, deep brown below in the larger specimens, and a lighter brown in the smaller ones.
Where growing	Usually in damp places, on or under trees.	On dry open pastures.

N.B.—Nine-tenths of the cases of fungus poisoning are due to the Death Cup, *Agaricus phalloides*. This fungus grows in woods; it is of a pale yellow colour on the upper side and white on the under side; its stem presents a loose white collar near the top, and a loose cup-like sheath at the base.

POLYPUS is a growth, shaped like a cherry, springing from a mucous membrane. It is most common in the interior of the nose. The diagnosis and treatment require a doctor.

POMATUM is not recommended. When used, some material which does not turn rancid is required, e.g., vaseline or castor oil scented. [Refer to *Hair*.]

PORK See *Food*.

PORT WINE, though largely used at the present day for invalid purposes, is not recommended, unless selected with special care, as so much that is on the market is port only in name. Cognac brandy is the best alcoholic stimulant for the sick room. As a tonic the use of wine, except under medical supervision, is very unwise and as a rule quite uncalled for.

POST MORTEM examinations can be made without leaving any traces. They are invaluable to medicine as a whole, and also to each individual doctor who makes them. Permission to perform one should always be granted. There is nothing which makes the opinion of the consultant worth more than that of the general practitioner so much as the fact that he has frequent opportunity in his hospital work of verifying his diagnosis *post mortem*, whereas the family doctor rarely has. It is not a question merely of seeing if the patient died of such and such a disease, say consump-

tion, of that there is often no doubt whatever, the question is, does the mental picture of the state of the lungs formed during life correspond with that actually found at the post-mortem? It is by a series of such lessons over many years that the really accurate physician is made. Again, in public institutions, e.g., asylums and workhouse infirmaries, where the number of patients is very large in proportion to the number of doctors, there is nothing which keeps each member of the staff up to the mark so much as the fact that his diagnosis is liable to be verified or the reverse, in the presence of his colleagues in the post-mortem room. In the silent reproach of that cold corpse when a condition comes to light which a prompt resort to surgery might have relieved, there is a force that no human criticism can ever hope to attain. The Board of an Institution by doing all it can to encourage a post-mortem being performed on every case of death, especially if apparently of no interest, will do more to promote efficiency than by almost any other measure. Such post-mortems are, of course, private. We mention this because we find relatives confuse a post-mortem with an inquest, and they often decline permission at first solely on this account.

POTASH is used in many forms. Caustic potash, in the form of solid sticks, is used as a caustic. Citrate of potash, dose, twenty to sixty grains, is largely used in gout to clear the blood of the uric acid salts with which it is laden; bicarbonate of potash is used to form an effervescing draught when mixed with citric acid; twenty grains of the former, dissolved in water, neutralises fourteen grains of the latter dissolved in water, forming citrate of potash, and setting free carbonic acid gas, which escapes, producing effervescence. Potash water is very like soda water, and is composed of water containing a small amount of potash and a large amount of carbonic acid in solution. Bitartrate of potash, or cream of tartar, in doses of twenty to sixty grains in water, is a cooling summer drink, but in doses of a quarter to one ounce it is an aperient, which acts soon after it is taken.

POULTICE is an application which is both soft and moist. It is at the present day nearly always used hot, though an ice poultice is occasionally used for applying cold. An ice-bag is, however, much more convenient. Poultices are not nowadays applied to wounds or boils, fomentations being used instead, as they are antiseptic. But to apply heat to the unbroken skin the poultice is the better, as it retains its heat longer than the fomentation does. The linseed poultice is the one we recommend, as the bread poultice soon turns sour.

TO MAKE A LINSEED POULTICE.—Get ready two basins, two metal plates or old soup plates, a large wooden spoon, a clean cloth, some linseed, preferably the crushed variety, olive or salad oil, and a kettle of boiling water. Put the two metal plates in the oven. Heat the bowl by standing boiling water in it, and warm the spoon and linseed by the fire. When all is warmed, put fresh boiling water in the bowl, using less than the beginner is inclined to, and stir the linseed in a little at a time until the mixture is sufficiently stiff to enable the spoon to stand upright when thrust into it. Now spread an even layer on the cloth; smear the surface with olive oil, then place the poultice between the two hot plates and carry it to the bedside.

The linseed poultice is useful for a whitlow before it comes to a head, and for pleurisy, pneumonia, stomach-ache and many conditions of deep-seated inflammation, though in pneumonia it is becoming obsolete. Poultices are also used as counter-irritants in bronchitis, lumbago, etc. For this purpose the mustard poultice or the mustard leaf is the best.

TO MAKE A MUSTARD POULTICE.—Make the same preparations requisite for preparing a linseed poultice, with the mustard in addition. The poultice is then prepared in the same way, except that equal parts of mustard and linseed are used. When required for children one part of mustard to three of linseed meal should be used.

The mustard poultice should only be left on the skin for a sufficient length of time to produce redness. As a rule, this is only so long as the patient can bear it, but with those accustomed to its application and with school-boys it is often borne long enough to produce blisters or even serious damage to the skin. Hence its effects should be watched. The mustard leaf dipped in hot water and applied is more convenient and quite as efficacious as the mustard poultice. Of the many other poultices formerly in vogue, we recommend none; especially worthy of condemnation is the charcoal poultice, formerly supposed to have a healing effect on poisoned wounds.

POWDERS are useful for children before they are old enough to take a pill. The most useful is *grey powder*, a mixture of mercury and chalk, the dose of which is a half to one grain for a child. For indigestion, wind, or disturbed bowels, it is of great value in the treatment of infants, and is recommended in preference to the "teething powders" that are sold, many of which contain opium and other unsuitable ingredients. *Gregory's powder* is a nauseous preparation of rhubarb which should never be given now that so many less disagreeable aperients are obtainable. A mixture of grey powder one grain, with carbonate of soda two grains, and powdered ginger three grains, makes a good stomachic mixture for occasional use for an infant. For adults liquorice powder, compound jalap powder, and seidlitz powders are familiar aperients; Dover's powder in ten grain doses contains one grain of opium and is useful at the onset of a cold. Antimony powders, a substitute for the James' powder, once much in vogue, is now seldom employed.

PREGNANCY, MANAGEMENT OF. The ordinary daily duties should be carried on as usual. Some exercise in the open air should be taken daily, as good muscular tone greatly aids childbirth. All strains and jolting should be avoided, as they promote miscarriage. The skin should be kept active by a daily bath and the bowels regulated by mild aperients. Internal douches are, as a rule, unwise. The mind should be kept pleasantly occupied, and all anxiety and fright avoided as much as possible. The dress should be such as to avoid pressure, garters and tight stays being unsuitable, though an abdominal belt may be useful if the abdomen is lax and prominent. The nipples must be guarded from pressure, and should be hardened towards the end of pregnancy by bathing in weak spirit. Maternal impressions have no effect on the infant, the sight of a negro or a cripple, for instance, need cause no alarm.

(1) Vomiting requires rest in bed daily until the usual time for its occurrence is passed; care in the diet and attention to the bowels.

(2) Severe itching requires the application of a solution of borax, three drachms to the pint, or lead lotion, and cold cream should be applied afterwards.

(3) Swelling of the feet and of varicose veins should be met by resting with the feet up as much as possible.

(4) Swelling of the face should be reported promptly to the family doctor.

(5) Cramps in the calves are best relieved by friction with the hands.

(6) Piles may be troublesome, and should be treated as directed under that heading.

(7) Melancholia is not rare during the earlier part of the pregnancy. It will cease as the pregnancy advances.

(8) Threatened abortion, stoppage of the water, or convulsions require prompt medical aid.

PRESBYOPIA, the long sight of advanced life. [See *Sight.*]

PRICKLY HEAT. A condition of the skin caused by the formation of sweat faster than it can escape from the pores. It is best treated by creolin, one teaspoonful dissolved in a pint of water, the lotion, thus formed, to be dabbed on frequently. Lead lotion, or a lotion made of one part of pure carbolic acid, dissolved in eighty parts of water, may also be used. Light clothing, a daily bath and a free action of the bowels should also be secured.

PROLAPSE is the descent of an internal part so that it appears externally. The two organs liable to this malposition are the uterus and the lower bowel. The latter is most often affected in this way in childhood. The cause is prolonged straining at stool from constipation, or other source of bowel irritation, or from straining to pass water due to a need for circumcision or from stone in the bladder. Hence a careful medical examination is indicated to detect and remove the cause. The prolapsed bowel should be at once washed and then gently squeezed back by grasping

it with an oiled rag. This is best attempted with the patient lying on the side and with the buttocks raised. After the replacement of the bowel has been accomplished, a diaper should be folded and passed between the legs; this should then be secured in front and behind to a waist belt. In future the child should pass its motions lying down, all strong aperients must be avoided, and any prolapse corrected directly after the motion.

PROPHYLACTICS, literally "guarding beforehand," are measures taken to prevent illness. Thus a dentist by stopping carious teeth prevents toothache; a youth with consumption in his family may guard himself from being a victim by an open air life and temperate habits; the spread of epidemics may be checked by disinfection and the prompt isolation of patients suffering from the complaint, and so on.

PROSTATE is a gland which surrounds the neck of the bladder in males just at the spot that the bladder opens into the urethra. In later middle age it often enlarges, and then may cause difficulty in passing water, and from time to time attacks of acute congestion, commonly known as "an attack of the prostate," may occur. In such an attack there is retention of the urine, with local discomfort and often slight fever. Such cases require prompt medical aid. These attacks may be guarded against by avoiding chill and alcohol, especially the more acid wines. It is often while waiting for a hansom on a cold night, in evening dress, that the chill to the bladder and prostate is caught.

PROUD FLESH is the popular name for the feebly growing new tissue that forms on the surface of a wound that is not healing properly. It should be touched with lunar caustic. [Refer to *Wounds*.]

PRUSSIC ACID. See *Poisons*.

PSORIASIS is a common skin disease, apt to recur in the spring and autumn for years. It is recognised by the patches of silvery scales present usually on the elbows and knees and the backs of the forearms. The scales are dry; there is nothing greasy about them. If removed, the skin beneath is seen to be red. Some scaliness is often present on the head also. Itching is often troublesome. Solution of coal-tar half a drachm, white precipitate ten grains, oil of cade a drachm, worked up with an ounce of vaseline is an efficient remedy if applied night and morning. Hot baths with soft soap and pumice stone should be used frequently till the scales are off. If the skin becomes inflamed, zinc or calamine ointment should be applied for a few days and the above ointment then resumed. Medicines do little good. If the head is scaly it should be treated as for baldness [which see].

PUBERTY is the transition stage from childhood to manhood or womanhood. Associated with the development of the sexual organs and instincts are certain physical changes, such as the breaking of the voice, the appearance of hair on the face in the boy, and the development of the breasts and the establishment of menstruation in the girl. At no time in later life has the body to undergo such marked changes. The strain on the constitution is considerable. It is a time of life which, in the delicate especially, requires care, plenty of fresh air and good food, and absence of worry. The mind is often unstable and is more emotional than before. Unfortunately it is a time of life in which school examinations frequently occur, and when the entrance examination for the future professional career has often to be prepared for. It is not surprising, therefore, that nervous breakdown is common at this time, especially in those with inherited tendency to it. Such cases require special care. All, at this time, are the better for a few words of advice from their guardians.

PUBLIC HEALTH, or Preventive Medicine, is concerned with the prevention of disease, wherever possible. Wise laws, honestly carried out, can do far more in this matter than is popularly supposed. This involves, however, interference with the liberty of the subject, and an increase of the local rates; and hence the present administration of the laws relating to public health admits of much improvement. In the interest of public health the State is bound to take under its jurisdiction:—Rivers, to prevent their pollution by factory refuse or sewage; buildings, their site and construction, sewage and scavenging; water supply; food, its purity and the sanitary condition of the buildings in which the food is prepared, e.g., dairies, bake-houses, and slaughter-houses, factories and workshops, especially in relation to light and ventilation; the regulation of the liquor traffic; the disposal of the dead; the control of infectious disease by vaccination, isolation hospitals, disinfection and compulsory notification.

These matters, since 1875, when the Public Health Act was first passed, have been under the control of one central authority, the Local Government Board. Acting under this central authority are Boards for each district, the Local Sanitary Authorities, who are aided by permanent officials, the Medical Officers of Health and their assistants. The matters of pressing public importance at present include the housing problem, river pollution, the smoke nuisance, the disposal of the dead before burial where several people occupy the same room, the prevention of consumption, and the more efficient supervision of the preparation and storage of food, especially sausage and ice cream making, and lastly the greatest problem perhaps of all, the *drink question*. The reduction in the number of licensed houses, and the establishment of thoroughly well-ventilated and cleanly buildings, in which the sale of food and of temperance drinks is encouraged, whilst the alcoholic liquor sold is pure and good of its kind, would in the opinion of many constitute a most valuable reform. But the whole question is too complex to be dealt with here. It is worthy of remark, however, that the boarded floor covered in sawdust, so commonly to be found in the public house of the day, is a potent means of spreading consumption, as the sawdust encourages promiscuous expectoration, and a large proportion of bar-loafers are consumptive. [Refer to *Air*, *Dead*, *Disposal of*, *Drains*, *Fevers*, *House Sewage*, *Ventilation*, *Water*.]

PUERPERAL FEVER is the entirely preventable fever due to bad hygiene, or lack of antiseptic precautions, in the management of child-birth. The most deadly form usually sets in within three days of child-birth, and begins with an attack of shivering, drying up of the milk, high fever, and often delirium. A less severe form more commonly begins about the tenth day. The treatment must be in medical hands. [Refer to *Child-birth*.]

PUERPERAL INSANITY is a form of insanity, usually temporary, that occurs at times after child-birth. The onset is often sudden, the patient becomes wild and restless, and may do injury to herself or her child unless she is carefully watched.

PULSE is a throbbing in a blood-vessel, limited as a rule to the arteries and caused by the injection of some four ounces of blood at each heart-beat into a system of blood-vessels already distended with blood. This sudden addition to the contents of an arterial system, already full, gives rise to a pressure wave, which passes rapidly from the main artery at the outlet from the heart to the arteries in all parts of the body. The rate at which the wave travels is about 30 ft. per second. Hence with one hand on the heart and the other feeling the pulse at the wrist, the heart-beat and the pulse appear to be simultaneous. That this is not so we know by accurate measurement with apparatus devised for the purpose, which shows the minute interval of time really present between them. It is a popular error to think the pulse is only to be felt at the wrist. It may be felt in any superficial artery, e.g., at the temple, in the neck, front of the thigh or behind the ankle on the inner side. The wrist is the most convenient. The spot to feel is just above the ball of the thumb, on the outer side of a tendon that is readily felt there. The pulse-rate in the new-born is 130 to 140 per minute, in childhood about 100, in the adult 70 to 75, in old age 80. The rate is slightly higher in the female than the male. In health it is increased by exertion; there should be five beats difference per minute between lying and sitting, and five more between sitting and standing, whilst a short run upstairs raises it to 120. After an acute illness, the pulse becomes rapid in response to any exertion, that in health has but

little effect. Hence it is unwise to be in too much hurry to sit up during convalescence, a difference only of ten beats per minute in the pulse rate means about 10,000 beats per week, and the rest to the heart given by another week in bed is thus apparent. In illhealth the pulse rate is increased with few exceptions. In fever it rises ten beats for each degree the temperature is above normal, except in scarlet fever, in which therise of pulse-rate is still greater. In exhaustion and after severe loss of blood the pulse-rate is increased even though the temperature has fallen to below normal. Nervousness and many emotional states raise the pulse-rate remarkably, and may give rise to an erroneous belief that something is wrong. Except during the convalescence from fevers the pulse-rate is seldom diminished, though in some people it is always low, thus Napoleon had a pulse-rate of forty. More important than the rate is the regularity of the pulse. An irregular pulse may indicate serious heart mischief, but may be merely due to dyspepsia or excessive consumption of tobacco. It should be borne in mind that the pulse is often irregular in early life, especially during sleep, without anything being amiss. Another point from which the doctor gains much information is the "feel" of the pulse. From this he learns whether the pressure within the blood-vessels is high or low, whether they are full or empty between the beats, and whether the wall of the artery is normal or not. From these facts inferences can be drawn concerning the state of the circulation, the kidneys and other important organs. It is thus clear that the prominent place given to the pulse in a medical examination is justified by its importance. It is also, we trust, equally clear that amateur attempts to examine a pulse and draw inferences from it are sure to be futile. To count a pulse accurately is soon learnt, but to *feel* it requires an expert.

PURGATIVES. See *Constipation.*

PURPURA, known also as the "Purples," is the name of a rash caused by the rupture of small blood-vessels and the escape of blood beneath the skin. Purple patches are thus caused which do not disappear on the application of pressure, and which vary in size from that of a flea-bite to that of a half-crown or more. The cause is either (1) some change in the blood, which makes the walls of the smaller vessels no longer capable of withstanding the pressure within them, or (2) rupture of vessels from strain, e.g., whooping cough or from absorption of the fat which normally supports them, as in the hands of old people, or (3) is due to strong nervous disturbance, as in the stigmata of the martyrs, some cases of hysteria, neuralgia, etc. Group (1) includes many grave conditions, e.g., the worst forms of the infectious fevers. Group (2) is not serious. In all cases, however, send for the doctor.

PUS is "matter." See *Inflammation.*

PUSTULE is a pimple that has come to a head. A saturated solution of boric acid may be used as a lotion applied frequently. Malignant Pustule is the first symptom of a malignant fever termed "Anthrax" or Woolsorter's Disease (which see).

PUTREFACTION. See *Bacteria, Dead, Fermentation.*

PYÆMIA, literally pus in the blood. See *Blood-poisoning.*

PYREXIA is a condition in which the temperature is above normal. [See *Fevers.*]

PYROSIS, literally to burn, is the technical name for Water Brash (which see).

QUACK is one who lays claim to powers or knowledge that he does not possess. The tendency to believe what one is told is sufficient to enable quacks to make a thriving living. Many claim to be qualified doctors, who have been struck off the rolls, because they have refused to divulge the nature of some "wonderful remedy" that they have discovered. Others claim to have been born with a healing power, which required no medical training to develop. Quacks are not absent from the ranks of the medical profession. The surgeon who operates without cause, and the doctor who gives an opinion which is not based on careful examination of the patient and his history, are really, if not legally, quacks.

QUARANTINE is the time during which those exposed to infection on a given date must wait without further exposure to infection, before it is known whether they have taken the disease or not. The time varies with each infectious disease [Refer to *Fevers.*]

QUARTAN FEVER is one form of ague.

QUININE, the active principle of Peruvian Bark or Cinchona, is invaluable in the treatment of malaria or ague, as it possesses the power of destroying the parasite of malaria, which lives in the blood. Large doses are used for this purpose, e.g., 5 to 20 grains four times a day. People in malarious districts often do harm by overdosing themselves. Given during the height of the attack it often increases the headache and does harm. In smaller doses, e.g., 1 to 2 grains, quinine is largely used as a tonic. It is often combined with perchloride of iron, as the acid perchloride dissolves the quinine. Quinine may also be taken in pills or tablets so as to avoid its bitter taste. It should not be taken if the stomach is out of order, or if there is a tendency to deafness. Repeated doses are prone to upset the digestion, to cause ringing in the ears, and to produce a dull headache. It is used in the treatment of neuralgia, blood-poisoning, rheumatism, and to reduce high temperature. Owing to its intense bitterness, children do not take it well.

QUINSY, strictly speaking is an abscess in one tonsil, but other forms of sore-throat are often included in the term when used popularly. [Refer to *Sore-throat.*]

RABIES, literally madness, is the disease in dogs which, when transmitted to man by the bite of a mad dog, causes hydrophobia. The disease has been stamped out in England by the Muzzling Act. [See *Hydrophobia.*]

RADIUM acts as a caustic, and is used to destroy rodent ulcer and cancer. It also removes "port wine" stain from the skin.

RAILWAY SPINE is a condition that often follows a railway accident. Some time after the accident, symptoms of spinal complaint develop, e.g., weakness or stiffness of the legs, tenderness over the spine, etc. Some of these cases are due to concussion, others to hysteria. The prospect of recovery varies greatly in different cases.

RASH is a breaking out on the skin, usually comparatively sudden in origin. Nettle rash and the rashes of the infectious fevers are examples. Each fever has a rash characteristic of itself, though in certain cases they simulate one another closely, thus German measles rash may be almost indistinguishable from that of scarlet fever. [Refer to *Fevers* and to the separate article on each.]

RAW MEAT JUICE is the best form of concentrated meat food. It should be prepared fresh every twelve hours, according to the following recipe:—

> Remove all skin and fat from raw shin of beef; mince the lean and place it in a bowl. Add a pinch of salt and just enough water to cover it. Allow to stand for some hours in a cool place, preferably on ice. Then strain through muslin and forcibly squeeze the residue in a lemon squeezer until the last drop of juice has been expelled. The object aimed at is to rupture the fibres of the meat and obtain the juice that they contain within them. The first straining, together with the juice obtained from the lemon squeezer, together constitute raw meat juice.

It is far more nourishing than beef tea, and most easily digested, provided it is not heated. An infant can take a quarter of a pint in the course of the day. The juice is not very appetising, however, and children, curiously enough, often take it much better if a dash of port wine is added, though to the adult palate this addition is not an improvement. It may also be disguised by giving a little malt extract with it. In order to dissolve the cement which binds the meat fibres together, the addition of a few drops of hydrochloric acid or spirits of salt is often made to the salt and water with which the mince-meat is covered. Raw-meat-juice is used in practically all hospitals for giving nourishment in cases of severe prostration, and in the treatment of rickets. Although a little more troublesome, we strongly recommend it in preference to the tinned meat-juices, excellent though some of these are.

RAYNAUD'S DISEASE is a disorder affecting the circulation in the fingers and toes, which in popular

language "go dead," or become white and numbed owing to the temporary lack of circulation in them. The white stage is at times followed by a blue stage, in which the finger is swollen with stagnant blood. The disease is not dangerous, nor need heart disease, paralysis, or other grave condition be feared, as Raynaud's disease is not a sign of any of these. During an attack, warmth and friction should be applied. Between the attacks, loose warm gloves and socks should be worn, and contact with cold objects, as far as possible, avoided, whilst the general health should receive attention.

RECTUM is the last eight inches of the intestinal canal. Diseases of the rectum include (1) absence of any opening from birth, (2) fistula, (3) cancer, (4) piles, (5) prolapse, (6) stricture. [Refer to these headings.]

RED-GUM RASH, technically known as papular urticaria, is a common skin disease of childhood. The rash is a form of nettle-rash, and consists in red itching spots scattered over the body, which come and go often for years. The disease appears during the first few months of life, and is often wrongly attributed to vaccination, owing to this being performed at a time of life at which the disease usually begins. It has also been attributed to irritation of the gums from the onset of teething. The *treatment* should be attention to all sources of irritation, both within and without; errors of diet, indigestion, constipation, worms, and lack of cleanliness, rough or dyed flannel next the skin, a flea or a badly placed pin, are all prone to determine an outbreak of the rash in those born with sensitive skins. The attacks are apt to recur again and again; each time, often enough, a new doctor is consulted, but the nature of the complaint is such that nothing is to be gained thereby. Soothing lotions such as lead lotion should be dabbed on, and weak creolin baths may be tried, in which only sufficient creolin is added to make the bath water slightly milky. Scratching should be checked as much as possible, as it aggravates the complaint. At night a sock may be slipped over each hand and secured round the wrist to prevent scratching during sleep.

RED LOTION is a useful application to chapped hands. It consists of sulphate of zinc two grains, tincture of lavender ten drops, and water one ounce

REFLEX ACTION is movement produced in response to a stimulus, without the aid of the will. By a stimulus is meant anything capable of stirring a sensory nerve to action, e.g., a prick, pinch or burn, or a dash of cold water on the skin, or a sudden noise, or flash of light, or snuff in the nostril. The impression thus made in the nerve endings is conveyed by the nerve to the spinal cord, or certain parts of the brain, whence a nerve impulse is sent or reflected to the muscles, and "reflex movement" is the result. A sneeze, a cough, or the involuntary passage of water are familiar examples. The power of restraining a reflex act is usually present to some degree, a sneeze, for instance, or a cry of pain. This power is less in childhood, in sleep, in fatigue, in old age, in exhausting illnesses, and especially in many nervous disorders. The comparatively slight control of the will over the bladder in childhood should be borne in mind. Disease of one organ will often disturb another by *reflex irritation*. Thus pain may disturb the heart sufficiently to cause fainting; teething may cause convulsions, pregnancy vomiting, etc.

REFRIGERANTS are remedies for reducing fever. Cold water applied both externally and internally, and acid drinks, are examples. [Refer to *Baths*, *Cookery*, *Fever*.]

RELAXED THROAT. The treatment is the same as for elongated uvula, which is described under *Sore Throat*.

REMITTENT FEVER is one name for *ague*.

RENAL DISEASE. See *Kidney*.

RENNET is the active ingredient of the digestive juice concerned in curdling milk. Rennet is extracted from the stomach wall of the pig or calf, and used for making curds and whey. Portions of the stomach itself can be preserved and are used, but a glycerine extract is preferable. Schacht's rennet is a reliable brand. [Refer to *Milk*.]

RESPIRATION is the act of breathing. By its means oxygen is taken in and is subsequently given out again in the form of carbon dioxide, a gas formerly termed carbonic acid. This exchange of gases or breathing is going on wherever living tissue is to be found, both in animal and plant life, with the possible exception of certain bacteria. In some animals (e.g., insects), the air passages ramify all over the body, thus carrying air to every part. But in the higher animals the air passages do not extend beyond the lungs. Exchange of gases in these cases occurs between the air and the blood in the lungs. The blood then carries the oxygen to all parts of the body, and serves out oxygen to any tissue requiring it, receiving carbon dioxide in exchange. Hence breathing, in the popular mind, has come to mean the movements of the chest by which air is sucked in and forced out of the lungs. These movements are effected by a nerve centre in the base of the brain just at its junction with the spinal cord, and though they can be altered at will, they are in the main carried out unconsciously. Respiration must be thorough if health is to be maintained. Everything should be done to aid it; tight clothing, faulty attitudes, e.g., stooping over a desk or a bicycle, a mumbling voice, enlarged tonsils and nasal obstruction should all receive prompt attention. Healthy sports compel deep breathing; singing, drill and gymnastics encourage it. Special breathing exercises may also be practised daily. Habitual breathing through the mouth should never be allowed; when this is present in children, obstruction in the nose and throat is usually present, and the family doctor should be consulted. In cases of suspended respiration, *artificial respiration* must be resorted to at once. This is described under *First Aid*. [Refer to *Ventilation*.]

RESPIRATORS are now obsolete.

RETENTION OF URINE. See *Bladder*.

RHEUMATIC GOUT. See *Rheumatoid Arthritis*.

RHEUMATISM presents two chief forms, the acute and the chronic. ACUTE RHEUMATISM, or rheumatic fever, most often attacks young adults and children over ten years. The *cause* is probably a germ—the diplococcus of rheumatic fever—but this is not accepted by all authorities. Cold, damp and inherited tendency are factors in the production of the disease. The disease is not infectious. The *symptoms* are fever, profuse sweats, sore throat, inflammation of several joints, and in those under twenty years of age the heart is very commonly attacked. Indeed rheumatic fever is the principal cause of heart disease in the young. St. Vitus's Dance is common in rheumatic subjects, and is regarded as a symptom of rheumatism by most of the authorities of the day. The *treatment* is above all to secure rest, in fact, quite contrary to popular ideas, to regard rheumatic fever as first and foremost an inflammation of the heart, and to spare no effort to rest the heart until all inflammation has completely subsided. The pain is relieved by the use of salicylate of soda (20 grain doses every three hours) or of aspirin (dose rather less), and by anodynes and warmth applied to the affected joints. The treatment has to be continued for some time after symptoms have subsided, or relapses, which are very common, will occur. The diet should be at first a spoon one, and later on fish and farinaceous food. The clothing should be flannel, and the sheets are best removed from the bed, as the profuse sweating is apt otherwise to cause chill. [Refer to *Anodynes*, *Fomentations*, *Poultices*, *Sick Room*.]

CHRONIC RHEUMATISM may follow rheumatic fever, but more often comes on gradually in middle-aged people of previous good health. The *symptoms* are stiffness and pain without redness in many joints, especially the knees and shoulders. The general health is often impaired. The chance of recovery is bad, but the risk to life is very small. The *treatment* should be chiefly applied directly to the affected joints. The salicylates, so useful in rheumatic fever, is of but little service in chronic rheumatism. The treatment of the joints themselves consists in the application of counter irritants, e.g., iodine and blisters, or of anodynes, e.g., laudanum or belladonna; in warmth applied by poultices, fomentations, wrapping the joint in

wool, or by hot bags of dry salt or sand; in the combination of hot water and massage used at many of the Spas, e.g., Bath, Buxton, Droitwich, etc. [See *Health Resorts*]; and perhaps, best of all, by the Dowsing System of treatment.

The DOWSING SYSTEM is of comparatively recent introduction. The affected joint is enclosed in a metal case, which is lined by electric lamps. The skin is protected by a piece of lint rendered fire-proof by previous immersion in tungstate of soda. The lamps are then made to glow by turning on the current, which raises the temperature inside the case to 400° F. The enclosed joint is thus exposed to a high temperature for as long as it is thought advisable. The treatment is repeated daily. The whole body, with the exception of the head, is often treated instead of each joint separately. The effect of this treatment is to reduce the stiffness in the joint and to relieve pain. The treatment is suitable for stiff joints from other causes. It is to-day easily obtained in almost any town, and thus saves the need for a journey to a Spa.

RHEUMATOID ARTHRITIS, or Arthritis deformans, is a chronic disease of the joints distinct from both rheumatism and gout, though formerly termed rheumatic gout. Under the name "rheumatic gout" the public include any chronic joint disease, the majority of the cases being rheumatoid arthritis, and the remainder chiefly chronic gout or rheumatism. In rheumatoid arthritis the gristle, covering the ends of the bones, wears away and new bone is formed at the margins of the joints. The joints are thus fixed and distorted. The skin over them is not red or inflamed. No chalk stones develop, as they are peculiar to gout. There are three chief forms of the disease:—

(1) One large joint, like the hip, is alone attacked; (2) a great number of joints are attacked so that the patient is a hopeless cripple, limbs, back, and jaws being all involved; (3) the fingers are alone attacked.

The disease is most frequent at the change of life, but it may begin in young women who are suckling. A rare form also attacks children. The cause is unknown. The disease is incurable. The treatment is the same as for chronic rheumatism. Fortunately the pain, which is often severe at first, usually ceases, and the effect on the general health is little or nothing. [Refer to *Rheumatism.*]

RHUBARB is not prepared from garden rhubarb, but from the root of an allied plant, a native of Tartary. The powdered root in doses of 1-5 grains is used for indigestion, and in doses of 10-20 grains it is an aperient The aperient action is succeeded by a costive action. The compound rhubarb pill of the Pharmacopœia is a useful aperient in cases of indigestion with diarrhœa due to some error of diet. Gregory's powder is a nauseous mixture of rhubarb and magnesia, which is going out of fashion. For infants, a mixture of powdered rhubarb, one grain, bicarbonate of soda two grains, and powdered ginger three grains is a better preparation. For older children two to four times this dose should be given. Or it may be given as a mixture thus:—bicarbonate of soda two grains, tincture of rhubarb five minims, syrup of ginger twenty minims, peppermint water one teaspoonful. To be given thrice daily in cases of indigestion, in infancy, until a free action of the bowels has been produced. For older children, double or treble the dose. Rhubarb stains the urine and motions yellow. Rhubarb taken during suckling is apt to alter the milk and upset the infant.

RHUBARB, GARDEN, is a useful article of diet, except to those liable to gout or gravel.

RIBS, BROKEN, This injury may result from a direct blow, or a crush. The symptoms caused are shallow breathing, with pain on drawing a deep breath. Rarely the broken rib punctures the lung; bright red frothy blood is then coughed up. The treatment should be to tighten the clothing so as to give the ribs support. This may be effected in a man by pinning up the back of the waistcoat. The arm of the affected side should then be placed in a sling, and the patient sent to the doctor. If he is coughing up blood, the treatment must be different, pressure will then aggravate the injury. The patient should then lie down till the doctor comes, or if necessary be carried to him in a stretcher or coster's barrow.

RICE WATER is a form of broth that may be used in invalid dietary.

Take an ounce of rice, an ounce of sugar, and a pint of cold water. Having washed the rice put it in the saucepan with the sugar and allow it to boil gently for one hour, then strain and serve cold.

RICKETS is a disease due to unsuitable food. It is with few exceptions a disease of infancy. The name is derived from the Anglo-Saxon, *wrikken*, to twist awry, and refers to the deformities rickets cause. Although only recognised in the 17th century, when it was regarded as a new disease, rickety skeletons dating from the stone age have been found of late. All young animals are liable to rickets if they are improperly fed, and especially if they are also badly housed. The disease in its more severe forms is most prevalent in the slums, but slighter forms of rickets are only too prevalent in the nurseries of the well-to-do. "The fact that it is abundantly found amongst children of the well-to-do is a grave reflection upon those responsible for their nurture," writes a great authority, Dr. Cheadle. In short, rickets is wholly preventable. Two main causes produce it at the present day. (1) The rich do not bring up their babies on the breast. Patent foods, supposed to be superior to Nature, are substituted. (2) The poor, under the mistaken notion that suckling prevents pregnancy, keep their infants at the breast for months after they should be weaned. The milk in such cases is watery and the need for other food is great, especially when, as often happens, the mother is pregnant whilst suckling. The poor, also, have adopted the patent food craze to some extent. They buy tinned farinaceous foods, shake these up with water, and produce an opaque white mixture not unlike milk to the naked eye and very much cheaper. This mixture, almost wholly indigestible to a young infant, is given instead of milk, whilst the mother is out at work. Aiding and abetting this factor in the causation of rickets are squalor and deficient light. It is not surprising that "Physical Deterioration" is a serious national question.

SYMPTOMS OF RICKETS:—The age of onset is usually between five and nine months. The skin becomes tender, the child is fretful when handled, it kicks off the clothes at night, it loses its energy and puts on pale, pasty fat. Its gain in weight often gives the parents much satisfaction, and convinces them they are feeding it properly. Indeed, the prize winners at "baby shows" are often cases of early rickets, as Dr. Cheadle has shown. Soon after the above symptoms, sweating becomes prominent, specially on the head during sleep, so that the pillow may be soaked with perspiration in the morning; and the hair at the back of the head is worn away partly from being continually wet with perspiration, and partly from a habit the rickety infant acquires of rolling the head from side to side whilst lying on its back. If these symptoms attract no attention, and no treatment is adopted, the disease develops apace. The legs are no longer kicked vigorously about, but are drawn up tailor fashion, and lie there unmoved. Errors of growth next become apparent, the abdomen and the head enlarge, whilst the chest and the limbs are remarkably small. Thus in a marked case the infant, as Trousseau pointed out long ago, assumes a figure of eight shape. The large head is associated with a small face, and the stunted limbs with large, loose joints, The wrists usually are affected first. The large abdomen is caused mainly by chronic distension with wind due to the improper food. The small chest is due to the softened ribs being unable to resist the pressure of the atmosphere. All the bones are lacking in mineral matter, and thus bend readily. The back is often curved, the arms yield to the weight put on them when the infant crawls, and the legs also, if the child is put on its feet; thus bowed legs or knock-knee develop. The child is fortunately backward in learning to walk, thus giving the legs time to recover; the anxious parents, however, find their neighbour's child in advance of their own, and insist on standing the child

up, much to its detriment. The teeth are cut late and decay early. The risk of diarrhœa, inflammation of the lungs and convulsions is great, and death is often due to one of these three causes. If the child escapes these complications, the rickets usually passes off in a couple of years, the bones harden, the digestion improves, and health is regained, though permanent deformity, e.g., bowed legs, pigeon-breasts, deformed hips, stunted growth and defective teeth are only too common.

TREATMENT OF RICKETS. The treatment is two-fold—preventive and curative. 1. *Prevention* consists in feeding an infant properly and giving it its fair share of sunlight and fresh air. There is much need of instruction of the masses in this elementary matter. But little good can be done when once a woman has become a mother; it must be done in school. "Know how to feed a baby! Haven't I buried eight," was the retort of an out-patient to a well-known physician. And this remark is in the writer's experience typical of motherhood in a certain stratum of society.

2. *Curative treatment* is in the main a substitution of correct dietary for the one that has been used. Two special articles of diet are also requisite, (*a*) raw meat juice, and (*b*) some form of easily digested fat, e.g., fried bacon fat, cream or cod-liver oil. Healthy surroundings are also most desirable. The nursery must be airy and well lighted, the house dry, and the climate, if possible, sunny. Poor-Law guardians and others will thus do well to send cases of rickets to such surroundings. The disease takes time to pass off, even under the most favourable conditions. *Drugs do little for the cure of the disease.*

> The anæmia may be treated by steel wine; thus half a teaspoonful of steel wine may be given with the same quantity of cod-liver oil and one-eighth of a grain of bicarbonate of potash to an infant of one year, and twice or thrice this dose for older children, according to age. Parrish's food, "Chemical food," syrup of iodide of iron, syrup of lacto-phosphate of iron and lime are also used. Lime water itself is useless for making bone, in spite of popular belief to the contrary.

Rubbing the back and limbs with sweet oil for ten minutes daily is useful. Morning baths do good, and a handful of table or sea salt may be added to the water with advantage. The child should sit in a warm bath and tepid or cold water be sponged over the back for a few seconds. The child should then be placed on the hearth-rug and dried before the fire with brisk friction with warmed towels. At night it should sleep on a hair mattress and be clad in a combination sleeping suit; the latter prevents it catching cold when it kicks off the bed clothes, as it is sure to do constantly. It must be kept off its legs until the rickets is over or deformity will result. If it insists on trying to walk, which older children do at times, a piece of light lath should be bandaged to each leg and made to project six inches below the foot. By this means standing on the feet is prevented. *Irons and all heavy splints or any remedy designed to forcibly straighten the bent bones are very bad.* If the bones have bent they tend to grow straight of themselves as soon as the child is kept strictly off its feet. If, however, this precaution is neglected, surgical operation or permanent deformity has to be feared in the future. [Refer to *Infant Feeding, Raw Meat Juice, Scurvy-Rickets.*]

RIGOR MORTIS. The stiffness that sets in after death. [See *Death.*]

RING, FIXED. To remove a ring which is firmly fixed on the finger, the latter must be made smaller by expelling the blood it contains. This may be done first by shaking the hand above the head as high as can be reached, and then by bandaging the finger as tightly as possible from the nail upwards. By repeating this manœuvre several times in rapid succession, the ring can often be slipped off with a screw-like motion. If not, some stout packing thread should be wound around the finger from the nail upwards until the ring is reached, one end of the thread is then to be passed under the ring and brought out through it. The thread around the finger is now unwound by using the end that is through the ring; by this action the ring is slipped steadily towards the nail. If this method fails, the file is the only resort.

RINGWORM is a disease due to a fungus that grows in the hair or skin. The scalp is usually attacked. From five to fifteen years is the common age of onset, and fair hair is more prone to attack than dark hair. The disease often requires months and even years to cure, though at puberty it nearly always heals spontaneously. It is *highly contagious* to children, and their attendance at school is thus interfered with, so much so that the London Poor-Law authorities have special schools for pauper children suffering from ringworm. Domestic animals are very liable to attack and often spread the disease. Ringworm begins as a small, red scurfy spot, which itches. It spreads from the centre and thus produces a ring shaped patch, which has given rise to the name. The affected hairs fall out and temporary baldness results. As to *treatment*:—Most authorities shave the head for some distance round the patch, and rub in for ten minutes twice daily ointments to kill the fungus, e.g., sulphur and carbolic ointment in equal parts, or white precipitate ointment and vaseline in equal parts. Stronger remedies, e.g., chrysarobin, formalin, or lunar caustic are also in use, but the inflammation they often cause renders them unsafe, except when their effects are under close medical examination. X rays cure more quickly than any other remedy, but they produce complete baldness for a time.

> The *domestic remedies* that have been used are innumerable; salt, vinegar, ink, etc., etc. Many of these exert some action in checking the growth of the fungus. Hypo-sulphite of soda a drachm to the ounce of water, applied three times a day may be tried. There can be no question, however, that medical supervision is much to be desired, even though the treatment has often to last for two years.

PRECAUTIONS. The heads of school children should be examined periodically, and any suspicious spot at once reported to the doctor. A child affected with ringworm should wear a skull cap day and night, which should be replaced by a clean one frequently. He must be cautioned not to scratch the affected spot, for by scratching he will convey the contagion to other parts of his body, and start a fresh place. All hats, furs, and the like which the child has been wearing shortly before the ringworm was detected are infected and are best destroyed, the lining of the hats at any rate must be burnt. Brushes and combs should be soaked in strong soda water. The child should never use any brush or comb, towel or pillow, but its own, and these should be washed frequently. The disease often spreads round a family from neglect of this simple precaution. It is, by the way, a good rule to insist on each member of a family having his own brush and comb for the same reason. The finger used to rub the ointment into the ringworm should be protected by the finger of a clean leather glove, or infection may occur.

Ringworm on the body should be treated in the same way. It can be cured easily, usually in a fortnight.

RODENT ULCER is a growth in the skin allied to cancer, occurring in the elderly. It begins like a pimple, and later becomes a ragged wound or ulcer with a thick edge. The ulcer is usually seen near the eye or ear. It may remain stationary for years, but it is liable at any time to spread rapidly, eating deeply into the tissues beneath. Such a result may arise from the application of caustic ointments. The X rays have been utilised with some success to promote healing, but complete removal by the surgeon is usually the best treatment.

RÖNTGEN RAYS. See *X rays.*

RUBBING. See *Massage.*

RUPTURE is the escape of an abdominal organ from the abdominal cavity. It is the commonest form of Hernia. *Hernia* is the escape of any organ from the cavity which normally contains it. The most frequent form of rupture is the escape of a piece of gut. This may be forced through a weak spot in the abdominal wall either at the navel or the groin. No age is exempt from this accident. When this occurs, a swelling of rounded form makes its appearance at the navel or groin. The swelling disappears when

the patient lies down, and returns when he sits up; the size of the swelling is increased by coughing or crying. The *prevention* of rupture consists in avoiding all causes of strain. Any strain raises the pressure within the abdomen, and so tends to expel a loop of gut through any weak spot. The commonest strains in early childhood are straining at stool from constipation; straining to pass water because a condition requiring circumcision has been neglected; and straining by violent coughing, as in whooping cough. The recent scar tissue of which the navel at this age consists is a weak spot, which readily permits the formation of a rupture, hence it is here that the rupture of infancy is most frequent. In adult life to these strains are added the strain due to the nature of the work, like coal-heaving, or of athletics, like riding or rowing. In advanced life a chronic bronchitis is responsible for many a rupture. In the adult, the navel is not such a weak spot as in the infant, and groin rupture is more frequent in consequence. The *treatment* of rupture consists in returning the gut to the abdomen and of keeping it there by a suitable truss. This must be seen to fit by the doctor. It is unwise to rely on the surgical instrument salesman alone.

THE TRUSS must be worn whenever the erect position is assumed. In the event of this being irksome, an attempt at a radical cure can be made by the surgeon in suitable cases. The truss, however, is soon worn, like the clothes, without knowing it. A second truss should always be kept handy, so that when one breaks a second can replace it. This is of special importance on a holiday or voyage. In childhood the truss should be of a simpler description. For a navel rupture a flannel binder is put on, a cork bung or a disc of lead sewn into it to be placed over the navel. At the same time the cause must be detected and removed. For a groin rupture in infancy a clean skein of wool put round the thigh and then the hips in a figure of eight fashion is used.

STRANGULATED HERNIA. The danger of rupture, if neglected, is not only that it gets steadily larger but that the hole through which it has come may contract, and by nipping the gut prevent its return. This is the condition known as "Strangulated Hernia." The symptoms are vomiting, pain, prostration, stoppage of the bowels; the rupture is found no longer to return to the abdomen when the patient lies down, nor does a cough now increase the size of the rupture. When this occurs, put the patient into a hot bath and send for a doctor. No aperient is to be given, and no attempt is to be made to force the gut back, as this may, in unskilled hands, end in the rupture of the gut and the death of the patient. The treatment when the doctor arrives will consist in an attempt to return the gut; and if the attempt fails, an operation will be necessary. If neglected, the condition is fatal.

ST. ANTHONY'S FIRE. See *Erysipelas.*

ST. VITUS'S DANCE, or Chorea, is a disease of the nervous system, characterised by:—(1) sudden purposeless movements which the will has little if any power to prevent; (2) muscular weakness; (3) a blunting of the intellect combined with a lessened control over the emotions. The name *chorea* is from the Greek "to dance." The name St. Vitus's Dance arose from a large number of cases in the year 1418 being sent to the shrine of Saint Vitus to be cured. In the disease of to-day, however, we can recognise no symptom that resembles the rhythmic movements of a dance, the movements are of the exactly opposite nature, irregular to a degree. The disease is brought on by eye strain, worry and over-work, such as competitive examinations too often involve. The time of life most liable to attack is between five and fifteen years. Girls are more often attacked than boys, poor more often than rich, whites more often than coloured races. Rheumatism plays its part in the causation of the disease; very often the child has rheumatic fever either previously or subsequently, and there is often rheumatism in the family. Indeed there is evidence, as Dr. Poynton has shown, that chorea is rheumatism attacking the nervous system. Girls, who are keen at their bookwork, and who come of a rheumatic strain, are the most liable to become choreic, a fact the parents should bear in mind. A sudden fright finally determines the onset of an attack in many of the cases.

The *symptoms of onset* demand special attention both from the parent and the schoolmaster. At home the child often gets into trouble for behaving badly at table. It spills food on its bib, drops its cup without apparent cause, and often insists on swinging one leg. At school it often gets into trouble for making faces, for inattention, for bad writing, or for a slouchy gait. Amongst its playmates it gets into trouble for its altered disposition. It becomes morose, anxious to be left alone and abnormally emotional when interfered with or chaffed. Ridicule or correction make matters much worse; prompt detection of the real state of affairs is essential if the condition is to be nipped in the bud.

Treatment:—The child should be put to bed by itself for a few days, the sides of the cot should be protected with pillows, all books removed, sleep and plenty of plain food encouraged, and the irregular movements ignored. Many cases thus treated recover in a few days. A fortnight's holiday is then required, with plenty of fresh air and sunshine, but without excitement. Afterwards the child must not be pressed at school or the condition will relapse. In more marked cases, not only the doctor, but a nurse is requisite, and for the poor the hospital is the best place to send the patient. When this is not possible, the use of some enamelled iron cups and plates is desirable; a parson's wife, of the writer's acquaintance, keeps such a set for use in the parish. This little point may be worth bearing in mind.

SALICYLIC ACID, in the form of salicylate of soda, is largely used in the treatment of rheumatism. It must be taken under medical supervision.

SALINE APERIENTS include Seidlitz powder, Epsom and Glauber's salts. [Refer to *Constipation.*]

SALIVA, or spittle, is a fluid secreted by three pairs of salivary glands situated below the chin and in front of the ear. Saliva consists of water, salts, and an active ingredient which changes the starch in bread, potatoes, etc., to sugar. Saliva is essential both for swallowing and speaking, owing to its lubricating effect. It is alkaline in reaction. The salts are prone to be deposited on the teeth in the form of tartar. The quantity of saliva secreted varies. The sight or odour of savoury food makes the mouth "water"; and the presence of food in the mouth causes a similar increased flow. Acids increase the flow. Hence lemonade or an acid-drop relieve a parched throat. All pungent substances, e.g., mustard, ginger and tobacco increase the flow. Certain drugs continued over long periods may cause troublesome salivation, especially mercury. Irritants in the mouth act in the same way; the baby that is teething is a familiar case. Hence, those taking mercury should pay special attention to the teeth and abstain from strong tobacco, so as to avoid two possible stimulants to salivation. The flow of saliva is checked by alkaline gargles, by belladonna, and by removal of all sources of irritation from mouth and stomach. It may also be checked by fear. In the East a thief is at times said to be detected by making all the suspected men eat a mouthful of rice. The thief is supposed to be unable to swallow from lack of saliva.

SALT. Table salt or sodium chloride is essential to life. [See *Food.*]

SALT MEAT. See *Food.*

SAL VOLATILE, or aromatic spirit of ammonia, contains liquid ammonia, carbonate of ammonia, spirit, oil of nutmeg, oil of lemon and water. The dose for an adult is half to one teaspoonful taken in a little water. It is a useful remedy for faintness and for flatulence, but the alcohol it contains should be borne in mind if it is proposed to use it frequently.

SANATORIUM is a home for the preservation of health. The term is used at the present time chiefly in connection with the open-air treatment of consumption, the buildings used being termed open-air or consumption sanatoria. The inclusive terms at these institutions range from two to five guineas a week, though a few charities take patients for less. A list of them may be obtained in a little pamphlet

published by Pulman, entitled "The Doctor's Handy Reference List," or by reference to the Medical Directory or current medical journals. Arrangements should be made for a stay of not less than three months.

SANITAS is a disinfectant prepared by the oxidation of turpentine. Being non-poisonous, it is well suited to domestic use.

SANITATION. See *Public Health, Drains, Sewage Disposal.*

SARSAPARILLA is a drug largely used by quacks, but so far as is known it has no action whatever.

SCABIES. See *Itch.*

SCALD HEAD. See *Favus.*

SCALDS. See *Burns.*

SCALP. See *Baldness.*

SCAR. See *Wounds.*

SCARLET FEVER is an infectious disease due to a germ that has not been discovered at present. Infection arises from contact with, or proximity to, a case of scarlet fever. It is retained in infected clothing for months but it is not conveyed by the air to any great distance. Hence, scarlet fever may be nursed at home quite safely, provided the top floor of a house can be reserved for the purpose. The age most liable to attack, the incubation and the quarantine period are given in a table under *Fevers.* The time of year at which the fever is most prevalent is late autumn. The geographical distribution is curious, as scarlet fever is never epidemic in India, though on the same latitude in the Western Hemisphere it is rampant. The cause of this is an enigma

Symptoms. At the onset, one or all of three symptoms are nearly always present, viz., sore throat, headache, and vomiting. This group of symptoms in a child justifies isolation for a day or two to see if any rash appears. The rash usually appears on the second day of illness, and is first visible at the root of the neck and upper part of the chest. It consists of bright red dots placed close to each other. It spreads in a few hours to the whole body, and is often well marked near the arm-pits and groins. The face is usually flushed with well-marked pallor round the mouth. There is rarely any rash on the palms or soles. The tongue is coated with white fur. At the tip of the tongue little red points the size of a pin's head stand out through the fur. The pulse is very rapid and the temperature raised. Such symptoms demand strict isolation until the doctor can be obtained. Occasionally indigestion with nettle rash in a child, or German measles is mistaken for scarlet fever by the layman, but in all doubtful cases no harm can be done by isolation until the doctor's arrival.

Period of Infection. The rash and temperature both subside in five or six days, and peeling of the skin then begins at the root of the neck and on the ears, and spreads slowly to the rest of the body. Peeling is completed in about six to seven weeks, the palms and soles taking the longest time. It is customary to regard the case as infectious until the peeling is completed. There is evidence against this. There is also evidence that cases with discharge from the nose or ears are infectious so long as the discharge continues. The responsibility of stating a case is no longer infectious can thus only be taken by a doctor. A mild case of scarlet fever properly nursed causes but little suffering and the risk to life is slight. Severe cases, however, are apt to be followed by troublesome complications, of which ulceration of the throat, discharge from the ears, inflamed glands in the neck and inflammation of the kidneys are the chief.

The *treatment* should in all cases be in medical hands, and one hospital nurse for the first three weeks at least, besides the mother, are required to manage the case satisfactorily. If this cannot be afforded, the hospital is the best place to send the patient. The mother or whoever takes her place as assistant nurse will find instructions for her guidance in the article on the *Sick Room.*

When no medical or nursing aid is obtainable, the following points should receive attention in addition to those given in the article just mentioned :—

(1) Fresh air is the chief disinfectant and the chief medicine required. (2) Confine the patient to bed while the temperature is up, making use of the bed pan when necessary. After the temperature has fallen allow the patient up to attend to the calls of nature and to have the bed made, but keep him in bed between whiles for ten days from the onset of the illness. (3) Every two hours by day and every four by night give milk and soda water in equal parts. Between whiles allow the thirst to be quenched with water, lemonade, or other beverage mentioned under *Cookery*, as often as the patient likes, but never give milk between the stated intervals, and only give alcohol as a last resort. After the temperature is normal the diet should be increased by the addition of eggs, bread and butter, and milk puddings, and a few days later by fish, and then meat. Oranges and grapes are useful. (4) If the patient has a house and garden to himself he will be ready to go out in the sunshine after three weeks indoors, but if he is isolated at the top of the house from people living beneath he must remain there until all peeling has ceased. (5) After the temperature has been normal two days a warm bath may be given on alternate nights. It aids peeling and soothes the skin. Care must be taken that chill is not caught after it. When the temperature is above 104° the patient should be bathed with tepid water for ten minutes every four hours. (6) In severe cases mop out the throat every two hours with a little wool securely fixed to a penholder, and dipped in glycerine and water in equal parts. Use a fresh piece of wool each time, and burn the soiled piece at once. (7) If the neck swells wrap it up in a large pad of wool that reaches from one ear to the other and passes beneath the chin. Tie this on with a handkerchief. (8) If ear-ache occurs pour into the ear a few drops of a mixture of warm olive oil 7 parts and laudanum 1 part. Do this every four hours and keep the ears wrapped up between whiles. When the ear discharges the pain is relieved. A pad of wool should be kept over it, changed twice daily so long as discharge continues. It should be syringed twice daily with warm water containing a teaspoonful of salt to the pint. This ear discharge usually lasts some weeks. The deafness that often accompanies it is rarely permanent.

Special Precaution. The onset of inflammation of the kidneys must be watched for even in the mild cases. During the third and fourth weeks is the common time. The water should be poured into a glass and held up to the light daily. A rust-red deposit that has been aptly compared to the dregs of beef tea is an early symptom. In more serious cases the urine may be smoky or port wine coloured. If such symptoms occur the patient must be put to bed at once, clad in flannel, and must remain there until the urine has been normal for at least three days. The diet in the mild cases should be ample, accompanied by an increased amount of water to drink, and the exclusion of alcohol. In the severe cases, namely, with scanty port wine coloured urine, the diet should be chiefly milk, with plenty of water to drink ; and linseed poultices should be applied to the loins every four hours. Other symptoms to watch for that may indicate the same condition are pallor, vomiting, puffiness about the face, ankles or privates, and sudden rises and falls of the temperature. They demand the same treatment. If they are ignored, death from convulsions, heart failure or suppression of the urine is likely to result. In conclusion, permit us to insist that the chief preventive of the complications of scarlet fever is fresh air and plenty of it. [Refer to *Disinfectants, Fever, Sick Room.*]

SCIATIC NERVE is the stoutest nerve in the body. It runs from the lower end of the backbone through the pelvis to the buttock, and thence down the back of the thigh, where it divides into branches that supply most of the skin and muscles of the leg and foot. At its upper end it is so strong that it can support the weight of the whole body.

SCIATICA is neuralgia of the sciatic nerve and its branches. It occurs chiefly in middle-aged men. It is caused by exposure to cold or wet, or to pressure, as in sitting on a hard seat. It is also often due to constitutional disorder, e.g., gout, rheumatism, debility or ague. As the lower bowel is in proximity to the nerve at one point, constipation may cause sciatica by the pressure of the overloaded bowel on the nerve. The *symptoms* are pain, which is made worse by any act that puts the nerve on the

stretch, such as bending down to tie up the shoe, and also by an action of the bowels. The pain comes and goes, being often present even when the limb is at rest. It is distributed over the branches of the sciatic nerve; usually it is felt at the back of the thigh, but occasionally in the calf, ankle, or even in the great toe. The skin may be numbed in places and tender elsewhere. It is always limited to one side. It has to be distinguished from muscular pains, from which it differs in being present when the muscles are at rest. In childhood, symptoms like sciatica are nearly always due to hip disease, and require immediate medical care. Pain resembling sciatica at any age when present on both sides is generally due to some serious condition in the bladder, rectum, or spinal cord, and also requires medical care. The *treatment* for sciatica should be rest, a free purge, and counter-irritation over the painful region.

> Counter-irritation may be applied by rubbing in camphorated oil, compound camphor liniment, or turpentine liniment, or by the application of mustard leaves, or by a row of small blisters which should be removed as soon as redness of the skin has been produced, and repeated every few days.

Another treatment is to apply several folds of brown paper, and then iron the thigh with a laundress' iron applied as hot as it can be borne. If the patient is gouty, rheumatic or the subject of ague, the medicine recommended for these may be tried also. The condition often requires some weeks of treatment, and should be in medical hands, if possible, as more powerful modes of treatment can then be resorted to.

SCIRRHUS is a hard cancer.

SCOTT'S OINTMENT is composed of mercurial ointment with camphor oil and wax; it is applied over organs which are the seat of chronic inflammation, such as enlarged glands in the neck, to hasten their recovery.

SCROFULA is an old-fashioned name for the hereditary tendency to tuberculous glands in the neck. Until the discovery of the tubercle bacillus in 1882, it was not known that consumption and chronic enlarged glands in the neck were due to the same cause. Hence some people were said to be consumptive and others scrofulous, whereas both are alike the victims of tuberculosis [which see].

SCURF. See *Dandruff*.

SCURVY is a disease due to a defective dietary, characterized by hæmorrhage, swollen gums, affection of the bones, anæmia and exhaustion, with absence of fever. Lack of fresh animal and vegetable food is the cause. Malaria, dysentery, overcrowding, and mental depression aid in causing the disease. The disease is now prevented on long voyages by the administration of lime juice, and the use of fruit and fresh vegetables whenever possible; failing oranges and green stuff, the onion and the potato are specially valuable for this purpose. Dried peas and beans are useless.

SCURVY RICKETS, or infantile scurvy, is scurvy attacking infants who have been fed on tinned foods only or on boiled milk. These articles of diet lack the ingredient which prevents scurvy in those fed on the breast or on fresh milk. As the name implies, rickets is often present also, but the disease is essentially scurvy. The same earthy complexion, with absence of fever, spongy gums, hæmorrhages from the mouth, under the skin, and on the surface of the bones occurs. A bone affected in this way is intensely tender, the child screams when it is touched, and the limb is held as still as if it were paralyzed. The disease may be prevented by feeding the infant properly. Humanized milk should not be used over long periods. Milk should be Pasteurised to sterilise it instead of boiling it thoroughly. A teaspoonful of orange juice may be given occasionally. After the ninth month a teaspoonful of well-cooked floury potato passed through a sieve may be added to one or two feeds daily. The disease is most often met with amongst the children of the rich. The recognition and treatment of the disease is a matter for the family doctor. [Refer to *Infant Feeding.*]

SEA SICKNESS, or *mal de mer*, is a temporary disturbance of the bodily functions caused by the motion of a ship. Those made sick easily by other causes are the most prone to suffer. As a rule, women suffer more than men, whilst the very young and very old often escape. The duration of the attack ranges from three to five days, though in exceptional cases it may persist for weeks. The *symptoms* consist at first in pallor, coldness of the extremities, an indisposition to be disturbed, and uneasiness at the pit of the stomach; these symptoms are soon followed by headache and generally by vomiting. The vomiting often gives temporary relief, but it may recur sufficiently often to cause exhaustion. The *risks* of sea sickness are not great. Those with heart disease are not specially endangered but people who are ruptured and those of a bodily habit suggesting the risk of apoplexy, should think twice before exposing themselves to the effects of prolonged vomiting.

The *treatment*. For a few days beforehand attention should be paid to the general health; the diet should be spare and the bowels freely open. Three hours before going on board, a plain but substantial meal should be taken, at which some alcohol is also taken. On going on board, a deck chair should be secured, placed as near the centre of the ship as possible. In this the traveller should recline, with the extremities well wrapped up, and with the eyes closed. He should breathe deeply. As soon as nausea is experienced, a lemon may be sucked or a dry biscuit or cloves may be eaten slowly. If nausea persists without vomiting, relief may be obtained by a dose of brandy, a cup of tea or a drink of sea water, which act alike as emetics in this condition, and often bring the desired relief. If vomiting persists, ice to suck, sips of champagne, or small quantities of lemon juice and soda water may be tried. In *short trips*, beyond nibbling a biscuit, it is well to abstain from food. In *long voyages*, beef tea, jelly and barley water should be tried, and will often be retained; and determined attempts to get used to the ship's motion by walking about on deck, shouting, singing and the like, should be made. Of the drugs recommended, few are of much use, and the traveller is best without them. In very severe cases the ship's doctor may have to resort to cocaine or opium, but this should be left to him. On landing, many people feel the motion of the ship for some time. Rest and food should be first tried, and then if the sensation persists, a couple of compound rhubarb pills will be found an efficient remedy.

SEASIDE, DANGERS OF. In taking a holiday by the sea in a crowded holiday resort, certain dangers are incurred. Families often crowd into lodgings far smaller than those they are accustomed to at home, and if the weather is wet, they live in an atmosphere by no means conducive to health. The sanitary arrangements are often primitive or out of order. The food is often prepared in insanitary surroundings. The lodgings have often just been occupied by people convalescent from measles or other infectious fever, often without the knowledge of the landlady. Such people are also often present in the shelters on the sea front. The beds are often imperfectly aired and the bedroom may have been shut up for some time. Watercress and shell fish are often partaken of more freely than at home. Both articles of diet are apt to be contaminated with the germs of typhoid fever. The sea air promotes constipation, and this, coupled with the increased food eaten, often upsets the digestion, if suitable aperients are not taken. Children are often allowed to paddle bareheaded under a fierce sun, quite contrary to their custom at home.

Much illness can be avoided by the exercise of more care and common sense in the choice of lodgings. Instead of merely finding out whether they have a sea view, would it not be as well to ascertain if the water is pure, to see if the cistern has a lid, and to inspect the lavatory? Is the house free from damp and well ventilated? Or are the window-sashes fixed to save the curtains, and the chimney register shut to protect the decorations of the fire-place? It is desirable, if practicable, to inspect the kitchen and larder to see that the food is prepared and kept under sanitary conditions. Lastly, it should be remembered

that harm is often done by a sudden change in the daily habits; long walks and large meals at unaccustomed hours not unnaturally do more harm than good. [Refer to *Health Resorts.*]

SEASON at which each fever is most prevalent is stated under each.

SEA VOYAGE. See *Health Resorts.*

SEBACEOUS CYST, or *wen,* is due to the mouth of a sebaceous gland becoming blocked. [Refer to *Cyst.*]

SEBACEOUS GLAND is an oil-gland, two of which are connected with the socket of each hair. [Refer to *Acne, Hair, Skin.*]

SECRETION. See *Gland.*

SEDATIVES are remedies which reduce the activity of any organ. [See *Baths, Drugs.*]

SEDENTARY HABITS promote constipation, torpid liver, piles, gout, obesity, irritability of temper and sleeplessness.

SEIDLITZ POWDER. The blue paper contains carbonate of soda mixed with Rochelle salt, which is a double tartrate of potash and soda. The white paper contains tartaric acid. On mixing the contents of the two papers in water effervescence occurs. The powder should be taken before breakfast, as its aperient effect is soon produced. [Refer to *Constipation.*]

SENDING FOR THE DOCTOR. Always send, if possible, before the doctor has started on his round. Otherwise he may pass your door, and on reaching home find he has to retrace his steps. Except in midwifery cases, the fee for a night call is double that for a day call. In the case of rashes, the sooner a doctor sees them the better, though a definite opinion must not be expected until the rash is fully out and has been seen in daylight. In cases of accident send a written message, stating its nature. The doctor will then bring the necessary dressings, etc., with him, and much valuable time will be thus saved. In all cases send a written message with the name and address written in full. It is quite common for a child to come and ask the doctor to call at "mother's," without being able to give any further information. [Refer to *Doctor.*]

SENNA is a drug with an aperient action and nauseous taste. The chief preparations are syrup of senna, dose, one half to two teaspoonfuls; confection of senna, half to one teaspoonful; black draught, two to four tablespoonfuls; and senna tea, two to four tablespoonfuls. The last may be prepared by pouring a pint of boiling water on two ounces of senna and a teaspoonful of ginger, and, after allowing to stand in a warm place for half an hour, straining.

SEROUS MEMBRANE is a membrane that secretes a watery fluid resembling serum. The purpose served by this fluid is to lubricate the surfaces of organs which glide over each other. Thus the inside of the abdominal wall and the outside of the stomach and intestines are lined with a serous membrane—the peritoneum.

SERUM is a clear straw-coloured fluid, not unlike whey, which is produced by the clotting of blood. Blood when shed turns to a solid portion or clot, and a liquid portion or serum. The serum of animals that have been rendered immune to diphtheria contains antidotes to diphtheria poison known as antitoxin. It is this serum, known as antidiphtheritic serum, or more briefly as antitoxin, which is injected under the skin of patients suffering with diphtheria, in order to cut short the attack. The same mode of treatment is capable of application to many other diseases as soon as research has overcome certain difficulties in the technique. [See *Antitoxin.*]

SETON is a bundle of silk threads passed through the skin and left in so as to produce a festering sore. It is an obsolete method of applying counter-irritation over an inflamed or painful region.

SEWAGE, DISPOSAL OF. In towns a system of sewers for carrying off the soiled water from bath-rooms and kitchens is necessary. Hence the excreta can readily be removed by the same sewers, and in towns there is little doubt that a water-borne system of sewage disposal is the best. Other methods, however, have been tried and are still in use; of these the pail system is the chief in England. By this system the excreta are allowed to collect in pails, which are removed at regular intervals by the Sanitary Authority. In most varieties of this system some powder is added to the pail, in order to soak up the urine; of these powders the house ashes are a convenient one, though they have the disadvantage that they destroy the value of the contents for manure. In rural districts the disposal of excreta is in many places still very bad. The worst plan consists in digging two holes in the cottage garden, one of which is the well, from which the house draws all its water, and the other is the cess-pool. Yet this plan is still widespread, though obviously dangerous. Probably the best plan is a pail system, in which dry earth is used in the pails, and each cottager empties the pail and buries its contents in his garden at intervals of not more than three or four weeks. It is difficult, however, to secure that this is done regularly.

When a water-borne system is adopted the disposal of the sewage becomes an important problem, for if the crude sewage is run into the nearest river, serious pollution occurs. Hence many methods for treating the sewage have been suggested so that the effluent shall be rendered harmless. One method is the distribution of the sewage by irrigation works over farm land—the SEWAGE FARM method. The farm area necessary, however, to receive the sewage of a large town is very great, and the value of the irrigation to the land from a farmer's point of view falls very much below the cost involved. Hence for large towns this method is too expensive. *Chemical Precipitation* is another method. Here the fluid effluent discharged into the river is rendered harmless by precipitating the offensive material with lime, iron salts, etc. The difficulty then is to get rid of the precipitate. Lastly, the LIQUEFACTION or SEPTIC TANK process has been introduced. In this method the sewage is first kept for twenty-four hours in a closed tank, termed the septic tank, in which active bacteria live, that would be destroyed by air or light. The action of these bacteria is to liquefy the solid parts of the sewage. The liquid sewage then passes over layers of coke, in which it is freely exposed to the air. Here other kinds of bacteria live, which oxidise the organic matter in solution and produce from it harmless bodies. The sewage is then free of odour and harmless to fish, and may be discharged into the nearest stream. The drawback to this method is that although dead organic matter is rendered innocuous, yet many living bacteria, e.g., those of typhoid, if present in the original sewage, will pass through alive and active and thus pollute the stream and any shell fish that may be living in it. The septic tank, then, though a great advance on former methods, leaves much to be desired.

SHELL FISH. See *Food, Public Health, Typhoid Fever.*

SHINGLES, or **HERPES ZOSTER,** is a disease of the skin characterised by a row of blisters limited to one side of the body, in the area of distribution of a nerve. Around the waist or chest is the usual position. The skin beneath the blisters is red and burning; neuralgic pain usually precedes the appearance of the rash; the rash itself lasts from three to ten days. The blisters burst or dry up to form scabs, and the skin recovers. The cause is unknown. The treatment should be the application of zinc ointment spread on clean linen and fastened on. The popular belief that if shingles encircle the waist death results, is merely another way of saying that shingles always affect one side only. Recovery is certain. Medicine is not required. Herpes on the lips or inside the mouth is a distinct disease; it occurs on both sides of the midline as a patch of blisters on an inflamed base. This condition is common at the onset of many fevers, e.g., pneumonia. The treatment, so far as the herpes is concerned, is the application of zinc ointment. Recovery is more rapid than in *herpes zoster.*

SHIVERING is due to irritation of the nervous system by many different causes, some of which are trivial, others serious. The causes fall into three groups:—

(1) mental, e.g., fear; (2) irritation of the skin or mucous membranes, as in exposure to cold, or the passage of water

—which in many healthy people is accompanied by a slight shiver—or the passage of a gall stone; (3) poison in the blood, as in the presence of matter pent up within the body, or at the onset or in the course of many fevers, especially pneumonia and ague.

The duration of shivering varies from a few seconds to a couple of hours, and is often succeeded by sweating and flushing. The temperature of the body as a whole is usually rising during a shivering attack, although the patient feels cold, and it is falling during the flushed, sweating stage, although the patient then feels hot. In children the more serious causes which produce shivering in the adult often cause convulsions. The *treatment* during the shivering should be hot blankets, hot bottles, hot drinks, and during the subsequent hot stage in which the patient is sweating, the skin should be sponged with tepid water, and plenty of cooling drinks allowed. The subsequent treatment will depend on the cause of the shivering. Death never occurs during a shivering attack.

SHOCK is a disturbance of the nervous system, caused by painful impressions on the body or the mind, which affect specially the heart and circulation. The symptoms and treatment are similar to those of fainting given under *First Aid.*

SHORT SIGHT. See *Sight.*

SICKENING FOR AN ILLNESS, the nature of which has not yet declared itself, is a condition which every parent is sure to encounter. The treatment in such cases cannot be guided by the nature of the illness, and we have to adopt, therefore, a course of procedure suited to all illnesses, and one which can in any case do no harm. We recommend the following:—

(1) Always inspect the THROAT in the way described under *Sore-throat,* even though the patient does not call attention to it. If anything is seen that raises a suspicion of diphtheria, not a moment must be lost in consulting the doctor.

(2) Take the TEMPERATURE, and it if be found above normal, put the patient to bed at once, though there is no need for alarm at a temperature of three figures in a child, as the least ailment may present this symptom. When the temperature is not raised, there is no harm in confining the patient to bed, but keeping to one room is, as a rule, sufficient. The same evening the temperature should be taken again, as it may be raised at this time, although not above normal in the morning. [See *Temperature.*]

(3) In the case of children, secure the ISOLATION of the invalid until the illness is known not to be catching.

(4) Do everything to secure REST; rest is the great healer. Encourage sleep, put the mind at ease by quiet, though cheery surroundings, and discourage much reading. Adopt a spare diet for the same reason; the digestion is sure to be disturbed and requires a day's rest to recover.

> Two pints of milk and one of beef tea, with a little bread and butter, or toast, is all that an adult requires for a day or two, and children may be given the same diet in rather smaller quantities. The milk should be diluted with barley water or aerated water, and food must be given every four hours during the day with nothing between meals except water to quench thirst.

It is a common mistake to give milk whenever the patient is thirsty, with the result, as a rule, that any indigestion already present is much increased. On the other hand, there is a strong popular prejudice against the free use of cold water, whenever a child is feverish. A feverish child is all the better for frequent draughts of cold water in small quantities at a time; a two ounce medicine glass, holding four tablespoonfuls, forms a convenient drinking cup, which the child may be allowed to drain each time. Acid drinks, such as lemonade, black currant water, etc. (see *Beverages*), are also often grateful to the patient, but they cannot be allowed with the same freedom.

(5) Give little MEDICINE, if any. If there is constipation, a mild laxative should be given; castor oil is the safest, but the aperient to which the patient is accustomed may usually be administered. (See *Constipation.*) While the temperature is raised, an effervescing draught may be given every four hours with some benefit, though it is not essential; such a draught may be made of a saltspoonful of bicarbonate of soda dissolved in a little water stirred up with the same quantity of citric acid, also previously dissolved in a little water. Within thirty-six to forty-eight hours of this treatment, the temperature will fall and convalescence begin in the great majority of cases, and the attack will prove to be a false alarm. The diet should then be increased by the addition of lightly-cooked eggs and of fish, and if no further symptoms occur the patient may get up on the following day. If, on the other hand, there is either no improvement, or fresh symptoms, e.g. a rash, a cough, etc., make their appearance, medical aid should be obtained.

SICKNESS. See *Sea Sickness, Vomiting.*

SICK ROOM, MANAGEMENT OF. The *room* selected for most illnesses should be well lighted, the sunny side of the house being the best except in very hot weather. In certain cases of brain injury or excitement, and in many eye troubles, the room will have to be darkened, but in practically all other forms of illness the cheering effect of light should never be forgotten. The room should also be quiet, a fact which may necessitate one at the back of the house being chosen. In many illnesses a room next door for the nurse is required, and the proximity of a lavatory is another point to be considered in choosing the room. For infectious disease the whole top floor is nearly always reserved for the patient and nurses, whilst for cases of prolonged illness, e.g., heart disease, in which a turn in the garden may be allowed daily, but in which mounting stairs is dangerous, one of the ground floor rooms will have to be converted into a bedroom. The wall paper should be of a subdued pattern, the furniture scanty, and all unnecessary curtains, bed hangings, and other dust traps removed. Fresh flowers without too pronounced a scent are better than pictures for decorative purposes. Except in infectious and certain surgical cases, the removal of the carpets is unnecessary.

1. THE BEDROOM APPLIANCES necessary for nursing the sick must be obtained. The bed chosen should, if possible, be narrow, so that the patient can be easily reached and lifted; the mattress is best a hair one, lying on a wire-spring frame, and in any case a feather-bed should never be used, as the patient can be moved on this only with difficulty, and it is apt to cause bed-sores. The sheets should not be linen, as this is too chilling. The hair-mattress should be covered by a blanket and sheet, and a draw sheet placed across the bed with, if necessary, a square of mackintosh beneath it, kept in position by a safety pin at each corner.

> A draw sheet is made by folding a sheet till it is three feet wide, and placing this across the bed, so that one end just comes to the right hand edge of the bed, whilst the majority of the sheet lies on the floor on the left side. This free end is folded up and tucked in beneath the mattress. As the sheet becomes soiled it is drawn across the bed towards the right and the soiled part tucked in on the right side. This manœuvre is repeated each time the sheet is soiled, until all the sheet has been drawn across the bed to the right side. A new sheet is then substituted, having again the spare portion at first on the left side.

In addition to the bed and bedding, hot-water bottles wrapped in flannel, a bed-rest and a bed-cradle, are often required. *Bed-rests* are usually made with an adjustable back, so that the patient may recline at any angle he likes. A pastry board covered by a pillow may serve as an extemporary bed-rest. A plank on four legs, about eight inches high, is useful to place in front of the patient for meals, toys, etc. *Bed-cradles* are used to take the weight of the bed clothes off the feet or some injured part, and are usually made of hoops of metal or wicker work fixed in a frame, and can be easily made by any one at all handy at carpentry, or might be made of stiff cardboard bent into a half circle. *Bed-pans,* night table, and a glass urinal with a wide mouth so as to be easily cleaned should be provided. A *thermometer* should be hung over the head of the bed, and a clinical thermometer for taking the patient's temperature will be required. *Medicine glasses,* feeding cups, a small spirit lamp and kettle, washing materials, and an enema syringe should also be handy. When poisonous lotions are being

used as well as medicine, it is much safer to keep the former locked up in quite a different place to the medicine, as mistakes are made more easily than the beginner thinks. A *note book* and pencil should be provided in which to keep accurate notes put down at the time and not from memory.

2. THE NURSE must be clean and neat; she must have no rustling skirt, creaking shoes, or rattling bangles. She must be bright, cheery, punctual in giving meals and medicines, and capable by tact and quiet firmness of seeing that these are taken properly. Anxiety must not be allowed to cause fussiness. She must carry out the doctor's instructions faithfully, and if she does not understand them she must say so at the time, and she will be wise to write them down at once, as in the strain and anxiety of nursing a near relative, the memory is rarely reliable. She must keep notes of the pulse rate, the temperature and the breathing rate, if desired, and should also note when the patient sleeps, how he takes his nourishment, how often the bowels and bladder act, and any symptom such as pain, cough, vomiting, or rash. A small portion of the vomit, expectoration, urine, and motions should be reserved for the doctor's inspection, and should be kept in a cool place outside the sick room.

The nurse is responsible for the *ventilation* and warming of the sick room. Ventilation must always be into the outside air, and is best effected by a bright fire and by a window open at the top. The wall thermometer must be the guide as to the amount of fire used. To keep the temperature up to the right level by diminishing the ventilation is bad nursing. The usual temperature for the sick room is 55° in winter and 65° in summer; but in nursing bronchitis the temperature may be a little higher, and in surgical cases often a little lower than the average. In illness involving the emission of sickly odours the room must be kept sweet by more abundant ventilation, and not by disguising the fœtor by other and stronger scents. This point is essential to the welfare both of nurse and patient. The fear of draughts, which took so prominent a place in the mind both of relatives and doctors of the last generation, is now largely a thing of the past, except in the treatment of bronchitis and some diseases of the kidneys. The open-air treatment, so beneficial in consumption, is extending to illness in general. The fire should be poked with a stick and coal put on by hand to avoid noise; a pair of gloves are usually kept for this purpose.

Bed-making has often to be done without removing the patient from the bed. The bed-linen may be changed in the following way:—

> The patient is turned on his side and brought to the edge of the bed, and the part of the under sheet and drawsheet thus exposed is rolled up lengthwise till it lies against the patient. The clean sheet and drawsheet are also rolled lengthwise for half their width, and the open half is then spread over that part of the bed from which the old sheet has just been removed. The rolled portion of the new sheet is then in contact with the rolled part of the old sheet, and the patient is now lifted on to the unrolled portion of the clean sheet. The old sheet is then removed and the remainder of the new one unrolled.

In removing body linen it is well to draw it over the head, taking the arms out last; but in putting on fresh linen it is better to put the arms in first and then to slip the shirt over the head and down the back. The prevention of bed sores will depend largely on the skill with which the bed is made, and the bed and body linen kept dry. Crumbs must on no account be permitted in the bed. [Refer to *Bed-sores.*]

Lifting patients is best done in a blanket, but in lifting them further up the bed the best method is for two people to pass their hands from opposite sides of the bed under the shoulder blades and buttocks and to lift simultaneously, whilst a third assistant, if necessary, supports the patient's head.

Management of the *excreta.* Care must be taken that thorough dryness be secured, which is best done by using a dusting powder, such as starch and zinc oxide in equal parts. The excreta should be at once removed from the sick room, and not hidden under the bed or emptied into a slop-pail. In certain fevers the excreta require disinfection before emptying, but as a rule they may be emptied at the water-closet at once, a small sample being reserved for the doctor's inspection. The expectoration in consumption or pneumonia should be received in a vessel containing some disinfectant, such as sanitas or chinosol, and the lips wiped with a soft rag, that is subsequently burnt. Any blood or offensive odour in the expectoration should be noted. [Refer also to *Baths, Blisters, Catheter, Cookery, Dressings, Enemata, Food, Infancy, Leeches, Poultices.*]

3. SPECIAL CASES. (1) In nursing a case of *fractured leg* or thigh the bed is prepared by placing boards across the bed beneath the mattress to prevent any subsequent sagging. The limb having been set, subsequent swelling may cause the bandages to become too tight; it will then be proper to give relief by making a slight snip with scissors into the edge of the bandage. Later in the illness pain at the heel or elsewhere may indicate the necessity to readjust the splints; this symptom, then, should always be reported to the doctor. Some aching in the limbs, however, must be expected, owing to the necessity of lying in one attitude. The use of the bed pan and the prevention of bed-sores require special skill in these cases.

(2) In nursing a case that presents *mental* symptoms special care is required. Two attendants should always be present, and if the patient be strong, more than this number may be required. Razors, knives, forks, glass, fire, and even bell ropes are all sources of danger. In holding the patient when struggling his skin should be protected by holding him in a blanket. [Refer to *Delirium Tremens.*]

(3) In nursing a case of *infectious* illness the top floor should be selected for the purpose, and on this floor patient and nurses must live isolated from the rest of the family. Domestic pets must be excluded. The room should be stripped of all pictures, carpets, and other furniture except the barest necessaries, which should be of such a nature as to hold the dust as little as possible. A sheet soaked in some antiseptic, such as perchloride of mercury, 1 in 2,000, should be nailed over the doorway and allowed to hang down outside it. This antiseptic, though more expensive, is preferable to carbolic, because it is odourless. A gown should be kept for the use of the doctor on his visits. The dress of the nurse should be washable. Ventilation should be thorough, but this must not be aided by opening the door: the windows and chimney should alone be used. All attempts to disinfect the air of the room by trays of carbolic or other chemical are futile, and only give the room an unpleasant and unhealthy odour. Crockery must be washed by the nurses themselves, and no letters posted. Soiled linen must be soaked in a strong disinfectant before being sent to the laundry. Food must not be allowed to stand in the sick room, and when once it has been taken into the sick room, if not used, it must be burnt. The nurse's meals should be taken outside the sick room, and the hands should be carefully cleansed first, though the use of medicated soaps is not recommended. Arrangements should be made, if possible, for each nurse to have at least an hour a day in the open air, the clothes being completely changed before going out. In illness of this kind, as in all serious illness, the aid of at least one hospital nurse is of great value. The other members of the household should try to work amicably with her, and to take her advice in all cases of doubt when the doctor is absent. When friction arises it is usually the well-intended but highly unnecessary fussiness of the relatives that is at fault. [Refer to *Disinfection, Typhoid, Scarlet Fever, etc.*]

SIDE, PAIN IN. If due to pleurisy, this pain is increased by taking a deep breath. If due to indigestion, it is not affected by breathing, but is worse after meals. It is also due at times to muscular rheumatism. [Refer to these separate heads.]

SIGHT. Normally we are able to focus for near or distant objects with equal facility until middle age is reached, when most people require spectacles to enable them to see clearly small objects at a short distance. Such

people are said to be long-sighted, as any distant object is seen as well as ever. The time to take to spectacles is indicated by the position in which a newspaper has to be held to read it. As long sight develops the paper has to be held further and further from the eye, till it is held at arm's length. Spectacles should be obtained before long sight has advanced so far. Short-sighted people, on the other hand, can see near objects but not distant ones distinctly. Short-sight may date from birth, but is more often produced by too close an application to reading, embroidery, or other work that involves eye strain. It is very rare in savages. The defective sight is easily remedied by suitable glasses, which cannot be worn too young, as the short sight will otherwise increase. The commonest error of vision is not short sight, but astigmatism, which is treated under a separate heading. [Refer to *Astigmatism, Blindness, Eye, Squint.*]

SINKING SENSATION at the pit of the stomach is due to indigestion. It is not a sign that stimulants are required. It is largely used as an excuse for alcoholic indulgence, which by increasing the indigestion makes the symptom recur with increased frequency. [For treatment see *Indigestion.*]

SINUS is a passage, produced by disease, blind at one end and opening on to the surface of the body at the other. Disease of a bone is the most common cause; the matter makes its way to the surface, leaving a track, through which discharge continues until the diseased bone has been removed. The treatment is surgical.

SKIN forms a protective coating over the whole body. It is popularly thought to consist of three layers, but really only consists of two:—the cuticle, scarf-skin, or epidermis above, and the true skin or dermis beneath. The *epidermis* is devoid of nerves and blood-vessels, so that it stands wear and tear without bleeding or causing pain. In order to withstand the constant wear to which it is exposed, it is formed of several layers of scales, which are renewed beneath as fast as they are rubbed off at the surface. The greater the friction the greater the scale formation; hence arise the "horny hand of toil," corns, etc. The *dermis* or true skin is richly supplied with blood-vessels and nerves. To the latter the sense of touch is due. Deep in the dermis are the sweat glands, which pour the sweat into canals or ducts that open on the surface of the skin; the openings of these ducts are the pores of the skin, which are visible through a strong magnifying glass. The chief purpose served by the sweat gland is to aid in regulating the temperature of the body. As the body becomes heated the formation of sweat is much increased, and this in the course of evaporation chills the skin and the blood flowing through it. The skin contains hairs. These grow in little pits in the skin called *hair-follicles.* As soon as a hair has attained a certain length, which varies with the individual, it is cast off and replaced by a young hair that grows up beneath it. From disease or advancing age the follicles may cease to produce new hairs, and baldness results. Opening into the follicle are two oil glands, the sebaceous glands, the purpose of which is to oil the hair and the surface of the skin. Attached to each follicle is a small muscle, which, under the influence of cold or fright, makes the hair stand on end. The condition termed goose-flesh is thus produced. If dirt is allowed to collect on the surface, the mouth of the sweat glands and the sebaceous glands become blocked, and their secretions are pent up.

1. CARE OF THE SKIN is of much importance to health. The skin must be kept clean, but harm can be done by over-washing. It will be noted from the above that the skin is provided with oil glands to keep the skin lubricated, and while this oil must not be allowed to accumulate and turn rancid, it must, on the other hand, not be removed so frequently that the skin is kept dry and brittle. Many of the soaps used contain free alkali, which does harm in this way. In raw weather many people with delicate skins, who have to go out directly after breakfast, do well to wash the face at night but not in the morning. During the night a protective coating of natural oil collects, which protects the skin from being chapped. In such cases also the use of a super-fatted soap is worthy of a trial; that is, a soap that contains an excess of fat. Such soaps, if kept a long time in warm weather are, however, apt to turn rancid, and are then very irritating. Most skins stand the morning cold bath without soap very well, but they will not all withstand the vigorous rub down afterwards with hard, rough towels. To cleanse very dirty, coarse, thick skin the use of soft soap, turpentine, and methylated spirit will be found effective. In cold weather those who have to wash the hands frequently require care in order *to avoid chaps.*

> These are best avoided by (1) washing in cold water instead of hot, (2) by well rinsing them free from soap, (3) by rubbing in, just before drying the hands, a mixture of equal parts of glycerine and red lotion (composed of zinc sulphate two grains, tincture of lavender ten drops, and water an ounce), (4) by thorough drying, making use if necessary of a drying powder, e.g., violet powder, sanitary rose powder, or common starch or flour. When chaps have occurred the glycerine and red lotion mixture or hazeline cream should be rubbed in at bed-time, and clean woollen gloves worn all night. The use of oatmeal water instead of soap and water is also desirable. The best towels to use are washed at home without chemicals, and are mangled but not ironed.

In youth the skin of the face and back is often the seat of *black-heads.* These are due to the secretion of the oil glands being pent up. In these cases also the use of hot water and soft soap at night is useful. (Soft soap is prepared with potash instead of the soda of ordinary soap.) The *clothing* worn next the skin is a matter the importance of which is often forgotten. Many skins cannot stand rough flannel next them. This intolerance is due partly to the mechanical irritation of the rough flannel and partly to the perspiration often induced. The result is troublesome itching and the appearance of a rash. In such cases if soft cotton or silk material be substituted and flannel worn over it good results are obtained. The skin must be kept dry; urine and sweat are both highly irritating if allowed to remain in contact with the skin, especially in parts exposed to friction. In hot weather the underclothing requires more frequent changing, and in infancy the diapers should be changed directly they are soiled and the skin cleansed with oatmeal water.

2. HEALTH OF THE SKIN. A healthy skin covers a healthy body. The state of the *general health* has an important influence on the welfare of the skin. All are familiar with the "staring coat" of a horse that is out of sorts. In man gouty eczema, and the rashes of the infectious fevers are examples of the effect of the general health on the skin. It is the digestion, however, which is specially important. Those who desire a *good complexion* and sufferers from nettle-rash or "breakings out" should attend to the bowels and restrict the diet to easily digestible food; fatty and sweet food are specially harmful.

The skin may be injured by *unfair wear and tear.* An ill-fitting boot is the cause of a corn; the use of cosmetics of a ruined complexion; the repeated exposure of the hands to strong chemicals, as in laundry and other trades, may cause eczema, and old people who sit much in front of the fire often have a similar eczema of the skin over the shins.

The skin is liable to a great number of *disorders.* This is due to its exposure to changes of temperature, injury, germs, and other parasites, and also to its complex structure.

> Germs are responsible for boils, carbuncles, eczema and lupus; fungi for ringworm and scaldhead; animal parasites for itch, and pediculosis, which is due to lice. Disorder of the nervous system is the cause of nettle-rash, red gum rash, shingles, dead fingers, and the itching without apparent cause so common in the elderly. Disorder of the sweat glands causes profuse sweating or serious deficiency, or an altered character of the sweat, retention of the sweat causes prickly heat. Disorder of the oil glands causes baldness, black heads, sebaceous cysts or wens, and often gives rise to eczema. Disorder of the blood-vessels causes birth-mark and purpura. Lastly, overgrowth of the epidermis may cause corns, warts or cancer.

[Refer to *Acne or Blackheads, Baldness, Birth-mark, Boils, Cancer, Carbuncle, Chilblain, Corn, Cyst, Dandruff, Eczema,*

Hair, Itch, Itching, Lice, Lupus, Nails, Nettlerash, Psoriasis, Ringworm, Rodent Ulcer, Shingles, Sweat, Warts.]

SKULL, FRACTURED. See *Blows.*

SLEEP. A baby should sleep twenty hours out of the twenty-four; at fifteen years of age nine to ten hours suffice; at fifteen to twenty-five years eight hours, and after this age six to seven hours until old age is reached, when more is required. The amount of sleep required, however, varies greatly in the case of different individuals, as well as in that of the same individual at different ages. People should have their sleep right out as much as possible, but once fully awake it is well to rise at once. In order that sleep may be as refreshing as possible the surroundings must be suitable. The bedroom should be quiet, darkened, cool, and well ventilated. Ventilation is best effected by a window open at the top and by the chimney register being never closed. The bed should have a hair mattress, not feathers. The foot of the bed should have extra covering over it. The pillow should be low in childhood and higher as age advances. In childhood a sleep in the forenoon daily is most beneficial. Children should go to bed not later than seven o'clock, and they should have a good "romp" for half-an-hour or so before bed-time. Babies should sleep in cradles without rockers. To be rocked to sleep is an acquired habit that is quite unnecessary, if not harmful, as hospital experience has abundantly proved.

SLEEP, DISTURBED. See *Dreams, Sleep-walking.*

SLEEPLESSNESS may arise from many causes that may be summarised thus:—(1) Pain and other sources of irritation, e.g., indigestion, adenoids, itching, etc.; (2) poisons in the blood which irritate the brain; these may arise from the abuse of coffee, tobacco, opium, or other drug, or from some bodily disorder, e.g., gout, Bright's disease, etc.; (3) mental disturbance by worry, excitements, or strange surroundings, or by insanity. The treatment is largely a matter of the detection and removal of the cause, though certain aids to sleep may often be adopted with benefit. There are two chief varieties of sleeplessness, (*a*) difficulty in going to sleep at the beginning of the night's rest, (*b*) a habit of waking in the small hours, with difficulty in dropping off to sleep again. Sufferers from variety (*a*) should pay attention to the points referred to under *Sleep.* The hour of retiring should be the same each night. The mind and body should both be healthily tired, without being overfatigued. Hence those engaged in sedentary occupations often sleep better for a short evening walk each night. Study pursued till bedtime or an exciting novel may cause a sleepless night. Heavy suppers or strong coffee late at night promote insomnia. Fruit late at night is also said to be a cause. Soothing applications to the skin are often of great service, e.g., friction with a flesh brush or a warm bath. Warmth to the feet may be required in the form of extra covering or a hot bottle. The position of the head should be high in full-blooded people, in heart disease or asthma, and low in childhood and anæmia. Monotonous mental impressions promote sleep; thus thinking of a familiar rhyme over and over again, counting, reading a dull book, or, still better, having it read to one in a monotonous voice, picturing a flock of sheep coming through a gap in a wall one by one are familiar examples that have their use. The use of alcohol as a night cap before retiring to bed is a habit that cannot be recommended. Sufferers from variety of insomnia (*b*) who wake in the small hours should take a little food, preferably warmed, e.g., milk or beef tea. A spirit lamp or special burner in connection with the gas of the bedroom should be at hand for the purpose. Any tendency to flatulence or constipation should receive appropriate treatment. Drugs used to procure sleep are given under *Drugs*; they are only safe in medical hands.

SLEEPING SICKNESS, THE. This disease, known in West Africa for a century, has now made its appearance in the Congo Protectorate and Uganda. The sleep at first is often put down to laziness, but the face becomes dull and bloated. The victim lies sleeping in his tent, and can scarcely be roused to take food. By degrees he wastes to a skeleton, and within eight months dies. The cause of this disease has recently been discovered by Dr. Bruce, who has proved that it is due to an animal parasite called *Trypanosoma*, which is found as a parasite in the body of the tsetse fly, and transmitted by the fly to the man or animal it has bitten. The prevention and treatment are problems calling for solution.

SLEEP-WALKING, or **SOMNAMBULISM,** has been described as a dream that is acted. At times skilled muscular feats are accomplished, e.g., climbing over roofs, and more rarely skilled mental acts, e.g., solving a mathematical problem. The somnambulist on waking has no recollection of his acts. Sleep-walking generally occurs in high-strung school children who are over-worked at school. The treatment should be in medical hands, and meanwhile, the windows and doors must be guarded and the child not left to sleep in a room by itself.

SLING. See *First Aid.*

SLOUGH is a piece of dead tissue, and is, therefore, sooner or later separated from the body and thrown off.

SMALL-POX is due to a germ not yet discovered. Infection is spread both by contact with infected persons or clothing, and by the air. Few diseases spread their infection by means of the air with such success. Hence small-pox cannot be safely treated either at home or in the ordinary fever hospital; special hospitals far from town are required. The age most liable to attack in the unvaccinated is under ten years. In the vaccinated the attack, if it occurs at all, is after that age, with few exceptions; this is owing to the immunity conferred by successful vaccination lasting for ten years in most cases. The disease is most prevalent in the winter. [The incubation and quarantine period will be found in a table under *Fevers.*] One attack, with few exceptions, renders the subject immune to future attacks. The *symptoms* at the onset consist of shivering, vomiting, pain in the back, and a sudden rise of temperature to 103°. The patient feels ill for three days, when the true rash of small-pox appears in the form of red spots, shotty to the feel, situated most often at the margin of the hair and on the wrists. The appearance of the rash is commonly accompanied by a feeling of relief, and by a fall in the temperature. The spots subsequently undergo changes similar to those of vaccination pocks, and they leave more or less scarring, which may be very slight. The patient is free of infection when all the scabs are off, usually in three weeks from the onset. In the worst cases the rash is general, and the spots join each other, the fever is high, delirium and death common. Such cases form the "confluent form" of small-pox. By previous vaccination the symptoms are often much reduced. Hence a few shotty pimples appearing at the wrist or forehead, with or without a feeling of illness, vomiting or fever, should always arouse suspicion it small-pox is about. The disease is often confused with chicken-pox, measles, and influenza. The *treatment* should be strict isolation in all suspected cases till the doctor arrives, and the contents of the rooms last occupied should be left untouched with the doors locked. The Metropolitan Asylums' Board send suspected cases to the Wharf Hospital for observation, and only after the disease has declared itself are the cases sent to the small-pox hospital proper. The ambulances are disinfected before a new case is fetched. Those who desire a private hospital can obtain it at the South Mimms Small-pox Hospital, not far from Barnet. [Refer to *Vaccination.*]

SMELLING SALTS are prepared with ammonium carbonate or "lump ammonia," which is moistened with lavender water. Other scents are also added at times.

SMOKE NUISANCE. The fact that each house does not consume its own smoke is only too obvious. The effect of fogs laden with such smoke is disastrous to sufferers from consumption or bronchitis. It is much to be desired that some remedy for this danger to public health may be found.

SMOKING in moderation is harmless to the adult. It is used as a nerve sedative and as a stimulus to the bowels. The best time is after meals; as it diminishes hunger it should not be indulged in shortly before meals. Juvenile

smoking stunts growth. In excess, tobacco disturbs the action of the heart and may injure the sight. The inhalation of cigarette smoke is bad for the air passages. The use of very strong tobacco is proved to cause chronic sore throat and dulling of the sense of taste. Broken clay pipes used over a long period may determine the onset of cancer of the tongue or lip.

SNAKE BITE kills by paralysis of the nervous system. Much swelling may occur around the wound. A ligature should be firmly tied around the limb between the bite and the heart, and close to the former. The wound may be sucked, though with some risk, especially if the lips are cracked; the saliva must be spat out at once, and the mouth should then be well rinsed. The wound should then be bathed with dilute ammonia. The patient must be kept warm and given stimulants freely. The sooner a doctor can be procured the better, as the wound requires cauterizing. Calmette has succeeded in obtaining a curative serum known as anti-snake venom from the blood of animals rendered immune to snake venom. The serum retains its healing power for a year, and is of great service in India and elsewhere. In England the viper is the only poisonous snake, and its bite rarely kills. The faintness it often causes is frequently due not to poison but to fright.

SNEEZING occurs in hay-asthma and ordinary colds; it may be an early symptom of measles or influenza. The symptom may often be allayed by inhaling steam from a jug of boiling water, or from a pint of boiling water to which a teaspoonful of Friar's balsam has been added. The inhalation of creosote, eucalyptus, or camphor may also be tried, or Ferrier's snuff may prove effective. At times repeated sneezing is a symptom of stomach disorder; an emetic then gives prompt relief.

SNORING is due to breathing with the mouth open during sleep. In childhood it is often due to "adenoids." In later life snoring may be checked by lying on the side or by keeping the mouth closed with a bandage under the chin.

SOAP. See *Skin, Care of.*

SODA and its various compounds are very similar to potash, though not so readily absorbed into the circulation. Bicarbonate of soda, in half teaspoonful doses, in a little water, often relieves heart-burn; two ounces of washing soda to a footbath of hot water is useful in allaying the pain of gout in the foot; tartrate of soda, in the form of a Seidlitz powder, is a useful aperient.

SOIL. See *House.*

SOMNAMBULIST. See *Sleep-walking.*

SORE THROAT, QUINSY, TONSILLITIS. are terms in popular use to denote many forms of throat affection, which in Medicine are recognised as separate conditions. When the throat becomes sore it may be a symptom of the onset of some fever, which is most likely to be the case in childhood. Hence a child with a sore throat should be isolated in a bedroom at the top of the house. The throat should be examined in a good light in the way described under diphtheria, and if anything can be seen that makes one suspect that disease, no time must be lost in summoning the doctor. If the throat has been distinctly seen in a good light and no white patches are present on the tonsils or elsewhere, it will be less necessary to consult a doctor at once, but the appearance of a rash next day should be looked for on the chest, as scarlet fever has to be thought of, and the joints should be examined, as rheumatic fever may develop. Meanwhile, a light diet of milk and barley water, egg and milk, blancmange, jelly, and plenty of soothing drinks, e.g. linseed tea or imperial drink, should be allowed, and a mild aperient given at night. In adults, specially in domestic servants, with bad teeth or with a plate of false teeth worn over festering stumps, as is only too often done at the present day, sore throats are very common. These take the form of either *tonsillitis*, known as ulcerated throat, or of *quinsy*, that is an abscess in one tonsil. The tongue becomes coated, swallowing difficult, the temperature rises to 102° F., the limbs and head ache. The attack lasts about a week; if an abscess forms it may burst, but time and suffering is saved by having it lanced. The possibility of the attack being the onset of a fever has to be borne in mind. The same mode of isolation and dieting should be employed as that given above.

A chlorate of potash gargle, some port wine, and a quinine mixture should be employed; the false teeth should not be worn during the illness; the neck should be wrapped up in wool.

1. CHRONIC SORE THROAT may be due to overstrain of the voice, as in the "clergyman's sore-throat," or to indigestion, to the abuse of tobacco or alcohol, or to disease of the nose. The treatment should be the removal of the cause, aided by suitable applications to the throat.

The "gargle to cleanse the tonsils," mentioned under "gargle," should be used thrice daily, and the throat should be sprayed or preferably painted with a large camel's hair brush dipped in a solution of menthol, in paroleine, or olive oil, in the proportion of 1 to 7. If these give no relief after a week's treatment, the throat should be painted with glycerine of tannic acid, and an alum gargle should be used. The use of black currant jelly, liquorice, or a teaspoonful of glycerine, honey, or syrup of lemon will be found to ease the throat and improve the voice temporarily.

Clergyman's sore throat usually indicates the need for some lessons in elocution.

2. ELONGATED UVULA is a common complication of chronic sore throat. The enlarged uvula excites a constant tickling in the throat which may be very troublesome. The treatment should be that for chronic sore throat. If necessary, the uvula can be treated surgically, and with the aid of cocaine this can be done without much pain, and without chloroform being required.

To see one's own uvula all that need be done is to stand in front of the glass in a good light and say "Ah," when the uvula is seen as a fleshy projection hanging down from the edge of the palate in the mid-line. At the word "Ah" it is drawn up. When elongated it hangs low enough to come in contact with the back of the tongue, and it rises imperfectly at the word "Ah."

SOUP. See *Food.*

SPANISH FLY. See *Cantharides.*

SPASM is an involuntary contraction of a muscle due to some abnormal cause. The possible causes are numerous. The spasm itself is usually painful, and may cause serious results; thus spasm of the muscles around the top of the windpipe causes suffocation by closure of the windpipe. Spasm of the bronchi causes the symptoms of an attack of asthma, and so on. Spasms may be either continuous, as in lock-jaw, or of short duration, but frequently repeated, as in an epileptic fit. Spasm of the muscles of the abdominal viscera is known as colic. Hot applications help to relieve spasm; and the drugs, which also act in this way, known as antispasmodics, are given under the heading *Drugs.*

SPECTACLES. See *Sight, Squint.*

SPEECH is effected by a complex mechanism. Vowel sounds are produced in the larynx, or voice-box, situated at the top of the wind-pipe; consonants are produced by the modification of these primitive vowel sounds by the lips, tongue, and palate. The nerve centre in the brain concerned with the production of the necessary movements is situated on the left side only. It is intimately connected with the brain centre of hearing, of sight, and of writing. If any part of the above mechanism is out of gear, speech is imperfect. The most common injury to the brain which disturbs the speech in adult life is an apoplectic stroke down the right side of the body. Such a stroke is due to the rupture of a blood-vessel on the left side of the brain, which damages the speech centre. The speech is also affected in general paralysis of the insane, in idiocy, and a few other diseases of the nervous system. Temporarily it is often much disturbed in St. Vitus's Dance, and during alcoholic intoxication. Speech is not abolished by removal of the tongue.

1. LEARNING TO SPEAK. Speech is acquired, as a rule, towards the end of the second year of life, but at times it is delayed until the end of the fourth year. Speech is learnt by hearing a language spoken and by learning to associate objects and actions with words. A child born stone deaf or one who becomes so early in life, is thus necessarily dumb. Such children can be taught to speak by the aid of the eye instead of the ear, as in the now well-

known "lip reading" method adopted in schools devoted to the subject. A child picks up readily the dialect of those amongst whom it lives, hence care in the choice of a nursemaid is of great importance. When first beginning to talk a child talks "baby talk." Many well-intending parents make the mistake of talking to children in this same "baby talk," as though they could not understand plain English. It is a great mistake, for the "baby talk" is simply the first defective attempt to talk good English. Surely to help the child to talk, the worst thing possible is to talk to it in its own imperfect language; every error is thus encouraged and the task made greater.

2. LISPING. Defective speech in the form of a lisp not uncommonly persists to adult life, and is from some strange whim regarded as good style by some people. A lisp is the rule in "baby talk"; *f* is substituted for the *th* sound, and *w* for *r*, because these are easier sounds to produce. In rarer cases this substitution of easy consonants for difficult ones is carried to such a pass, that the child appears to be talking a foreign language. Thus Dr. Colman describes a case of his in "Allbutt's System of Medicine," in which the Lord's Prayer was repeated thus: "Ouë Tahde na ah in edde, anno de Di na, I tidde tah," etc. In this case *t*, *d*, or *n* were substituted for those consonants that the child found difficult. In cases of this condition, and in ordinary lisping, there may be defects in the air passages, e.g. tongue-tie, high or cleft palate, enlarged tonsils or adenoids, etc. Such defects should be detected and removed, and the child then made to talk properly by firmness and patience.

3. STAMMERING, or stuttering, is another speech defect commonly met with. In this condition there is an occasional difficulty to produce certain sounds in the course of conversation, though scarcely ever in the course of singing. The condition occurs in nervous children; it begins in childhood, and usually passes off with advancing years. The efforts to produce the desired sound are often so great that the sufferer looks on the verge of a fit. Ridicule makes matters much worse. The stutterer should speak slowly, and when about to stammer he should raise his voice and concentrate his effort on the vowel portion of the consonant; thus in *b*, really *be*, he must say *e* and let the *b* go. Perseverance is essential.

SPHINCTER is a muscle in the form of a ring. When the muscle is contracted the ring is closed; when relaxed it is open. Sphincters guard the outlet from the bladder, intestine, and elsewhere.

SPIDER'S WEB is a bad application for cuts on account of the dirt it contains.

SPINA BIFIDA is a condition in which the lower end of the spine fails to develop properly before birth. A tumour is then present at birth, composed of the distended spinal marrow and its sheath, which bulge through the gap in the spine. Death nearly always occurs within a few weeks.

SPINACH is the most digestible of the green stuffs, See *Food*.

SPINE, backbone, spinal or vertebral column, consists of a series of separate bones or vertebræ, which are jointed into one another, and are also united by pads of gristle placed between each of them, and by powerful muscles and ligaments. Each vertebra is ring-shaped. Hence the vertebral column as a whole contains a cavity, the spinal canal. This canal is connected to the cavity of the skull by means of an aperture in the latter termed the *foramen magnum*. It contains the spinal cord.

SPINAL CORD is part of the central nervous system. It is really a continuation of the brain downwards. It extends from the upper end of the spine to the middle of the loins. It lies within the spinal canal, enclosed in a protecting sheath of membrane. Between each of the vertebræ it gives off a pair of spinal nerves that leave the spine and supply the various parts of the trunk and limbs. The nerve centres, which control the bladder and anus, are situated at its lower end, hence pressure on the cord above this level will cause paralysis of these organs, in addition to that of the legs. Of the diseases to which the spinal cord is liable, *Locomotor Ataxy* is the chief [which see].

SPINAL CURVATURE. The spine is normally curved from before backwards, but not from side to side. The spine should be curved forwards in the neck, backwards in the back, forwards in the loins, and backwards below this level. To these normal curves the term spinal curvature does not apply. The most common abnormal curvature is one from side to side, *lateral curvature*. The first symptoms of this deformity, which is common in school girls, are the growing out of the right shoulder and hip. If neglected the condition increases and becomes permanent after the age of eighteen, when the active growth of the spine ceases. The affection is wholly preventable with few exceptions. It is caused by the habitual assumption of faulty attitudes. Growing girls with weak muscular development are easily tired if made to sit on a stool or to stand for any length of time. Hence they seek relief by change of posture, and assume attitudes which deflect the spine from the upright. Such postures, when adopted habitually, produce permanent changes in the spine. School girls should always be provided with chairs with backs, and they should so sit on them that the whole back, not only the shoulders, is rested against them. Gymnastics should be encouraged, especially swinging from a horizontal bar. Writing should be performed with the shoulders square with the desk. Standing should be of short duration only, and all lolling with one knee bent should be prohibited. No mechanical supports for the spine should be employed. When lateral curvature has developed the doctor should always be consulted, as it may be due to one leg being shorter than the other, or to one eye being stronger than the other, and these errors may need correction, although most cases are due to neglect of those matters of school-room management mentioned above.

Two other forms of spinal curvature deserve mention:—

(1) The *hollow back*, which is due to an exaggeration of the normal curves. This should be treated by gymnastics and attention to the general health. (2) The *round back*, which is due, like lateral curvature to a faulty attitude. Usually stooping over a book or other work is the cause, Such stooping may be the result of short sight, and may thus demand suitable spectacles, or it may be due to a softened state of the bones, the result of rickets.

SPINAL DISEASE is the cause of the common deformity known as hunch back. It is also known as *angular curvature*. It is due to the bones of the spine being attacked by the tubercle bacillus; in other words, it is consumption of the back bone. This is a most serious disease, which demands prompt and prolonged treatment. So long as active mischief is going on in the spine, so long must the sufferer be kept lying down, for the spine will not heal unless completely rested. Do not be surprised, therefore, if your doctor orders the patient to be kept lying down for a couple of years. Children soon grow accustomed to this position, and are quite happy, especially when they see what relief from pain it gives them. Spinal jackets of plaster of Paris or poro-plastic are a poor substitute for the complete rest obtained by lying down. A portable box, known as Phelp's box, is used for young children, which can be carried about so that the child may be brought down into the garden. The symptoms of onset of spinal disease are as follows:—(1) The child no longer cares to play as it did, but mopes about by itself; (2) it comes downstairs with great care; (3) it is constantly supporting its head with its hands, with its elbows on the table. These symptoms are due to the fact that any sudden jar to the spine causes pain. (4) Pain is often felt along the course of the spinal nerves. Thus pain may be referred to the stomach or limbs, and mistakes may thus arise; stomach ache, or "growing pains," may indicate disease of the spine. Such symptoms demand prompt medical aid. If neglected, hunch back or cold abscess may develop, and the tuberculous disease may spread to other parts of the body and prove fatal.

SPIRITS, LOW, usually result from constipation [which see].

SPITTING BLOOD, though it always arouses suspicion of consumption, may be due to less serious causes. Hence the symptom need not cause unnecessary alarm, though it

should be reported promptly to the family doctor. [For treatment see *First Aid*].

SPLEEN, or **MILT**, is an abdominal organ, the function of which is to manufacture new blood and to remove the old blood. In malaria it is liable to undergo great enlargement, forming the so-called *ague-cake*.

SPLINT. See *First Aid.*

SPORADIC cases of disease are those which occur here and there from time to time, a term thus the opposite of epidemic, which denotes a large number of cases occurring at the same time close together.

SPOTTED FEVER, or Epidemic Cerebro-Spinal Meningitis, is a disease of young persons, usually in isolated cases, but at times in epidemics. The germ is found in the discharge from the nose of patients suffering from the disease, and soiled handkerchiefs are thus a possible source of infection. Horses, which suffer from a similar fever, may possibly be sometimes the cause of the epidemic. A patient with spotted fever very rarely, if ever, infects other patients in the same ward. The *symptoms* resemble those of influenza at the onset, passing on rapidly to delirium, deafness, and painful spasm of the muscles of the back, which cause the head to be drawn backwards. The skin becomes tender and hæmorrhage occurring here and there beneath it produces the purple spots which give the disease its name. *Post mortem*, the membranes lining the brain and spinal cord are found acutely inflamed and contain the germ.

SPRAIN. See *First Aid.*

SPRAY. Applications may be made to the throat in the form of a spray, but they have the drawback of always feeling cold, even when the fluid used is nearly boiling. An ether or ethyl chloride spray is most useful for freezing the skin before performing some minor operation, e.g. opening an abscess. The pain is thus almost abolished, though some pain is felt afterwards when the skin thaws.

SQUILL is a drug used to aid cough in the later stages of bronchitis. It should never be given until the cough loosens.

SQUINT is present when both eyes do not look at the same point. The effect produced is "seeing double." When, however, the squint develops early in life, the patient learns to look with one eye only, ignoring the squinting eye so that by becoming blind in this eye he does not see double. In early life the development of the slightest squint indicates the need of suitable spectacles, which will cure the squint without the aid of an operation. If a slight squint is ignored, it will get worse, and a condition becomes established which only an operation can remedy. In later life the development of a squint is usually due to paralysis of one of the muscles that move the eye. This may be only temporary, as in alcoholic intoxication, or more permanent, as in tumour on the brain. Suitable medicine may relieve the condition, and, meanwhile, a shade must be worn over one eye, or a suitable prism eye-glass worn to prevent "seeing double." [Refer to *Eye.*]

STAMMERING. See *Speech.*

STARCH. See *Digestion, Dusting Powder, Food.*

STARVATION, or the absence of food, usually proves fatal within twenty days if plenty of water is obtained. Absence of water kills within a very few days. The cause of death in starvation is usually a gradually deepening stupor, due mainly to a steady fall in the temperature of the body. The *treatment* should be warmth, stimulants, and small quantities of easily digested nourishment. Predigested food, e.g. peptonised foods or somatose are specially suitable. A large meal after a prolonged fast may prove fatal. [Refer to *Food, Fasting.*]

STEEL WINE. See *Iron.*

STETHOSCOPE is an instrument used to listen to the sounds of the heart and the lungs. The one now used consists of two tubes, one for each ear, uniting below into a single tube, which is applied to the chest.

STIFF NECK is commonly due to a chill, but it may be a symptom of spinal disease. Ordinary stiff neck should be treated by rubbing in stimulating liniments, such as compound camphor liniment, and by wrapping up the neck in wool or flannel. If spinal disease is present, light pressure applied to the top of the head when the patient is standing or sitting up causes pain in the neck. In ordinary stiff neck this is not so. [Refer to *Wry Neck.*]

STIMULANTS are remedies which promote the activity of any organ. Those which act on the heart and the nervous system are the most important. They include warmth, hot food, tea, coffee, alcohol, strychnine, ammonia, sal volatile, etc. [Refer to *Alcohol, Drugs.*]

STINGS. See *Bites.*

STITCH is a sharp pain in the side. A stitch of only short duration may be caused by running, specially soon after a meal. It may be prevented by training, and requires no treatment. Persistent stitch, made worse by taking a breath, may be due to pleurisy or pneumonia [which see].

STOMACH is situated in the upper part of the abdomen on the left side, partially protected by the ribs. It is lined by a mucous membrane, which secretes a digestive juice, the gastric juice, and slime, or as it is technically called, mucus. The secretion of gastric juice is under the influence of the nervous system, and is stimulated by the presence of food in the stomach. Hence indigestion may arise from disturbance of the nervous system, or from the unsuitable nature of the food eaten. Indigestion, especially if due to the abuse of alcohol or tea, is prone to lead to chronic inflammation, or as it is termed, *chronic gastritis*, in which much mucus and but little gastric juice is produced, and the food not being digested turns sour. Gastritis requires rest; the diet must be altered. Diluted milk in small quantities at a time should be taken; a glass of hot water should be taken before meals, and two to four of the bismuth lozenges of the Pharmacopœia should be taken after each meal. If neglected, gastritis may lead on to *ulcer* of the stomach. An ulcer is a wound in the stomach, and is, necessarily, difficult to heal, owing to its being constantly irritated by the gastric juice and by food. It causes most severe pain in the pit of the stomach in front or near the angle of the shoulder blade at the back. This pain is usually felt twenty minutes after food. Vomiting blood, if it occurs, is proof of the presence of an ulcer. It is most common in domestic servants. The treatment should be in medical hands. The stomach may become dilated, either as the result of chronic gastritis, or from constriction of the pylorus, that is its point of outlet into the intestine. A dilated stomach may retain food for several days, and then it may empty itself by vomiting several quarts of fermenting food. This condition is treated by washing out the stomach daily, a procedure not nearly so unpleasant as it sounds. The stomach is liable to *cancer*. This occurs chiefly in the middle-aged. It causes symptoms very similar to those of chronic indigestion or of dilated stomach. Much may be done to give relief in such cases. [Refer to *Abdomen, Digestion, Indigestion, Gastric Juice, Drugs.*]

STONE. See *Bladder, Gall Stone, Kidney.*

STOOLS. See *Motions.*

STOUTNESS. See *Obesity.*

STRANGULATION is due, partly, to the suffocation induced by pressure on the wind-pipe, and partly to the interference with the circulation through the brain, due to pressure on the blood vessels of the neck. The constricting cord should be removed, and artificial respiration, warmth, and stimulants at once employed. [See *First Aid.*]

STRANGULATED HERNIA. See *Rupture.*

STRAPPING. See *Plaster.*

STRICTURE is a contraction of any natural passage or orifice. Thus we may have stricture of the gullet due to cancer, or to the pressure of an aneurism, or stricture of the pylorus, which is the passage from the stomach to the intestine, and so on. A stricture is usually caused by ulceration or cancer.

STROKE. See *Apoplexy, Sunstroke.*

STRYCHNINE is the active ingredient in nux vomica. It is a powerful drug, much used as a nerve tonic, but of course only by medical prescription, as it is highly poisonous except in minute doses. [Refer to *Poisons.*]

STUPOR. See *Coma.*

STUTTERING. See *Speech.*

STYE is a miniature abscess round the root of an eyelash. It should be bathed with hot water till it bursts, and the general health should be toned up.

STYPTICS are remedies which arrest bleeding. See *First Aid.*

SUCKLING. See *Infant Feeding.*

SUDDEN DEATH may be due to fatty degeneration of the heart, disease of the valves at the root of the aorta, or to rupture of the heart; to a clot becoming dislodged and obstructing some vital part of the circulation; to the rupture of a blood vessel in the brain, lungs, or abdomen; to rupture of the bladder or other abdominal viscus; to shock due either to great mental emotion, to severe pain, or to the sudden application of cold to the stomach, as in eating a large quantity of ice cream, or drinking copiously of iced water on a hot day; to food or other material becoming lodged in the wind-pipe; to spasm of the vocal cords, as in croup. Sudden death is very rare during an epileptic fit, an attack of asthma, a fainting fit, or the various forms of heart disease not mentioned above.

SUDORIFICS are remedies to promote sweating. The term diaphoretics is more often used, which see.

SUFFOCATION is obstruction to respiration caused by any means except the application of pressure to the neck. When the latter mode of obstruction occurs, the term "strangulation" is used. Suffocation is a common cause of death amongst the infants of the poor, owing to the practice of parents and infant sharing the same bed. This is illegal in Germany. The effect of the practice is to expose the infant to being suffocated by the parents, who, turning in their sleep, may lie on their child. Many of these cases are deliberate murder. [For treatment see *First Aid.*]

SUGAR. See *Food.*

SUICIDE. It has been said with no little truth that no man ever committed suicide directly after a full meal, a sound night's sleep, or a free action of the bowels. In the treatment of the would-be-suicide these three points should receive special attention.

SULPHATE OF SODA. See *Glauber's Salts.*

SULPHUR, or brimstone, taken internally is a mild laxative, the dose of flowers of sulphur being twenty to sixty grains; of confection of sulphur one to two teaspoonfuls; and of sulphur lozenges, one to six. In the form of sulphur ointment it is a useful remedy for ringworm, scabies, and other parasitic affections of the skin, though it is wise to dilute it with an equal quantity of zinc ointment, well mixed with it, as sulphur is very irritating to some skins.

SUNSTROKE exists in two forms: (1) Heat Exhaustion, (2) Thermic Fever. Heat exhaustion may result from exposure to heat of any kind. The symptoms are collapse, pallor, sweating, rapid feeble pulse, hurried breathing, and subnormal temperature. Death may occur from heart failure, though complete recovery is the rule. The *treatment* should be plenty of fresh air and stimulants. Thermic fever rarely occurs except from exposure to the direct rays of the sun. Fatigue, tight clothing, and alcohol increase the tendency to it. The symptoms are loss of consciousness, which may become very deep. This loss of consciousness may be the first symptom, the victim falling as though struck down, but usually dizziness and nausea occur for a short time previously; the face is flushed, just the opposite to the pallor of heat exhaustion; the temperature rises and may reach 110° F. The case may soon terminate in death, or recovery may occur, the onset of which is indicated by a return of consciousness and a fall of the temperature. The after effects may include impairment of memory and intolerance of even the ordinary summer heat. The *treatment* should be the loosening of all tight clothing and the application of cold to the whole body. This may be applied by sponging every few minutes with well water, or better by the application of ice. A sponge bag full of ice should be secured to the head.

SUPPOSITORY is a cone-shaped solid preparation containing food or drugs for introduction into the lower bowel. They are usually prepared of cacao butter, beeswax, or gelatine, in order that they may melt at the temperature of the body. As a rule their action is less certain than that of enemata.

SUPPURATION, or the formation of matter, occurs when a pimple comes to a head, or when an abscess forms. [See *Abscess, Inflammation.*]

SUPRARENAL BODIES are two small glands, one of which rests on the upper end of each kidney, hence their name. When diseased, Addison's disease results, the chief feature of which is great debility, both of the muscular and the circulatory systems. The function of the suprarenals was not demonstrated till 1895, when Schafer and Oliver obtained an extract from them which they proved had the power of stimulating muscular action, especially the muscular coat of the blood-vessels. This fact, coupled with the symptoms of Addison's disease, point to their function being the secretion of a material, which they add to the blood passing through them, and which improves the tone of all the muscles in the body. The extract known as "suprarenal extract," or *adrenalin,* is now widely used by the medical profession to check hæmorrhage, for when applied to a bleeding surface it closes the mouths of the cut vessels, by stimulating their muscular coats to contract.

SURGEON. See *Doctor.*

SUSPENDED ANIMATION. See *Drowning* in the article on *First Aid.*

SUTURE is a stitch. Horse hair, catgut, silkworm gut, silk, and silver wire are used in surgery. In anatomy the term denotes the line of junction of two bones of the skull.

SWALLOWING is an act effected by the muscular action of the throat and gullet. The food does not fall down into the stomach, it is forced down. Hence an animal grazing is able to swallow without raising the head. Difficulty in swallowing may be due to hysteria, to stricture of the gullet from cancer, or to pressure on it by aneurism or other tumour within the chest.

SWEAT is always being poured out from the pores of the skin. As a rule, it dries as fast as it appears, and so we are unconscious of it. Perspiration of this kind has been called "insensible perspiration," as opposed to "sensible perspiration," or sweating that is sufficient to be visible. Normally, perspiration is only sufficient to be visible when the body is heated. The sweat in drying chills the body and thus checks the rise of temperature that would otherwise occur. Sweat is composed mainly of water, but it contains some waste products and fatty matter that readily turn sour. When the kidneys are out of order or overworked, the waste products are discharged in the sweat to an increased extent. Absence of the sweat glands is met with in some people from birth. Such people find a hot room unbearable, and are unfit for life in the tropics. Wide variations occur in different individuals, compatible with health, in the amount of sweat discharged under similar conditions; but in diabetes and many fevers the amount is insufficient. More common is excessive perspiration. We are all liable to break into a cold sweat under the influence of strong emotion, but cases are common in which abnormal sweating of the hands, feet, and other parts of the body occur. Such cases range in severity from a clammy, moist hand to conditions in which the sweat pours off, making the skin sodden, and rendering work of various kinds almost impossible. Added to this annoyance is the difficulty of preventing the sweat turning sour and becoming offensive. The *treatment* should be strict attention to cleanliness, the use inside the socks of a dusting powder, e.g., boric acid or borax, or these mixed with zinc oxide, and improvement of the general health. As a rule the fingers are bluish and cold, which points to a sluggish circulation. In such cases fresh air, food, exercise, tonics, and cold baths should be tried. In others the nerves are overwrought, and a holiday with more sleep is requisite. Special medicines for checking sweating are available, but of these the only one for domestic use is a

level teaspoonful of sulphur in milk twice a day. If this purges too much, it must be taken less often. It is often very effective. In stout people sweating at the folds of the armpit is often troublesome. This may be checked for some hours by applying a sponge wrung out of very hot water for some minutes and afterwards bathing the part with eau de Cologne. In rickets and consumption sweating is common during sleep. [Refer to *Rickets, Consumption, Drugs, Skin.*]

SWEETBREAD. The neck sweetbread of the butcher is the thymus gland. The belly sweetbread is the pancreas, a digestive gland that pours its secretion, the pancreatic juice, into the small intestine. Pancreas of the sheep or calf is well suited to invalid dietary.

SWEETMEAT. See *Confectionery.*

SWELLING may be due to dropsy, to inflammation, or to a growth.

SWISS MILK. See *Infant Feeding.*

SWOON. See *Fainting.*

SYNCOPE. See *Fainting.*

SYNOVIAL FLUID is the lubricating fluid poured into the interior of joints by the synovial membrane, which lines them.

SYNOVITIS is inflammation of the membrane lining a joint. The disease may be acute or chronic, and due to one of many causes, injury being the most common. The knee is the joint most often affected. The inflamed joint requires rest.

SYRINGE. See *Ear.*

SYRUP is a saturated solution of sugar in water. Hence in cold weather the sugar is apt to crystallise out, and in the hot weather to ferment. Syrups keep best when made from refined sugar, and kept in an even temperature in well-stoppered bottles. The Pharmacopœia contains twenty-two syrups made by adding different drugs to the simple syrup just mentioned. They are specially useful for administration to children.

> The syrup of the iodide of iron or of the phosphate of iron and Easton's syrup are useful tonics; syrup of orange, of ginger, of lemon and of Virginian prune are used as flavouring agents; syrup of glucose is used for pill making; syrup of red poppies and syrup of roses are used for colouring medicine a pleasant red; syrup of squills and syrup of tolu are used to loosen a hard dry cough; syrup of rhubarb and of senna are aperients. The dose of the above syrups is one teaspoonful for an adult.

Golden syrup is a useful article of nursery diet. Quack medicines sold as soothing syrups to quieten the baby are to be avoided; some of them contain opium, and are responsible, according to high authorities, for many deaths annually. [See *Opium.*]

TABES, literally, a consumption—is a term used to denote one of two diseases, viz., tabes dorsalis, or locomotor ataxy; and tabes mesenterica, or consumption of the bowels. [See *Locomotor Ataxy, Tuberculosis*].

TAMARIND WATER is a refreshing beverage that may be given in any case of fever. It may be prepared thus:—

> Two ounces of dried tamarinds are obtained from the grocer and are boiled in three pints of water for an hour; the mixture is then strained and served when quite cold.

TANNIN, or tannic acid, is an organic acid that is widely distributed in the vegetable kingdom. It has the power of coagulating albumin. Oak-bark owes its value to the tanner for the tannin it contains. The Pharmacopœia contains oak-galls, logwood, kino, catechu amongst others which owe their value to the presence of tannin. Tannin is an astringent; by coagulating the albumin with which it comes in contact, it checks bleeding and diarrhœa. Clean linen rags dipped in a strong solution of tannin freshly prepared may be applied to abrasions to check hæmorrhage. Its internal administration is best in medical hands, as there are many other drugs that check diarrhœa which upset the stomach less. Tea which has been infused for longer than three minutes beomes rich in tannin and is a frequent cause of indigestion. This risk may be avoided by pouring the tea into an empty teapot at the end of three minutes; the tea may then stand under a cosy for any length of time without harm. Tea is not a wise beverage to take with a meat meal, as any tannin present turns the meat eaten to a leather-like substance. Tannic acid glycerine and tannic acid lozenges are useful for relaxed throats. Port wine is used as a gargle for the same reason, as all red wines contain tannin. Hence white wine is better than red in dyspeptic conditions or if there is a tendency to constipation. Tannin is an antidote to many poisons. [See *Poisons*].

TAPE-WORM. See *Worms.*

TAR is now rarely used internally, but as an ingredient in various ointments it is valuable for all chronic and scaly conditions of the skin. The tar ointment of the Pharmacopœia is rather hard and strong and may be diluted to advantage with almond oil in equal parts. Still more useful is the preparation known as *Liquor picis carbonis,* or Solution of Coal Tar, in the proportion of half a drachm to an ounce of vaseline. A proprietary preparation known as *Liquor carbonis detergens* has a very similar action. From coal tar *creolin,* another proprietary preparation, has been prepared, and is now sold by the original makers under the name *Cyllin.* This body is an antiseptic, but its chief value is its use in baths or lotions for allaying itching. For a bath, half a teaspoonful to ten gallons should be used. For a lotion, a teaspoonful to a pint may be used.

TARTAR forms on the teeth a rough surface to which the germs of decay readily adhere. Hence the tooth-brush should be in regular use. [See *Teeth, Care of.*]

TARTAR EMETIC is a tartrate of antimony. It is contained in antimony wine. [See *Antimony.*]

TARTARIC ACID. See *Potash* and *Soda.*

TASTE is due partly to the tongue, partly to the nose. Hence a cold in the nose deprives us of much of our sense of taste, though the perception of sweet, acid, salt and bitter remains, for these are due to the tongue alone. Holding the nose is thus useful when taking nauseous medicine; and a pinch of salt or slice of lemon on the tongue just before the dose is taken may disguise the taste also. The palate does not play as large a part in taste as is commonly thought. A body must be in solution to be tasted, hence the use of pills and powders. A bad taste in the mouth between meals is usually due to constipation and indigestion. Loss of taste may be induced by heavy smoking.

TEA is a useful stimulant, which is due partly to the hot water and partly to the caffeine it contains. Tea infused longer than three minutes takes up tannin, which causes indigestion. Tea should, therefore, be poured off the leaves into an empty teapot if it has to be kept warm for any length of time. *Plasmon-tea* is an attempt to remove the tannin by the addition of plasmon, a preparation of milk. The use of milk with tea must act in much the same way and is desirable, though not essential, if the tea is properly made and poured out at once. For migraine, hot strong tea without sugar, slowly sipped, is a useful remedy.

TEARS are secreted by a gland situated on the outer side of the eye. The tears are smeared over the surface of the eye by the eye-lids, and the eye is thus cleansed. The tears then escape through two pores in the eye-lids at the inner corner of the eye, and pass down the lachrymal duct into the nose. If the duct is blocked tears overflow continually, a condition the surgeon can remedy.

TEETH are made of a bony material, the *dentine,* and covered by a modified skin which has been so impregnated with lime salts as to form a protective shell of extreme hardness known as *enamel.* The teeth receive nerves and blood-vessels, which break up into minute branches in a cavity in the centre of the tooth, called the pulp cavity, corresponding to the marrow cavity of other bones. The pulp cavity is highly sensitive, whilst the other parts of the tooth are not; hence has arisen the popular custom of calling the pulp cavity the nerve of the tooth. The roots of a tooth are the fangs; the part of the tooth above the gum is the crown; the junction of these is the neck of the tooth.

The *first set,* or milk teeth, consist of twenty. In health the first teeth cut are the central lower front ones; these are cut at the sixth month. At twelve months there should

be twelve teeth, at twenty months twenty teeth. The child is ready for farinaceous food when the teeth begin to be cut, and is ready for meat when the double teeth are cut, about the eighteenth month. The *second set*, or permanent teeth, have three large double teeth or molars, in each half jaw in addition to those that replace the twenty milk teeth. Hence there are thirty-two permanent teeth. They begin to be cut at the sixth year. The first to appear is the first molar or large double tooth. This does not displace a milk tooth but comes up behind it. It generally begins to decay very soon, and is often neglected because it is mistaken for a first tooth, no first tooth having been shed when it appeared. The last teeth cut are the third molars or wisdom teeth, usually at the twenty-fifth year, but often they fail to cut the gum either entirely or partially.

TEETH, CARE OF. The permanent teeth develop at the roots of the first set during the first year of life, before the first set have cut the gum. The health of the infant at this time has an important effect on the subsequent welfare of the teeth. Later in life, also, attention to the general health tends to preserve the teeth; whilst the care of the teeth will amply be repaid by their effect on the general health. The mouth and teeth must be kept clean. They should be cleaned at night as well as in the morning by the thorough use of a tooth-brush with some tooth powder. The tooth powder should be antiseptic and not too hard; Calvert's Carbolic tooth powder is a good example. Soap and water and salt and water are also recommended; precipitated chalk is good, but camphorated chalk and other preparations of camphor are bad, because they whiten the teeth at the expense of making the enamel crack. All acid mouth washes are bad; and all medicines that damage the teeth, like iron, should be taken in pill form or through a quill. Tooth picks should be of quill or wood, not metal. During suckling, phosphates should be taken as medicine to make up for those lost in the milk, otherwise the teeth suffer for want of this ingredient. The dentist should examine the mouth periodically and stop all teeth that require attention. Plates of artificial teeth should not be worn over stumps. The above remarks apply just as much to the first set as the second set. The child should be taught to use a tooth brush, and periodical visits to the dentist should be begun long before the second teeth appear. By this means much of the toothache, indigestion and tuberculous glands in the neck, so common in childhood—can be prevented, and the maximum growth secured. [See *Toothache*].

TEMPERATURE of the skin in different parts of the body varies widely, but the temperature of the deeper organs remains remarkably constant. This constancy is maintained by the nervous system which regulates the process of heat formation and of heat loss. A rise of temperature is generally due to less heat being lost and not, as one would expect, to an increase in the amount of heat produced. A reduction both in the quantity of blood supplied to the skin and in the amount of perspiration, check the loss of heat and thus cause a rise of temperature. The normal temperature of the mouth or armpit is, on the average, 98·6° F. In the rectum it is half a degree higher. There is a daily variation of temperature; it is lowest in the early morning, highest in the evening; it ranges between 97·5° F. and 99·5° F. These variations of temperature are often mistaken for signs of illness. In illness the daily variation is usually greater, and is present even in high fever. Illness more often sends the temperature up than down. In nervous people and children, trifling causes, e.g., gastric disturbance or emotion, send it up much more readily than in the average man. Inflammation causes a rise of temperature unless it is so intense that the patient is prostrated, when death may occur with a temperature that is at or below normal. The infectious fevers, with rare exceptions, cause a rise of temperature; diphtheria is unaccompanied by a rise of temperature more often than any other infectious disease. A temperature above 105° or below 96° is dangerous to life and requires active treatment. [See *Baths*, *Collapse*].

To take the temperature requires care. A clinical thermometer is required; the mercury must be shaken down till it is well below 98° F. before the temperature is taken. The thermometer should be left in position rather longer than the time it is supposed to require; a quarter minute thermometer should be left half a minute, and a three minute one five minutes. If the temperature is taken in the armpit, the skin must first be dried, and after the thermometer has been placed under the arm, the elbow should be drawn well across the chest and kept there. If the temperature is taken in the mouth, the thermometer must be placed *under* the tongue and be held by the lips, so that no air can pass to and fro through the mouth. In children it is unwise to take the temperature in the mouth; the groin is with them the most convenient, the thigh being bent well up on to the abdomen. The most accurate results are obtained in the rectum, and in most sanatoria for consumptives the temperature is taken in this way. After the temperature has been taken it should be written down at once and the thermometer should then be washed in *cold* water and placed in a disinfectant for a few minutes. Malingerers rub the thermometer between the blankets or expose it to the fire; boys in boarding-schools and hysterical women also are apt to do this if not watched.

TENDER FEET. See *Feet, Care of*.

TENDON, or leader, is the string by which a muscle is connected to the bone, on which it pulls. Thus the muscles of the forearm move the fingers by reason of their attachment by tendons to the bones of the fingers. Most tendons are surrounded by synovial sheaths that secrete a lubricating fluid; rupture of a tendon in the leg is the cause of *Cricketer's leg*.

TERTIAN FEVER is a form of ague.

TETANUS is *Lock-Jaw* [which see].

THERAPEUTICS is the science which treats of the use of drugs in the cure of diseases. *Pharmacology*, on the other hand, is the science which treats of the action of drugs on the various organs of the body when administered during health.

THERMOMETER. See *Temperature*.

THIRST occurs whenever much fluid is lost from the system, hence profuse sweating, vomiting, diarrhœa, hæmorrhage, and frequent passage of water, as in diabetes, all cause thirst. In febrile conditions water is always craved for and should be freely given. In indigestion a dry mouth with thirst is common. Relief is best given by gargling, sipping hot water, or sucking a slice of lemon, as copious drafts of fluid will make the symptoms worse. When fluid cannot be given by the mouth or when it is at once vomited, thirst is relieved by an enema of a pint of water containing a teaspoonful of salt, which should be given twice daily at blood heat.

THORAX is the *Chest* [which see].

THREAD WORMS. See *Worms*.

THROAT. See *Sore Throat*.

THRUSH is an affection of the mouth due to the growth of a parasitic yeast which forms white patches on the gums, cheeks and throat. The yeast may excite considerable inflammation of the mouth, though usually it does not do so. The condition is most common in hand-fed infants, caused by dirty bottles, by dummy teats, and general bad management. Such infants usually have diarrhœa and sore buttocks, which the mothers explain away by saying it is the thrush going through the baby. Really it is another result of the bad management which caused the thrush in the mouth. The *treatment* should be an improvement in the general management of the baby, and the application to the white patches of a mild antiseptic; honey and borax is the popular remedy and is good, though we recommend glycerine of boric acid applied gently with a camel's hair brush or swab of clean wool. Thrush occurs in the adult in the course of wasting illnesses, and also from wearing plates of false teeth over festering stumps, as is so commonly done by domestic servants at the present day. In such cases the servant usually gets sent to a fever hospital as a case of alleged diphtheria.

THYROID is a gland situated around the wind pipe in the lower part of the neck. It secretes a fluid which is

absorbed by the blood and regulates the nutrition of the body. When enlarged, the thyroid forms a tumor known as goitre.

TIC-DOULOUREUX. See *Neuralgia.*

TIGHT-LACING is now well recognised as injurious. By this malpractice the lower ribs are forced inwards, and the liver and spleen, which these ribs cover, are compressed and their functions embarrassed; moreover the colon is included in the area of pressure, and dyspepsia, constipation and appendicitis thus invited; whilst the important organs of the chest, viz., the heart and the lungs, are forced upwards and their action impeded. The effect on the general health likely to result from interference with so many vital organs can be readily imagined.

TINCTURES are solutions of the active ingredients of drugs in rectified spirit. The Pharmacopœia contains over 60. They are much stronger than infusions, the dose being either 5–15 drops or a half to one drachm, according to the drug.

TOAST WATER may be used freely in febrile conditions.

It is prepared by placing two slices of bread, well toasted, in a jug and pouring on a pint of boiling water. The whole is allowed to stand till cold, and the toast water is then poured gently off.

TOBACCO. See *Smoking.*

TOE. See *Bunion, Corn, Ingrowing toe-nail.*

TONGUE is liable to a great number of disorders. The little band of mucous membrane that passes from the floor of the mouth to the under-surface of the tongue may be too tight from birth. The condition is termed *tongue-tie*, and is easily remedied by a snip of the doctor's scissors. It is not present as often as the anxious mother imagines. The tongue becomes *coated* in many affections, e.g., indigestion, liver disorder, constipation, toothache, tonsillitis, gout, rheumatic fever and the infectious fevers. It is usually a bad sign when in the course of a severe illness a tongue previously coated with white fur becomes dry and brown. A tongue that is coated and clammy on waking every morning usually indicates gastric disorder, often from the use of spirits before going to bed. *Dryness* of the tongue on waking in people otherwise healthy may be due to sleeping with the mouth open. *A flabby tongue*, dinted at the margin by the teeth, suggests debility with dilated stomach. *Soreness* of the tongue may be due to tobacco smoking, spirit drinking, or the friction of a broken carious tooth. Such a condition should never be ignored; if neglected, cancer of the tongue may possibly develop. *Tremor* of the tongue when it is put out is common in debility, especially when due to alcoholism. *Difficulty in putting out* the tongue is common in St. Vitus's Dance, and in certain diseases of the nervous system.

For cleansing the mouth and tongue, the use of an aërated water, e.g., soda water, is valuable. It may be used as a gargle, or a swab of wool wound round a glass rod or stick, may be dipped in soda water and used to wipe the mouth with. The use of glycerine of borax one drachm, tincture of myrrh twenty minims and water one fluid ounce, is also a most useful mouth wash, both for cleansing the mouth and for stimulating a sore tongue to heal. Honey and borax is also good. Such remedies must not be used as a substitute for treatment directed to remove the cause of the unhealthy state of the tongue. The abuse of tobacco or alcohol, the presence of carious teeth, constipation, etc., must receive the attention they deserve.

TONIC is a remedy for debility of either the body as a whole or of any one organ. Thus we can have general tonics, e.g., fresh air, or a gastric tonic, e.g., gentian, a nerve tonic, e.g., arsenic and so on. A tonic differs from a stimulant; the former promotes the recovery of the normal strength, the latter whips up a flagging organ and makes it work well for the time at the cost of greater weakness afterwards. The best tonics are not drugs, but fresh air, sunlight, cold baths, exercise, sleep, regularity of the bowels, and suitable food. The much-vaunted port wine is, be it noted, not included among the best tonics. There is a great deal of unnecessary quinine and iron and other material consumed at the present time in an attempt to substitute drugs for regular habits; an attempt which fails in the long run. A free purge, a good sweat, and some form of regular and healthy exercise in the open air is usually the treatment required by those who resort to tonics. [See *Debility, Drugs.*]

TONSILLITIS is inflammation of the tonsil. [See *Sore Throat.*]

TONSILS are rounded bodies situated one on each side at the entrance to the throat. Their function is not certainly known, but they probably aid in protecting the body from infection. Tonsillitis, or inflammation of the tonsils, is a common complaint described under *Sore Throat.* Chronic enlargement of the tonsils is common in children, and often requires surgical aid.

TOOTH-ACHE should, as far as possible, be prevented by following the advice given under "Care of the Teeth." When present, it should be treated in the following way. An aperient should be taken, the face kept warm by cotton wool or bran poultices, and a spoon diet alone used. If this does not procure relief, a minute piece of cotton wool soaked in pure carbolic may be inserted into the cavity of the tooth, and then covered with a second small piece of wool soaked in Friar's balsam. This must be inserted lightly, and must be smaller than one would judge, because the tongue exaggerates the size of a cavity.

The pain of tooth-ache is often referred to the wrong tooth. This is due to the fact that the same nerve supplies by one branch part of the ear, by another part of the socket of the eye, by a third branch the teeth of the upper jaw, and by a fourth those of the lower jaw. It is a law in the physiology of nerves that irritation at any part of a nerve may be felt in the area supplied by any of its branches. Hence, not only may tooth-ache be felt in the wrong tooth, but ear-ache may be due to a wisdom tooth or neuralgia of the eye to a decayed tooth. Should pain be sufficient to prevent sleep, it is much wiser, if the above measures fail, to secure relief promptly by consulting a dentist.

TOURNIQUET is an appliance for checking hæmorrhage. [See *Hæmorrhage* under *First Aid.*]

TOXICOLOGY is the science of poisons—their effects, antidotes, and detection within the body or in suspected food.

TRACHEA is the wind-pipe.

TRACHEOTOMY is the operation in which the wind-pipe or *trachea* is opened. The wind-pipe having been opened, a tube made for the purpose is inserted and through this the patient breathes. The operation is required whenever obstruction in the upper air passages is sufficient to prevent satisfactory respiration, a condition most often met with in the diphtheria of infancy. [See *Diphtheria*].

TRADES. See *Death-Rate, Dangerous Trades.*

TRAINING is good for the healthy youth. Before beginning a course of strict training, a medical examination is requisite. The training should be gradual. The muscular work performed at first should be well within the powers of the future athlete. The point to aim at is not to strengthen the muscles so much as to strengthen the heart. Most people have muscular power out of proportion to their heart. Hence, when exerting their muscles to the full, they put a strain on the heart which is unequal to it and *dilated heart* results, a condition that may require a long time of enforced rest to remedy. "Good wind" means a heart equal to the strain thrown on it; "short wind" a heart that is not equal to it. Hence the great aim of the wise trainer is "to lengthen the wind." All causes that embarrass the heart must be avoided, specially during exertion, e.g., tight clothing, a full stomach or a stomach distended by flatulence, a cold on the chest, shallow breathing, or muscular effort with the breath held. Elaborate systems of dietary are obsolete. All that is really required is a diet easy to digest, so as to prevent flatulence and constipation, fattening articles of dietary being cut down though not excluded. Tea, tobacco, and alcohol, "the three domestic poisons," must be excluded or strictly limited, chiefly for the sake of the heart. The skin should receive extra care, as much work is thrown on the sweat glands. The limitation of the amount of water consumed is often unnecessarily severe, though fluid should

certainly not be taken between meals. Harm often results from the commission of a series of dietetic and other indiscretions directly the training is over.

TRANCE. See *Catalepsy.*

TRANSFUSION is the name of the operation by which blood was transferred from the arm of a healthy individual to that of a patient. This operation is now hardly ever performed, for it has been found by experience that the injection of water at blood heat, containing a teaspoonful of salt to the pint, acts just as well. The term is now used to indicate the latter operation. Transfusion is often resorted to during an operation if the patient is in a state of collapse. The nearest approach to it obtainable by the layman, is to give the same salt and hot water in the form of an enema. From one to two pints may be given after a severe hæmorrhage, or in any condition of collapse, the warm fluid thus given being soon absorbed into the circulation.

TRAPS are devices to prevent the escape of sewer gas from the drain into the house. Many of the older traps had the drawback that they allowed filth to accumulate in them. Such traps as the Bell Trap have been discarded on this account. A U or S shaped trap is the one now chiefly used. By having the drain pipe of this shape, whenever the drain is flushed some water is retained in the bent part or trap, which then prevents the passage of gas through this portion of the pipe. Such a trap is liable to certain drawbacks :—

1. When two closets one above the other discharge into the same soil pipe, flushing the lower one may suck the water out of the trap of the upper one. This is avoided by putting the pipe between the trap and the soil pipe in communication with the outside air by means of a small ventilating pipe known as the anti-siphonage pipe.
2. If the sewers are not well ventilated, sewer gas will collect in them until it is under sufficient pressure, when it will force the water out of the trap and escape into the house.
3. If the trap is not flushed regularly the water it contains will dry up and thus unseal the trap.
4. Every trap introduced into a drainage system impedes the flow of the sewage.

Traps should be placed immediately under the pan of the water-closet, and at the point of entrance of the soil pipe into the main drain. There should be no trap between these two points. Traps should also be placed immediately beneath the grating of all sinks, basins and baths, in spite of the fact that these pipes discharge over a gully without any direct connection with the soil pipe. By this means bad odours due to the accumulation of filth within the pipes is excluded, and any sewer gas from the gully, which may be sucked into the waste pipe by reason of the warmth of the house, is excluded also.

TRAUMA means an injury.

TREACLE soothes a sore throat and is slightly laxative.

TREMOR or **TREMBLING** is common in emotional states, in nervous debility, in old age, in poisoning by mercury or alcohol or tobacco, in exophthalmic goitre, and certain diseases of the nervous system, e.g., the shaking palsy. In most cases the hands suffer most and the tremor is most noticeable during the performance of any act with the hands, though in the last-mentioned disease the tremor is checked by movement and occurs during rest. Tremor in all cases ceases during sleep. The treatment is the removal of the cause, and when this is impossible, some improvement may be obtained by a quiet, regular life with freedom from worry or excitement.

TRICHINIASIS is a disease due to the invasion of the body by worms belonging to the species known as *Trichina spiralis.* The symptoms resemble those of typhoid fever. The worms gain entrance to the body in the meat obtained from infected pigs. The disease is most common in Germany. The disease may be prevented by thoroughly cooking the food. [See *Worms*].

TROPICAL DISEASES include many which are rare in more temperate climes. Recently a School of Tropical Medicine has been instituted, largely owing to the enterprise of Mr. Chamberlain. At this school research is carried on, and colonial surgeons and medical missionaries receive instruction in the diseases peculiar to the tropics. The occupation of the tropics by Europeans is in many cases awaiting the solution of the problems of the prevention and treatment of certain tropical diseases, so that the matter is one of pressing public importance. Among tropical diseases we may mention more particularly ague, beri-beri, cholera, dysentery, elephantiasis, Guinea-worm, liver abscess, sleeping sickness, and yellow fever. Information respecting these diseases will be found under their respective headings.

TRUSS is a mechanical support used by those who are ruptured, to prevent the escape of any portion of the abdominal contents from the abdominal cavity. [See *Rupture.*]

TUBERCULOSIS is disease due to the tubercle bacillus. Although the organs in man that are most frequently attacked are the lungs, other parts of the body are not immune. Tuberculosis of the lungs is popularly known as consumption, and was named by Hippocrates *phthisis,* a term that means literally wasting. The other organs most liable to attack are (1) the lymphatic glands of the neck, (2) the intestines, (3) the joints, (4) the bones, (5) the lining membrane of the brain, (6) the genito-urinary organs. It is thus seen that the same germ by attacking different parts of the body may produce very different symptoms.

When (1) the lymphatic glands are the seat of disease, lumps appear in chains up the sides of the neck—a condition formerly termed scrofula. These lumps are enlarged glands. They should not be painted with iodine, but cod-liver oil and fresh air, preferably Margate air, should be tried for some months, and if they do not disappear they should be removed by the surgeon whilst they are still hard. If neglected they will break down into cold abscesses and burst, leaving discharging wounds that heal very slowly.

When (2) the intestines are attacked, *consumption of the bowels* results, though this term embraces many other forms of infantile diarrhœa and wasting. In these cases the germ has been swallowed. In infancy the germ may be introduced by the habit of sucking the fingers, which have often previously picked up dust from the floor, more especially in houses inhabited by a sufferer from consumption; but the germ is more often introduced in the milk, as a large number of English cows are tuberculous. The latter risk may be avoided by sterilising the milk (see *Milk*). Consumption of the bowels is a common complication of phthisis, owing to the phlegm being swallowed instead of being expectorated into a suitable receiver as it should be. It has been proved that the stomach has no power to kill living tubercle bacilli which reach it.

When (3) the joints are attacked, usually the hip or knee, wrist or ankle suffer. *Hip disease* or *White Swelling* of the knee is the result. (4) Tuberculosis of the bones most often occurs in the spine, the familiar hunch-back being the deformity apt to result.

Of the other forms of tuberculosis, that of the skin causing *lupus* and that of the supra-renal capsules causing *Addison's disease* are worthy of mention. Moreover, *a general tuberculosis* occurs amongst children who are debilitated by an acute illness or who have been starved. In this condition the germs attack many parts of the body at once and produce an acute fever not unlike typhoid in its symptoms; such cases end fatally in a few weeks.

Between the years 1881-1890, one-ninth of the total death rate in England and Wales was due to tuberculosis. Of these cases, tuberculosis of the lungs was far and away the chief cause. In 142 consecutive post-mortem examinations made by the writer at a Workhouse Infirmary, 42 of the deaths, or nearly one-third, were demonstrated to be due to tuberculosis of the lungs. In this class of society, then, the ravages of the tubercle bacillus seem to be even greater than in society as a whole. The prevention and treatment of the different forms of tuberculosis is thus one of the chief medical problems of the day. The subject is dealt with more fully under *Consumption.* [Refer also to *Fevers, Hip Disease, Gland, Spinal Disease, Lupus, etc.*]

TUMOUR, literally a swelling, may be due to a great number of causes. It may consist of fat, fluid, cancer, etc.

No treatment should be adopted till after a thorough medical examination.

TURPENTINE. Common turpentine or "turps," when distilled, breaks up into a distillate named oil of turpentine and a residue known as resin. Oil of turpentine is used as a stimulating liniment in the form of either turpentine liniment or acetic turpentine liniment. Both are useful; turpentine and soap liniments in equal parts are also good. They are used as counter-irritants in pleurisy, neuralgia, and joint affections. Internally a turpentine enema dispels flatus. It should not be given by the mouth except by medical orders.

TYMPANITES means severe flatulent distention. A turpentine enema is usually required.

TYMPANUM, the drum of the ear. [See *Ear.*]

TYPHLITIS is the old name for appendicitis, which see.

TYPHOID STATE is characterised by prostration, low muttering delirium, and picking at the bedclothes. It is caused by many diseases, but always indicates a critical condition. The name is due to the resemblance of the symptoms to a severe case of typhoid fever in the third or fourth week of illness.

TYPHOID or **ENTERIC FEVER** was formerly often called gastric or low fever. Having been confused with *typhus* fever, which is really altogether different, it received the name of *typhoid* (*oid* meaning "like"), but is now more commonly called enteric. The *cause* is a germ which swims actively and lives in water a long time. It is known as the typhoid bacillus. The germs gain entrance to the body in water or milk that has been contaminated with sewage, or in shell fish, especially oysters and cockles, which have grown in water thus contaminated. In the South African war flies and dust carried the infection more frequently than happens at home.

This fever is wholly *preventable.* Improved drainage is always followed by a reduction in the prevalence of typhoid. In London, the drainage and the water supply are now so good that the typhoid has been greatly reduced. The cases that still occur are traceable to the consumption of shell fish, infected by having been grown in water contaminated by sewage, or to milk that has been diluted with polluted water. The disease is most prevalent in the autumn.

The *symptoms* consist of the following:—For a week, the temperature each night is a degree higher than the night before; there is languor, headache, loss of appetite, disorder of the bowels. During the second week the temperature remains continuously about 103° F. The rash appears during this week; it consists of rosy pimples on the trunk, which come out in crops, last a few days only and fade. The abdomen becomes distended; the tongue coated with a red tip; the motions assume a liquid yellow character; the mind becomes dull. In the third week improvement occurs in the milder cases, but in the severe cases the third and fourth weeks are an exaggerated picture of the second week. The patient wastes, and sinks into a low muttering delirium in which he picks at the bed-clothes; his tongue becomes dry and cracked; his teeth coated with a tartar that reforms as fast as it is removed. Death from exhaustion usually follows.

The *nature of the disease* may be thus summed up:—germs of typhoid pass unharmed through the stomach and take root along the small intestine. Here they multiply and cause ulcers. From these ulcers the germs are absorbed into the blood stream and circulate in it. The blood is poisoned, fever, wasting, and delirium result. The germs are discharged in the motions, the urine, and the sweat. All three therefore are highly infectious. The *treatment* requires a doctor and a hospital nurse. If delirium is a marked feature, a second nurse will be required. The room must be prepared in the way suitable for an infectious case. [See *Sick Room*].

Certain special points require emphasis. The bowels are ulcerated and at these points are as thin as paper; if the bowel gives way, death is almost certain. The ulcers are not healed till ten days after the temperature is normal. Therefore, from the onset to the end of this time fluid diet alone is given. During the ten days after the temperature has reached normal, the craving for solid food is intense; the temptation to a fond relative to gratify this craving is great; but such temptation will be resisted by anyone who bears in mind that perforation of the bowel, in the condition of the invalid, is as easy as it is fatal. The death rate has been much lowered of late by the cold-water treatment, which is carried out by lowering the patient, in a blanket, into a bath of cold water at the bedside. Relatives often resent this, but it is foolish to do so, as this treatment calms delirium, secures sleep, reduces the fever, and preserves the strength. Shivering is often caused, but this is not serious. In regard to the bowels, give no aperient unless specially ordered, but use enemata only. If the temperature drops suddenly or bleeding occurs from the bowel, keep the patient very quiet, avoid brandy, apply cold to the abdomen, let him pass his motions into a draw sheet so as not to disturb him, and send for the doctor at once.

> In helping to nurse these cases bed sores are to be dreaded and to be guarded against by the strictest cleanliness and thorough drying after each action of the bowels. There is considerable risk of contagion being carried by the fingers to the mouth of the nurses. This accident is to be most carefully prevented in the following way. Before attending to the patient scratch a piece of soap; you will thus plug each nail with soap and prevent infection getting under the nails. After you have attended to the patient immediately wash the hands thoroughly and then immerse them in water containing perchloride of mercury (one part in 2,000). Leave them in this while you count a hundred; this takes much longer than you think. The motions and urine are both to be received into vessels that contain some disinfectant. All soiled linen must be soaked in some disinfectant, e.g., carbolic lotion (one part in 40) for some hours before going to the laundry. The patient must be kept lying down at all times *without any exception whatever.*

After recovery, a long holiday is requisite, the convalescent may become very fat, but this condition rectifies itself in about a year.

TYPHUS FEVER has now been practically stamped out in Great Britain by improved sanitation.

ULCER is a discharging sore. It is most commonly met with on the leg. It is rare in youth, but common in middle age amongst those whose trades involve much standing, e.g., laundry work. Bad circulation usually produced by varicose veins is the chief cause. Our workhouse infirmaries contain a great number of intractable cases, as the ulcers heal with rest in bed and often break down again directly the patient resumes work. The treatment should be rest in the horizontal position, and suitable antiseptic treatment of the sore [see *Wounds.*] When the sore is clean it may be stimulated to heal with yellow oxide of mercury ointment applied to the sore only and not to the healthy skin. [For ulcer of the cornea, see *Eye.*]

UNCONSCIOUSNESS. See *Fits* under FIRST AID.

URÆMIA is blood poisoning due to deficiency of kidney action. [See *Kidney.*]

URETER is the tube that puts the kidney in communication with the bladder. It is the passage of a stone down this tube which causes renal colic. There is a separate ureter for each kidney.

URETHRA is the canal by which the bladder communicates with the exterior.

URINE consists of water, salts, nitrogenous waste products and colouring matter. Normal urine is acid in reaction, that is to say it turns blue litmus red. In abnormal conditions the urine differs from the normal in many ways, some of which are obvious at a glance, whilst others are only detected by careful analysis. The *quantity* passed is much increased by nervous excitement, hysteria, diabetes and chronic Bright's disease; it is diminished by diarrhœa, vomiting, fever, and acute Bright's disease. The *colour* is higher the more concentrated the urine is; it becomes a mahogany brown in jaundice, green in carbolic acid poisoning, smoky when it contains blood from the kidneys, blood red when it contains blood from the bladder or urethra; a deep orange or gamboge yellow may be produced

by taking certain drugs, notably rhubarb and senna. The *odour* is altered by certain drugs, e.g., turpentine and certain articles of diet, e.g., garlic, but these are of little moment; when, however, the urine is offensive when first passed, inflammation of the bladder is present. The *reaction* may be made alkaline by taking soda or potash salts, but not by taking ammonia. It is also alkaline in inflammation of the bladder. The presence of a *sediment* is always worthy of notice. In cold weather or in very hot weather the urine, after standing some time, is apt to form a precipitate, which has a brick-dust colour and is soluble in hot water. Such a sediment need give rise to no alarm, but whenever a sediment is present in urine *directly* it is passed, the fact should be reported to the doctor. [Refer to *Bladder*, *Gravel*, *Gout*, *Prostate*.]

URTICARIA. See *Nettle-Rash.*

UVULA is the fleshy appendage of the soft palate that hangs down in the mid-line and is raised in the act of saying "Ah." [See *Sore Throat.*]

VACCINATION. This method of protection against small-pox was introduced by Dr. Jenner, an Englishman, in the year 1798. Before this date Lady Montagu introduced the practice of inoculation from Turkey. This consisted in the inoculation of small-pox matter during robust health. By this means an attack of small-pox was induced, which was usually mild and gave protection from subsequent attacks. The danger of this method was that not only might the attack be severe, but it often started an epidemic of small-pox. Vaccination, on the other hand, never produces an attack of small-pox nor starts an epidemic. The lymph with which vaccination is performed is obtained from calves suffering from the disease known as vaccinia or cow-pox. Jenner observed that the milk-maids escaped in many epidemics of small-pox, and found that in these cases the cows had cow-pox. Thus in milking them the milkers had vaccinated themselves. Since this discovery inoculation has been prohibited by law, and vaccination enforced. So great has been the success of this method that in nearly all the countries of the civilised world the disease has been almost forgotten, instead of being a source of daily terror. The result is the production of anti-vaccinators. These in various countries and at various times diminish the thoroughness with which the law is enforced. For a few years all goes well, then follows a terrible epidemic, and the anti-vaccinators and every one else are vaccinated. After this outbreak the law is enforced more rigidly for a time, but gradually the pressure of public opinion slackens into indifference, and history repeats itself, as it always will under the same conditions.

The Vaccination Act of 1898 is on its trial and will probably require modification, but it has certainly effected one much-needed reform, for it abolished arm-to-arm vaccination, and permitted the public vaccinators to use calf-lymph only, thus preventing the risk of contagion, as the calf is killed and proved to be healthy by post-mortem examination, before any of the lymph obtained from it is permitted to leave the laboratory. Another improvement effected by the Act of 1898 is the abolition of vaccination stations, the medical officer being by the Act required to attend each case at its home. Epidemics of measles, whooping cough and the like, which were, at times, started by the collection of infants together at the vaccination stations, are thus no longer produced in this way.

The most suitable *age for vaccination* in the healthy infant is six weeks, though the law permits any time up to six months. Vaccination should be performed in four or five places, for not only is the protection afforded thus increased, but the effect on the arm is less severe than when only one point of inoculation is chosen. If desired, vaccination may be performed on the leg, so that the scars do not show, but it is difficult to keep the leg of an infant always clean and dry, and in the adult, if this site is chosen, the probability of being unable to walk for a few days should be borne in mind. After vaccination has been performed, the child becomes fretful about the fifth day. About the ninth day the skin around the vaccination spots becomes red and swollen, and remains so for a few days. The glands in the arm-pit may swell. The scabs fall off between the fourteenth and the twentieth days, leaving red pitted scars which become pale only after some time.

The *danger* of vaccination with calf-lymph is practically limited to the risk of the vaccination sores becoming poisoned owing to carelessness after the operation. It is usual to protect the arm with a piece of lint secured by strapping. This must be left undisturbed and kept dry; the child should have its daily bath as usual, but the vaccinated arm must be kept out. When the arm swells the strapping may become too tight and may require a slight snip with a pair of scissors, so as to slacken it without cutting it right across. The arm should be guarded from accidental knocks. The diet should be the same as usual.

In working amongst the poor, district visitors and others must expect to hear of an endless chapter of accidents attributed to, and dating from, vaccination. The ignorant, like many well-informed people, fail to distinguish the "post hoc" from the "propter hoc"; and thus skin eruptions, due to neglect or to vermin in the scalp, are commonly laid at the door of vaccination.

RE-VACCINATION. The protection given by vaccination gradually diminishes as time goes on. Experience shows that after ten years it is time to be vaccinated again. In Germany this is compulsory, in England it is not, but it is none the less a wise precaution to have re-vaccination performed before leaving school. During an epidemic of small-pox and before going abroad it is also wise to be vaccinated again. The effect on the arm is usually much milder than after vaccination for the first time; but if no reaction occurs at all, it is unwise to at once assume that small-pox need not be feared, as there are brands of lymph on the market, especially during a small-pox epidemic, which are not always reliable. In such cases, vaccination should be again performed with another brand of lymph, and only after two or three attempts should the assumption be made that the vaccination will not take. The public vaccinators, who alone can use Government lymph, return a very much smaller number of cases as immune to vaccination than the private practitioners do, showing that the quality of the lymph used is of much importance.

> Those interested in the subject of vaccination and anti-vaccination will find an article in the Encyclopædia Britannica giving evidence for anti-vaccination, and an article in Clifford Allbutt's System of Medicine, Vol. II., p. 657, giving abundant evidence for the utility of vaccination; the Annual Report of the Metropolitan Asylums' Board for 1902 is a valuable contribution to the subject, as it gives an analysis of the cases treated during the London epidemic of that year. The analysis is drawn up so as to show the relation of severity of attack, not only to the presence or absence of vaccination marks, but also to the size and number of such marks when present, and to the time since vaccination had been performed.

VAPOUR BATH. See *Baths.*

VARICELLA. See *Chicken-pox.*

VARICOSE VEINS are veins which, having been unequal to bear the pressure of the blood within them, have become dilated and tortuous in consequence. Their valves no longer act. The condition is most common in the legs, especially of tall people who have much standing. It is also produced by obstruction to the circulation in the legs or abdomen, e.g. by tight garters, pregnancy, congestion of the liver, etc. The tendency to the condition is greatest in middle age, and women are more liable to it than men. The *symptoms* produced are pain, numbness or stiffness in the affected part. The nutrition of the skin often suffers, and swelling, eczema or ulcer of the leg are then likely to develop. The *treatment* should take the form of some support; either an elastic stocking or an elastic bandage may be worn. It is important that the pressure these exert should be greatest at the foot and least at the knee; hence the stocking presents an advantage over the bandage, as the latter, which is applied from the ankle upwards, when put on by the patient himself, tends to be tighter with each turn, and so to be loose at the ankle, tight at the knee,

and thus worse than useless. In rare cases the veins may require removal by the surgeon. [For treatment of a ruptured varicose vein see *Hæmorrhage* under FIRST AID.]

VARIOLA. See *Small-Pox.*

VASELINE is prepared from petroleum, and thus, unlike animal fats, it does not turn rancid. On this account it is valuable as an ointment.

VEAL. See *Food.*

VEGETABLES. See *Food.*

VEGETARIANISM is a diet from which animal food is excluded. Such a diet is the common one for the poor of certain tropical countries, but is unusual in this country. When practised here, a modified vegetarian diet is usually adopted, fish, flesh, and fowl being excluded, but eggs, milk, butter, and cheese being admitted. The advantage of a vegetarian diet of this kind is cheapness. Nitrogenous food in the form of peas, eggs, or cheese is cheaper than in the form of fish, flesh, or fowl, but it is not so easily digested. For the gouty, a restriction of the amount of meat eaten is certainly wise, but for the average man there is little doubt that the ordinary mixed diet is the best, though perhaps it might be eaten more slowly and in smaller quantity to advantage. The evidence against a strict vegetarian diet is as follows:—

1. A comparison of our teeth with those of purely carnivorous animals on the one hand and with purely herbivorous on the other, points to our teeth being adapted to a mixed diet.
2. The length of the food canal of the purely carnivorous is relatively short and its structure simple; the length of the food canal of the herbivorous is relatively long and its structure complex; the length and the complexity of the human food canal occupies a position midway between these extremes.
3. The time herbivorous animals spend in feeding is far greater than man can afford for the purpose.

VEINS are the blood-vessels that return the blood to the heart from that network of minute blood-vessels termed capillaries, which occur in nearly every part of the body. The veins of the limbs and of the surface of the body are furnished with valves which permit the flow of blood towards the heart only. The circulation in the veins is slow and feeble compared to that in the arteries, and is readily retarded by the pressure of tight clothing. The circulation in the veins is largely dependent on muscular action, as the muscles compress the veins when they act and the valves then come into play, and only allow the blood to be squeezed onwards. If the valves become defective, circulation is much impeded, and "varicose veins" usually result. The veins of the viscera, which are devoid of valves, are specially prone to engorgement and to varicosity; for instance, piles are varicose rectal veins. [For the treatment of a *Ruptured Vein* see *Hæmorrhage* under FIRST AID; see also *Varicose Veins, Heart, Blood-Vessels.*]

VENISON. See *Food.*

VENOMOUS BITES. See *Bites.*

VENTILATION is the renewal of the air contained in a room. The necessity for such renewal increases with the number of people occupying it, and the number of lights burning in it. Both lights and people, alike, use up the oxygen of the air, and discharge into it a certain amount of carbon dioxide; but the human breath has a more noxious effect than the flame of an ordinary lamp or gas-jet, for it emits a certain quantity of highly poisonous organic matter, and it is chiefly this which vitiates the air and gives it the well-known "stuffy" odour. The amount of the organic matter in the air of a room bears a constant ratio to the amount of carbon dioxide present as the result of breathing. This carbon dioxide of human origin is the most convenient indicator that we have for estimating the state of the air in a room, as it is much easier by chemical analysis to measure this gas than to measure the organic matter.

The amount of carbon dioxide present in fresh country air is 4 parts in 10,000. In a dwelling-room it must not be allowed to rise permanently above 6 in 10,000, or the air will be harmful. Though for a short time we can tolerate air far more vitiated than that containing 6 parts in 10,000 of carbon dioxide, as in a theatre or underground railway, yet even a short exposure to such air, if repeated daily, has an injurious effect on health. The air of a dwelling-room can seldom be as pure as the air outside; hence in those forms of illness in which pure air is a vital matter the open-air treatment has to be adopted.

In order to prevent the carbon dioxide rising above 6 per 10,000, 3,000 cubic feet of fresh air per hour for each person is requisite. The air cannot be changed more frequently than three times an hour, without causing an unpleasant draught, unless the fresh air is warmed before it is admitted; hence in the ordinary room an air space of 1,000 cubic feet each person is required. The law permits an air space of only 300 cubic feet per head in common lodging houses, 300 in workhouses, 600 in barracks, and 800 in prisons; whilst school dormitories usually give the 1,000 cubic feet recommended above, general hospitals 1,200, and fever hospitals 2,000.

In calculating the air-space, the height must not be reckoned above 12 feet, however lofty the room. This is a practical point of great importance, the reason for which may not be clear at first sight. Everyone is aware that air which has been breathed is warm and that warm air rises; hence one is inclined to think that if the room is sufficiently lofty the bad air will all accumulate near the roof and the air near the floor will not be vitiated for many hours. Such a delusion is rudely shaken by the vitiated atmosphere so common in churches. The explanation is that air which has been breathed is only lighter than fresh air on account of its warmth and moisture. The warmth, however, is soon lost, and the moisture condenses, causing the bad air to become heavier than the fresh; hence the expired air at first rises and then sinks, and, as a matter of fact, it rarely rises higher than 12 feet before it becomes cool and descends. To secure the ventilation of a dwelling-room, then, we require no ceiling to be higher than 12 feet, but the windows should reach the ceiling and be open at the top. A fire-place should always be present, and the chimney register should never be closed. The window and the chimney are the two simplest and readiest means of ventilation. "Windows were made to be opened, doors to be shut." It is a common error to ventilate the room into the passage by leaving the door open and the window closed. Among the simplest aids to ventilation are the following:—

(1) *Perforated bricks* communicating with the room by gratings, which serve to break up the current and thus prevent the draught from being felt.

(2) *Boyle's valve* inserted in the chimney near the ceiling. This contrivance consists of an aperture leading into the chimney with two talc flaps, forming a valve, which permits the air of the room to enter the chimney, but prevents the smoke from entering the room.

(3) *Louvre panes*, consisting of slips of glass placed obliquely in an oblong opening cut in the window pane. They are commonly used in shop windows that do not open. The Cooper rose ventilator is on the same principle.

Many have been the attempts, more or less successful, to admit fresh air without causing unpleasant draughts. The aim has been to dilute the cold fresh air with that of the room before it comes in contact with the occupiers of the room. The following are among the chief devices adopted:—

(1) *Hinckes-Bird's method* consists in raising the lower sash of a window a few inches and blocking up the opening with a board, thus allowing the fresh air to enter the room, but only between the two sashes and with an *upper* current.

(2) A *Tobin's tube* is a pipe the lower end of which communicates through an opening in the wall with the outside air, whilst the upper end opens into the room about six feet above the floor.

(3) A *Sheringham valve* is a metal guard placed around an aperture in the wall, so arranged as to direct the incoming air upwards, and made to work on a hinge so as to close the opening when desired.

(4) A *Galton's Grate* has an air-space behind the chimney, communicating below with the outside air and above with the interior of the room, the heat of the chimney being in this way used to warm the incoming air.

In most public buildings the above methods are insufficient, and have to be supplemented by some contrivance for pumping fresh air in and drawing the impure air out. In such cases the incoming air is usually warmed by passing it over radiators composed of steam or hot-water pipes. It is important that the fresh air should not be unduly heated, for otherwise the fresh air will rise directly it enters the room, and so not only be of little service to the occupants but actually a detriment by checking the upward current of foul air. The extraction of the bad air may be effected (1) by the use of Boyle's self-acting air-pump ventilator, or (2) by means of shafts heated with gas-jets or steam, or (3) by the action of electric fans. The relative positions of the inlet and outlet shafts is important, as it is possible to have them so placed that the fresh air is drawn out as soon as it is admitted.

One authority, Mr. Kenneth Gray, holds that the fresh air should be pumped into the upper part of a large public room and the impure air extracted "at or near the floor level." This view is based on the fact already mentioned, that foul air is heavier than fresh as soon as it has lost its warmth and its moisture has condensed.

Pure air is not only essential to health but to efficiency. If the employer wishes to get the maximum work out of his men, if the schoolmaster expects close application on the part of his scholars, and if the clergyman desires sustained attention from his congregation, then must they each ensure efficient ventilation. [For ventilation of Sewers refer to *Drains*.]

VERMIN. See *Lice*.

VERTEBRA. See *Spine*.

VERTIGO. See *Giddiness*.

VINEGAR is a diluted form of acetic acid. Meat soaked in vinegar becomes tender as the material that cements the fibres together becomes dissolved. Vinegar is also used to relieve thirst and to modify the taste of salad and other oils. Equal parts of vinegar and water may be used as a cooling lotion with which to bathe the forehead in headache, or the skin generally in fever. Internally the medicinal use of vinegar is slight; as a gargle, two drachms of vinegar to the ounce of water may be useful, but the repeated use of vinegar as a cure for obesity is to be condemned, as it only acts by setting up a gastro-enteritis, and so checking the absorption of nutriment. *Aromatic Vinegar*, made by adding oil of lavender, cloves, and the like to white vinegar, was formerly regarded as a disinfectant. It is now supplanted by efficient disinfectants, e.g. Jeyes' fluid, Izal, etc. *Raspberry Vinegar* used diluted with water to quench thirst in fever is inferior in the writer's opinion to those drinks mentioned under *Beverages*.

VIS MEDICATRIX NATURÆ is the healing power of unaided nature. Every living creature, be it plant or animal, has some power of repair after the receipt of an injury not instantly fatal. Exposure to injury by accident, changes of temperature, or the attack of parasites, is a part of the environment, and therefore every old-established race is adapted to this part of its environment, for were it not the race would in all probability have become extinct. Adaptation to the receipt of injury without serious consequences ensuing consists in the possession of the power of repair, which is called into action by the injury itself. The thoroughness of this power of repair varies in different species and in different individuals, and it is a fascinating study to trace the *vis medicatrix naturæ* step by step from the lower forms of life to the higher. If we do so we shall find the power of repair in certain organs much greater in some of the lower forms of life, and at first sight this may occasion surprise. Why, for instance, should a crab be able to grow new limbs, whilst a man can only grow a new nail? It is not because the limb of a crab is a simple structure, for it is nearly, if not quite, as complex as a human limb. In the writer's opinion it is because each race is endowed with a power of repair for those accidents which most often befall it; the loss of a limb is common in crab life, rare in human life. In the same way tropical diseases affect the native less severely than the European visitor; whilst measles, a European disease of old standing, when imported for the first time into the South Sea Islands, caused a mortality amongst the Aborigines out of all proportion to that which it produces in Europe. Many other examples could be quoted.

To make the most of the *vis medicatrix naturæ* possessed by each individual patient, is the secret of the healing art, and when this power of repair is thought to be feeble, the surgeon dare not perform an operation except as a last resource. In the average individual, if an injured organ can be put at rest, nature will heal it; hence the surgeon sews up a cut and excludes germs, or sets a broken bone and keeps it in splints and leaves nature to do the rest. Again, bowed legs caused by walking whilst suffering from rickets will often grow straight if the patient be kept off his legs soon after the deformity has arisen. In such a case, to straighten the legs, by surgical means, would be unjustifiable. It is only when nature has failed that a surgeon should operate. In fevers, perhaps, more than in any other group of diseases, reliance at the present time is placed on the *vis medicatrix naturæ*, a force which we have learnt to respect in a way very different from that entertained by our fore-fathers, who spared no effort to exhaust the patient so as "to leave the fever no food to feed on," a mode of treatment that hardly fulfilled Hippocrates' exhortation "to at least do no harm." In the future, nature's healing power will no doubt be supplemented by the use of antitoxins, which will then be available for each fever instead of only for diphtheria and for one or two others, as at present; meanwhile reliance has to be placed mainly on nature's remedial force and comparatively little on drugs.

To judge the value of any remedy is very difficult, owing to the natural tendency to recovery which we are considering. Hence much error arises and recovery may be attributed to a remedy, whilst in reality it has been wrought by nature, either quite independently of the supposed remedy or even in spite of it. The vast number of quack medicines and systems of cure, e.g. the use of "electric belts," etc., which in turn receive enthusiastic support from people, otherwise intelligent, is familiar to everyone, and is an example of the difficulty of separating the effect of a remedy from the effect of nature's power to heal. We are indeed all apt to resemble the fly in the ancient fable which, perched on the axle, watched the chariot wheels revolve and fondly imagined itself the cause. The doctor, however, is keenly alive to this tendency, the credulous believer in quackery is not.

VITRIOL is sulphuric acid. Vitriol-throwing may cause blindness if any of the fluid enters the eye. The best treatment in such a case would be at once to bathe the eye thoroughly with a weak warm solution of washing soda or with lime water, and then to drop in some castor oil from the end of a clean match, whilst the lower lid is drawn down by the thumb of the left hand. The skin may be bathed in a strong solution of washing soda at any part on which the acid has fallen, and should then be protected from the air by rags smeared with vaseline.

VOICE. See *Larynx*.

VOMITING, like swallowing, is a muscular act controlled by the nervous system. The nerve centre which controls this act, situated in the medulla oblongata, is termed the "vomiting centre" (see *Brain*). The act is not under the control of the will, but is produced whenever the vomiting centre is irritated. The various *causes* of irritation may be classified thus:—

(*a*) Causes acting *directly* on the vomiting centre, e.g. (1), interference with the circulation of the brain, as in migraine, concussion, meningitis, tumour on the brain, and (2), the supply of impure blood to the brain as in fever, Bright's disease and many poisons.

(*b*) Causes acting *indirectly* on the vomiting centre from irritation of other organs, e.g. (1), mental disturbance by unpleasant sights, sounds, and smells, or by severe pain; (2) irritation of the nerves of the throat, stomach, and other viscera, as in tickling the throat with a feather,

prolonged coughing, an irritating poison or indigestible meal, the pressure on the stomach due to tight lacing, ulcer of the stomach, constipation, worms, appendicitis, or strangulated hernia, etc.

Vomiting is thus seen to be a symptom often present, the cause of which may be trifling or very serious. When due to a poison or to indigestion, it may be a natural remedy of value, but as a rule it is a symptom that may be checked to advantage provided its cause has been first detected. Vomiting accompanied by a rise of temperature is a common mode of onset of one of the fevers, whilst vomiting accompanied by constipation may be caused by intestinal obstruction. In both cases medical aid is essential. In *infancy*, vomiting is especially common, and is then most often due to over-feeding or to unsuitable food (see *Infants*). In *childhood*, it is commonly due to over-eating, or to a fall on the back of the head. In such cases rest, quiet, and some water to drink are advisable, and a dose of grey powder or the soda and rhubarb mixture recommended under *Rhubarb* should be given. The child should be kept under observation, and if any other symptoms develop, the doctor should be informed. Repeated attacks of vomiting may be due to worms, but when accompanied by headache—the so-called "bilious attacks"—the symptom is usually due to congestion of the brain resulting from eye-strain, and the remedy is to be sought in the use of suitable spectacles (see *Bilious Attack*). Vomiting in the *adult* is not induced by such slight causes as in early life, and unless definitely connected with an indiscretion in diet, it is wise to regard it as a symptom demanding medical attention. The remedies to check obstinate vomiting to which the layman may safely resort, when no medical aid is at hand, include :—

(1) Sips of very hot water ; (2) small quantities of aerated water or champagne, preferably iced ; (3) one minim of ipecacuanha wine in a teaspoonful of hot water every half hour whilst the vomiting persists ; (4) bismuth lozenges, 1 to 6 every three hours.

[*Sea-sickness* is treated separately under that heading. Refer to *Emetics, Drugs, Poisons.*]

WALKING is one of the best forms of exercise. [See *Exercise*].

WALLS should be dry and clean. Cleanliness is promoted by smoothness of surface, and by material which can be cleansed with a damp duster. In hospitals glazed brick is largely used on this account, and smooth plaster is also used instead of paper. Wall papers should be smooth, coloured with aniline or other harmless dyes, arsenic and lead being eschewed, and they should be fixed to the wall with material that does not turn sour ; bad size used for this purpose is particularly noxious. The practice of pasting the new paper over the old one is to be strongly condemned, and is one cause of the insanitary nature of many a poor man's dwelling.

WARMING should be considered in relation to ventilation. The old-fashioned open grate consumes a large quantity of fuel for the heat it yields, as most of the heat goes up the chimney, but it makes the chimney a valuable ventilation shaft, which many more economical grates and stoves do not. Slow combustion grates are, however, desirable if ventilation can be effected in other ways ; thus the grates devised by Pridgin Teale and Lionel Teale respectively may be found useful. Gas stoves should never discharge their fumes into the room ; such stoves described as self-consuming are on the market and should be eschewed ; nor should the gas stove be placed in front of the fireplace and discharge its fumes through a small pipe, whilst the remainder of the chimney is blocked up, as a valuable aid to ventilation is thereby lost ; the gas stove should be placed in the grate itself and the chimney be just as open as for a coal fire ; when arranged in this way gas makes a healthy and convenient form of fuel. Closed stoves greatly economise fuel at the expense of ventilation. They often give the room a stuffy odour, probably from organic matter in the air being charred by contact with the stove, and also from the fact that hot iron is porous and permits the escape of some of the gaseous products of combustion through it. Trays of water on or around the stove prevent the unpleasant drying of the air that stoves and hot-water pipes often cause. An economical method for large rooms is the use of steam or hot-water pipes. Another method is to warm the air before it enters the room by the use of a Galton grate or other means. Probably the healthiest method is to use open fireplaces and also to warm the incoming air slightly in cold weather [see *Ventilation*].

WARTS are outgrowths from the skin, due to a cause not yet known. They occur at all ages. In youth they are exuberant, in old age flattened. They may occur in crops or singly. When occurring in crops they not infrequently come out suddenly and disappear as suddenly, as though dependent on some nervous or other constitutional cause. It is owing to this fact that charms have been used so much in the past to cure them. Single warts usually last much longer, and in later life they may become the seat of cancer. Warts are not limited to the skin, as they occur in the throat, bladder, and elsewhere. The *treatment* should be attendance to cleanliness and to the general health. The warts, unless present on the face or in large numbers, should be destroyed by some caustic. Glacial acetic acid painted on every night till the wart is destroyed completely is an efficient remedy. The skin around the wart should first be protected with vaseline, and the acid should then be applied on the end of a wooden match. A sore is often left, which soon heals if it is protected from the air with a little boracic ointment spread on linen. A saturated solution of salicylic acid in collodion painted on every night is also a good remedy. The most rapid in their action are caustic potash or fuming nitric acid, but these remedies are not so safe in lay hands. Whatever chemical is used, the treatment must be thorough or the wart will only be stimulated to grow. *Warts on the face* should not be touched except by medical orders, as scarring will result if the caustic is not applied skilfully, and also because in elderly people a condition allied to cancer, viz., rodent ulcer, begins in a growth easily mistaken for an ordinary wart.

WASHING. See *Disinfection, Infancy, Soap.*

WASTING may affect a part of the body only, as in a limb that is paralysed, or it may affect the body as a whole, producing a general wasting. A rapid loss of flesh should always arouse attention, though some loss of weight is normal at puberty, and often occurs also in advanced life. The cause of wasting may be starvation, indigestion, the loss of nutriment through abnormal channels, or the presence of poison in the circulation. In starvation, of course, sufficient food is not taken. In indigestion, though sufficient is taken, it is not all absorbed, hence the body suffers from lack of nourishment.

Loss of nourishment by abnormal channels occurs in—(1) *diabetes*, in which the food turns to sugar and is expelled in the urine, (2) *Bright's disease*, in which albumin is discharged in the urine, (3) *Sinuses*, which by continually discharging matter waste nutriment, (4) *Tape-worm*, which consumes the food before it can be absorbed. Examples of poison circulating in the blood may be found in the majority of acute and chronic diseases, notable amongst which are consumption, typhoid, and cancer.

Nature's power of repair is well illustrated by wasting. The less important organs waste more rapidly than the others. They are used as food to support the vital organs, for a starving animal feeds on its own flesh ; indeed many animals that hibernate put on fat before the winter sleep, and live on this throughout the winter. Analysis has shown that in starvation the fat and muscle waste rapidly, whilst the brain and heart waste very slowly. In disease certain variations in the type of wasting may occur ; thus in consumption the chest and limbs show more change than the face, whereas in cancer in the abdomen the face wastes as much as the rest of the body.

The most common causes of severe wasting are :—in *infancy*, indigestion due to unsuitable food or to chill ; in *youth*, phthisis ; in *middle age*, cancer or chronic indigestion.

WATER ranks next to air in ministering to life, for it forms the chief ingredient in all living tissues and animal

juices. The amount consumed daily by the adult should be on an average three pints, though allowance has to be made for variation in the amount of water lost in perspiration and other ways. The amount required in childhood is proportionately greater than in adult life; hence one should be slow to limit the quantity consumed by a child. In addition to its value as a beverage, water is invaluable in promoting cleanliness and so in checking the outbreak of infectious diseases. Practical sanitarians find that not less than 17 gallons per head should be delivered to each house, and that 10 more should be allowed for trade and municipal purposes. The quantity supplied in London greatly exceeds this.

The *dangers* of water are due to its impurities, which include:—

(1) Germs, especially of typhoid, dysentery, cholera, and some varieties of diarrhœa.
(2) Eggs of certain parasitic worms.
(3) Mineral matter in excess, which in the course of time promotes the formation of goitre, gall-stones, and gravel.
(4) Lead, which may cause lead-poisoning.

As to the *origin of impurities* in water, it is clear that those marked (1) and (2) arise from pollution with sewage, that (3) is due to the rocks, especially limestone and chalk, through which the water percolates; whilst (4) is caused by the lead pipes through which the water passes or the lead cistern in which it stands. Hard water—which owes its hardness to the mineral matter it contains—is not nearly so easily tainted by lead as soft water. The water most seriously infected in its passage through lead is soft water from a peat district, such water being rich in vegetable acids that dissolve the lead rapidly.

In the management of the *water supply* of a town the engineer is guided by the facts above stated. The excessive hardness of water is diminished by chemical means, and when the water is of such a nature as to make lead-poisoning a danger, it is treated by filtration through beds of flint and chalk, by which it acquires the necessary hardness. When the water is derived from a river into which sewage has been discharged higher up the stream, it is drawn off as far as possible from the source of pollution, and filtered and aërated under scientific supervision. In all cases, care has to be taken that the water does not become polluted after leaving the reservoir. Two sources of danger have to be guarded against: (1) aqueducts and sewers are apt to communicate through slight leaks if they are laid side by side; (2) cisterns are liable to become filthy through neglect, or to be left uncovered, with the result that a bird or some animal finds in it a watery grave, Happily, the continuous supply system renders cisterns unnecessary.

Water derived from *wells* is by no means safe from pollution; if a well is shallow, the risk of sewage contamination is often considerable. A well should be deep, and have its sides protected by some waterproof material to prevent the surface water from entering it. The best wells are those driven right through the first impervious stratum, so as to tap the one lying below. The water thus obtained has travelled a considerable distance in the earth, and has thus been thoroughly filtered. In London, for instance, by boring through the London clay into the chalk beneath, water is reached which has percolated through the chalk of the Surrey downs.

The further *purification* of water drawn from the tap in our great towns is unnecessary, and is not recommended; indeed many of the filters in domestic use are actual sources of danger. When, however, the only water obtainable comes from an unknown or from a suspicious source, some means of purification is highly desirable, as the prevalence of enteric fever, in India, the South African War, and elsewhere testifies. Three remedies exist:—(1) filtration, (2) boiling, (3) chemicals. The only *filter* that we recommend is one on the Pasteur-Chamberland principle (see *Filters*). *Boiling* is effective, but it takes so long for the water to cool again, that to a thirsty man this method is useless, unless he is prepared, as the wise traveller often is, to quench his thirst with tea. The addition of *chemicals* has been largely tried. Alcohol has obvious drawbacks of its own, and many of the other chemicals that kill germs, either make the water poisonous or nauseous; thus Condy's fluid has been tried in the army, but such water was not popular, as can be readily understood. The best device up to the present is one recently patented by Mr. Nesfield, a surgeon of the Indian Medical Service.

> It consists of a small tablet made in two halves, one of which is coated with gelatine so that its contents are not dissolved by the water until the gelatine has been first absorbed. On dropping the tablet into water one half at once dissolves and sets free chlorine that kills the germs; within a few minutes the gelatine coating of the other half is dissolved, and this half then acts on the chlorine and changes it to a harmless chloride. The result is that within ten minutes the germs have been destroyed, the chlorine removed, and the water kept safe and palatable. The soldier or traveller can thus protect himself if, whenever he replenishes his water-bottle at the wayside, he adds one of these tablets at the same time.

Water as a *curative agent* is largely used both internally and externally. Externally, it is chiefly useful as a means of applying heat or cold (see *Baths*). Internally, pure water is a valuable stimulant to the process of excretion; it is the safest diuretic we possess, and is thus largely used in the treatment of gout and of renal disease. The effect of water on the various parts of the body differs according to the time of day it is taken; thus (1) taken on rising, a glass of cold water acts as a laxative; (2) sipped before meals it stimulates digestion, especially if taken hot, and is thus useful in many cases of dyspepsia; (3) taken copiously with meals, however, it retards digestion by diluting the gastric juice. Aërated water is more palatable than pure water to many people, and may be used in the same way. Medicinal waters are largely used in the treatment of disease, in some of which the water itself is the most valuable part of the treatment; they are best taken at the Spas under medical supervision [see *Health Resorts*].

WATER-BED and Water Cushions are alike valuable to relieve pressure when there is risk of bed-sores forming. A water-bed must be placed on the bed empty, and then filled with warm water, a task which requires an hour's hard work and many gallons of hot water to accomplish. The bed should be filled three-quarters full of water and a little air should be pumped in with a bicycle pump. Care must be taken that the edges of the water-bed do not press on the back or the heels of the patient, and that safety pins are not inserted into it, which is apt to happen when dressings are being changed. If such an accident has happened, the "repair outfit" for punctures of a bicycle tyre will be found useful. The water-bed should in all cases be covered by the usual blanket, sheet, and draw-sheet; it must not come in contact with the skin.

WATER-BRASH, or **PYROSIS**, is the term applied to the bringing up of clear fluid into the mouth. Such fluid may be acid, bitter, or tasteless, and is a symptom of indigestion. A saltspoonful of bicarbonate of soda in half a tumbler of water may be taken, and the cause of the indigestion, which is often an excess of sweet or starchy food, should be avoided in future.

WATER ON THE BRAIN. See *Brain*.

WATER-CLOSET must be of such a pattern that it is (1) always clean, (2) efficiently trapped, (3) without direct connection with the drinking water cistern, and (4) flushed by a special cistern of its own, which should hold from two to three gallons. The "wash-out" closet and the "valve" closet are two of the best patterns in use at present; a "hopper" closet is commonly used, and it is satisfactory if a short hopper is used; the long hopper is to be condemned from its lack of cleanliness. The "pan" closet is another variety that should be condemned. The traps must be furnished with anti-siphonage pipes to prevent them becoming unsealed [Refer to *Traps, Drains*].

WAX IN EAR. See *Deafness, Ear*.

WEAKNESS. See *Debility*.

WEANING. See *Infancy*.

WEIGHTS AND MEASURES. The avoirdupois system is employed in the most recent edition of the Pharmacopœia, published in 1898.

437 grains = 1 ounce.
16 ounces = 1 lb.
7,000 grains = 1 lb.

Comparing the avoirdupois with the metric system we find :—

1 gramme = 15.4 grains.
1 grain = .065 grammes.
1 ounce = 28.35 grammes.
1 pound = 453.6 grammes.

Formerly the scruple and the drachm were recognised weights weighing 20 and 60 grains respectively, but they are excluded in the present Pharmacopœia.

The volume of an ounce of distilled water at 62° F. is the standard measure, and is termed a fluid ounce.

60 minims (or drops) = 1 fluid drachm (a teaspoonful).

480 minims or 8 fluid drachms = 1 fluid ounce (2 tablespoonfuls).

20 fluid ounces = 1 imperial pint.

It is often convenient to regard 5 grains dissolved in a fluid ounce as a one per cent. solution.

Comparing the measures of the Pharmacopœia with the metric system :—

1 minim = .059 cubic centimetres.
1 fluid drachm = 3.55 cubic centimetres.
1 fluid ounce = 28.4 cubic centimetres.

Roughly speaking, a litre, which is 1,000 cubic centimetres, is $1\frac{3}{4}$ pints.

WEIR-MITCHELL TREATMENT is a system of treatment named after an American doctor who introduced it. The patient is put to bed, isolated from all friends, thoroughly massaged twice daily, and given from three to five pints of milk daily in addition to three good meals of other food. The treatment is usually persevered in for at least a month, and is useful in cases of hysteria, nervous prostration, insomnia, and similar conditions, especially when accompanied by loss of weight.

WELLS. See *Water*.

WEN. See *Sebaceous Cyst*.

WET-PACK. See *Baths*.

WETTING THE BED. See *Bladder*.

WHEY. See *Milk*.

WHISKY is a form of spirit, containing about 50 per cent. of alcohol. It should be prepared from malt by distillation, and coloured by storing it in barrels that have contained sherry. At the present day a great deal of "whisky" is prepared from grain which has not been first malted, and is put on the market without this fact being in any way indicated on the bottle. Such whisky, often sold as blended whisky, lacks many of the ingredients present in true malt whisky and contains others which are harmful. New whisky always contains fusel oil, an impurity which is harmful and highly intoxicating. In the process of maturing this disappears. Whisky, if of a good brand, is one of the best forms of alcohol we have, though taken neat or on an empty stomach it is of course bad, and will in time give rise to a hob-nailed liver; it is far less prone to cause gout than beer or port wine, and it also less often causes delirium tremens than brandy does, thus showing it is less poisonous to the nervous system.

WHITE-SWELLING is a term used to indicate tuberculosis of a joint (see *Tuberculosis, Joints*].

WHITLOW is an abscess or gathering in a finger or thumb. The danger of this condition lies in the risk that the matter may travel up the finger to the wrist, hence the doctor should be called in promptly, and the matter let out as soon as it has formed; the severe pain is thus promptly relieved. Until the abscess is opened, it should be poulticed with a linseed poultice, which retains the heat longer than a fomentation, and which should be renewed as soon as it is cold. The poultice should be covered in oil-silk and some wool and a bandage. The hand should then be slung up on to the opposite shoulder, as in this position there is less throbbing. The diet should be light but nourishing, and any tendency to constipation that may be present should receive attention.

WHOOPING COUGH is an infectious disease usually attacking childhood, and characterised by a distinctive cough. The symptoms for the first ten days consist of a feverish cold which presents nothing distinctive; the case is highly infectious, unfortunately, during this stage. After ten days to a fortnight the cough assumes its typical character, which consists of a series of short coughs without any breath being taken between them, until finally air is drawn into the lungs with a "whooping" sound, frequently vomiting then follows. At the onset the child is often frightened and runs to its nurse, clutching hold of her dress, and during the attack the face often turns blue, the eyes start, and the child looks suffocating. The complications are convulsions, broncho-pneumonia, and wasting from the frequent vomitings. The after-effects include the risk of tuberculosis. The duration of the attack varies, but six weeks is an average time. Infection continues until the whoop ceases. The *treatment* should be confinement to bed, in the early stages, in a well-ventilated room, and strict isolation from all children. The diet should be light, and later, when vomiting is frequent, food should be given directly after it is vomited. No medicine should be given, except by medical orders; no drug is known that has an undoubted beneficial effect, though numbers of patent ones are on the market. During convalescence, a seaside holiday is very desirable [For the incubation and quarantine periods, see the table given under *Fevers*].

WINDPIPE, or **TRACHEA**, puts the throat in communication with the bronchi. [See *Tracheotomy, Lung*].

WINE is the fermented juice of the grape. In red wines the skin has been allowed to remain in the juice while fermenting. This gives not only the red colour, but it adds tannin, which is astringent. White wine is free from both the colour and the tannin, and is in consequence less likely to upset digestion. Wines in which all the sugar has been changed to alcohol before bottling are dry wines, those in which the fermentation proceeds after bottling are effervescing wines, like champagne. Sweet wines which are not effervescing have been doctored, that is, the fermentation has been stopped by adding raw spirits. The bouquet or aroma of a wine is caused by the compound ethers the wine contains. It is these which develop as the wine matures, and it is these far more than the alcohol which cause gout. Hence the gouty often do well, if they drink wine at all, to use a claret or hock that is not too old.

Wines may be classified thus, according to Sir A. Garrod :—

(1) Spirituous wines, rich in alcohol and sugar. These are port, sherry, madeira, marsala, containing about 15 per cent. of alcohol.

(2) Liqueur wines, rich in sugar, alcohol between 10 and 15 per cent. These include Tokay and Malaga.

(3) Acid wines, rich in acid tartrate of potash; alcohol about 10 per cent. The red wines, with tannin, include Claret, Bordeaux, and Burgundy. The white wines, without tannin, include Hock, Moselle, and Chablis.

(4) Sparkling wines, rich in sugar and carbonic acid, include Champagne and sparkling Hock.

Much of the port and sherry on the market is sham wine made of crude spirit coloured and sweetened. For invalid purposes we urge the use of the light white wines, and when a strong stimulant is required, the use of good brandy or whisky rather than port.

WOOLSORTER'S DISEASE is a form of *Anthrax*. [See *Dangerous Trades*].

WORMS. A great number of species in this group of animals lead a parasitic life, that is to say, they live in the body of some other animal, usually a vertebrate, which is technically known as the "host." Forty-seven species are known to infest man, though, fortunately, the majority of these are rare. Those worms which in structure are specially adapted to a parasitic existence often pass their life in two hosts, the earlier stages of development being passed in one host whilst the mature worm lives in another of an entirely different species. For instance, the pork tape worm in its immature condition lives in the muscles of the pig, and only develops into the mature

worm when the pig's flesh, in an imperfectly cooked state, is consumed by a human being. The mature tape worm does not attack the muscles of its human host, but attaches itself to the intestinal wall by means of four suckers with which its head is provided, and the worm then remains stationary within the small intestine, absorbing the nourishment with which it is bathed, and discharging eggs in countless thousands. The eggs do not develop unless, after their expulsion from the intestine of their human host, they contaminate the food of a pig, and so gain access to its stomach, within which they hatch; the young worms thus set free bore their way into the stomach wall and finally reach the muscles where they remain quiescent until consumed by man. In another species, the *Tænia echinococcus*, the adult worm lives in the intestine of the dog, and the immature worm infests the liver, lungs, or other parts of the body of the ox, sheep, pig, and occasionally of man, giving rise to the tumours known as "hydatid cysts" (see *Hydatid*). It is thus seen that man acts as a host to the adult worm in the former species, but to the immature worm in the latter, and the symptoms produced are naturally very different in the two cases. In other species, one host is a vertebrate and the other an invertebrate, as in the Guinea-worm, the adult of which attacks man, whilst the embryo lives in the water-flea, gaining entrance to the human being in drinking-water.

The chief points concerning the three common parasitic worms met with in Britain may be summarised thus:—

Thread-worm.	Round-worm.	Tape-worm.
APPEARANCE. Not unlike a piece of wet cotton, half-an-inch long.	APPEARANCE. Not unlike the earth-worm in size and shape, but of a dirty white colour and devoid of rings.	APPEARANCE. 6–12 feet long, flat, and segmented, ½ inch broad, tapering towards the head, which is rather larger than a pin's head and is armed with four suckers.
HABITS. In large intestine in large numbers.	HABITS. In small intestine, in comparatively small numbers.	HABITS. In small intestine, rarely more than one.
Active. At night often escapes from anus.	Active. May escape from mouth or nose.	Passive. Fixed by head to intestinal wall; fragments often expelled per anum.
LIFE-HISTORY. Only one host—man. Eggs are discharged in the motions, and some of them may find their way into the human body by polluted drinking-water or water-cress.	LIFE-HISTORY. Only one host—man. Life history, as in the thread-worm.	LIFE-HISTORY. Two hosts—(1) Man, (2) either ox or pig, according to the species of tape-worm. The terminal segments of the adult worm, containing ripe eggs, break off and are discharged per anum. These are harmless to human beings, but develop if swallowed by the ox or pig, the flesh of which is then liable to convey the worm to the human intestine.
PRECAUTIONS. Water from an unreliable source should be filtered or boiled; water-cress is best avoided. When worms are present fresh crops of them are frequently induced by carelessness in regard to the finger-nails.	PRECAUTIONS. Treat water as for the eggs of thread-worm.	PRECAUTIONS. Meat infested with tape-worm, viz., *measly meat*, must not be eaten, as even if cooked, all the worms are not killed. Oxen and swine must be so fed as to avoid infection.
SYMPTOMS. Often slight. Local irritation, incontinence of urine, diarrhœa, disturbed sleep, and at times convulsions. (It is a popular error to put every childish ailment down to "worms," and be it noted that irritation about the nose is usually due to some other cause).	SYMPTOMS. Usually none. Rarely a worm may make its way into the nose, or bile duct, and produce symptoms accordingly.	SYMPTOMS. Generally severe. Hunger and emaciation due to the nutriment absorbed by the parasite.
DIAGNOSIS. Only to be made if worms are found in the bed or the motions.	DIAGNOSIS. Only made when the worm is discharged.	DIAGNOSIS. Made by the appearance of fragments of the worm, per anum.
TREATMENT. (1) Avoid patent "worm powders." (2) Prevent scratching during sleeping, enclosing each hand in a sock that is tied around the wrist. (3) Smear the skin around the anus with white precipitate ointment. (4) Give enemata of salt water or quassia daily for ten days. (See *Enemata*).	TREATMENT. Santonin, given under medical supervision.	TREATMENT. Pumpkin seeds three ounces, crushed and soaked in water for twelve hours, should be taken on an empty stomach and a purge an hour later. Unless the head comes away the parasite will grow again. Under medical supervision male fern is often efficient.

Certain other worms are worthy of mention. The *Trichina spiralis* gives rise to a disease in man termed *trichiniasis*, the symptoms of which resemble those of typhoid fever. The immature worm lives in the muscles of the pig. When pork, infested in this way, is eaten without having been very thoroughly cooked, the worms grow, and within a week each produces hundreds of young, which bore through the wall of the intestines and make their way into all parts of the body. This migration is accompanied by fever, diarrhœa, and pains in the limbs, which last till the migration is over, usually for a month or so. When the worms have settled down in the muscles they cause no further symptoms. The worms survive in swine flesh for a considerable time after the pig is slaughtered, and they even withstand the process of smoking by which ham is made. Raw ham is thus liable to spread the disease, and, as a matter of fact, the disease is prevalent only in districts where sausages made of raw ham are largely eaten, as in North Germany and in the German quarters of American towns. The Germans have largely reduced the prevalence of the disease by a thorough system of meat inspection, and by attention to the way in which

swine are housed and fed. The normal life history of the worm is to use the pig and the rat as a host alternately, infection of man being only an accidental occurrence.

The tunnel worm, *Anchylostomum duodenale*, lives in the small intestine in large numbers and feeds on blood sucked from the intestinal wall. The symptoms produced are a severe anæmia known as Miner's Anæmia or Egyptian Chlorosis. The disease is prevalent amongst miners and others, especially in Egypt and Brazil. It caused serious consequences to many of the men engaged on the St. Gothard tunnel, and it has appeared recently amongst the Cornish miners. The worm gains entrance to the body in drinking water contaminated with sewage.

Bilharzia haematobia is common in Egypt and at the Cape. It caused serious illness in Napoleon's Egyptian campaign, but the cause was not then recognised. It attacks the male population much more often than the female, and in the Transvaal is remarkably prevalent amongst the Boers.

WOUND is popularly understood to mean a breach in the skin, with or without injury to the underlying tissues, produced by violence. In Law, a wound is a wider term; thus a man who breaks another's leg "wounds" him even though the skin is not broken. In Medicine, wound is used in its popular sense. Five varieties are recognised, viz., incised, punctured, stab, lacerated, and contused wounds. An incised wound is one made by a cutting instrument; a punctured wound is one made by the thrust of a pointed instrument devoid of cutting edges, e.g. a nail; a stab is produced by a pointed instrument with cutting edges, e.g. a dagger, and the wound thus produced is really a combination of a punctured and an incised wound; a lacerated wound is one produced by tearing—a common result of machinery accidents; a contused wound is one in which the tissues have been smashed by a blow, as in a fall or the blow of a hammer.

The HEALING OF WOUNDS is favoured by attention to the following five rules:—(1) Arrest bleeding, (2) cleanse the wound, (3) bring the cut edges together when this can be done with safety, (4) provide for the escape of discharges, (5) keep the injured part at rest.

The first of these rules is discussed under *Hæmorrhage* (see *First Aid*). The cleansing mentioned in the second rule is necessary, because germs are the chief cause of wounds not healing. It should be carried out by syringing the wound or immersing it in a mild antiseptic lotion. (The choice of an antiseptic is discussed under *Disinfection*.) With respect to the third rule, the question whether to bring the cut edges together or not is often difficult to answer. When in doubt, it is better to leave the wound open. In punctures, closure of the wound is certainly the worst treatment possible, and in lacerated and contused wounds, it had better never be attempted by the layman. In clean cuts, however, the edges should be brought together, preferably by the stitches of the surgeon, but failing a surgeon, resort must be made to collodion, Friar's balsam, or strapping; it is doubtful, however, if the use of collodion or Friar's balsam is safe in lay hands, as it is essential that only cuts that are entirely cleansed from germs should be treated with either of these remedies.

(1) *Collodion* is best applied on cyanide gauze, in the following way. Several layers of gauze should be cut, rather larger than the wound. The cut having been cleansed and all bleeding arrested, the surrounding skin must be thoroughly dried or the collodion will not adhere to it. The gauze should then be dipped in the collodion and applied to the wound, layer by layer, as any attempt to apply several layers at once will not prove satisfactory. In drying, the collodion contracts and draws the edges of the cut together, and at the same time forms a protective coating over it. This method is well adapted to small, clean cuts.

(2) *Friar's Balsam* is not so good, though it may be applied if necessary either in the same way as collodion or by simply pouring it over the cut, provided the cut is thoroughly cleansed first and then dried.

(3) *Strapping* may be used to draw the edges of a longer cut together, though it is very inferior to surgical stitches. The best material is either rubber-strapping or Leslie's hospital strapping. A dry dressing just wide enough to cover the cut should be applied first, and over these, strips of strapping should be applied in pairs, each pair making a cross, the centre of which is over the wound. The strapping must first be heated by wrapping it round a metal jug of hot water with the sticky side outwards. The lowest corner of the wound should not be covered by strapping, so as to enable any discharge that may form to escape. Over the strapping a pad of wool is placed, which is secured by a bandage, and the dressing is then complete.

When it is decided not to bring the edges of the wound together, a dry dressing should be applied, unless there is a large raw surface, as in the case of many burns, when vaseline or eucalyptus ointment spread on lint or clean linen is preferable. The dry dressing should be impregnated with antiseptics; boric lint or cyanide gauze are two of the best preparations, but when these are not obtainable, clean linen rag may be used and the antiseptic provided by dusting the wound with boric powder. A pad of sterilized absorbent wool should be placed over the dry dressing, and the whole enclosed with a bandage. Rest must then be secured for the injured part by the use of splints, slings, or by confinement to bed.

THE AFTER-TREATMENT. Clean cuts should be left alone after the first dressing for a fortnight, when the dressing should be removed, and the wound be found to have healed. Wounds, the edges of which have not been brought together, should be dressed daily; the wound should be syringed with a mild antiseptic at blood heat, and then bandaged up as before. The bandage and wool, if not soiled, may be used again, but the dressing in contact with the wound should be renewed daily.

The indications for departure from the above procedure are:—

(1) The *appearance of blood or discharge* on the bandage, which demands immediate removal of the dressing and an inspection of the wound. If bleeding is going on it must be arrested (See *First Aid*); if the discharge is copious the dressing must be renewed each time it soaks through, without delay.

(2) The *occurrence of pain* or throbbing, accompanied by a rise of temperature. These symptoms are likely to occur on the third day, if the wound has not been properly treated or was much bruised in the first place. They indicate that the wound is poisoned by the invasion of germs, which have caused the formation of matter, or as it is termed, pus. If the germs had been excluded, pus would not have formed, and if the pus is not allowed free means of escape it will cause blood-poisoning. In this case the dressings must be removed, when the wound will be seen to be "angry," that is, inflamed. Any strapping present should be removed and the wound should be opened up at its lower corner, and after being thoroughly bathed in a mild, warm antiseptic it should be treated with boracic fomentations every few hours until the inflammation has subsided, when the dry dressing may be resumed. [See *Fomentation*.]

N.B.—When the wound consists of a large raw surface and makes but little progress, stimulating ointments may be applied as directed under *Ulcer*.

THE TREATMENT OF SPECIAL CASES: (1) Wounds of *mucous membrane*, e.g. a wound in the mouth, should be treated, after the bleeding is checked, with mild antiseptics used as a gargle or spray. For this purpose Condy's fluid answers well, and such wounds usually heal readily. (2) Wounds due to a *foreign body* imbedded in the flesh, such as gunshot wounds or needles in the hand, should be bandaged up and a doctor sent for. When there is no chance of medical aid, the wound should be fomented until it heals or the foreign body is discharged, and meanwhile the wounded part must be kept at rest, which is best secured in the case of a limb by the use of a splint.

A *fish-hook* may need extraction. This is best accomplished by cutting off the dressing, so as to leave the shank bare, and pushing the hook steadily onward through the flesh till the point appears and can be seized with pincers. The hook is then readily withdrawn if the shank be first snipped off close to the skin; or it may be pushed on till the barb appears, which is then cut off and the hook withdrawn.

(3) Wounds with *flaps of skin* hanging by a small portion. The wound should be cleansed and the flaps replaced, as the probability is that the latter will live. (4) Wounds caused by *bites*. (See *Bites* and *Snake-bite*.) The material

for dressing wounds, which should be kept handy by those living far from a doctor, include:—

Some antiseptic, e.g. Sanitas, Chinosol, Jeyes', Condy's fluid, etc., boric powder, boric ointment or eucalyptus ointment or vaseline, collodion and a paint brush for it, scissors, dressing forceps, safety pins, bandages of sizes to suit the finger, arm, and chest, sterilised absorbent wool, cyanide gauze, boric lint, plain lint, oil-silk or christia tissue.

The dressings should be bought sterilised and kept in an air-tight tin. They may be sterilised again at any time by placing them in an air-tight tin in a brisk oven for half an hour. Those who live within easy reach of medical aid may, nevertheless, find the following useful at times: A little cyanide gauze and collodion for clean cuts; some antiseptic, some boric lint, christia tissue, absorbent wool, and a few bandages.

WRIST-DROP, a symptom of lead poisoning. [See *Dangerous Trades*.]

WRITER'S CRAMP is a condition in which the writer gradually loses control of his pen, until he cannot write at all. The sufferer is usually a clerk or professional writer of some kind, those engaged in copper-plate work being specially liable. The symptoms begin with aching of the hand after writing for the usual time, in a few weeks to this symptom is added unsteadiness, which is usually remedied at first by grasping the pen more tightly; later the pen is unsteady, however tightly it is held, and finally cannot be grasped at all in spite of the fact that for all other movements the hand is as useful as ever. The *treatment* should be rest in the early stages, and the use of a soft broad nib or pencil for such writing as is performed. Still better is the use of a type-writer of the piano-playing variety, and the abolition of all writing for some months. Massage and galvanism are also useful. Similar "occupation-cramps" attack, though more rarely, the members of other occupations, as in violin playing, hammering, and even milking. In all cases rest of the muscles involved is imperative.

WRY-NECK is a twisting of the neck to one side. It may date from birth, but more commonly develops later. Chill may cause muscular rheumatism on one side of the neck, producing the well-known "stiff neck"; more rarely the wry-neck is due to spinal disease. A still rarer form of wry-neck is spasmodic wry-neck, a disease of middle age characterised by intermittent spasm of the muscles of one side, which forcibly draw the shoulder up and the back of the head down, till they nearly meet, whilst the chin is thrust to the opposite side. Like many spasmodic affections it is made worse by the presence of strangers, and ceases during sleep. The treatment should be in medical hands [Refer to *Stiff Neck*].

X RAYS, or **RÖNTGEN RAYS**, are now extensively used both in diagnosis and treatment. They are of great service, not only in the diagnosis of fractures, but also in detecting stone in the kidney, for seeing the part of the lung attacked by consumption, for detecting aneurysm, for examining diseased joints, and for the localisation of bullets and needles that are buried in the flesh. In nearly all cases of fracture or of injury to a limb near a joint, it is well worth resorting to the X rays before any active treatment is adopted. In the same way, a needle buried in the hand or foot may require very prolonged dissection to extract, unless the exact position be first determined by means of the X rays. Mr. Hurry Fenwick, in the Medical Annual for 1903, urges the importance of having any child examined by the X rays who suffers from recurrent attacks of severe stomach-ache. For in such a case stone in the kidney may be detected, which, according to this authority, is a more frequent cause of "stomach-ache" than is commonly thought. In the detection of early consumption, it is noteworthy that not only is the affected portion of the lung more opaque than normal, but the diaphragm on the affected side moves less; and the latter sign is now regarded as important.

The use of the X rays is restricted mainly to the cure of rodent ulcer, lupus and ringworm. For advanced rodent ulcer with much ulceration no treatment is equal to the X rays, though for the early stages excision or the Finsen light seems preferable. The healthy part of the face is protected from the action of the rays by tinfoil or preferably sheet lead, and a hole is punched in the lead at a point corresponding to the ulcer. The treatment has usually to be repeated over many months, though cures in less than twelve sittings have been reported. In the treatment of lupus, the X rays have now largely supplanted the Finsen light method, as the latter takes so much longer to act; the scar, however, ultimately produced by the latter is said to be better than that resulting from the former.

Such active rays naturally have their *dangers*. Cases of severe burns have occurred from the carelessness or ignorance of those who have worked with them. Hence their use should be confined to thoroughly trained experts. The repeated exposure of the hand to the X rays merely to show the bones of the hand for the amusement of others at a conversazione or the like, is not justifiable, an acute inflammation of the skin may be thus caused. Many experts have found to their cost, that the repeated exposure to X rays has caused in themselves a chronic inflammation of the skin of the hands, with the formation of corns and painful cracks, that are most difficult to heal, and in a few cases, inflammation of the inner surface of the eye-lids has also been reported. For an acute inflammation, the application of lead lotion is recommended by Dr. Hall Edwards, and for the chronic condition, an ointment, composed of salicylic acid and menthol of each gr. 20, cocaine, gr. 1, and lanoline an ounce, has been found a useful application, whilst exposure of the injured parts to X rays or bright sunlight has to be rigidly avoided. The use of india-rubber gloves, whilst working with X rays, is a valuable preventive measure (see the *British Medical Journal* of October 15th, 1904).

YAWNING is a curious act, the purpose of which is not clear. It is readily induced by a condition of ennui or by the sight of another person yawning. It is not produced merely by fatigue; for instance, it is far more common during listening to a prosy speech, even for a few minutes, than it is at the end of a long day's walk or after a football match. Although more common perhaps in a stuffy room, it is not one of the regular symptoms of commencing asphyxia. When present to a marked extent, yawning may indicate the presence of anæmia, or nervous exhaustion. [See *Anæmia, Debility*.]

YEAST was at one time a fashionable domestic remedy for boils, but it is now superseded by more efficient remedies. It is possible that the phosphate it contains has some value as a tonic.

YELLOW FEVER is an infectious disease characterised by jaundice, hæmorrhages, and an elevation of temperature. The actual parasite which causes it is not yet known, but it is clear that mosquitoes can convey the disease just as they convey malaria from the sick to the healthy. The mosquito concerned is *Stegomyia fasciata*, which is one of the commonest species met with between the 30th parallels. Its grubs breed in water tubs and cess-pools around the houses. Attention to this fact has had an excellent result. In Havana the draining of all yards, the covering of all exposed water near the house with oil, and the use of mosquito nets has resulted in the stamping out of yellow fever in that town ten months later. Until these precautions were taken in 1901, yellow fever had never been absent from Havana for 140 years at least (see Colonial Medical Reports for 1901 and 1902). Yellow fever has its home in the West Indies and the West Coast of Africa, whence it is at times conveyed by shipping to distant ports.

ZYMOTIC DISEASE. See *Fevers*.

PREFACE.

TO this section of the book we must give a prefatory word as to its object and scope. It consists of four distinct parts. The first part, on "Parliament and Administrative Government" will we hope prove interesting to every Briton who values the political institutions of his country. The second part, on "Local Government" will provide the public-spirited citizen, who wishes to render service as a County or Borough Councillor, or in some similar capacity, with the legal knowledge that is essential to him as a guide in the performance of his public duties. The third part, on the "General Principles and Practice of English Law," will not only serve for occasional reference on the part of the general reader, but will at the same time serve as a guide to any one who desires to study the broad lines of English law. The fourth part, on "Commercial Law," will supply information that is quite indispensable to the merchant, tradesman and others engaged in commercial business.

Whilst venturing to hope that the brief account of the laws of England here given will serve a useful purpose as a general guide in the ordinary run of business and practical life in which law enters as an important factor, we do not pretend that it will enable any one to dispense with the services of a lawyer, when it is thought expedient to bring the matter in dispute into a law court. It may, however, help to discourage a hasty recourse to litigation by giving a man a just view of the rights and liabilities of each party in the dispute, and by impressing him with the existence of the many hidden pit-falls into which the unwise litigant is in danger of falling. In fact, this little treatise on the law aims not at helping a man through the law courts without professional assistance, but rather at keeping him outside altogether when his case is of doubtful issue. Though it would be unwise for a man to presume upon his slight knowledge of the law to judge for himself whether or not his case is strong enough to bring into court, and still more unwise, if brought there, for him to dispense with professional aid in conducting his case, yet he might find his "little learning," instead of being "a dangerous thing," of great service in helping him rightly to appreciate the argument of his lawyer and the soundness of his advice when consulted about the expediency of "going to law."

The arrangement aimed at is one that will make reference easy, and present on each important subject the main points in one view. The attempt to attain the latter object has entailed a certain amount of repetition, but in this way has been avoided the necessity of much cross reference. Many subjects, however, have been treated in different connections, and in various aspects, and therefore in different parts of the book. When, then, further information on a subject is desired reference should be made to that subject in the Index, where will be found the different places in which it occurs.

A LEGAL GUIDE.

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PART I.

PARLIAMENT AND ADMINISTRATIVE GOVERNMENT.

INTRODUCTORY.

It is often stated that the government of this country is a limited monarchy, or that the British nation is ruled by a sovereign with limited powers. This popular notion is incorrect. In reality the country is governed by a sovereign Parliament, consisting of three interdependent parts—the Crown, the Lords, and the Commons. From a legal point of view, it should be remembered, Parliament includes the King as well as the two houses.

Parliament is the supreme, but not the only law-making body in this country. It has the right to make or to unmake any law whatever, and no person or body of persons in this country has a right to over-ride or to set aside or to dispute the validity of laws made by Parliament. In this respect Parliament differs from nearly every other legislature on the face of the earth. Yet when it is said that Parliament is a sovereign law-making body, and has power to make or unmake any law it pleases, this must not be taken to mean that there are not *any* limitations on the authority of Parliament. What is meant is that there are no legal limitations on the power of Parliament, that there is no law and no person which can call in question the authority or the validity of Acts of Parliament. Nevertheless, there are real limitations to its power. Parliament must legislate in harmony with the wishes and the opinions of the people. No law passed by Parliament could be enforced if it outraged the beliefs or the conscience of the majority of the people in this country. If Parliament were to pass such a law, there would be a conflict between Parliament, the legal sovereign, and the electors, the political sovereign, and of the issue of such a conflict there can be no doubt.

As will be seen later, the King has certain rights, powers, and prerogatives which enable him to do certain things without the concurrence of the Lords and Commons. These rights are the survival of a time when England was under the rule of an absolute monarchy and not of a sovereign Parliament. The constitution has developed gradually during the last seven centuries and in the course of its development certain prerogatives have been wisely left to the Crown, prerogatives that could not now be constitutionally abrogated without the king's consent.

Although the powers inherent in Parliament include not only the legislative but also the executive and administrative functions of government, it has been found convenient in practice to delegate the executive and administrative government of the country to other bodies (e.g., the Departments of State, and the Courts of Law) which are all subordinate to, and for the most part derive their authority from, the sovereign Parliament. In the pages that follow it is proposed to deal with the legislative, executive, and administrative machinery of government, and more particularly with the personnel of the various departments.

THE CROWN.

TITLE TO THE THRONE. In Early English History the occupant of the throne was elected by the Witenagemot, a council of the chief men of the nation. Gradually, however, the title by election was supplanted by that of inheritance, due regard being paid to the rules of primogeniture. But often, as in the case of many of the Yorkist and Lancastrian kings, the right to the throne was merely a right gained by might and conquest; and sometimes, as in the case of William III. and Mary, the sovereign was chosen by the representatives of the people in Parliament assembled. Now, however, the title of the sovereign to the throne dates from the Act of Settlement, 1701, which provided that on the death of William III. and Queen Anne without issue the next in the order of succession should be Sophia, the Electress of Hanover (grand-daughter of James I.) and the heirs of her body, being Protestants. On the death of Queen Anne, George I., the son of the Electress of Hanover, succeeded to the throne and his descendants have since continued to occupy it. The occupant of the throne must be a Protestant, and may be either a male or a female, though among brothers and sisters of the royal family each brother's title to the crown is held superior to that of any sister. In fact, the heir to the throne succeeds much in the same way as an ordinary heir-at-law, except that females do not hold the title in coparcenary. (Refer to "Coparcenary" in *Index*).

ACCESSION. By various statutes it has been enacted that no office under the Crown shall become vacant by reason of a demise of the Crown; but that the holders of such offices are to continue in their duties for six months unless before that time they have been confirmed in, or removed from, their respective appointments. When a sovereign dies it is customary on the following day for his successor to be publicly proclaimed in a Proclamation issued by the Lords Spiritual and Temporal, assisted by members of the Privy Council, members of the Royal Family, the Lord Mayor and Aldermen of London and other important personages. The new sovereign then takes and subscribes the oath relating to the security of the Church of Scotland which is required by the Act of Union. He then usually issues a proclamation confirming the holders of offices in their appointments. Such a proclamation was issued by King Edward VII., and the new king George V., following the precedents established by their predecessors. About a year afterwards when the Court has emerged from mourning the coronation takes place.

CORONATION. This is a religious ceremony which, in the days when kings were elected, showed the sanction of the Church to the choice of the Witenagemot. The coronation also confirms the sovereign in his position of supreme head of the Church of England and Defender of the National Faith. The ceremony is full of symbolism and takes place in Westminster Abbey in the presence of the Peers and persons of distinction. The principal portions of the service consist in

(1) The *Recognition* whereby the new sovereign is publicly presented to the people.

(2) The *Oaths* whereby he promises to govern according to the statutes, laws and customs of the country and to maintain the Protestant religion.

(3) The *Anointing* with oil whilst seated in the chair which is said to have been used in the coronation of Edward the Confessor.

(4) The *Investiture*, whereby he is invested with a royal robe, a ring, an orb and other symbolical appointments.

(5) The *Coronation* or the crowning of the King by the Archbishop of Canterbury.

(6) The *Homage* whereby the Peers of the realm swear fealty.

THE CIVIL LIST. Originally the expenses of our sovereigns were paid from what were called the "Hereditary Revenues of the Crown," which consisted of the rents of Crown lands supplemented by certain taxes and excise duties voted by Parliament for that purpose. Now, however, it has become the custom for each successive sovereign to surrender his hereditary revenues to the Commons in exchange for a Civil List paid from the ordinary taxation of the nation. In accordance with this custom His Majesty King Edward VII. placed unreservedly his hereditary revenues at the disposal of the Commons, who by the Civil List Act, 1901, directed them to be paid into the Exechequer and made part of the Consolidated Fund. In return the Commons directed that the King's Civil List should be £470,000 annually; and that in addition annuities should be granted of £20,000 to the Prince of Wales, £10,000 to the Princess of Wales, and £18,000 to Trustees for the three daughters of his Majesty.

The Civil List of King Edward VII, was £470,000 made up as follows:

		£
(1)	Their Majesties' Privy Purse	110,000
(2)	Salaries of His Majesty's Household and retired allowances	125,800
(3)	Expenses of His Majesty's Household ..	193,000
(4)	Works	20,000
(5)	Royal bounty, alms and special services	13,200
(6)	Unappropriated	8,000
	Total	£470,000

The Committee appointed to settle the Civil List for King George V., recommended that no alteration should be made. By the death of King Edward VII., the contingent provision of £70,000 a year made for Queen Alexandra in 1901, now becomes operative. Provision will be made for the King's younger children, and for the Princess of Wales, when the Prince marries.

THE ROYAL FAMILY. The family of a sovereign has no place strictly speaking in our Constitution, neither do its members take any part in the political government of the country. When a Queen Regnant marries, her consort takes no part in the government of the State but the offspring of the marriage are nevertheless considered to be members of his House or Family.

The present Royal Family consists of the descendants and first cousins of Queen Victoria and their respective consorts. By the Royal Marriages Act, 1772, no descendant of George II. other than the issue of princesses married into foreign families may marry without the previous consent of the sovereign; and if they marry without such consent the marriage will be void, except where the descendant, being over twenty-five years of age, has given twelve months' notice to the Privy Council of his intention to marry without the sovereign's consent. If during the twelve months both Houses of Parliament have not expressly declared their disapprobation of the intended marriage, it may take place and will be perfectly valid, save that the sovereign is not bound to accord any rank, precedence, or royal recognition on a person who has thus married a member of the Royal Family.

Members of the Royal Family are addressed as His (or Her) Royal Highness. The male members on attaining years of discretion are usually made dukes, but they do not, of course, thereupon cease to be Princes, by which title they were previously styled. The Consort of a King bears the title of Queen and has her own Household, though she takes no part in the government of the country. She however, is crowned by the Archbishop of York at the Coronation, and usually accompanies the King at the opening of Parliament and other functions. But the consort of a Queen Regnant is not called King. Queen Victoria conferred upon her husband Prince Albert the title of Prince Consort with precedence next to the Queen by Letters Patent in the exercise of her Royal Prerogative. The eldest son of the sovereign is always Duke of Cornwall and usually has the additional titles of Prince of Wales and Duke of Chester, or Duke of York, conferred upon him by Letters Patent. The eldest daughter of a sovereign is styled the Princess Royal.

ROYAL PREROGATIVES.

1. MAKING TREATIES. The right of making treaties with Foreign Sovereigns and States is a prerogative of the Crown. Being a royal prerogative it is not necessary for any treaty made in this country to be submitted to and confirmed by the Upper and Lower Houses of Parliament. In this respect Great Britain differs from the United States of America and some other countries. In practice, however, the King never makes any treaty except on the advice of his ministers, and as the latter are subject to Parliamentary control, the country's interests are fully safeguarded against any abuse of this prerogative.

2. DECLARATION OF WAR. The Crown has also the prerogative right of making war on Foreign States. Here again, however, the Crown does not now act except through the instrumentality of its ministers, who are responsible to Parliament, and who may be impeached if they give wrong advice. And as the purse-strings are in the hands of "His Majesty's faithful Commons," there is no danger whatever of any war ever being undertaken without Parliamentary sanction and control.

3. TITLES AND HONOURS. The Crown as the "Fountain of Honour" has the prerogative right of creating peers and regulating the order of precedence. It confers the order of knighthood and the various other orders and titles upon its distinguished servants. So also it appoints the Judges who administer our law, and grants commissions to officers in His Majesty's forces. The Crown also, in effect, appoints the bishops; for on a vacancy occurring the King grants to the Dean and Chapter a *congé d' élire*, which is a licence under the Great Seal to elect a person named in certain letters missive which accompany the licence. The Dean and Chapter are practically bound to elect the Crown's nominee.

Although the King's right to confer honours and orders is an absolute prerogative, in practice the appointments are usually made after consultation with his ministers; so that peerages, knighthoods, companionages and other titles of honour are conferred not only on those who have performed some conspicuous service of importance to the nation, but frequently on those who have merely done good service in the interests of the political party which happens to be in power at the time.

4. OWNERSHIP OF LAND. In the eye of the law the King is the ultimate owner of all land in the country. Or, as it is said, "all land is held mediately or immediately from the Crown." So when the owners of land die intestate and without heirs, the Crown succeeds to the property. The Crown as ultimate owner of the soil has also a prerogative right to gold, silver, or other treasure trove found therein, the true owner whereof is unknown and cannot be discovered.

5. THE PREROGATIVE OF PARDON. The Crown as "Fountain of Justice and Mercy" has the right of pardoning persons convicted of crimes—a right, however, that is only exercised upon the advice of the Home Secretary. A pardon may be granted before or after trial and sentence. A free pardon from the Crown was, until the passing of the Criminal Appeal Act, 1907 (see p. 482), the only way known to the law of releasing an innocent person from prison after a miscarriage of justice. Any compensation granted in such a case is according to our laws, an act of grace, and cannot be demanded as of right. When a sentence of death is commuted to penal servitude for life, it is in form a pardon. A pardon cannot be pleaded to an impeachment nor granted to one who detains a subject outside the realm.

6. **"THE KING CAN DO NO WRONG."** This oft-quoted phrase requires some explanation. If a wrongful act be committed in the name of the King it is assumed that he is not responsible for the deed but his ministers. As the "Fountain of Justice," it is also assumed that no injustice can be laid to his charge. So it is impossible to take any proceedings in our Courts against the King for any crime or tort. If, therefore, property has come into the possession of the Crown which rightly belongs to a subject, the latter can only proceed by way of petition. The person aggrieved draws up a petition which is left at the Home Office for His Majesty's *fiat* (i.e., permission to proceed). In due course, the fiat having been granted, the petition is heard in the High Court of Justice and judgment given upon it in much the same manner as in the case of actions between subject and subject.

THE ROYAL HOUSEHOLD.

The King and the Queen Consort have each a separate household, some of the officials whereof are honorary whilst others are paid out of the Civil List. Most of the minor officials are permanent, but it is a peculiarity of our constitution with regard to the greater officials of the Household, that they go out of office with every change of government and that they are chosen from persons of high rank among the political party which happens at the moment to be in power. This is done to avoid friction between the King and his ministers, the latter of whom might otherwise think that he was wrongly influenced by the persons unfriendly to the ministry in his *entourage*.

PRINCIPAL OFFICIALS OF THE COURT.

1. **THE LORD STEWARD.** He is the chief officer of the royal household. He is a member of the Government and almost invariably a peer of the realm. He presides at the *Board of Green Cloth*, a sort of court which originally had some jurisdiction for the keeping of the peace in the king's palaces and which still deals with all the accounts of the Royal Household. He has the selection and control of all the officers and servants of the household, except those belonging to the Chapel, the Chamber, and the Stable; he also appoints the royal tradesmen. Under him are the *Treasurer* and the *Comptroller* of the Household, who also are members of the ministry.

2. **THE LORD CHAMBERLAIN.** The next great officer of the Household and a member of the ministry is the Lord Chamberlain. He appoints the sovereign's private attendants and manages the ceremonial functions of the Court. It is his duty to see that none but fit and proper persons are permitted to attend these functions or be presented at Court. He has also many other duties not immediately connected with the household. Thus he has to examine and license plays before they can be publicly produced for hire in this country. He is assisted in his household functions by the *Vice-Chamberlain*.

3. **MASTER OF THE HORSE**, the third great officer of the Court, who has the superintendence of the royal stables, with authority over all equerries and grooms, and the appointment of all saddlers and farriers, &c., in the royal service. The office is held in high honour, and its holder rides next to the sovereign on all state occasions.

4. **OTHER OFFICIALS.** There are besides certain other officials who go out of office with the Government, namely, the respective *Captains* of the Gentlemen-at-Arms and the Yeomen of the Guard, and the *Lords-in-Waiting*, whose number is limited to seven, and whose functions are ceremonial, not administrative.

Appended are the salaries of these officials:—

The Lord Steward	£2000	per	annum.
Treasurer of the Household	£900	„	„
Comptroller of the Household	£900	„	„
The Lord Chamberlain	£2000	„	„
Vice-Chamberlain	£900	„	„
Master of the Horse	£2500	„	„
Lords in Waiting, each	£700	„	„
Captain of the Gentlemen-at-Arms	£1200	„	„
Captain of the Yeomen of the Guard	£1200	„	„

5. **PERSONAL APPOINTMENTS.** Besides the ministerial appointments mentioned above, are certain personal appointments made by the King himself, the most important of which are the Master of the Household, the Keeper of the Privy Purse, and the King's Private Secretary

6. **THE POET LAUREATE**, an official attached to the King's household, was originally called the "King's Versifier." The honour is usually conferred on a poet of some distinction and is held for life. He has no compulsory duties to perform, but he is expected to compose an ode of honour on special state occasions.

GREAT CEREMONIAL OFFICERS.

1. **THE LORD GREAT CHAMBERLAIN.** This official must not be confounded with the Lord Chamberlain mentioned above. His office is hereditary and is claimed by the two families of Cholmondeley and Willoughby de Eresby, it being usual for a member of each family to hold it in turn. He attends the Sovereign at his Coronation and at the opening of Parliament and other similar functions, and it is his duty to see that Westminster Hall and the Houses of Parliament are properly furnished and decorated on great occasions of state.

2. **THE LORD HIGH STEWARD OF ENGLAND.** This official again is not to be confounded with the Lord Steward of the Household. There is no permanent High Steward but the office is revived when occasion requires. He has ceremonial duties to perform at Coronations; but his principal duty is to preside at the trial of Peers. When the proceedings are ended the High Steward snaps his wand of office.

3. **THE LORD HIGH CONSTABLE OF ENGLAND.** This is an official appointed only occasionally for the purpose of assisting at coronations and other like ceremonies.

4. **THE EARL MARSHAL.** This great officer of state is head of the College of Arms which grants coats of arms and crests to those entitled to bear them. The office is hereditary and is held by the Duke of Norfolk. Under him are the three kings of Arms—Garter, Clarencieux, and Norroy—the six heralds of Arms, and the four pursuivants of Arms.

PARLIAMENT.

ORIGIN OF PARLIAMENT. The Great Council of the nation from the time of the Norman Conquest had usually been composed only of barons, bishops, and greater abbots, although on two or three occasions in the 13th century, the smaller vassals of the crown had been represented by two knights from each shire. But in 1265 Simon de Montfort, who at the time was the real ruler of England, though Henry III. was nominally king, not only summoned to his Parliament two knights from each shire but also two burgesses from each chief city and borough. He was thus the first to summon representatives of the towns, and to form a parliament composed, as to-day, of peers, county members, and borough members.

It was not, however, until thirty years later that the practice thus begun was repeated. It was not till 1295 that Edward I. summoned a full parliament, consisting of barons, bishops, knights of the shire, and burgesses (or representatives of the towns), "it being meet," said the king, "that what touches all should be approved by all." This complete form of parliament met with general approval, and from that time parliament assumed its permanent shape. Though the admission of the burgesses and knights of the shire to the assembly of 1295 completed the fabric of our representative constitution, it was only by degrees that the Commons (as the knights and burgesses were styled) established the right not only to take part in matters of taxation—for which they were originally called—but in the work of legislation, and the control of government.

NOTABLE DATES IN PARLIAMENTARY HISTORY.

1265. First Parliament to which were summoned repretatives of the chief towns.
1295. The *Model Parliament*, being the first parliament summoned by royal authority in which the three estates of the realm—the clergy, the nobles, and the commonalty—were represented. All parliaments from this date were composed of these three orders.
1322. Commons obtained recognition of their right to share in all the deliberations of parliament.
1341. Commons sat apart from the Lords, the knights and burgesses sitting as one body. From this date, probably, parliament met as two Houses.
1376. The *Good Parliament* attacked the king's ministers by *impeaching* them before the House of Lords.
1430. Parliamentary elections first regulated by statute, the franchise being secured to all freeholders, whose lands were worth 40s. a year.
1509. Acts of Parliament printed from this time.
1536. Wales, Cheshire, and Monmouthshire now first represented in parliament.
1542. Members protected from arrest for debt.
1614. *The Addled Parliament*, so called because dissolved in anger by James I. without passing a single measure.
1640. *The Short Parliament* met in April and was dissolved in three weeks for discussing grievances instead of voting supplies.
1640. *The Long Parliament* met in November and made war on the king, Charles I.
1648. *The Rump Parliament* composed wholly of *Independents* who put King Charles on his trial, all the other members having been excluded by the act of violence known as "Pride's Purge."
1649. House of Peers abolished but reinstated at the Restoration, 1660.
1653. Cromwell forcibly dismissed the Rump Parliament.
1660. A *Convention Parliament* (that is, one not summoned by royal authority), voted the restoration of Charles II.
1678. Roman Catholics were excluded from parliament.
1689. A *Convention Parliament* offered the crown to William and Mary on condition of their acceptance of the Bill of Rights. From this date Parliament, not the King, the paramount power.
1694. Triennial Act which limited the duration of parliament to three years, security having been already taken for the annual meeting of parliament by making votes of supply for one year only at a time.
1697. Each vote of supply now limited to the service for which it was granted.
1707. First parliament of Great Britain.
[By the Act of Union between England and Scotland it was agreed that the two countries should have a single parliament, Scotland being represented by 16 peers and 45 commoners.]
1716. Septennial Act which extended the maximum duration of parliament from three to seven years.
1771. Reporting the debates in the House of Commons practically permitted, but no "Reporters' Gallery" before 1835.
1801. First Parliament of the United Kingdom of Great Britain and Ireland.
1801. Clergymen prohibited from becoming members of the House of Commons.
1829. Roman Catholics admitted to parliament.
1832. First Parliamentary Reform Bill passed.
1833. First Quaker admitted as M.P. on his affirmation simply.
1834. Houses of Parliament destroyed by fire.
1835. Separate accommodation for reporters first provided. Previously reporters sat in the Strangers' Gallery.
1840. M.P.'s relinquish the privilege of franking letters (that is, of sending them post free).
1840. The new "Palace of Westminster," as the Houses of Parliament are called, now begun.
1847. The Lords took possession of their new chamber.
1852. The Commoners met in their new chamber.
1858. First Jew admitted as M.P.
1867. Second Reform Bill passed.
1868. Voting by proxy in the House of Lords discontinued from this date, though under certain conditions it might be revived.
1872. Ballot Act passed, by which all voting at Parliamentary Elections has since been secret and by ballot.
1880. Members in certain cases allowed to affirm instead of taking an oath.
1884. Third Reform Bill passed.
1906. A new party formed of "Labour Members."
1909. The refusal of the House of Lords to pass the Budget until a general election had taken place upon it raised the great constitutional question whether the House of Lords had the right to reject the Budget, which it is claimed is a purely money bill, and the House of Commons has sole control of supplies.
1910. A conference of representatives of the Government and the Opposition met to consider the question so raised.

PARLIAMENTARY REFORM. This has been effected by three Reform Bills, each of which has lowered the franchise and redistributed the seats in Parliament.

First Reform Bill, 1832. The franchise was made uniform in all boroughs instead of depending, as formerly, on custom, which varied with the locality. Now, in all boroughs, the franchise was given to those who occupied premises worth £10 annually. In counties to all freeholders of land worth at least 40s. per annum, to the holders of leases for sixty years to the annual value of £10, and to all farmers and others who paid at least £50 a year as rent. It disfranchised fifty-six boroughs, each of which had less than 2000 inhabitants, and it took one member from each of thirty boroughs more that had less than 4000 inhabitants. This gave 143 seats for distribution among the more populous districts.

Second Reform Bill, 1867. The franchise in boroughs was given to householders occupying houses rated at £5 at least, and to lodgers paying £10 a year. In the counties the franchise was lowered to £12 annual rent. At the same time thirty-five seats were taken away, partly from corrupt boroughs, partly from the less populous, and given to London and other populous places.

Third Reform Bill, 1884–5. This bill extended to the counties the household and lodger suffrage conferred by the previous Reform Bill on the boroughs. All boroughs having less than 15,000 inhabitants were to cease as such, and to form part of the county in which situated; and those having less than 50,000 inhabitants were to lose one member if previously entitled to two. 160 seats obtained in this way were divided among counties and boroughs with a large population. The total number of members was also raised from 652 to 670.

SUMMONING OF PARLIAMENT. Parliament is summoned by the Sovereign, and its summoning or otherwise was once an absolute Royal Prerogative; but it is now to a certain extent regulated by Acts of Parliament and the necessities of public business. By the unrepealed sections of the Triennial Act, 1694, it is provided that "a parliament shall be holden once in three years at the least," so that after one parliament has come to an end, it is legally incumbent on the sovereign to summon another within three years. But owing to the fact that taxes are voted annually and that the Army Act which authorises the existence of the standing army has to be passed every year, it will be seen that it is now a practical impossibility for the government of the country to go on for more than a year without the assistance of parliament. Parliament is summoned by Royal Writ. The King with the advice of the Privy Council by proclamation (usually in the proclamation whereby a former Parliament is dissolved) directs the Lord Chancellors of Great Britain and Ireland to cause writs for a new parliament to be issued returnable within thirty-five days and addressed to the Spiritual and Temporal Peers, to the Judges of the High Court and the Law Officers of the Crown, and to the Returning Officers of the constituencies.

OPENING OF PARLIAMENT. On the day appointed in the Proclamation, Parliament assembles in the two Houses at Westminster. The Commons are called to the bar of the Upper House and directed to elect a Speaker. They then return to their own House and having elected their Speaker proceed to take the oath (see later under *House of Commons*). A day or two afterwards the King accompanied by his Consort attends in state at the House of Lords, and Black Rod (see under *House of Lords*) is

sent to summon the Speaker and the Commons to the bar of the House of Lords. The King then reads his speech from the throne, a speech which in reality is drawn up by the cabinet, and which comprises a review of the international situation and a summary of the legislation intended to be introduced by the ministry during the session. Those parts of the King's Speech which refer exclusively to finance and taxation are addressed to the members of the House of Commons. If the sovereign is unable to attend in person, a Royal Commission opens parliament in his place and the speech is read by the Lord Chancellor.

The Commons on returning to their own House usually exercise their privilege of reading a Bill for the first time to demonstrate the fact that they are not bound to confine their attention exclusively to matters dealt with in the speech from the throne. The speech is subsequently read again in both Houses by the Lord Chancellor and the Speaker respectively, and an Address in reply, consisting practically in a repetition of the text of the speech itself, is moved and seconded in each house by two junior members of the party in power attired in uniform or court dress. The Opposition usually moves certain amendments to the Address and thus early in the session has an opportunity of attacking and criticising the policy of the Government. When the Address has been agreed to, it is duly presented to the sovereign.

DURATION OF PARLIAMENTS. By the Septennial Act, 1716, it was enacted that parliaments may continue for seven years and no longer from the day appointed by the writs for their assembling. But in practice this limit has never been reached. The King can dissolve parliament at any time, and he usually does so on the advice of the Prime Minister and the cabinet when the ministry find, either that they cannot command a majority in the Commons or that for party and electioneering reasons a dissolution is desirable.

There are three ways of suspending the sittings of Parliament—dissolution, prorogation, and adjournment:—

(1) *Dissolution.* The King dissolves parliament by means of a Proclamation under the Great Seal; and, as we have seen, the same proclamation usually provides for summoning the next parliament.

(2) *Prorogation.* This is a device, first adopted in the reign of Henry VIII. for prolonging the life of parliament from one session to another. Parliament is said to be prorogued when, by an act of the Crown its sittings are suspended either indefinitely or until a certain fixed day. This not only occurs at the end of a parliamentary session, but also as preliminary to a dissolution.

(3) *Adjournment.* This is a temporary suspension of parliamentary business for a certain time in the course of a session. It takes place in either House independently of the other and by an act of the House itself without the concurrence of the Crown. After an adjournment business goes on from the point at which it left off; but after a prorogation or dissolution, any Bill that has not passed through all its stages and received the royal assent must be reintroduced and treated as a new Bill.

PARLIAMENTARY ELECTIONS.

We shall state first of all who enjoy the franchise or the right to vote for a Member of Parliament; secondly, who may be a candidate for election; thirdly, how the election is to be conducted; fourthly, the method of voting; and, lastly, the modes of disputing the results of an election.

1. REGISTRATION OF VOTERS. No one may vote at any Parliamentary Election unless his name has been registered on the list of voters of the particular county or borough for which he is entitled to vote.

DISQUALIFICATIONS. Certain persons are absolutely disqualified from being registered. They include (1) Women. (2) Infants, i.e. persons under twenty-one years of age. (3) Aliens who have not become British subjects. (4) Convicted felons, until they have served their sentences or been pardoned. (5) Lunatics and idiots. (6) Peers of the realm. (7) Corporations. (8) Persons paid to do work at elections, e.g. election agents. (9) Persons convicted of "corrupt practices," for seven years after their conviction. (10) Persons convicted of "illegal practices," for five years after their conviction. (11) Persons in receipt of parochial relief, if they have received the relief within twelve months before the 15th July of the year of registration; but receipt of the benefits of the Vaccination Acts and certain other kinds of medical relief do not disqualify the recipient.

QUALIFICATIONS. If a person desires to have his name entered on the Register as a Parliamentary voter, not only must he have none of the above disqualifications but he must also be possessed of a Property, Occupation, Residential or Lodger's qualification.

(*a*) **Property Qualification.** In England, the property qualification, which applies only in the case of county constituencies, is one of the following:—

(1) The beneficial ownership of freehold heritable property of the clear yearly value of forty shillings. (2) The beneficial ownership of a life estate of the clear yearly value of £5. (3) The ownership in copyhold of an estate for life, or any greater estate of the clear yearly value of £5. (4) The ownership of leasehold property held originally for a term of sixty years or more, of the clear yearly value of £5. (5) The ownership of a leasehold of the clear yearly value of £50, held originally for a term of twenty years or more.

(*b*) **The Occupation Qualification,** which applies to both county and borough constituencies, entitles a person to be registered, if he is the occupier of land or tenements of the clear yearly value of £10, provided that he has occupied it for the whole of the twelve months preceding the 15th July of the year of registration. No one can be registered with the occupation qualification unless the rates have been paid on the property. In the case of boroughs if the occupier is not a resident in the property (be it chambers, office, shop or warehouse) in respect of which he claims the occupation qualification, it is necessary for him to have resided, during the half year preceding the said 15th July, within seven miles, or in the case of the city of London, within 25 miles, of the boundaries of the borough.

(*c*) **The residential qualification,** which applies to both county and borough constituencies, enables the inhabitant occupier of a dwelling house or of any part of a house occupied as a separate dwelling (e.g. a flat) to be registered, provided the rates have been paid and he has resided in the property for the whole of the twelve months preceding the 15th July of the year of registration. If the person who occupies the dwelling, does so by virtue of any office, service, or employment, and his employer does not reside therein, then he and not the employer is entitled to the franchise even though the rates, rent and taxes are paid by the employer. But the fact that the servant has thus the occupation qualification does not exclude his master from claiming some other qualification, e.g., the freehold qualification, in respect of the same property.

(*d*) **The lodger's qualification** enables lodgers who have claimed the lodger's franchise and occupied lodgings in the same house for the said twelve months, of the clear yearly value (unfurnished) of £10, to be registered. The lodgings need not have been let unfurnished; but if let furnished the unfurnished value alone is taken into consideration by the revising barrister.

N.B.—Lodgers, unlike ordinary electors, have to renew their claims every year.

2. THE REGISTER. It is the duty of the Overseers to prepare lists of the electors in their constituencies. The lists, as prepared by the overseers, are posted up on church doors on the 1st August every year. If a qualified voter finds his name omitted from the list he should send in particulars of his claim, before the 20th August, to the overseers. All political parties in the constituencies have agents and other officials who are always ready and willing to assist qualified voters of their party with information necessary for making their claims. The statutory form of claim consists of four columns, thus:—

Name of Claimant at full length, the surname being first.	Place of Abode.	Nature of Qualification.	Description of Qualifying Property.
Brown, John	Rose Cottage, Milton	Residential. Have resided at present address since 1 Aug., 1904, and paid all rates	* *

* * As the qualification in this case is a residential one this division would be left blank.

Any qualified voter may object to the inclusion of a person on the list of voters, and should send in his objection before the 20th August. The persons who usually make the objections are the parliamentary agents of the rival parties. On the 25th August the Overseers publish lists of claimants and objectors. Between the 8th September and the 12th October a Revising Barrister, who must be of not less than seven years' standing at the bar, holds a court and decides on the validity of the claims and objections. The lists so revised are then sent to the Clerk of the County Council or Town Clerk (as the case may be) and are printed and form the official register of electors. The revised register comes into operation on the 1st January in each year.

3. THE CANDIDATES. There are a great number of cases in which persons are disqualified from being candidates for election. The following list includes the principal persons disqualified :—

(1) Women. (2) Infants (persons under twenty-one years of age). (3) Lunatics and idiots. (4) Aliens who have not become naturalised British subjects. (5) Peers of the Realm; but such Irish peers as are not representative peers may be elected as members of the House of Commons, but only for constituencies outside Ireland. (6) Clergy of the churches of England, Scotland, and Rome. (7) The holders of offices under the Crown, which have been created since 1705, are generally disqualified. (8) Bankrupts, until five years after their discharge, unless the bankruptcy is annulled within six months, or unless it was due entirely to misfortune, and not aggravated by misconduct. (9) Returning officers for the elections at which they officiate. (10) Convicted felons, until they have served their sentences, or received a free pardon. (11) Judges of the High Court and County Court Judges. (12) Persons convicted of "corrupt practices," for ever with regard to the constituency at which these practices took place, and for seven years with regard to other constituencies.

Candidates must be nominated in writing (except in University Elections), and their nomination papers must be subscribed by ten registered electors of the constituency, two of whom must respectively act as proposer and seconder.

4. THE WRITS FOR ELECTION. Before a general election can be held the King issues a proclamation ordering the Lord Chancellor to cause writs to be issued to the sheriffs of the counties and to the returning officers of the boroughs. The writs command these officials to hold an election in their respective districts for the purpose of choosing members to serve in Parliament. In the case of a by-election the writ is issued by the Speaker of the House of Commons to the Sheriff or returning officer of the district.

5. THE ELECTION. The nomination papers must be delivered, during the time appointed for the election, to the Returning Officer by the candidate himself or his proposer or seconder. If at the expiration of one hour after the time appointed for the election no more candidates stand nominated than there are vacancies to be filled, the Returning Officer declares the nominated candidate elected. But if there are more candidates than vacancies, the Returning Officer adjourns the election. He then gives public notice of the day on which the poll will be taken, and of the candidates for election.

Constituencies, especially county constituencies, are large, and were only one place of polling fixed for each constituency, it would be impossible for the bulk of the electors to record their votes. Consequently constituencies are sub-divided into polling districts, and each polling district has one or more polling stations or polling booths allotted to it. The polling stations are opened at 8 a.m. and closed at 8 p.m. on the day of election.

At each polling station there is a presiding officer, whose duty it is to preserve order, he is appointed by the Returning Officer and assisted by polling clerks. Each candidate may be represented at each polling station by one personation agent appointed by his election agent. The principal duty of the polling agent is to watch the electors so as to see that no one votes more than once, and that no one personates another elector.

At the close of the poll the ballot boxes are sealed by the presiding officer, and also by the candidates' agents if they wish it. As soon as possible after the poll, the Returning Officer makes arrangements for the counting. Each candidate may appoint an agent to attend the counting; the candidates themselves may also be present at the counting. Ballot papers which are not properly filled up are rejected. Questions as to the validity of any voting paper are decided by the Returning Officer; but his decision may be reversed on the hearing of an election petition. When the votes have been counted, the Returning Officer publicly declares the result of the election and the number of votes each candidate has received.

6. METHOD OF VOTING AT THE POLL. At University elections, the voting may take place by "show of hands," unless a poll is demanded; but in all other cases of contested parliamentary elections the voting is by ballot, and regulated by the provisions of the Ballot Act, 1872. Before the day of polling, the Returning Officer gives public notice of the situation of the various polling stations, and setting forth the description of the voters who may vote at each station. No one, except a policeman on duty, may vote in any other than the station allotted to him.

The voter goes to his station and receives a ballot paper showing the names and description of the candidates. Each ballot paper has a number printed on the back, and has attached a counterfoil with the same number printed on the face. The ballot paper is marked at the time of voting with an official mark on both sides, and the counterfoil is officially marked with the registered number of the voter. Having received his ballot paper the voter proceeds to one of the compartments of the polling station, where he can mark it unseen. With the pencil provided in the compartment he places a cross on the right-hand side opposite the name of the candidate for whom he votes. He must then fold up the ballot paper and in the presence of the presiding officer put it in the ballot box, and forthwith quit the polling station.

If the voter inadvertently spoils a ballot paper, he can return it to the officer, who will, if satisfied of such inadvertence, give him another paper. If the voter votes for more candidates than he is entitled to vote for, or if he places any mark on the paper by which he may be afterwards identified, his ballot paper will be void.

DISPUTING THE RESULT OF THE ELECTION.

1. ELECTION PETITIONS. The House of Commons has the right of deciding whether or not the persons elected as members are legally disqualified from sitting or voting, and of declaring the seat vacant if it decides that the elected person is disqualified. The only other way in which an election can be questioned is by Petition. The law governing election petitions now depends on the Parliamentary Elections Act, 1868, and its amending Acts, and on the Parliamentary Election Petition Rules. The trial of election petitions takes place before two judges of the King's Bench Division of the High Court of Justice. The following are some of the principal grounds on which an election petition may be founded, though such a petition may be presented in every case where the matters

alleged would be sufficient, if proved, to void the election:—

(1) The commission of "corrupt practices" by a candidate or his agents. (2) The commission of "illegal practices" by the same persons. (3) The disqualification of a candidate. (4) The fact that the person declared elected did not in reality receive the majority of valid votes.

Where the result of an election is that one of the candidates is returned by a very small majority, a petition is frequently made asking for a recount or a scrutiny. In a recount the ballot papers are merely counted again, but in the case of a scrutiny the ballot papers are examined, the secrecy of the ballot disappears, and it is possible to object to a vote on the ground that the elector though on the register was yet not qualified to vote.

2. PARTIES TO THE PETITION. The petition may be presented either by a candidate at the disputed election, or by any person who voted or who had a right to vote at the election. The person who presents the petition is called the Petitioner, and the person against whom it is presented is the Respondent. Generally the respondent is the person whose election is disputed, but in certain cases the Returning Officer may be made a respondent if he has been guilty of wilful misconduct in the discharge of his duties. If the petitioner in a petition dies, any person who might have been a petitioner may apply to the Court, within a month of the death, to be substituted as a petitioner. Again, if before the trial of the petition the respondent dies, or if he does not intend to oppose the petition, notice of the fact must be given in the place where the election took place, and any one else who would have been qualified to be a petitioner may apply to the Court for permission to oppose the petition.

3. PRESENTATION OF THE PETITION. The petition must generally be presented within twenty-one days after the return of the person whose election is disputed; but if the petition is based on the payment by the respondent or his agents, of some reward in furtherance of some corrupt practice, which reward has been paid since the election, then the petition may be presented within twenty-eight days of the payment. The presentation of the petition is made by leaving it at the office of the Master of the King's Bench Division, who is nominated for the purpose. The petition must state the right of the petitioner to petition, and must be divided into numbered paragraphs, stating the grounds of the petition, and it must conclude with a prayer asking for the election to be declared void, or for such other relief as the petitioner may think himself entitled to. All the petitioners must sign the petition. The petitioner must give security for the respondent's costs.

4. TRIAL OF THE PETITION. Before the actual trial of the petition, the preliminary applications, called "interlocutory applications," are generally heard by a judge, who may allow a petition to be amended in form, but he will not allow fresh charges to be introduced into it. The judge may order the petitioner to give particulars of the allegations he has made. If the only allegation is a miscount, the judge may order a re-count to take place before the trial. An election petition once presented cannot be withdrawn without the consent of the two election judges. The trial takes place before the two election judges of the King's Bench Division, and it is generally held in the constituency in which the disputed election has taken place. At the conclusion of the trial, the judges deliver judgment and decide whether or not the election is void, or whether the respondent or any other person has been duly elected. If the respondent has been charged with corrupt or illegal practices, the judges must report to the Speaker of the House of Commons their finding as to whether such practices have been proved and, if so, whether they have taken place with the knowledge of the candidate, and whether the corrupt practices have been extensive or not. The report, together with the evidence on which it is based, is subsequently laid before the Attorney General with a view to his instituting a prosecution against the guilty parties, should he think the evidence sufficient to warrant a successful prosecution.

5. CORRUPT AND ILLEGAL PRACTICES What constitutes the difference between such practices, and what punishments they render an offender liable to, are fully stated in the chapter on Local Elections. (Refer to "Corrupt Practices" in *Index*).

THE HOUSE OF LORDS.

CONSTITUTIONAL ASPECT. The position occupied by the House of Lords in our constitution has never been more admirably summarised than by the great Lord Lyndhurst in a debate in the House of Lords in 1858.

"Our legislature is a system of progressive machine; it consists of three independent powers; and if each power adhere rigidly to its own opinion the machinery of legislation would on many occasions come to a stand-still; it is by mutual forbearance and concession that the machine practically works out the great objects of the constitution. . . . . And with respect to the particular position and duty of the House of Lords, it is part of our duty to originate legislation; but it is also a most important part of our duty to check the inconsiderate, rash, hasty and undigested legislation of the other House; to give time for consideration; and for consulting and perhaps modifying the opinions of the constituencies; but I never understood, nor could such a principle be acted upon, that we were to make a firm, determined, and persevering stand against the opinion of the other House of Parliament, when that opinion is backed by the opinion of the people."

When the Lords reject a Bill of great national importance which has been passed by the Commons, it is usual for the Prime Minister to advise the Crown to dissolve parliament. If after the general election the new House of Commons is still in favour of passing the Bill, it is customary for the Lords to withdraw their opposition; but if they refuse to do this the Prime Minister can always advise the King to create a sufficient number of new peers to secure a majority in the Lords.

COMPOSITION. The House of Lords, or the Upper House of Parliament, consists of the Lords Spiritual and Temporal, two of the three Estates of the Realm.

The expression "three estates of the realm" is sometimes erroneously applied to the King, the Lords, and the Commons: and the Press, a very potent factor in modern political life, is not infrequently styled "the fourth estate."

The number of peers who sit in the House of Lords is not fixed. At present there are about six hundred. Hereditary peerages are continually becoming extinct through the death without heirs of the holders. But this continual and gradual decrease in their number is more than made up again by the creation of new peers. As these new peers generally consist of successful politicians, diplomatists, soldiers, lawyers, bankers, brewers, manufacturers, landowners, and merchants, the Upper House is gradually becoming more and more democratic in tone and feeling and less liable to resist the strongly expressed opinions of the Lower House.

SPIRITUAL PEERS. The Church of England is the Established Church, and as such is represented in the House of Lords by certain of its bishops. The spiritual peers, consisting of the Archbishops of Canterbury and York, and twenty-four English Bishops, are not hereditary peers and their wives are not peeresses. By the Bishoprics Act, 1878, it is provided that the number of Lords spiritual sitting and voting as Lords in parliament is not to be increased by the foundation of any new bishopric. Of the twenty-six seats in the House of Lords assigned to spiritual peers, five are always held by the two archbishops and the bishops of London, Durham and Winchester. The remaining twenty-one seats are given according to seniority, that is, to those who have longest held the appointment of bishop to an English see. Formerly certain Irish bishops had the right of sitting in the House of Lords, but now the right is limited to the "diocesan bishops" (not suffragan bishops) of England and Wales, exclusive of the bishop of Sodor and Man. When a bishop resigns his see he ceases to be a spiritual peer.

In ordinary matters spiritual peers vote as do the temporal peers; but unlike temporal peers they would not be tried by their peers, if charged with any crime, but in the ordinary courts.

TEMPORAL PEERS.

1. HEREDITARY PEERS. All English dukes, marquises, earls, viscounts and barons who have attained their majority are entitled to be summoned to the House of Lords They may not sit as members of the House of Commons, or even take part in parliamentary elections.

Many members of the House of Commons are styled "Lord"; but these are either Irish Peers who have not been summoned to the Upper House, or else they are the sons of English Peers, frequently bearing as courtesy titles the secondary titles of their parents. Thus the son of the late Marquess of Salisbury before becoming himself a peer sat in the Commons as Viscount Cranborne, this being one of his father's titles.

It need hardly be said that peeresses, even peeresses in their own right, are never members of the House of Lords. Members of both Houses of Parliament on taking their seats in every parliament are required to take the *oath of allegiance*, which is in the following form:—

"I, , do swear that I will be faithful and bear true allegiance to His Majesty King Edward, his heirs and successors, according to law, so help me God."

In the House of Lords it is made and subscribed by every member at the table in the middle of the House. If any member of the House of Peers sits or votes as a peer during any debate without having made and subscribed the appointed oath he is liable to a penalty of £500 for each offence, under the Parliamentary Oaths Act, 1866.

2. IRISH PEERS. By the Act of Union with Ireland, 1800, twenty-eight of the Lords Temporal of Ireland, elected for life by the Peers of Ireland, is the number appointed to represent Ireland in the House of Lords. Any Irish peer may be elected a member of the House of Commons unless previously elected and summoned to sit in the Upper House. The Act of Union also provides for a gradual reduction in the number of Irish peerages by enacting that only one new one is to be created for every three that become vacant, until the total number has been reduced to one hundred; after which the total is to be kept at about that number.

The Irish Lords of Parliament have the same privileges as the Lords of Great Britain; save that, whether among the twenty-eight or not, they take precedence after peers of like rank in Great Britain whose peerages date from a time prior to the union. But Irish peerages created after the union have rank and precedency with peerages of the United Kingdom according to the dates of their creation.

3. SCOTTISH PEERS. Those Scottish peers who are elected by their fellow peers to serve parliament in the House of Lords are not like the Irish peers elected for life; but only for the space of one parliament; though they may be, and generally are, re-elected. The Act of Union between England and Scotland, 1706, provides that the latter country is to be represented in the House of Lords by sixteen representative Scottish peers. Scottish peers have precedence after English peers of the same rank, but before British peers created subsequently to the union. It is not the practice to create new Scottish peerages. Scotsmen who are now raised to the peerage are granted peerages of Great Britain. Unlike Irish peers, Scottish peers, not elected to serve among the representative peers of the House of Lords, have no right to sit as members of the Lower House.

4. LIFE PEERS. We have already noticed the spiritual peers and the elected Scottish and Irish peers. A further step in the direction of Life Peerages was made by the Appellate Jurisdiction Acts, 1876 and 1887. The House of Lords in addition to being a legislative body has also judicial functions. Besides trying peers who commit serious crimes, it is the ultimate court of appeal from judgments of the courts of England, Scotland and Ireland. The Lord Chancellor always, the Lord Chief Justice of England generally, and sometimes other great lawyers, are created hereditary peers of the realm; but in order to still further strengthen the legal and judicial element in the Upper House the Appellate Jurisdiction Acts enable the Crown to appoint persons who have held high judicial office as Lords of Appeal in Ordinary with life peerages and the rank of Barons. The children of these life peers are entitled to the courtesy appellation of "the Honourable."

OFFICERS OF THE HOUSE.

1. THE LORD CHANCELLOR. The position of Speaker or Prolocutor of the House of Lords is held by the Lord Chancellor. It is not essential by law that he should be a peer, but it has become the established custom for him on attaining the position of "Lord High Chancellor of Great Britain" to be created a peer, usually a baron, but sometimes viscount or earl. In the absence of the Lord Chancellor, the peer occupying the position of Chairman of Committees usually acts as his deputy in the office of Speaker, though not in his other functions. The Lord Chancellor whilst acting as Speaker sits on the *Woolsack*, an ottoman couch stuffed with wool to represent the commodity which was at one time England's staple export. Technically the woolsack is not now regarded as being within the House, perhaps because the Lord Chancellor is not by law bound to be a peer; so that when a peer does not desire to vote on any question he stands behind the woolsack, on the question being put, and then he is regarded as not present at the time. The Lord Chancellor being now always a peer, he can address the House as such. If he wishes to do so, he advances three steps forward into the House.

Apparently the Woolsack was at one time in the middle of the Parliament Chamber, for by the Statute 31 Henry VIII., c. 10, it is provided that the Lord Chancellor and other great officers of state, if under the degree of baron, should "sitt and be placed at the uppermost parte of the sakkes in the middes of the saide Parliament Chamber."

Besides being Speaker of the House of Lords, the Lord Chancellor is custodian of the Great Seal which may never leave the realm. So that whilst in office he cannot, without infringing the constitution, take a holiday abroad. He is also the keeper of the King's Conscience, and so must be a member of the Established Church. He has besides many judicial and other functions. (Refer to "Lord Chancellor" in *Index*.)

2. BLACK ROD. An office which most people who read the newspapers are familiar with is that of the "Gentleman Usher of the Black Rod." He is an officer of the House of Lords and also of the Order of the Garter, and is appointed by the Crown, the office usually being conferred on some retired naval or military officer. The black rod from which he derives his title is a black staff surmounted with a golden lion, which he carries as a symbol of office. One of his principal duties is that of carrying communications between the Lords and the Commons. Thus when the King opens Parliament, Black Rod is sent to summon the Commons to attend at the bar of the House of Lords to hear the King's Speech.

3. OTHER OFFICERS. In the service of the House of Lords is a large staff of clerks, messengers, doorkeepers, etc., who take records and minutes of the proceedings to be published in the Journals of the House, and who fulfil many other important and necessary functions.

Among these officials may be mentioned the Yeoman Usher of the Black Rod, who assists the gentleman usher mentioned above; the Sergeant-at-Arms who has to guard the approaches to the House, and arrest any person when so ordered by the House; also the Deputy Sergeant-at-Arms, the Clerk of the Parliaments, the Reading Clerk, the Clerk of Public Bills, the Clerk for Standing Orders, Examiners for Standing orders, the Clerk of the Journals, the Principal Clerk and Taxing Officer of the Judicial Department, the Principal Clerk for Private Bills, and the Librarian of the House.

DIFFERENCES OF PROCEDURE IN THE TWO HOUSES. It may be interesting to mark certain differ-

ences in the mode of procedure in the two Houses, each House, of course, making its own rules:—

(1) When a peer speaks in debate he does not address his remarks to the Lord Chancellor, but to the peers collectively, beginning with the words "My Lords," and referring to the House in the course of his speech as "Your Lordships," whereas the Commons always address the Chair, as it is termed, and begin with the words "Mr. Speaker."

(2) The Upper House may transact business when only three members are present, nor is it necessary that the Lord Chancellor should be one of them. In the Lower House no business may be done when less than forty members are present should one of the members call the attention of the Speaker to the fact. In other words, three members in one House constitute a quorum, and in the other House, forty.

(3) Again, when the question is put to the House, the peers reply "Content," or "Not Content," whereas the Commons reply "Aye," or "No."

(4) Peers who strongly object to the resolution carried by the majority are entitled to enter their *protest* in the Journals of the House; not so the Commons. The Lords also formerly allowed voting by *proxy*, an absent peer being able to authorise another to vote for him, but this objectionable practice has been discontinued since 1868.

(5) In 1882 the Commons introduced the "Closure" (see under *House of Commons*), but the Lords have not found it necessary to adopt this method of bringing a debate to a close.

THE HOUSE OF COMMONS.

CONSTITUTIONAL ASPECT. Of the three portions of our Sovereign Parliament, the so-called Lower House is undoubtedly constitutionally the most important. The Commons alone have the right to originate bills imposing taxation on the country and to vote supplies of money. The Lords have no right to modify a money bill, and the legal right to reject one is practically obsolete. It is now established beyond question that the Commons have the exclusive right to the management of the national finance. Moreover, the Commons are an elected body, and since the electors are drawn from practically every class of the community, the political opinions of the House of Commons fairly represent, as a rule, the opinions of the majority of the nation. In fact it may be said that the representatives of the people in the House of Commons rule the country subject to the power of the Crown and the House of Lords to check hasty and ill-considered action.

COMPOSITION. The House of Commons consists of 670 members. The number representing each division of the United Kingdom is shown in the following table:—

Countries.	County Members.	Borough Members.	University Members.	Total.
England .	234	226	5	465
Wales . .	19	11	—	30
Scotland .	39	31	2	72
Ireland . .	85	16	2	103

Whereas in England and Wales there are nearly 70,000 people to one member, and in Scotland 65,000, in Ireland there are only 43,000. Thus in proportion to population, Ireland has considerably more members than any of the other portions of the United Kingdom. This is due to the fact that the Act of Union with Ireland provided for at least one hundred Irish members of the House of Commons, no one anticipating at the time that the population of Ireland would decrease.

PRIVILEGES OF MEMBERS. Ordinary members of parliament receive no remuneration from the State for their services. This would render it impossible for poor though able men to enter parliament were it not for the fact that the Labour Representation Committee, various Trade Unions and other societies frequently provide members with a small salary.

The greatest privilege perhaps a member of parliament possesses is that of freedom of speech. He may not, of course, offend against the standing rules and orders of the House; thus, his remarks must be relevant to the matter in question before the House, he must not make personal charges against any member, and he must not make use of treasonable, seditious, or "unparliamentary" expressions. The privilege of freedom of speech enjoyed by members of parliament means that no member can be held responsible in a court of law for any statement, whether true or untrue, libellous or otherwise, which he may have made in the course of a debate in the House. Another privilege is that of freedom from arrest on civil process during the sittings and for forty days preceding and succeeding each session, though, as a rule, the House will not interfere if a member is committed to prison for contempt of court. Members are not privileged from arrest for crime.

THE OATH. The first duty of members after the election of their Speaker is to take the oath of allegiance. Members who object to be sworn, either on the ground that they have no religious belief, or that the taking of an oath is contrary to their religious belief, may make a solemn affirmation instead. The form of affirmation being similar to the oath, save that the words "so help me God" are omitted, and the words "solemnly, sincerely, and truly declare and affirm" are substituted for the word "swear." Moreover, members desiring to be sworn with uplifted hand in the Scottish manner instead of kissing the New Testament, are permitted to do so. By the Parliamentary Oaths Act, 1866, if any member of the House of Commons votes or sits during any debate, after the Speaker has been chosen, without having made and subscribed the oath of allegiance, he is liable to a penalty of £500 for every offence, and in addition he forfeits his seat.

THE MACE. Students of English history will remember that during the Commonwealth Cromwell, in expelling the Rump of the Long Parliament in 1653, pointed to the Mace in use at that date and said, "Take away that bauble." The mace is a symbol of authority and when the Speaker leaves or enters the House, it is borne before him by the Sergeant-at-Arms. Prior to the election of a Speaker it is placed under the table, a position which it also occupies when the House goes into Committee. But whilst the House is sitting with the Speaker in the chair, the mace lies on the table.

SEATING OF MEMBERS. The first bench on the right hand side of the Speaker's chair is called the "Treasury Bench," and is occupied by members of the ministry; the front bench on the opposite side being usually occupied by the leading members of the opposition, and especially by those among them who have held high office. Behind the Treasury Bench the supporters of the Government range themselves, and on the opposite sides members of the opposite parties. Members have a great difficulty in securing seats on account of the inadequate accommodation of the Chamber. Whilst there are 670 members, each entitled to a seat, there are only 306 seats on the floor and 124 in the side galleries, from which, however, no member may address the House. According to the Standing Orders of the House, no member's name may be affixed to any seat in the House before the hour of prayers (which are read each day immediately after the entry of the Speaker), but any member having thus secured a seat is entitled to retain it until the rising of the House.

ATTENDANCE OF MEMBERS. By ancient statutes which are still unrepealed, members are bound to attend the House on all occasions when it is sitting. If a member of a committee on an opposed private bill absents himself without leave (which is usually granted on the ground of illness, domestic bereavement, etc.), he is reported to the House. Attendance on public business though not enforced by the House, is not left entirely to each member's own

discretion and convenience. Each party appoints one or more of its number to look after the attendance of its professed supporters. It is the duty of the "Whip," as one of these officers is styled, to remind members of the occasions when their attendance is particularly required in the interests of their party, to admonish those who are frequently absent, and to arrange for "pairs."

When a member of either party desires to be absent from a division he, or the party whips, seek out a member of an opposing party who also desires to be absent. The two agree that neither will attend, and are said to be *paired*; the balance of the parties remaining as before.

THE CHILTERN HUNDREDS. No provision is made in our constitutional system for a member of parliament to resign his seat. But as a member who accepts office under the Crown is required to present himself to his constituents for re-election before he is entitled to resume his seat in parliament, an easy way of legally vacating his seat has been devised. There is an office known as the "Stewardship of the Chiltern Hundreds" to which neither duties nor emoluments are attached. When therefore a member, whether on account of age, infirmity, or other reason, is desirous of resigning his membership of the House of Commons, it is usual for him to apply for this post. The application is always granted. He ceases to be a member of parliament, and as he does not offer himself for re-election the seat is declared vacant and a new member elected. Shortly afterwards he resigns his stewardship, so that any other member may apply for it. Thus in fact, though not in theory, it is quite easy for a member to resign his seat.

SITTINGS OF THE HOUSE. The House arranges its own sittings and can always alter the arrangement. The hours and times for the sittings of the House are contained in the Standing Orders, and it is always within the competency of a minister of the crown (though apparently not of a private member) to move amendments to the Standing Orders. By the Standing Orders passed in 1906, the House meets at 2.45 P.M. on Mondays, Tuesdays, Wednesdays and Thursdays. The old dinner interval was abolished, and 11.30 P.M. fixed as the time for the adjournment of the business of ordinary sittings. The hour for terminating *opposed* business is 11 o'clock. On Fridays the House meets at noon for private business and continues to sit until 5.30 P.M. unless previously adjourned; but after the business under consideration at 5 P.M. has been disposed of no further opposed business may be taken. When the hour for terminating a sitting has arrived, if the Speaker be in the chair, he declares that the proceedings stand adjourned; and if the House be in committee, the chairman leaves the chair and reports to the House. If on account of the importance of the business under discussion it is desired to "suspend the eleven o'clock rule," it is usual for a minister of the crown at the commencement of public business to bring forward a motion, which is decided without amendment or debate, to the effect that the proceedings on certain specified business, if under discussion at eleven o'clock, be not interrupted then, but continue until the House, at its pleasure, adjourns.

THE BALLOT FOR PRIVATE BILLS. On the opening of a parliamentary session there is always a large number of members who wish to introduce *bills*. Not very much of the time of parliament is devoted to these private members' bills, so that unless such a bill is introduced early in the session it has but a small chance of becoming law. The priority of private members' bills over each other is determined in the first instance by ballot.

QUESTIONS. Members desiring to ask questions of members of the Government must give written notice of their intention to do so to the clerk at the table. If the member desires an oral answer to his question he must mark it with an asterisk, otherwise the answer will be only printed. Questions are taken on Mondays, Tuesdays, Wednesdays, and Thursdays after private business has been disposed of, and as a general rule between 3 and 3.45. The Speaker calls successively upon each member who has put his name down on the question paper. There are many rules regarding the questions that may be put. Chief among them is the rule that the questioner must make himself personally responsible for the accuracy of any statement contained in the question.

THE CLOSURE. Debates are sometimes carried on to an inordinate length, chiefly owing to the fact that certain members, generally representing a minority, make unnecessary speeches with the deliberate intention of hampering the business of the house in the hope of preventing the passing of the bill in its present form. To check this abuse, an expedient known as the "closure" was adopted in 1882. It gave power to the Speaker or Chairman of committees, when it appeared that "the evident sense of the House" was in favour of an immediate division, forthwith to put the question of closing the debate. In 1887 power was given to any member, private or official, to move the closure, leaving, however, to the Speaker or Chairman's discretion the question of putting or not putting the motion from the chair. At the same time it was enacted that a bare majority should suffice to carry the closure, if it was found that not less than 100 members voted in support of the motion. On the closure being carried, the question in debate was ordered to be forthwith put. This is done in the manner following:—

The Speaker having risen recites the original motion and the proposed amendment, and then, according to an established formula, he continues, "The question I have to put is that the words to be left out stand part of the question," or "that those words be there inserted." The Speaker adds, "As many as are of that opinion say 'Aye.'" Immediately a certain number of members shout "Aye." The Speaker then says "As many as are of the contrary opinion say 'No.'" which is accordingly done. The Speaker, judging from the volume of sound says, "I think the Ayes have it," or "I think the Noes have it," as the case may be. If challenged this announcement is followed by a "Division," that is, by the members separating into two parties to record their votes in favour of "Aye" or "No."

DIVISIONS. When a division is to take place, the Speaker says "Clear the lobby." The Clerk at the table immediately turns a two-minute sand-glass and the division bells are set ringing, as a signal to members in the library and other parts of the House. After the lapse of two minutes, as measured by the sand-glass, the Speaker again puts the question, and, if again challenged, names the tellers, two for the "Ayes" and two for the "Noes." The members then divide into two parties, the "Ayes" going into one lobby and the "Noes" into the other. In each lobby are three clerks to record on printed lists of names, arranged alphabetically, the votes as the members pass their desks. To return to the House the "Ayes" and "Noes" must pass through different doorways, at which respectively stand the tellers, who count aloud as each member passes by. The tellers then give in their numbers to the assistant-clerk at the table, who hands the paper on which he has written the result to the chief teller of the side that has won. The numbers are then announced, first by the teller, and then by the Speaker (or Chairman of Committees). If the votes on a division are equal, the Speaker (or Chairman) has a casting-vote.

QUORUM. A quorum of the Upper House, as already stated, consists of three members only, but in the Lower House of forty. Consequently, no business can be commenced in the House of Commons until forty members at least are present, and no business can be continued when a less number is present should any member draw the attention of the Speaker or Chairman to the fact.

Shortly before the time for beginning business, prayers are read by the Speaker's Chaplain, the Speaker occupying meanwhile the Clerk's place at the table. Nor does he take the chair until forty members are present. To secure a quorum as soon as possible no member is permitted to leave the chamber until the required number is present "to make a House." If by a certain hour, named in the Standing Orders, less than forty are present, the Speaker declares that there is "No House," and the House stands adjourned until the next day. This is, of course, a rare occurrence. As soon as forty are present the Speaker

takes the chair and business begins. Having begun, it may continue although nearly all withdraw and leave the member speaking to address empty benches. But if a member should call the attention of the Speaker to the scanty attendance, business is suspended, the sand-glass is turned, the doors thrown open and the bells set ringing. When the sand has run out, the Speaker rises and counts those present. If forty, including the Speaker, are present business is resumed; if not, he leaves the chair and the House adjourns until the next day appointed for a sitting.

STRANGERS. Persons other than members are allowed to be present during the sitting of the House if furnished with an order signed by a member. A few visitors are permitted to sit under the galleries behind the bar. Most, however, are seated in the galleries, one of which is reserved for the press, another for the peers and another for ambassadors and other distinguished persons. There is also a "Ladies' Gallery" with a brass "grille" in front to serve as a screen. But at any time a member who objects to the presence of strangers may say that he spies strangers in the galleries. Whereupon a division is taken and if the motion is carried, the galleries are cleared.

OFFICERS OF THE HOUSE.

1. THE SPEAKER. The debates and most of the proceedings of the House of Commons are presided over by a Speaker. He is a member of parliament, and is chosen on the assembling of a new parliament. When the last Speaker does not seek re-election, it is usual to elect some member of the party in power at the time, special care being taken to select one who is courteous and fair, and at the same time firm and dignified, and thoroughly conversant with all the rules and usages of the House. If, however, an ex-Speaker is still available it is usual for him to be re-elected even though his political opponents are in power. The Speaker receives a salary of £5,000 per annum under an Act of 1834. He is also provided with a residence attached to the House of Commons. Moreover on state occasions he has an escort of Life Guards, and is generally preceded by the Sergeant-at-Arms bearing the mace. One of his most important duties is to see that debates are conducted in an orderly manner. He is, therefore, empowered to determine the order in which members desirous of addressing the House shall speak, to check irrelevancy, and to call members to order who use unparliamentary language or in any other way transgress the rules of the House. He may order any member whose conduct is disorderly to withdraw from the House; or if he deems such punishment inadequate he may "name" the offending member, that is, call upon the House to pass judgment on his conduct. Members of parliament whilst speaking address their remarks to the Speaker, and not, as in the Lords, to the House generally.

> When a member speaks of another member he may not refer to him by name. If the member referred to is a Privy Councillor, he is mentioned as "the right honourable the member for ———," or "the right honourable the Chancellor of the Exchequer," or other Minister as the case may be. If he be a lawyer he is referred to as "the honourable and learned member for ———," or if a soldier as "the honourable and gallant member for ———." Whereas if he has no office or distinctive profession he will be "the honourable member for ———."

The Speaker's duties are too manifold to be dealt with in detail here; but it should be mentioned that whenever a seat in the Commons falls vacant it is the Speaker who issues the writ for a new election. In the Speaker are symbolically embodied all the rights, duties and privileges of the House of Commons.

2. THE CHAIRMAN OF COMMITTEES. When the House goes into Committee of supply for the first time after a General Election, it elects a Chairman in much the same manner as the Speaker is elected. He is called the "Chairman of Committees," and it is his duty to preside when the House sits in committee. He is also authorised to act as Deputy-Speaker in the Speaker's absence. As remuneration he receives a salary of £2,500 per annum. At the commencement of every session the Speaker nominates a panel of about five members, any of whom the Chairman of Committees can call upon to act as his deputy. The Deputy-Chairman may also in the absence of both the Speaker and the Chairman of Committees act as Deputy Speaker.

3. THE SERGEANT-AT-ARMS. This official is appointed by the Crown by letters patent under the great seal. When parliament is not sitting he is in attendance on the King; but during a session it is his duty to attend on the Speaker, and to act generally in the service of the House of Commons. On the Speaker's order he takes disorderly members into custody; sees that the doors are opened to let members in for a division and closed again during the division; and bears the mace before the Speaker on occasions of state.

4. THE CLERK OF THE HOUSE. This is a very important official, who attends the sittings whilst the Speaker is in the chair. On the first day of a new parliament he receives from the clerk of the Crown Office a book containing the names of the members returned. The oaths or affirmations of allegiance made by the members are administered by the clerk. He also turns the sand-glass when the house "divides." He is assisted in his duties by two Clerks Assistant, appointed by the Crown on the recommendation of the Speaker. The salaries of the officers of the House are regulated by commissioners acting under the House of Commons (Offices) Act, 1812. These commissioners consist of the Speaker, the Secretaries of State, the Chancellor of the Exchequer, and the Attorney and Solicitor Generals. At present the salary of the clerk of the House is £2,000 per annum.

5. OTHER OFFICERS. As in the case of the House of Lords so in the House of Commons there are many other officials of varying rank.

> These include the Principal Clerk of Committees, the Clerk of the Journals, the Principal Clerk of the Public Bill Office, the Principal Clerk of the Private Bill Office, the Librarian, the Deputy Sergeant-at-Arms, the Assistant Sergeant, the Chaplain, and the Counsel to the Speaker. There are also several clerks, messengers, door-keepers, constables and other necessary functionaries.

LEGISLATION.

It must be borne in mind that in the making of the laws, the three great elements constituting Parliament—the King, the Lords, and the Commons—must all concur. Before a measure receives the assent of the three constituent elements of Parliament, it is called a Bill, and after having received the assent of all three, it becomes an Act of Parliament, and forms a part of the law of the land.

In describing the process by which bills become Acts of Parliament, it will be well to distinguish between the three great classes of bills, viz., Public Bills, Private Bills, and Money Bills. A *Public Bill* may be described as a bill which affects the King's subjects generally, a bill the object of which is to further the interests of the nation at large, or to alter or to modify the general law of the land, familiar examples of which would be the Married Women's Property Acts, the Workmen's Compensation Act, before these measures became law. A *Private Bill*, on the other hand, affects the interest of an individual or a group of individuals only; or the people living in a particular locality, the best examples of which are bills promoted by municipalities for town improvements, railway bills, and the like. A *Money Bill* is a bill the object of which is to provide money for the public services, or a bill authorising the levying of taxes, and the like.

Each of these different classes of bills is characterised by peculiar differences in the manner in which it is introduced into Parliament, and the stages through which it must pass before it becomes an Act of Parliament. It may be stated that any bill, save a Money Bill, may originate in either House, and that each House may amend bills passed by the other with this exception, that the Lords cannot amend a Money Bill, all that the Upper House can do is to accept

or to reject it. Every bill must be read and passed three times by each House before it can receive the royal assent.

PUBLIC BILLS.

1. INTRODUCTION AND FIRST READING. In the House of Commons, a member desiring to introduce a public measure must bring in a motion for leave to introduce the bill. On such leave being granted, the House orders that the bill be prepared and brought in by the mover and any other members named by him. The introducer of the bill then advances to the bar of the House, and on the Speaker calling him by name, he replies, "a bill, Sir." The Speaker then commands him to bring it up. The bill is then brought to the table and delivered to the Clerk of the House, who reads out the title of the bill. Two questions are now put to the House, viz., that the bill "be now read a first time," and that it be printed. These are carried without discussion, as the first reading is a purely formal affair, and an order is then made by the House that the bill be read a second time on an appointed day.

2. THE SECOND READING. This is the crucial stage in the progress of the Bill, and includes three distinct steps: (1) Debate on the principles of the bill; (2) The Committee Stage; (3) The Report Stage.

(*a*) **Debate.** On the arrival of the appointed day, a motion is put that the bill "be now read a second time." The putting of this motion is the signal for discussion, and it is now that the principles and the scope of the bill, without going into its details, are criticised. Opponents of the measure have several courses open to them—one being to move that the bill "be read a second time that day six months," for of course, it will generally happen that the Parliamentary session will have ended before the expiration of that period, and the bill will therefore be shelved, and its advocates will have to begin all over again in the next session. Another course is to move resolutions altering the character of the bill.

(*b*) **Committee Stage.** Should the motion for the second reading be carried, the bill is then sent to be discussed in detail by a committee of the whole House. A resolution is put and carried "that the House resolves itself into a Committee of the whole House." The Speaker then puts to the House "that I do leave the Chair," and on the House assenting, the Chairman of Committee then presides. The bill is then discussed, clause by clause, line by line, and sometimes word by word. Each amendment must be put and carried by a separate division. When the sitting for the day is over, the Speaker resumes the chair, and the Chairman reports to the House that progress has been made with the bill, and asks permission for the Committee to sit again. The House then orders that the Committee shall resume the discussion on an appointed day. Amendments must be within the scope of the bill, for if not relevant to the main object of the bill they cannot be dealt with by the Committee unless the Committee has been empowered to do so by express *instructions* from the House. New clauses cannot be added in Committee, until the discussion on the existing clauses is ended, that is, until the "Report Stage" has been reached.

(*c*) **Report Stage.** When the bill has gone through the Committee, and has been discussed and amended, the Chairman makes his report to that effect to the House. An order is then made by the House that on a day named, the bill as amended shall be considered. This is the Report Stage in the progress of a bill. The Speaker takes the chair to hear the report of the Chairman. Further amendments may now be made and new clauses added, or the bill may in whole or in part be sent back again to the Committee.

3. THE THIRD READING. When the amended bill has been considered by the House, a motion is then put and carried that the bill be read a third time. Of course any member is at liberty to oppose the third reading, but it is not usual to do so. The crucial time in the passing of a bill being on the motion for the second reading, and during its treatment while in Committee. On the third reading being carried, an order is made that the Clerk of the House "carry the bill to the Lords and desire their concurrence." The bill is endorsed with the Norman-French words *soit baillé aux seigneurs*—"let it be delivered to the Lords."

4. PROCEDURE IN THE HOUSE OF LORDS. When the bill is sent to the Lords it is read a first time. If then during the next twelve days no notice is given of the second reading, it is dropped for the Session. If, however, a motion is put for the second reading, the bill goes through the same procedure as in the Lower House. If the Lords agree to the bill substantially as it left the Commons, a message to that effect is sent to the Commons, but the bill is not returned. If, however, material amendments have been made by the Lords, the bill, after the third reading, is sent to the Commons with a message that the Lords agree to the bill with the amendments to which they desire the concurrence of the Commons. The bill is endorsed with the words *a ceste bille avesque des amendemens les seigneurs sont assentus*—"to this bill with amendments the Lords have agreed."

If the Commons agree to the Lords' amendments, the bill is endorsed with the words *a ces amendemens les Communes sont assentus*—"to these amendments the Commons have agreed." Should the Commons reject the amendments, the bill is returned to the Lords with a message that the Commons cannot accept the amendments. Usually certain amendments are accepted and others rejected, the bill passing from one House to the other until a final agreement is reached.

5. DIFFERENCES BETWEEN THE LORDS AND THE COMMONS. When the two Houses cannot agree as to the amendments to a bill, the dispute may be settled by a conference between the two Houses. Should the two Houses fail to come to an agreement and the bill is a measure of great national importance, the usual plan is for the Prime Minister to advise the King to dissolve Parliament. If the new elections show a decided majority in the House of Commons in favour of the bill, the Lords withdraw their opposition.

6. THE ROYAL ASSENT. When the bill passes both Houses, it is then ready to receive the royal assent. The King gives his assent in person when he is able to be present in the House of Lords at the prorogation of Parliament; when he is unable to be present, the royal assent is given by a commission of Peers appointed for that purpose.

In the case of public bills, the royal assent is given in the words *le roy le veult*—"the King wills it." Should the King refuse his assent, he does so in the words *le roy s'avisera*—"the King will consider it." The Crown has, however, not exercised its right of veto since 1708.

The royal assent in money bills is given in the words *le roy remercie ses bons sujets, accepte leur benevolence et ainsi le veult*—"the King thanks his good subjects, accepts their aid, and thus wills it."

Private bills are assented to in the words *soit fait comme il est desire*—"let it be done as is desired."

MONEY BILLS.

A money bill must go through precisely the same stages as an ordinary bill. But there are some differences between the procedure in the passing of a money bill and that of an ordinary bill. In the first place, a money bill must originate in the House of Commons, and after it has passed that House, the Lords cannot amend it, all that the Upper House can do is to accept it or reject it. The rejection of the Budget of 1909 by the House of Lords, has caused a grave constitutional crisis which is now agitating the country. Again, by the rules of the House of Commons, a private member cannot introduce a bill having for its object the levying of taxes or the appropriation of the revenue. Such bills can only be introduced on the recommendation of the Crown and by a responsible minister.

PRIVATE BILLS.

In dealing with private bills, Parliament exercises judicial as well as legislative powers, for an inquiry is made into the merits of the bill, and witnesses are heard

for and against the measure. The procedure, so far as regards English and Irish private bills, is as follows:—

1. **PROCEDURE.** (*a*) On or before December 21st, a petition on behalf of the bill must be deposited in the Private Bill Office, together with a copy of the bill, and such documents as may be necessary to explain the scope and the character of the bill. At this time, too, any memorial against the bill must be presented.

(*b*) On January 18th, the petition and the memorials are considered by two Examiners, one of whom is appointed by the House of Lords, the other by the Speaker. If no one appears in support of the petition, the measure falls through. The parliamentary agent engaged to see the bill through proves that the Standing Orders have been complied with, and witnesses may be heard, to show that the Standing Orders have not been complied with. When the hearing is finished, the petition is returned by the Examiners to the Private Bill Office.

(*c*) Should the report of the Examiners be favourable, the bill is read a first time, and referred back to the Bill Office to be examined. Within ten days of the first reading, any member of the public who wishes to oppose it must deposit a petition against the bill in the Private Bill Office. A first reading, according to the "Standing Orders" of the House, cannot take place after Whitsuntide, except [The *Standing Orders* are the rules and regulations laid down by each House prescribing in what manner its business shall be conducted] in the case of London County Council Bills for borrowing money.

(*d*) On the second reading, the general principle and the scope and the merits of the bill are discussed. If the second reading be carried, the bill is sent to a committee consisting of a number of the members of the House. But before the bill goes to the Committee, the bill is examined by the Chairman of Ways and Means on behalf of the Commons, and by the Chairman of Committees acting for the House of Lords. These two may introduce amendments within the scope of the bill.

(*e*) In Committee, the bill is discussed in detail; witnesses are heard for and against the bill; and counsel are employed on both sides, who examine and cross-examine the witnesses. The members of the Committee take a very active part in hearing and examining the witnesses, and inquire very closely into the merits and the demerits of the bill, and the needs which the bill is intended to supply. The whole business is semi-judicial. Before the bill is discussed in detail, the preamble must be proved. If the committee reject on the ground that the preamble has not been proved, the measure drops through.

(*f*) After the bill is discussed and amended in Committee it is reported to the House, and its next stages are exactly similar to those of public bills. No private bill can pass through two stages on the same day without special leave of the House.

2. **SCOTCH PRIVATE BILLS.** With a view to save the expense of summoning witnesses to London, a special procedure has been adopted since 1899 in regard to private bills which relate wholly to Scotland. Briefly the procedure is as follows. A draft order is deposited in the Private Bill Office, with the Clerks of Parliament, and with the Treasury. The Chairman of Committees and the Chairman of Ways and Means examine the draft order, and if they report to the Secretary for Scotland that the draft order does not apply wholly to Scotland, the measure falls to the ground. Should the report be favourable, the Secretary for Scotland directs certain Commissioners to make an inquiry.

The inquiry must be held in Scotland, and as far as convenient in the locality affected by the bill. At this inquiry evidence is taken for and against the proposed measure. At the end of the inquiry, the Commissioners report that the order petitioned for should be granted with whatever modifications may be necessary, or may report that it should be refused.

Thereupon the Secretary for Scotland issues a Provisional Order, which must be confirmed by Parliament, and therefore a bill for that purpose must be introduced. Such bill will be taken to have passed through all its stages, up to and including the Committee stage, and shall be deemed to be ready for its third reading. Having passed its third reading, it is then sent to the other House.

The Commissioners who hold the inquiry may be members of Parliament, in which case they form what is called a parliamentary panel, or they may be persons who do not sit in either House, when they are said to form an extra-parliamentary panel.

3. **COST OF A PRIVATE BILL.** The expense of promoting a private bill is very considerable, often running into many thousands of pounds. The fees exacted by each House may amount to several hundreds, and in addition there is the expense of local inquiries, the fees payable to counsel, the remuneration of witnesses, the cost of preparing plans, and the like, and last, but not least, the expense of reporting and printing the proceedings taking place day by day while the bill is in committee.

COMMITTEES.

1. **A COMMITTEE OF THE WHOLE HOUSE** is simply that all the members of the House sit as a committee, presided over not by the Speaker but by a Chairman. When the House is in Committee, the Speaker acts and votes like an ordinary member. When a public bill is in committee, the committee is a committee of the whole House. Other examples are the "Committee of Supply," which decides what amount of money shall be granted to the Crown, and for what purposes; "the Committee of Ways and Means," which determines in what way such money shall be raised, and by means of what taxes.

2. **SELECT COMMITTEES.** A select committee consists of a number of members appointed by the House to hear evidence on some given subject, and to make a report thereon, for the guidance and information of the House. An example of such a committee is one appointed by the House to hear evidence for and against a private bill.

3. **STANDING COMMITTEES.** These are appointed not for a special occasion, but to act throughout the session, in regard to all matters within the scope of their authority, e.g. the committee on standing orders, the general committee on railway and canal bills, and the committee on police and sanitary bills.

THE EXECUTIVE GOVERNMENT.

PARTY GOVERNMENT. Inasmuch as union gives strength, and opinions are only changed into laws when backed by strong and earnest majorities, it has ever been the practice of the various individuals who constitute the two Houses of Parliament to organise themselves into parties for the purpose of making their opinions effective. There are generally a few members who sometimes hold aloof from their party and prefer to express their opinions unfettered by any considerations of party interest or party policy. There are, in like manner, many groups formed of members who attach special importance to a change of the law in reference to some particular subject in which they are all keenly interested; but as no such change can be effected without the concurrence of the majority, the tendency is for these smaller groups to attach themselves to one of the two leading parties in the House. From the larger of these two parties the executive government is formed, the duty of criticising their policy and administrative acts falling to the smaller party, known as the "opposition."

THE PRIVY COUNCIL. The history of our constitution is the history of a gradual change from a royal to a parliamentary executive. The sovereign in carrying out the executive functions of government was wont to be guided by the advice of certain privy councillors chosen by himself. Privy councillors are still appointed by the sovereign, and may be removed by him at will, though such removals are exceedingly rare. On being nominated

they take the oath of office, binding themselves among other things "to keep the king's counsel secret." Membership is a coveted distinction, every Privy Councillor being entitled to be addressed as "Right Honourable." The principal officer is the Lord President of the Council, who is always a member of the cabinet.

It is now understood that only those members attend a meeting of council who are specially summoned. On ordinary occasions only the ministers, the chief officers of the Household, and the Primate are summoned; but on certain extraordinary occasions the whole council is invited to attend. Immediately on the decease of the Sovereign, the Privy Council assembles and proclaims his successor. The members then take the oath of office, under the new Sovereign, who forthwith holds a meeting of his council, before whom he makes declaration of his purpose to govern according to the laws and subscribes the oath to that effect. Thus King Edward in his address to his Privy Council on the morning following the Queen's death made this solemn promise:—

> "I need hardly say that my constant endeavour will be always to walk in her footsteps. In undertaking the heavy load which now devolves upon me, I am fully determined to be a Constitutional Sovereign in the strictest sense of the word, and as long as there is breath in my body to work for the good and amelioration of my people."

Meetings of council are held when required where the King happens to be, six councillors at least, with one of the clerks of council, constituting a meeting. The attendance of the King is optional.

It not infrequently happens that it is impracticable or undesirable for an Act of Parliament to contain complete details of the mode of carrying out the principles which the Act enunciates. Indeed in framing Acts it is often impossible to anticipate hitches which may occur when it is sought to put them into operation. The custom has, therefore, arisen of statutes being passed which contain provisions enabling the Privy Council, His Majesty's Judges, the Local Government Board, the Board of Trade, or other bodies, to frame rules for the efficient carrying out of such statutes. The Privy Council promulgates such rules by means of "Orders in Council." Moreover, a Judicial Committee of the Privy Council has power to hear and determine appeals from Indian, Colonial and Ecclesiastical Courts. (Refer to "Privy Council" in *Index*).

CABINET AND PREMIER. The Cabinet is a body composed of the heads of the chief executive departments, who are jointly responsible for the government of the country. In former times the Privy Council were the advisers of the Crown, but becoming too unwieldy for ordinary purposes, a small informal body of advisers grew up within it. Thus the Cabinet—which as we know it dates from the Revolution, 1688—has grown out of the Privy Council, but it has never been legally recognised either at Common Law or by Act of Parliament. The number of its members is not fixed, but has recently been nineteen.

The chief of the Cabinet and the head of the Parliamentary Executive is called the *Prime Minister* or *Premier*. The name has been in common use for over a century, but it has only recently been legally recognised. On 2nd December, 1902 the King issued a warrant under his royal sign manual, the exercise of his royal prerogative, declaring that hereafter the Prime Minister should have place and precedence next after the Archbishop of York.

When a ministry resigns, the sovereign calls upon some other statesman, usually the leader of the opposing party, to form another administration. If he succeeds in the attempt, he becomes of course the Prime Minister, and usually takes the office of First Lord of the Treasury, besides being the leader of the House to which he belongs. The Prime Minister presides at meetings of the Cabinet, and it is his function to direct the general policy of the Government, and exercise a general supervision over its several departments. While each member of the Cabinet administers his own department independently of his colleagues, he is expected to consult the Prime Minister on all matters of moment, especially in relation to Foreign Affairs. It is the duty of the Prime Minister, in like manner, to keep the sovereign well informed on all important matters of state, and after a meeting of the Cabinet to send him a *résumé* of their deliberations, thus giving the sovereign an opportunity of expressing his views on any question whilst leaving himself free to act according to the decision of the Cabinet. And this is right for the responsibility is his and theirs.

Though the responsibility of the Premier is great, so also is his privilege of patronage. He not only selects those who shall form the ministry under his guidance and determines which of them shall be admitted to the Cabinet, but it is upon his advice that, as vacancies occur, archbishops, bishops, deans, and the highest judges are appointed. It is upon his recommendation the sovereign confers honours and dignities, such as peerages, baronetcies, and orders of knighthood. It is he who really appoints to such high places as the vice-royalty of India, Colonial Governorships, and Ambassadorships.

Meetings of the Cabinet are usually held once or twice a week when parliament is in session, and at other times when its members are summoned to attend. Though the King may preside at a meeting of the Privy Council, it would be unconstitutional for him to be present at a meeting of the Cabinet. He has, however, as previously stated, the right to be at once informed of what has passed thereat, and to express his own opinion on the result of their deliberations. With this exception what passes in the Cabinet is kept strictly secret, not even an official record or minute being ever taken.

THE MINISTRY. Formerly the king appointed his own ministers and dismissed a minister when he chose. This claim on the part of the sovereign was not wholly abandoned until late in the 18th century. His Majesty's ministers are now always appointed on the advice of the Premier, and consist of some forty or more persons, rather less than half of whom form the Cabinet. The ministry is drawn from the predominant party in parliament, the majority being chosen from the House of Commons. If the Secretary of State for any of the great departments, e.g., the Department for Foreign Affairs, is a member of the House of Lords, it is usual for the department to be represented in the House of Commons by the corresponding Under-Secretary, whose duty it is to answer questions respecting the policy of the Department.

RESPONSIBILITIES OF MINISTERS. The irresponsibility of the sovereign and the responsibility of his ministers are two of the chief principles of the British constitution. If charged with an unconstitutional act the king's ministers cannot plead his command, they cannot shelter themselves behind his throne. They cannot even accept a paid office under the Crown without submitting themselves, if a member of the House of Commons, to re-election. The ministry usually stands or falls together, so that when parliament passes a vote of censure on the act of any minister, the whole body generally accepts it as a vote of censure on itself, and resigns. But in addition to this collective responsibility there is also, on the part of each minister, an individual responsibility that might possibly entail most serious consequences.

Each minister of the Crown is individually legally responsible for the advice which he gives to the sovereign, and on which the sovereign acts. The Royal Will and Pleasure is usually expressed either by Orders in Council, i.e., with the advice of Privy Councillors present on the occasion at which the order is issued as notified in the London Gazette; or by Warrant under the Royal Sign Manual, i.e. a Warrant issued by His Majesty and signed, or sealed by certain of his ministers; or by Proclamations, etc., issued under the Great Seal, a seal held by the Lord Chancellor. It is thus not difficult to ascertain what ministers are mainly responsible for any particular act of the sovereign. The method by which evil advice to a sovereign is most severely punished is by *Impeachment*, against which it is not possible for an offending minister

to plead that he has been pardoned by the Crown. The last instance of impeachment was that of Henry Dundas, Lord Melville, in 1806.

MINISTERIAL OFFICES AND SALARIES.

OFFICE.	SALARY.
	£
First Lord of the Treasury (Office usually held by the Premier)	5,000
Lord High Chancellor of Great Britain	10,000
Lord President of the Privy Council	2,000
Lord Privy Seal (whose duties as such are nominal)	unpaid
Chancellor of the Exchequer	5,000
Secretary of State for	
(1) The Home Department	5,000
(2) Foreign Affairs	5,000
(3) The Colonies	5,000
(4) War	5,000
(5) India	5,000
First Lord of the Admiralty	4,500
Chief Secretary to the Lord-Lieutenant of Ireland	4,425
The Secretary for Scotland	2,000
Lord Chancellor of Ireland	8,000
Chancellor of the Duchy of Lancaster ..	2,000
President of	
(1) The Board of Trade	5.000
(2) The Local Government Board ..	5.000
(3) The Board of Agriculture and Fisheries	2,000
(4) The Board of Education	2,000
Postmaster General	2,500
Usually all of the above, with one or two exceptions, form the Cabinet.	
Lord Lieutenant of Ireland	20,000
Lord Chancellor of Ireland	8.000
First Commissioner of Works	2,000
The Secretary to the Treasury	2,000
Financial Secretary to the Treasury	2,000
Three Junior Lords of the Treasury, each ..	1,000
Paymaster General (an honorary title) ..	nil
Civil Lord of the Admiralty	1,000
Parliamentary Under-Secretary for	
(1) The Home Department	1,500
(2) Foreign Affairs	1,500
(3) The Colonies	1,500
(4) War	1,500
(5) India	1,500
Financial Secretary to War Office	1,500
Financial Secretary to Admiralty	2,000
Parliamentary Secretary to	
(1) Board of Trade	1,200
(2) Local Government Board	1,200
(3) Board of Education	1,200
Vice-President of Board of Agriculture, Ireland	1,250
Attorney-General (England)	7,000
Solicitor-General (England)	6,000
Lord Advocate (Scotland)	5,000
Solicitor-General (Scotland)	2,000
Attorney-General (Ireland)	5,000
Solicitor-General (Ireland)	2,000

PENSIONS TO EX-MINISTERS. They are intended only for those ex-ministers whose income is comparatively small, and are limited to those who apply for them. Pensions are divided into three classes according to the office formerly held, the salary received, and the length of service rendered. No new pension is granted in any class while four pensions of that class are still running. The following table shows the amount of the several pensions and the conditions on which they are granted:—

Class of Pension.	Minimum Salary of highest office previously held.	Minimum time of service.	Maximum pension granted.
1	£4500	4 years	£2000
2	£2000	6 years	£1200
3	£1200	10 years	£800

GREAT DEPARTMENTS OF STATE.

There are many functions of executive government which Parliament would not have the time or the capacity to manage properly. These are carried out by great Departments of State, having as their junior officials persons not in parliament, whose appointments are usually permanent; whilst parliamentary control and supervision is gained by a system which requires the chief officials to be Ministers of the Crown in parliament, and therefore bound to change with each new Government.

THE TREASURY.

1. COMPOSITION. This office was at one time presided over by a Lord High Treasurer; but this individual no longer exists, his duties being discharged by a board of Commissioners consisting of the First Lord of the Treasury (usually the Prime Minister), the Chancellor of the Exchequer and three Junior Lords of the Treasury. But the three members of parliament who have most to do in respect of the work of the department are the Chancellor of the Exchequer, the Secretary to the Treasury and the Financial Secretary to the Treasury. The last of these usually has charge of the Civil Service estimates. As every one knows it is the Chancellor of the Exchequer who annually presents the Budget In addition to these there is a large number of permanent officials under a Permanent Secretary. Though not strictly members of the Treasury Department, the Comptroller and Auditor General and Assistant Comptroller and Auditor may be conveniently mentioned here. These are officials appointed for life by the Crown, but they may be removed upon an address of both Houses of Parliament, and they may not themselves be members of either House.

2. THE ESTIMATES. Shortly after parliament has assembled every year, the Secretary of State for War, the First Lord of the Admiralty, and other heads of departments present to parliament estimates of the expenditure of their respective departments for the ensuing year. When the estimates have been laid before the House in committee, the Chancellor of the Exchequer brings forward his budget; that is to say, he informs the House as to how the money required by the estimates is to be raised. These proposals are then embodied in Acts of Parliament and passed in the usual way.

The Acts usually consist of—

(1) **The Consolidated Fund Acts** which enable the Treasury to issue sums out of the Consolidated Fund for the service of the year, and to borrow money by the issue of Treasury Bills.

(2) **The Finance Act** which provides for general taxation.

(3) **The Appropriation Act** which provides for the appropriation of sums voted for supply purposes.

3. THE REVENUE. The revenue of the country is mainly collected by three great departments—the Post Office, the Customs, and the Inland Revenue. The money so collected is paid into the Consolidated Fund at the Banks of England and Ireland. It can only be paid out again under the authority of one of the above-named annual Acts of Parliament, or by some permanent Act, as the Civil List Act, 1901, and the National Debt and Local Loans Act, 1887. The usual method of procedure for withdrawing money from the bank is for the Lords of the Treasury to apply to the Comptroller and Auditor General for a credit on the Exchequer account at the banks. If the Comptroller is satisfied that the credit is authorised under an Act of Parliament, he allows the bank to pay over the sums required.

THE FOREIGN OFFICE.

1. COMPOSITION. The Department which manages our relations with Foreign Countries is presided over by the Secretary of State for Foreign Affairs. He is a Minister of the Crown and as such is responsible to parliament. The permanent officials are headed by a Permanent Under-

Secretary. The permanent staff of this department is more carefully selected than that of most of the other departments of State. The examinations are not entirely open, candidates for most of the positions being required to secure nominations from the Secretary of State. The principal work of the Foreign Office lies in the preparation of treaties and in negotiation with the diplomatic representatives of foreign powers. The right of making treaties is a prerogative of the Crown; but in practice they are made by the Secretary of State for Foreign Affairs, assisted by the permanent Under-Secretary, and frequently also by our diplomatic representative in the country concerned. Of course the Foreign Secretary does not commit the country to any important course of action without having first submitted his proposals to, and gained the sanction of, the Sovereign and the Cabinet.

2. **THE DIPLOMATIC SERVICE.** The Foreign Office is represented abroad by the Diplomatic and Consular services. The officers of the Diplomatic service consist of Ambassadors, Ministers, Secretaries and Attachés. Ambassadors reside in Embassies, Ministers in Legations. England has Embassies only in the following countries: Austria, France, Germany, Italy, Japan, Russia, Spain, Turkey and the United States. It is a peculiarity of embassies and legations that they are regarded in International Law as actual portions of the country they represent, and are with their officials outside the jurisdiction of the courts of the country in which they are situate. In the Diplomatic Service the range of salaries is very wide. Ambassadors may receive as much as £9,000 per annum, whilst Attachés receive nothing at all.

3. **THE CONSULAR SERVICE.** This service also represents the Foreign Office abroad, but in a different way. Its mission is commercial rather than political, though in many countries the Consular Officers have diplomatic functions. There are three main branches of the service: the service for the far East (China and Siam), that for the near East (Turkey, Persia, the Levant and Morocco), and the general consular service. In the first two the officials enter as Student Interpreters. They pass examinations in languages, law, and other subjects, and then study the languages of the country where they will be employed. Having gained proficiency they rise through the successive grades of consular assistant, vice-consul, consul, and consul-general. In many imperfectly civilised countries (like China) British subjects have extra-territorial rights, being tried for offences by their own consuls, and not by native courts. In the general consular service the duties of the officials are mainly commercial. They collect trade statistics and make trade reports. Formerly, the officials were nominated, but now they enter by examination. The salary of Student Interpreters is about £200, that of Vice-Consuls varies from £300 to £450, but many of the latter receive no salary, taking their remuneration in fees. Consuls receive from £600 to £1,000, and Consuls-General about £1,200.

THE WAR OFFICE.

1. **THE ARMY COUNCIL.** For years the War Office has been in a state of chaos. Almost every new Secretary of State for War has thought fit to launch forth new schemes entirely subverting the whole systems of organisation inaugurated by his predecessors. At present the affairs of the army are administered by an Army Council framed on lines similar to the Board of Admiralty. At the head is the Secretary of State for War, who is responsible to His Majesty and Parliament for all the business of the Army Council. Under him and responsible to him are—

(1) **The Chief of the General Staff** whose principal duties are in connection with the preparation of plans for mobilisation, the control of the Intelligence Department, and generally with such work as is usually undertaken by a general staff—the brains of an army.

(2) **The Adjutant-General,** the second military member of the Council, who looks after the recruiting and the maintenance of discipline in the service.

(3) **The Quarter-Master-General** who controls the supplies and organises the transport service of the army.

(4) **The Master-General of Ordnance** who looks after the armament of the Army and supervises fortifications, military defences and powder magazines.

There is also a civil member of the Council. He is usually the Parliamentary Under-Secretary, and is responsible to the Secretary of State for the non-effective votes and for so much of the other business of the Army Council as may be assigned to him. The audit of accounts and financial arrangements are managed by the Financial Secretary, a member of parliament; whilst the clerical and general work of the War Office is controlled by a permanent secretary who is also responsible to the Secretary of State.

2. **LEGALITY OF A STANDING ARMY.** The Bill of Rights, 1689, that great charter of constitutional liberties, declared "that the raising or keeping a standing army within the kingdom in time of peace, unless it be with the consent of parliament, is against law." Ever since the Bill of Rights became law the legality of the standing army has depended on the passing of an annual Act of Parliament. This Act is known as the Mutiny Act, because it was enacted for the securing of discipline and the prevention of desertion by empowering military officers to deal with cases of mutiny or desertion according to martial law. The first Mutiny Act, 1689, was passed for six months only, and since then for a year and no longer. Should parliament, therefore, in any year fail to renew it, the continued existence of the army would be illegal, as also the exercise of all military authority. (For the legality of billeting troops, and the charges that may be made therefor refer to "Billeting Troops" in *Index*.)

THE ADMIRALTY.

1. **ADMIRALTY BOARD AND COMMISSIONERS.** Originally the affairs of the Admiralty and the control of our naval forces were vested in a high officer of State known as the Lord High Admiral. The office does not now exist; its duties being fulfilled by certain commissioners. Of these the chief is the First Lord of the Admiralty, a member of parliament, but not necessarily a peer. He in fact occupies much the same position as a Secretary of State, and has a seat in the Cabinet. There are also four Naval Lords and a Civil Lord. The senior Naval Lord is the First Lord's chief adviser on questions of naval policy, and especially with regard to the strategic grouping of our fleets. The second Naval Lord looks after the recruiting and personnel of the navy. The third Naval Lord, also called the Comptroller of the Navy, has duties in connection with the construction and armament of the service; whilst the Junior Naval Lord manages the pay and provisioning departments. The Civil Lord, a member of the government, acts as a sort of parliamentary under-secretary for naval affairs.

The Board of Admiralty consists of the above six commissioners assisted by a Financial Secretary and by a Permanent Secretary. The first of these is a member of parliament and of the ministry, and so changes with each government, but he has whilst in office the benefit of the assistance of a permanent official known as the accountant general.

2. **IMPERIAL DEFENCE.** We have seen by what means parliament exercises its right to control both the land and marine forces of the empire; but for purposes of efficient attack and defence some system of co-ordination of naval and military policy is necessary. This is obtained by the existence of an "Imperial Defence Committee," presided over by the Prime Minister. It is the duty of the Committee to obtain and collate information relating to the defence of the Empire, to discuss the best means of keeping in readiness for war so as to strike promptly and effectively on its outbreak, and to keep records of its deliberations for the use of the Cabinet of the day and its successors. The Committee is purely advisory, having no executive function whatever.

THE HOME OFFICE.

1. **COMPOSITION.** At the head of this great department is the Home Secretary. Under him are a parlia-

mentary and a permanent under-secretary, and two permanent assistant under-secretaries, one of whom is a barrister and acts as a sort of legal adviser to the Home Secretary. The department also comprises a number of clerks of various grades, besides a whole army of inspectors of factories, prisons, etc.

2. **THE HOME SECRETARY.** His functions are too multifarious to be mentioned in detail. But speaking broadly they relate especially to (*a*) Communications between the king and his subjects; (*b*) The administration of the prison system in England and Wales; (*c*) The maintenance of public order in the country; (*d*) The application of the law relating to the conditions of industrial and social life.

(*a*) Through the Home Secretary the Sovereign exercises his royal prerogative to reprieve or pardon criminals and persons unjustly convicted, and through him addresses and petitions are presented to the throne and answers given.

(*b*) The Home Secretary supervises the control and management of prisons, reformatories, and industrial schools; he issues licences or "tickets of leave" to well-behaved convicts under the Penal Servitude Acts, by which they are conditionally released before the expiration of their sentences; he has the custody of all criminal lunatics; and to him falls the duty of carrying out the law relating to the extradition of criminal fugitives to and from the United Kingdom, and to the expulsion of criminal aliens.

(*c*) As the Home Secretary is the minister to whom parliament looks for the maintenance of public order, he has under his direct control the Metropolitan Police Force, and he possesses extensive powers respecting the control and management of the police forces throughout the kingdom.

(*d*) The Home Secretary has also been given power by parliament to frame rules and to enforce, by the employment of inspectors and otherwise, the due execution of many Acts of Parliament, especially those relating to the protection of health and life in dangerous industries whether in mines, quarries, factories, or workshops; also those relating to the employment of women and children, and to the care of children who have been taken out of the custody of their parents under the Prevention of Cruelty to Children Act. Moreover, many of the bye-laws issued by Local Authorities, under Acts of Parliament, can only come into force on being confirmed by the Home Secretary.

THE COLONIAL OFFICE.

1. **COMPOSITION.** Ever since the Crimean War this has been a separate department presided over by a Secretary of State assisted by a permanent and a parliamentary under-secretary. There are also four assistant under-secretaries and a number of clerks and other officials. The Colonial Office through its Secretary of State, exercises on behalf of His Majesty the rights of the Sovereign over all the dominions of the Crown except the United Kingdom, the Isle of Man, the Channel Islands and the Indian Empire.

2. **COLONIAL GOVERNMENT.** Different Colonies are governed in different ways; all are under the Crown, but they are not all subject to the control of the British Parliament.

Sir William Anson in his *Law and Custom of the Constitution* groups the systems of government for different colonies into four great classes.

(1) *Colonies with no legislature.* For these the Crown legislates by means of Orders in Council, usually countersigned by the Secretary of State, the executive powers being vested in a governor appointed by the Crown on the advice of the ministry. Gibraltar is perhaps the best known instance of this class of colony.

(2) *Colonies with a nominated legislature.* In each of these there is a governor and executive and legislative councils, all the members of which are nominated either by the Crown or by the governor. The best known instance of this class are the Straits Settlements of Singapore, Penang and Malacca.

(3) *Colonies with an elected legislature and a nominated executive.* Even in these colonies, of which the Bahamas are an instance, a portion of the legislature is nominated by the Crown.

(4) *Colonies with responsible government.* In these the Crown is represented by a governor, who is assisted by two chambers generally called the Legislative Council, and the Legislative Assembly. The assembly is wholly elected by the colonists, whilst the members of the legislative council are in some colonies elected, and in others appointed by the governor on the advice of the executive council, a body nominated not by the Crown but by himself. To this class of colonies belong Canada, Newfoundland, Australia, New Zealand, Cape Colony and Natal.

THE INDIA OFFICE.

1. **THE HOME CONTROL.** By the Government of India Act, 1858, the Indian territories then in the possession or subject to the sway of the East India Company, were vested in the Sovereign. The Act provides for the appointment of a Secretary of State and under-secretaries to be paid out of the revenues of India. The Secretary of State is assisted in advising the Crown by a Council of twelve members, none of whom may sit or vote in parliament. But some measure of parliamentary control is gained by the fact that the Secretary of State, the president of this council, is always a member of parliament and of the ministry. The major part of the council is chosen from among persons who have spent at least ten years in India, and so have some acquaintance and sympathy with local opinions and feelings. Each member of the Council is elected for ten years and receives a yearly salary of £1,200, paid out of the revenues of India.

2. **FUNCTIONS OF THE COUNCIL.** The Secretary of State acts as president of the Council, and though not strictly a member, he has a vote at its meetings which are held at least once a week at the India Office, Whitehall. The Council under the direction of the Secretary of State conducts the business transacted in the United Kingdom in relation to the government of the Indian Empire; but every order or communication intended to be sent to India must be signed by the Secretary of State and, unless a secret or urgent despatch, must be open to the perusal of the members of the Council, who may record their opinions with respect thereto in a minute book kept specially for that purpose. If the Secretary of State acts contrary to the expressed opinions of the majority he must record his reasons for so doing. The expenditure of the revenues of India are subject to the control of the Secretary of State in Council.

3. **LOCAL ADMINISTRATION.** In India itself the Crown is represented by a Viceroy, or Governor-General, who is appointed by the sovereign, usually for a term of five years. The Viceroy is assisted in his executive and legislative duties by a council consisting of an extraordinary member (the commander-in-chief of the forces in India) and about six ordinary members appointed partly by the Crown and partly by the Secretary of State in Council. But where legislation is contemplated the Viceroy has power to nominate from ten to sixteen additional members under the Indian Council Acts, 1861 and 1892. Some of these additional members are always chosen from among the natives of India.

The Presidencies of Bombay and Madras are in charge of Governors who are appointed by the Crown and have legislative and administrative councils of their own. But the Lieutenant-Governors of the other provinces and territories of India are appointed by the Viceroy, subject to the approval of the Crown.

LESSER DEPARTMENTS OF STATE.

In the last chapter we dealt with the seven great permanent departments, which carry out under, parliamentary control, the administrative functions of government. There are besides a number of smaller ones framed on similar lines, some of which we propose to deal with here.

BOARD OF TRADE.

1. COMPOSITION. At the head of this department is the President of the Board of Trade, a member of the Government who is now usually included in the Cabinet. He is assisted in parliament by a parliamentary secretary, and in his departmental duties by a permanent secretary. The permanent establishment is divided into various sections: the Commercial Labour and Statistical Department under a Comptroller-General; the Companies Department under a Comptroller; the Bankruptcy Department under an Inspector-General; and four departments (the Railway, the Marine, the Harbour, and the Finance and General) under Assistant Secretaries. Under these officers there is a large staff of clerks and other minor officials as in all the other departments of State.

2. FUNCTIONS. We can only state the various functions of these numerous departments in a general way:

(1) **The Commercial Labour and Statistical Department** has the duty of preparing and issuing returns, reports and statistics dealing with the trade of the country, and with the condition of the labour market.

(2) **The Companies Department** controls and supervises the liquidators of companies being wound up by order of the court, and has various other duties under the Companies Acts.

(3) **The Bankruptcy Department** appoints and controls official receivers and fulfils duties under the Bankruptcy Acts.

(4) **The Railway Department** exercises considerable control over railways and tramways, especially in seeing that the Companies concerned take the utmost precautions to ensure the safety of their passengers. Indeed when serious accidents occur the Board of Trade holds inquiries as to their cause. Moreover, the bye-laws of such Companies and the schedules of rates for the carriage of merchandise must be approved by the Board.

(5) **The Marine Department** discharges many duties under the Merchant Shipping Act, 1894, an act with 748 sections and many schedules. Some of the principal of these duties are the surveying, measurement and marking of British ships before they are registered, the granting of certificates of competency to masters, mates and engineers, the granting of licences for the supply of seamen, the approving of forms of agreement between masters and crew, the administration of the effects of deceased seamen, etc.

(6) **The Harbour Department** sees that harbours and rivers are kept in a navigable condition. It controls receivers of wrecks, and supervises Trinity House and other pilotage authorities.

(7) **The Finance and General Department** deals with the finances of the Board of Trade and with all the work of the Board not allotted to other departments. Thus it supervises the Patent Office.

LOCAL GOVERNMENT BOARD.

1. COMPOSITION. This Board was established by the Local Government Board Act, 1871, for the purpose of concentrating into one department the supervision of the laws relating to Public Health, the Relief of the Poor, and Local Government. The Board consists of a President, who is a member of the ministry and, as ex-officio members, the Lord President of the Council, all the principal Secretaries of State, the Lord Privy Seal, and the Chancellor of the Exchequer. It should be noted that the duties of the *ex-officio* members on this and the other great Government Boards are for the most part merely nominal and carry no remuneration. In each case it is on the President of the Board on whom falls the bulk of the work and the responsibility to parliament. The President is assisted in his executive duties by a parliamentary and a permanent secretary, and a staff of secretaries, assistant secretaries, inspectors, auditors, clerks, messengers, etc., as in the other departments of State.

2. FUNCTIONS OF THE BOARD. The Act of 1871 transferred to the Local Government Board

(1) The powers and duties formerly exercised by the Home Secretary under the Acts relating to Registration of Births, Deaths and Marriages; Public Health, Drainage, Sanitary Matters, Baths, Wash-houses; Public Improvements, Artizans' and Labourers' Dwellings, and Local Taxation returns.

(2) The powers and duties formerly exercised by the Privy Council under the Vaccination and other Acts dealing with the prevention of disease.

The Board is, in fact, the central department for Poor Law, Public Health, and other Local Government matters. It supervises urban rural and district councils in the carrying out of their duties under the Public Health and Local Government Acts. Thus it hears and determines appeals relating to the summary recovery of private improvement expenses by Local Authorities, and exercises a certain amount of control over the auditing of accounts and financial transactions of such authorities. Its auditors have the power, which they not infrequently exercise, of surcharging against individual members of local authorities items of expenditure which ought not legally to have been incurred. The Board, however, may grant remission of such disallowances on appeal. The power of the Local Government Board over Boards of Guardians is so complete that there is very little indeed that they may do without its authority. Over the other authorities its power is not so complete, but County Councils, Borough Councils, as well as the authorities of urban and rural districts have all to get the sanction of the Board to their proposals to borrow money and to the bye-laws they propose to issue. (Refer to "Local Government Board" in *Index*.)

BOARD OF AGRICULTURE AND FISHERIES.

1. COMPOSITION. An Act passed in 1889 established the Board of Agriculture, and by an Act passed in 1893 the powers of the Board were enlarged so as to include the control of the Fisheries, which previously were under the supervision of the Board of Trade. The Board consists of a President, who is a member of the ministry, and certain ex-officio members, including the Lord President of the Council, the First Lord of the Treasury, all the principal Secretaries of State, the Chancellor of the Exchequer, the Chancellor of the Duchy of Lancaster, and the Secretary for Scotland. The permanent staff is under a secretary assisted by assistant-secretaries, clerks, inspectors, etc.

2. FUNCTIONS. These may be thus summarised:—

(1) To prevent the introduction or spread of disease among certain animals. For this purpose it is empowered to make regulations for the importation of animals from abroad, for the slaughtering, if need be, of animals attacked by infectious disease, for the muzzling of dogs, and the destruction of such as show symptoms of rabies, &c.

(2) To collect and distribute information relating to Agriculture, Horticulture and Forestry; to promote instruction and training in these subjects by distributing the Government Grant at their disposal among such schools and colleges as give an efficient agricultural education; to administer the Sale of Food and Drugs Acts so far as they concern agricultural produce; and to collect and publish agricultural statistics, such as the average prices of British corn under the Corn Returns Act, 1882.

(3) To supervise the redemption of tithe rent charge, the enclosure of common land, the enfranchisement of copyhold land, and, in brief, to administer any Act under which the Land Commissioners formerly had powers and duties.

(4) To administer the Acts relating to sea, freshwater, and salmon fisheries in regard to England and Wales.

(5) To supervise the Ordnance Survey of the United Kingdom, which is placed under the charge of a Director-General.

BOARD OF EDUCATION.

1. COMPOSITION. This Board was established by the Board of Education Act, 1899, and consists of a President, the Lord President of the Council, the principal Secretaries of State, the First Commissioner of the Treasury, and the Chancellor of the Exchequer. The President is nominally appointed by the Crown to hold office during His Majesty's pleasure; but this really means that he is a member of the ministry, chosen like other ministers by the Premier, and going out of office on a change of government. He is, of course, a member of one or other of the Houses of Parliament, and has the assistance of a Parlia-

mentary Secretary. There is also a permanent secretary in charge of the permanent staff of clerks, examiners, inspectors, &c., with three assistant secretaries dealing respectively with elementary, secondary, and technological education. The Board is assisted in its duties by a Consultation Committee consisting of eighteen members, who may be considered well qualified to represent the views of the universities and other bodies interested in education.

2. FUNCTIONS. The Board takes the place of the old Education Department, Whitehall, and of the Department of Science and Art, South Kensington, and its duty is to administer in England and Wales the law as to Education contained in many Acts, commencing with the Act of 1870. (Refer to "Education Law" in *Index*). Moreover, the Crown has power, by Order in Council, to transfer to the Board of Education any of the powers of the Charity Commissioners or of the Board of Agriculture and Fisheries in matters relating to education. One of the Board's most important duties is to exercise control over local Education authorities generally, hearing and determining appeals and settling disputes; for instance, in regard to the necessity or otherwise of new public elementary schools. It has also to co-ordinate the several schools and institutions engaged in education so as to prevent their work from overlapping and themselves from injuriously competing with each other. It frames and issues codes, laying down the conditions on which government grants are made; commissions inspectors to visit the schools in receipt of public money to see that these conditions are fulfilled; requires the local authorities to submit all plans of new school buildings for its approval; supports in large measure colleges for the training of teachers, and regulates the employment of pupil-teachers; and performs among its other duties that of administering the Teachers' Superannuation Fund.

BOARD OF WORKS.

This Department is presided over by the *First Commissioner of Works*, who forms one of the ministry and sometimes one of the Cabinet. He has control over public works and buildings of which the expenses are defrayed from the public purse. He has also the management of certain national parks and gardens, such as Richmond Park, Phœnix Park, Holyrood Park, and Hampton Court Gardens.

REVENUE DEPARTMENT.

1. CUSTOMS. The Board of Customs consists of a Chairman, Deputy Chairman, and one Commissioner. It collects the duties prescribed each year in the Finance Act on the imports and exports of the United Kingdom, and pays the proceeds to the Exchequer Account in the Bank of England. (Refer to "Customs" in *Index*).

2. INLAND REVENUE. The Board of Inland Revenue is composed of a Chairman, Deputy Chairman, and two Commissioners. Its offices are at Somerset House, London. The revenue it collects is derived from four sources—death duties, income and property tax, stamp duties, and excise duties and licences. (Refer to "Inland Revenue" in *Index*).

3. POST OFFICE. This is an important source of income, the postal and telegraph services bringing in a net income of over five millions. The chief official is styled the *Postmaster General*, a member of the government, and frequently a Cabinet minister. (Refer to "Post Office" in *Index*).

Besides these great revenue departments we may mention two others from which the King and Prince of Wales derive a substantial part of their personal income.

(1) *The Duchy of Lancaster.* The Crown lands in the Duchy of Lancaster have for centuries been "held separately from all other hereditaments." The proceeds, which amounted in 1904 to £110,000 and which are wholly exempt from parliamentary control, are paid into the king's privy purse, and are additional to the sum allowed in the Civil List. The office of *Chancellor of the Duchy* is, nevertheless, a political appointment, usually falling to a statesman of high standing and carrying with it a seat in the cabinet.

(2) *The Duchy of Cornwall.* The chief officer is called the *Lord Warden of the Stannaries*, and his duty is to superintend the management of the estates in the interests of the Duke of Cornwall (Prince of Wales) to whom the net profits are paid. These in 1904 amounted to £77,000.

ADMINISTRATORS OF THE LAW.

In the chapter on *Legislation* we have been informed how laws are made, and in that on the *Law Courts* will be found information as to the various courts of law, the methods of procedure in them, and the ways of enforcing the judgments given by them. We will, therefore, deal here only with the officials who are appointed to administer the laws of the land.

THE LORD CHANCELLOR. This official is the highest judicial officer in the kingdom, and has precedency above all temporal lords. Owing to his ecclesiastical patronage he may not be a Roman Catholic, but this disability does not apply to the Irish Lord Chancellor. The appointment is made by the King delivering the Great Seal into his custody. It is not essential that he should be a peer, though he is the prolocutor or speaker of the House of Lords. He is always a member of the cabinet and a privy councillor, and vacates his position when the ministry go out of office. He advises the Crown as to the appointment of all judges (except the Lord Chief Justice, who is nominated by the Prime Minister) and himself appoints Justices of the Peace for the whole of the kingdom. He presides at all the meetings of the House of Lords when it sits to hear appeals. He appoints all County Court Judges (except those in the Duchy of Lancaster), exercises much other judicial patronage, is ex-officio a member of the Court of Appeal; and after his retirement has the right to sit as one of its members. His remuneration is £10,000 a year, £6,000 of which he receives as a Lord of Appeal in Ordinary, and £4,000 as Speaker of the House of Lords. On a change of government he still sits as a Law Lord and retains, as such, his salary of £6,000, but when he retires altogether his pension is £5,000. (Refer to "Lord Chancellor" in *Index*).

THE LORD CHIEF JUSTICE OF ENGLAND. When the Queen's Bench, the Common Pleas and the Exchequer Divisions were consolidated in 1881 into one division, now called the King's Bench Division of the High Court of Justice, the offices of Lord Chief Justice of the Common Pleas and Lord Chief Baron of the Exchequer were abolished and the Lord Chief Justice of the Queen's Bench became the Lord Chief Justice of England. He is appointed by the Crown by letters patent, and receives a salary of £8,000 per annum. In the absence of the Lord Chancellor he acts as president of the High Court of Justice. He must, unless prevented by illness, be one of the five or more judges of the Court of Crown Cases Reserved, the court which hears appeals on questions of law arising at criminal trials. He generally presides at the Divisional Court of the King's Bench Division on the hearing of appeals from Petty and Quarter Sessions and from County Courts. Under the Judicature Act, 1875, he is an ex-officio judge of the Court of Appeal, but except when one of the ordinary judges is absent he does not often sit in that Court. Nearly all writs are tested in the name of the Lord chancellor, when that office is vacant they are tested in the name of the Lord Chief Justice.

THE MASTER OF THE ROLLS. This official who ranks next after the Lord Chief Justice in the table of precedence was formerly a judge of the High Court. By the Judicature Act, 1881, he is made an ex-officio judge of the Court of Appeal, and in practice he nearly always presides in that court. He receives a salary of £6,000 per annum. Formerly the Master of the Rolls held sole jurisdiction over the register of patents, but much of this has been taken away by the Judicature Act, 1873. He still, however, as Keeper of the Records, has certain powers of

amending clerical errors in specifications filed at the patent office. He also has many powers over solicitors practising in England and Wales. The Master of the Rolls is so called because he is Keeper of Public Records, which were formerly written on rolls of parchment. In early times the rolls were in the custody of the Chancellor, but owing to the rapid growth of that official's jurisdiction a separate office was created in the reign of Edward II.

THE ATTORNEY-GENERAL. The principal law officer of the Crown is the Attorney-General. He is a member of the government but is not in the cabinet. His salary as a member of the government is £7,000 per annum, but he receives fees for actual litigious work done amounting roughly to another £6,000. His duties are manifold. He is the principal legal adviser to the ministry of which he is himself a member, and being a member of parliament he is expected to defend in the House the legality of the government's actions. He also is a necessary party in all legal actions where the Crown or its royal prerogatives are in question. By certain Acts of Parliament criminal proceedings cannot be taken against a person unless the fiat or sanction of the attorney-general has been first obtained. This is especially the case where the injured party would otherwise have two courses of procedure open to him, one criminal and the other civil. Thus fraudulent misappropriation by a trustee is both a civil wrong and a criminal offence. The attorney-general's fiat is necessary before criminal proceedings can be brought against a fraudulent trustee. The Attorney-General has, moreover, the power to stay and put an end to criminal proceedings by entering what is called a *nolle prosequi*. Thus a few years ago a man was tried for murder; the jury disagreed. He was tried again at the next assizes and the new jury also failed to agree. He would have had to be tried again had not the attorney-general entered a *nolle prosequi*. Whereupon he was discharged though not acquitted.

THE SOLICITOR-GENERAL. He also is a law officer of the Crown, a member of parliament and of the ministry, and not in the cabinet. He is not, however, a solicitor. Both he and the attorney-general are always chosen from among barristers of very high standing, and almost always from among the number of King's Counsel. The office is regarded as a stepping stone to that of attorney-general, and thence to the post of Lord Chancellor. His salary is £6,000 per annum, but with the addition of fees for litigious work it is brought up to about £10,000. He acts as the Attorney-General's assistant and takes his place whenever the latter is unable to be present.

LORDS OF APPEAL IN ORDINARY. The House of Lords is the highest court of appeal in the land. It hears appeals from His Majesty's Court of Appeal in England and from various courts in Scotland and Ireland. Moreover, the Judicial Committee of the Privy Council is the final court of appeal from the ecclesiastical courts of England and from the supreme courts of the Colonies. There are always a certain number of high judicial personages, as the Lord Chancellor and ex-Lord Chancellors with peerages in the House of Lords, but in order to strengthen the legal element the Appellate Jurisdiction Acts, 1876 and 1887, provide for the appointment of four Lords of Appeal in Ordinary with life peerages and the rank of Baron to aid the House of Lords (and the Judicial Committee when they are privy councillors) in the hearing of appeals. They receive salaries of £6,000 per annum each, and must at the time of appointment either have held for not less than two years some high judicial office or else have been in practice as a barrister in England or an advocate in Scotland for not less than fifteen years.

LORD JUSTICES. The Court of Appeal which hears appeals from the High Court and from which appeals lie to the House of Lords, usually sits in two courts of three judges in each. The Lord Chancellor and the Lord Chief Justice are ex-officio judges in this court, but seldom sit. In practice the six judges who sit in the court to hear appeals are the Master of the Rolls and five Lord Justices, each of whom receives a salary of £6,000 per annum, and must either have been a judge of the High Court for at least one year or been in practice as a barrister for not less than fifteen years.

JUDGES OF THE HIGH COURT. The Chancery Division of the High Court of Justice is nominally presided over by the Lord Chancellor, but the actual work of the division is performed by six *puisne* judges. (All those judges of the High Court who have no distinctive title are called *puisne* judges, Fr. *puisné* "junior.") In the King's Bench Division there are the Lord Chief Justice and fourteen puisne judges, and in the Probate, Divorce and Admiralty Division there are the President of that division and one puisne. The President of the Probate, Divorce and Admiralty Division and the puisne judges of the various divisions each receive a salary of £5,000, and the King's Bench Judges who go on Circuit receive in addition handsome travelling allowances. Puisne judges of the High Court must be barristers with not less than ten years' experience at the bar. They are addressed as "My Lord," and are styled "Mr. Justice ———." On appointment they always receive the honour of knighthood, but this is for the purpose of conferring a measure of precedence on their wives, they themselves rank higher than knights.

We may here mention an official known as the Judge's Marshal. He is usually some young relative of a judge who accompanies him on Circuit and acts as a sort of private secretary for which he receives his travelling expenses and two guineas a day whilst the judge is on circuit.

COUNTY COURT JUDGES. These are appointed from among barristers of not less than seven years' standing. Where the district of their County Court is situate within the royal Duchy of Lancaster they are appointed by the Chancellor of the Duchy, but elsewhere they are appointed by the Lord Chancellor. The same judge may be appointed to two different County Courts. Neither County Court judges, High Court judges, or judges of the Court of Appeal are allowed to sit as members of parliament. County Court judges receive a salary of £1,500 per annum, and an allowance for travelling expenses. They are addressed as "Your Honour," and styled "His Honour Judge ———." In the case of his illness, or unavoidable absence, a County Court judge may appoint as his deputy a barrister of not less than seven years' standing.

THE RECORDER AND THE COMMON SERGEANT OF LONDON. The Recorder is the judge of the Central Criminal Court, known familiarly as the "Old Bailey," though removed to new quarters on the site of Newgate Prison. It is his duty to deliver the charge to the Grand Jury at the "Old Bailey" sessions, held monthly. He receives a salary of £4,000 per annum, and is elected by the Aldermen of the City of London; but he cannot exercise his judicial functions until confirmed in his appointment by the Crown. Under him as a Judicial Officer of the City of London and also a judge of the Central Criminal Court is the Common Sergeant who was formerly appointed by the Court of Common Council, but is now, by virtue of the Local Government Act, 1888, appointed by the Crown. The Common Sergeant receives a salary of £2,500 a year.

RECORDERS OF BOROUGHS. The County Quarter Sessions are presided over by a chairman and County Justices, the Chairman being elected by the Justices. But in boroughs the sole judge at the Quarter Sessions is a Recorder, a barrister of at least five years' standing appointed by the Crown. By the Municipal Corporations Act, 1882, he receives such a salary (not exceeding the amount which the borough council has, by its petition for a court of its own, declared itself prepared to pay) as the Home Secretary may direct; but the salary may be increased by a resolution of the council approved by the Secretary of State. In some boroughs the Recorder receives nothing, whilst in others he receives a handsome sum for the few days' work in the year required of him.

BANKRUPTCY OFFICERS. Since 1883 the Bankruptcy Court has formed part of the High Court of Justice, though certain County Courts still retain jurisdiction in bankruptcy. The judge of the High Court who deals particularly with bankruptcy cases is one of the *puisnes* of the King's Bench Division, nominated for the purpose

by the Lord Chancellor. Under him are five REGISTRARS, who are empowered to hear bankruptcy petitions, to make receiving orders, and to do many things in connection therewith, thus relieving the Judge of a considerable amount of work. There is also an OFFICIAL RECEIVER appointed by the Board of Trade in each bankruptcy division of the county, whose duty it is, *inter alia*, to investigate the conduct of debtors and to report to the Court, stating whether there are circumstances which would justify the Court in refusing, suspending, or qualifying an order for a debtor's discharge.

JUSTICES OF THE PEACE. By far the larger amount of the work in connection with charges of crime is done by Justices of the Peace, familiarly known as magistrates. For over five hundred years they have received the sovereign's commission to keep the peace in their several areas. There is a separate commission of the Peace for each county, and for many boroughs. The position is one of honour. "The whole Christian world," said Lord Coke, "hath not the like office as justice of the peace, if duly executed." They are of two kinds, County Justices and Borough Justices, and are appointed by the Lord Chancellor on behalf of the Crown. The Chairman of a County Council or of an Urban or Rural District Council is by virtue of his office a County Justice (women, of course, are disqualified). So, too, in Boroughs the Mayor is *ex-officio* a Justice of the Peace both during his year of office and the succeeding year. The Recorder of a borough is also an *ex-officio* Borough Justice. The old property qualification for a county justice is no longer required. (See under "Justices of the Peace Act," p. 563.) Under the Summary Jurisdiction Acts the work of these local magistrates has become very heavy. The office is terminated by the death of the sovereign, by a special writ, or by the issue of a new commission. A justice of the peace also vacates his office on being made high sheriff of the county, but only during the period in which he serves as high sheriff.

STIPENDIARY MAGISTRATES. If a borough council so desire they may, under the provisions of 45 & 46 Vict., c. 51, s. 161, petition the King, through the Home Secretary, for the appointment of a Stipendiary Magistrate. If the petition is granted, a barrister of at least seven years' standing is appointed, who becomes by virtue of his office a justice of the borough. The stipendiary magistrate may do alone all acts which are authorised to be done by two justices of the peace. The paid magistrates in London number twenty-five, and they are known as METROPOLITAN MAGISTRATES. The appointments are made by the Crown. In the Metropolis there are daily sittings at fourteen police courts, excepting only Sunday, Christmas Day, Good Friday, or any day appointed as a public fast or thanksgiving.

OFFICERS OF THE CHURCH.

The constitutional aspect of the Established Church of England is described in the chapter on Church Law, to which reference should also be made for an account of church property, ecclesiastical jurisdiction, the position of the clergy and churchwardens, etc. The church only recognises three orders of clergy, namely, bishops, priests, and deacons. There are, however, among the clergy varying degrees of dignity or office, and it is of the holders of such dignities that we would speak here. (For the mode of addressing these different grades refer to *Social Guide*).

ARCHBISHOPS. England is divided into two provinces for ecclesiastical purposes, each of which has an Archbishop as its spiritual head. Of these the principal is the Archbishop of Canterbury who ranks as the first subject of His Majesty, and is placed in the table of precedency next to Ambassadors and before the Lord Chancellor. He is styled the Metropolitan and Primate of all England, and has the right of placing the crown on the sovereign's head at his coronation. The Archbishop of the province of York ranks in the table of precedency immediately after the Lord Chancellor and before the Prime Minister. At coronations it is his privilege to crown the Queen Consort. Each Archbishop has the jurisdiction of a bishop in his own diocese, and a measure of supervision and control over the bishops of the other dioceses in his province. The two archbishops together with the bishops of London, Durham and Winchester are always entitled by virtue of their office to be spiritual peers of the House of Lords, whereas the other diocesan bishops have to wait for that honour until entitled by seniority (see "Spiritual Peers" under *House of Lords*.) Archbishops and bishops sign themselves by writing their Christian names (or the initial thereof) followed by the ancient name of their see. Thus Dr. Randall Davidson, Archbishop of Canterbury, signs himself Randall Cantuar, and Dr. William Maclagan, Archbishop of York, signs himself Willelm Ebor (see "Episcopal Signatures" in *Social Guide*).

BISHOPS. The province of Canterbury is divided into the diocese of Canterbury with an Archbishop, who receives £15,000 per annum, and twenty-six dioceses with Bishops:—

London (£10,000), Winchester (£6,500), Bangor (£4,200), Bath and Wells (£5,000), Birmingham (£3,500), Bristol (£3,000), Chichester (£4,200), Ely (£5,500), Exeter (£4,200), Gloucester (£4,300), Hereford (£4,200), Lichfield (£4,200), Lincoln (£4,500), Llandaff (£4,200), Norwich (£4,500), Oxford (£5,000), Peterborough (£4,500), Rochester (£3,100), St. Albans (£3,200), St. Asaph (£4,200), St. Davids (£4,500), Salisbury (£5,000), Southwark (£3,000), Southwell (£3,500), Truro (£3,000), and Worcester (£4,200).

The province of York comprises the diocese of York with its Archbishop (£10,000), and nine other dioceses or bishoprics:—

Durham (£7,000), Carlisle (£4,500), Chester (£4,200), Liverpool (£4,200), Manchester (£4,200), Newcastle (£3,500), Ripon (£4,200), Wakefield (£3,000) and Sodor and Man (£1,450 net).

Besides the above diocesan bishops there are in the Established Church in England a number of other bishops who are either suffragan or coadjutor bishops.

SUFFRAGAN BISHOPS are appointed for certain towns mentioned in a statute of the reign of Henry VIII. (26 Hen. VIII., c. 14), and for such other towns as the sovereign may direct by means of an order in Council under the Suffragans Nomination Act, 1888 The duty of a suffragan bishop is to relieve his diocesan of a certain portion of his work, especially in visiting the clergy and their parishes, and in taking a large share of the Confirmations held each year in certain selected churches of the diocese. Suffragans are permitted by the Statute of Henry VIII. to hold two benefices each "for the better meyntenaunce of his dignitie."

A BISHOP COADJUTOR is an additional bishop appointed under the Bishops Resignation Act, 1869, when any Archbishop or bishop becomes incapacitated by reason of permanent mental infirmity from the due performance of his episcopal duties. He obtains upon consecration the spiritualities of the see and the patronage of the bishop, but usually a third of the temporalities of the see is taken as a pension for the late bishop.

DEANS. Next in rank to the Bishop comes the Dean. He is the head of the chapter attached to the cathedrals of every diocese except the newer ones of Birmingham, Liverpool, Newcastle, Southwell and Wakefield. The Dean and Chapter form the governing body of the cathedral of the diocese. They are charged with the duty of maintaining the fabric in good repair and the proper rendering of divine service therein. They are nominally entitled on the decease or retirement of the bishop of the diocese to elect a successor. But practically they are bound to elect the person named in the letters missive which accompany the *congé d'élire* or licence to elect. By the Ecclesiastical Commissioners Act, 1840, every Dean of a cathedral must remain in residence for at least eight months in the year. No one is eligible for the office of Dean until he has been six years in priest's orders.

CANONS. By the Ecclesiastical Commissioners Act, 1840, all the members of the chapter, except the dean, in every cathedral and collegiate church in England and in

the cathedral churches of St. Davids and Llandaff are styled Canons, whereas formerly in some cathedrals they were styled prebendaries, and in others canons. The term of residence to be kept by a canon of a chapter is at least three months in the year. The act further gives bishops the power to confer an honorary canonry on leading clergymen. The *Honorary Canons* are entitled to stalls and take precedence in the cathedral churches next after the canons. In some cathedrals these non-residentiary canons are still called prebendaries. The title of *Minor Canon* is given to the clerical members of a cathedral choir whose special duty is to officiate at Mattins and Evensong. They are appointed by the Chapter, and generally owe their appointment to a good voice and the power of using it effectively.

ARCHDEACONS. They are appointed by their respective bishops and are required to have been at least six years in holy orders. Their functions are indicated in the designation of these dignitaries as *oculi Episcopi*, "the eyes of the bishop." It is their duty to inspect the churches and glebe houses, and to hold annual visitations of the clergy and churchwardens. It is their privilege to present candidates to the bishop for ordination after having duly examined them, and to induct the clergy into the temporalities of their benefices. They are *ex-officio* members of Convocation. There are from two to four archdeaconries in each diocese.

RURAL DEANS. The Ecclesiastical Commissioners Act, 1836, gave power to the Crown to issue Orders in Council providing that every parish should be within a rural deanery, and every such deanery within an archdeaconry, and that no archdeaconry should extend beyond the limits of one diocese. It will thus be seen that the country is divided into ecclesiastical provinces, the provinces into dioceses, the dioceses into archdeaconries, the archdeaconries into rural deaneries, and the rural deaneries into parishes. At the head of these deaneries is the rural dean who formerly was a dignitary of considerable importance, but who now is chiefly concerned in assisting the archdeacon in inspecting and reporting on the clergy under his charge. He is appointed, as a rule, by the bishop or the archdeacon, but in some cases by the suffrages of the clergy of the rural deanery. He is frequently requested by the bishop to convene the clergy of his rural deanery to discuss certain questions on which the bishop desires to learn the opinions of his clergy.

RECTORS. By the New Parishes Act, 1856, upon every resettlement of endowments, whenever the whole of the ecclesiastical dues, consisting of any prædial or rectorial tithe arising within the limits of any parish or district, shall become payable to the incumbent, such incumbent shall thereupon become the rector. Generally speaking the title rector is given to the incumbent of parishes where the tithes have not been impropriated, that is, handed over to certain laymen, who are called, in consequence, lay rectors (Refer to "Tithes" in *Index*.)

VICARS. The term vicar (Latin *vicarius*) simply means a deputy, and was first applied to the clerical deputies appointed by lay rectors to conduct the services in the parish churches on their behalf; but the term is now used in a larger sense to include all incumbents who are not rectors.

CURATES. Originally the term applied to all clerks in Holy Orders who had a cure of souls; but now the word is generally employed to designate the clerks in Holy Orders, whether priests or deacons, who assist a rector or vicar in carrying out his duties in his church and parish.

> It is interesting to note that in French a *curé* is equivalent to a vicar, and a *vicaire* to a curate. The French terms are more strictly accurate than our own, inasmuch as the *curé* holds the cure of souls, and the *vicaire* (Latin, vicarius) is his assistant.

Generally when the incumbent in charge of a parish is maintained, not by rectorial or vicarial tithes, but by an annual stipend, he is styled a *perpetual curate*.

PART II.

LOCAL GOVERNMENT.

INTRODUCTION.

We propose in this second part of our "Legal Guide" to deal with the laws affecting Local Government, in the hope that our exposition may be of service to all who take an intelligent interest in the wise administration of those laws. Good laws are valueless unless well administered. Whether the administration of the laws in any locality is good or bad depends on the kind of men who have been elected for the management of its affairs. It behoves every citizen to do his best to secure the election of wise and honest men. It is, therefore, his duty to ascertain the character and fitness of the men who offer themselves for election, and to make a point of recording his vote on the day of election. This is obviously the least that a good citizen is bound to do in the interests of the community in which he dwells. But it is hoped that an increasing number of citizens, not satisfied with taking this minimum share of duty in local matters, will be glad to gain such information respecting the laws bearing on local government as will enable them to form a just opinion of the way affairs in their locality are administered, and to exercise a salutary influence in effecting necessary reforms. It is also hoped that the exposition here offered will be useful to those who have been elected to any such office as Borough or County Councillor, helping them to discharge their duties with a clear knowledge of their rights and responsibilities.

By local government is meant the administration of those matters which directly concern the inhabitants of a particular place, and which do not directly concern the nation as a whole, however greatly they may indirectly affect the interests of the nation at large. Such matters include sanitation, police, relief of the poor, lighting, maintenance and control of the highways, erection of free libraries, and many other local concerns. For the better administration of these affairs, the country is divided into areas, each of which is governed by an elective body with powers and duties well defined.

The largest administrative area is the County, the interests of which are supervised by the County Council. The County itself is divided into Rural Districts and Urban Districts, governed by District Councils. The Rural Districts are again sub-divided into Parishes, the interests of which are attended to by the Parish Council or the Parish Meeting. The Urban Districts are divided into parishes, but not for the purpose of each having a separate Council or Meeting. Further, in both Rural and Urban Districts the parishes are grouped together into Unions, each of which is for poor-law purposes governed by a Board of Guardians, though it must be remembered that in the Rural Districts the members of the Rural District Council are also the members of the Board of Guardians for that district. From this it will be seen that our system of local government has for its unit the Parish; from the

grouping of the Parishes comes the Districts and the Unions, and the County is built up of the Districts, Rural and Urban.

The County Council has certain powers of controlling and supervising the work of the smaller bodies, the District and the Parish Councils. The District Council has somewhat similar powers of supervising the work of the Parish Councils and Parish Meetings.

There are, however, certain Urban Districts which are exempt wholly or in part from the jurisdiction of the County Councils. These are known as boroughs, which in ancient times received a charter of incorporation, or at the present day have been granted a charter of incorporation under the Municipal Corporations Acts. Some of these boroughs are known as County Boroughs, and are wholly independent of the county in which they are situated, and are uncontrolled by the County Councils. This class of boroughs was created by the Local Government Act of 1888. The other boroughs may be described as Non-County Boroughs, and are not entirely free from County Council control, particularly in the matter of the maintenance of Highways, Education, and the payments of the salaries of Sanitary Officials.

The City of London is wholly unlike any other Municipal Corporation, not only as regards its form of government, but also in regard to the rights and duties of its Corporation. The Metropolitan Boroughs created in 1899, while they resemble other municipalities in their form of government, have somewhat different powers and occupy a different position from the provincial boroughs, notably in regard to their relation to the County Council and their position in matters of rating.

These different local bodies exercise considerable powers within the limits authorised by law, but in the exercise of their different powers they are strictly controlled by the Central Government acting through its great Departments —the Treasury, the Home Office, the Board of Trade, the Board of Agriculture, the Board of Education, and lastly and chiefly the Local Government Board. Their powers, and the manner in which these powers are exercised, are defined by Acts of Parliament, or by Orders in Council issued in virtue of Acts of Parliament. The various local bodies often feel that they have cause to resent the interference of the central authorities, but there is one important matter in which the latter might have exercised their authority with advantage. They might have checked the zeal of local authorities when it involved the raising of excessive loans for local undertakings, which in the case of the municipalities have grown to some hundreds of millions, and which are still increasing, threatening at no distant date to ruin the unfortunate ratepayers.

LOCAL AUTHORITIES.

In the following pages, the different local authorities will be described in the following order :—

1. Parish Councils and Parish Meetings.
2. District Councils—Urban and Rural.
3. Boards of Guardians.
4. County Councils.
5. Municipal Government.
   - (*a*) County Boroughs, and Counties of Cities and Counties of Towns.
   - (*b*) Non-County Boroughs.
   - (*c*) Metropolitan Boroughs.
   - (*d*) City of London.

PARISH COUNCILS AND PARISH MEETINGS.

Originally the ecclesiastical parish and the civil parish were one and the same thing—but at the present day there are in England and Wales nearly 15,000 civil parishes and 14,000 ecclesiastical parishes, and in only one-third of these do the civil and ecclesiastical boundaries coincide. The ecclesiastical parish was the district to which one parish priest ministered, the district which paid tithes and other church dues to the same person. The civil parish may be defined as a place for which a separate poor-rate is or can be made, or for which a separate overseer is or can be appointed.

Down to 1894 the duties of the Vestry—that is, "the ratepayers of the Parish in vestry assembled"—consisted in working and carrying out the provisions of certain "Adoptive Acts," such as the Public Libraries Acts, and in all Urban Parishes (other than Metropolitan parishes) the vestry still retains these powers ; but in all rural parishes these powers have been transferred to the Parish Council or the Parish Meeting, which exist only in rural parishes. A rural parish is a parish which on March 5th, 1894, was in a rural sanitary district. It is any place which is not within an urban district, and for which a separate poor-rate can be made, or a separate overseer appointed.

The Local Government Act, 1894, provides that every rural parish shall have a Parish Meeting, and that such rural parishes as have a population of 300 or upwards shall have a Parish Council.

THE PARISH MEETING. This body must meet at least once a year on some day between the 1st of March and the 1st of April, both days inclusive. This meeting elects the Parish Council, if there be one, and in that case the meeting will be held on a day fixed by the Local Government Board. Where there is no Parish Council, the Parish Meeting must take place twice a year. The business must not begin before six o'clock in the evening. All questions are decided by a majority of the meeting, unless a poll of all the parochial electors is demanded.

The Parish Meeting may adopt certain permissive Acts, e.g. Acts for providing the parish with baths, wash-houses, burial grounds, free libraries, recreation grounds, and for lighting the parish. Where there is no Parish Council, it has certain of the powers of that Council. It may levy a rate not exceeding sixpence in the pound for all purposes, inclusive of the rate required for carrying out the adoptive Acts.

PARISH COUNCILS. Every parish with a population of 300 or more has a Parish Council, and every parish of more than 100 but less than 300 may have one if the Parish Meeting so resolve. The County Council may establish a Parish Council in a parish with a population of less than 100, but only with the consent of the Parish Meeting.

(1) **Composition.** A Parish Council consists of a chairman and not less than five councillors or more than fifteen, fixed from time to time by the County Council. Any parochial elector, man or woman, or any person resident for a year in or within three miles of the parish, is qualified to be a Parish Councillor. The councillors hold office for three years. The election takes place at the Parish Meeting. A poll of the voters can be granted by the chairman, or it may be demanded by not less than five electors present at the meeting, or by one-third of those present, whichever number is the least. The voting then takes place by ballot.

(2) **Powers.** The Parish Council may adopt the permissive Acts with the consent of the Parish Meeting. It appoints the overseers and the assistant overseers. All parish property, except church property or ecclesiastical charities, vests in the Parish Council. It may make and manage allotments, and may petition the County Council to make an order authorising the hiring or purchasing of lands for that purpose. It deals with local sanitary matters, and protects public rights of way. It may, with the consent both of the County Council and the Local Government Board, borrow money up to one half of the rateable value of the parish. The Parish Council cannot, without the consent of the Parish Meeting, levy a rate exceeding threepence in the pound. In no case can it levy a rate exceeding sixpence in the pound, exclusive of rates required for carrying out the adoptive Acts.

The Parish Council and the Parish Meeting have a right to meet in public elementary schools ; but they may not meet in public houses, unless no other suitable place can be found. The Parish Accounts must be made up to the end of March in each year, and are audited by the Local Government Board Auditor.

DISTRICT COUNCILS.

A county district may be either urban or rural. As constituted by the Local Government Act of 1894, an Urban District may be roughly defined as an area which has not yet got a population large enough to enable it to obtain a charter and become a Municipal Corporation. All other districts may be classed as rural districts.

(1) **Composition.** No person can be an Urban District Councillor unless he or she be a parochial elector of some parish within the district, or has resided in the district for the twelve months preceding the election. But a rural district councillor may be either a parochial elector in some parish within the union which is often larger than the district. Women are eligible—but aliens, infants, bankrupts, or persons in receipt of parochial relief are not. Councillors hold office for three years. The chairman is, in virtue of his office, a justice of the peace.

(2) **Powers.** In regard to sanitary matters, the powers of District Councils are ample. They superintend and control the drainage, and the inspection and abatement of nuisances, the cleansing and scavengering of the streets. In Urban Districts, the Councils may build and maintain hospitals and mortuaries, and where the district is not already supplied with water by a water company, the District Council may provide a water supply. It has considerable powers over the highways. In Urban Districts, the Council has many of the powers possessed by a Municipality.

A great difference between Urban and Rural District Councils is that the members of a Rural District Council are also the poor-law guardians of the district. Each member of a Rural District Council represents his own parish on the Board of Guardians for the Union of which his parish forms a part, though, of course, the two bodies are quite distinct and have different functions. But in an Urban District, the members of the Urban District Council have nothing whatever to do with the Board of Guardians. Thus in Rural Districts one election does for the District Council and the Board of Guardians, but in Urban Districts two different elections are held, and the persons elected Councillors may or may not be elected Guardians of the Poor.

BOARDS OF GUARDIANS.

A Union, as its name implies, consists usually of a group of parishes united for poor-law purposes, but there are a few unions consisting of a single parish. Each union has a separate Board of Guardians, whose duty it is to attend to the relief of the poor.

CONSTITUTION. Any person, male or female, married or single, who is a parochial elector of any parish within the union, or has resided therein for twelve months preceding the election, is eligible as a Guardian; but paid poor-law officers, persons in receipt of poor-relief, those having an interest in any contract with the Board, persons who have within five years before the election been adjudged bankrupt, or convicted of a crime, are not eligible for election.

Guardians hold office for three years, and all retire at the same time. Each parish having a population of not less than 300 sends a member to the Board; smaller parishes may be grouped together for the purpose. Any guardian who is absent from all meetings of the Board for six months without good cause vacates his seat.

DUTIES. The principal duty of the Guardians is to relieve the poor, but they have other functions besides, e.g. the enforcement of the Vaccination Acts and the appointment of Registrars of Births and Deaths. The Guardians do not collect the poor rate, but merely issue an order to the overseers to collect so much from each parish in the union; and it is the duty of the overseers to fix the amount which each householder must pay, and to collect the amount so determined. The Guardians may, with the approval of the Local Government Board, borrow money for permanent works, such as hospitals, asylums, and workhouses.

CENTRAL CONTROL. There is no local body which has so little independence as a Board of Guardians. It cannot take the slightest initiative in anything, and everything done by it is rigidly supervised and corrected by the Local Government Board. For instance, a Board of Guardians cannot alter the dietary of the inmates without the consent of the Local Government Board, and it cannot even meet in any room other than the recognised board-room, without the consent of the same body.

COUNTY COUNCILS.

The county is an area under a form of government which as far as possible, approximates to that prevailing in the large towns. For the purposes of this system of local government, England and Wales is divided not into fifty-two counties, but into sixty-two administrative areas. Each of these areas is governed by a county council, of which the number of the members varies according to the size and the population of the county—from 28 for Rutland to 120 for the West Riding of Yorkshire, and 137 for London. Every County Council is a corporation, and may hold and acquire land without a licence in mortmain.

COMPOSITION. One-fourth of the members of a County Council are aldermen, who hold office for six years, one half of their number retiring every third year. The ordinary councillors are elected for three years, and at their first meeting in each period of three years they elect half the number of aldermen. Either members of the council or outsiders (provided they are qualified to be councillors), may be chosen as aldermen, but if a councillor is elected alderman he vacates his seat as a councillor, and the vacancy is filled up by the county electors choosing a fresh councillor. The chairman is (unless a woman), in virtue of his office, a justice of the peace for the county.

WHO MAY BE ELECTED AS COUNCILLORS. Every persons who is registered as a parliamentary voter in respect of property owned by him in the county; or who is qualified as a municipal elector in any borough in the administrative area, not being a county borough; or a person who would be qualified as a municipal elector in such a borough but for the fact that he is non-resident therein, provided he resides within fifteen miles of such borough. A peer owning property in the county is qualified to be a councillor, as are clergymen of all denominations.

No person who holds any office of emolument in the gift of the council, nor a person who has any interest in any contract with the council, nor a bankrupt for five years after his discharge, is eligible for election as a councillor. But the disability of women is now removed by the qualification of Women (County and Borough Councils) Act, 1907.

POWERS AND DUTIES. The County Council exercises all the powers and duties of the Justices in Quarter Sessions, except judicial powers, e.g. rating appeals, licenses for the sale of intoxicating liquors, which are still exercised by the Quarter Sessions. The county police are controlled by a joint committee of the County Council and the county justices, but in all other local concerns the County Council is the supreme body. They have power to levy county rates, and within certain limits to borrow money. They may oppose or promote bills in Parliament. Under the Education Act of 1902, the County Councils have extensive powers in matters of education. In fact, all education, primary and secondary, including technical instruction, is under their control.

The main functions of the County Councils are to provide and maintain Courts of Justice, Highways, County Buildings, Lunatic Asylums, Reformatories, Industrial Schools, Bridges, and Police. They prevent the pollution of rivers, and carry out the laws relating to contagious diseases in animals and to destructive insects. They appoint such officers as the coroner, the county treasurer, the surveyor, and the public analyst. All Local Government elections are under their control. Music and dancing licenses, and licenses for race courses are granted by them, and compulsory purchases of land for allotments may be authorised

by them. The use of proper weights and measures by shopkeepers and others is supervised by the County Council.

The County Council supervises all the local Councils, such as the Parish and District Councils within its area. It can compel these bodies to do their work, and if they neglect it, may do it for them. It settles disputes between the local councils, and, in short, it is the duty of the County Council to see that the work of the local government is carried out smoothly and efficiently.

To sum up, the County Council must perform all the duties which are not entrusted to the subordinate local authorities, such as the Town Councils, District Councils, and the Rural Councils.

EXTENT OF JURISDICTION. The County Council has jurisdiction over the entire area of the county, with the exception of those towns known as County Boroughs.

FINANCE. The funds for carrying on the work and performing the duties of the County Council are derived from various sources. It receives from the Imperial Government a share of the Excise duties collected in the county, and a portion of the Probate Duty collected throughout the United Kingdom. These contributions are paid into a separate account called the "Exchequer Contribution Account," and are devoted to the payment of various officials, such as the poor-law officers, medical officers of health, and registrars of births, deaths and marriages. Any surplus left after payment of these officials may be devoted to general purposes, more particularly for the promotion of technical education.

As the sums thus obtained are insufficient for local purposes, the County Council has power to levy a County Rate. In fixing the rate, the Council may employ the poor-law valuation, or may make a valuation of its own. The rate having been struck, the Council issues a precept or order to the poor-law guardians of each union, bidding them collect from each parish in the union an amount fixed in proportion to the value of the property in the parish. This amount is collected by the overseers of the poor, and handed over to the guardians, who in turn pay it to the county treasurer. The guardians must pay this money within the time named in the precept, otherwise the Council may themselves order the overseers to collect the amount due from each parish.

Other sums are derived from fines inflicted for the breach of bye-laws or certain statutes, tolls, rent of county property, and the like.

All moneys received by the Council other than those contributed by the Imperial Exchequer are paid into the County Fund Account. These moneys can only be employed to meet the expenses incurred by the Council in the exercise of its statutory powers and duties. The county treasurer is the only person authorised to draw money from the County Fund Account, and then only on an order of the Council signed by at least three members of the Finance Committee.

When the annual income is not sufficient to meet the annual expenditure, the Council may, with the sanction of the Local Government Board, borrow money where the expenditure is incurred on works of permanent value, the cost of which may properly be spread over a number of years, e.g. for purchasing land or erecting buildings which the Council is by law authorised to purchase or build. The loan is raised on the security of the income of the Council. No loan can, however, be raised without the express sanction of Parliament, given by a special Act for that purpose, if the loan will bring the total debt of the county above one-tenth of the rateable value of the property contained in the county.

THE LONDON COUNTY COUNCIL. It has powers similar to those of the County Councils of counties, with, however, some differences, for it succeeded to the powers, duties, and liabilities of the Metropolitan Board of Works. The London County Council has nothing whatever to do with the Metropolitan Police, whereas other County Councils pay half the cost, and share jointly with the Justices the control of the county police. Again, the London County Council has considerable control over the raising of loans by the Metropolitan boroughs, for its sanction is necessary to the raising of such loans. It consists of a chairman, 19 aldermen and 118 councillors. The aldermen are elected by the council but the councillors are elected by the parliamentary voters. The City of London elects four but the other London constituences return only two each.

MUNICIPAL GOVERNMENT.

A borough is "any place which for the time being is subject to the Municipal Corporations Act, 1882." Such places, before being subject to that Act, must have obtained a charter of incorporation.

MODE OF INCORPORATION. When a town has attained a size which in the opinion of its inhabitants renders it worthy of possessing a government of its own, a number of its inhabitant householders petition the King in Council to grant a charter of incorporation. This petition is advertised in the London Gazette, and notice of it is sent to the County Council of the county in which the town is situated. The Privy Council then directs a local inquiry into the circumstances of the case, and at this inquiry, evidence for and against the proposal is taken. The Committee of the Council to which the petition is referred, and which directs the inquiry, may then draw up a scheme by which all the existing local authorities are absorbed into the new corporation. If there is no opposition to this scheme, an Order in Council authorises the adoption of this scheme. Should, however, the local authorities oppose the scheme, an Act of Parliament is necessary before the scheme can come into force. The charter of incorporation fixes the number of the councillors of the borough, a number which varies according to the population. If it is necessary to divide the borough into wards, the charter fixes their number and determines their boundaries. It also appoints the first officers. On the granting of the charter, all the provisions of the Municipal Corporations Act at once apply to the newly created borough. The scheme of municipal government is the same for all boroughs—County Boroughs, Counties of Cities, Counties of Towns, and Non-County Boroughs. The main difference between these different kinds of bodies relates chiefly to the administration of justice, the control of the police, and to the fact that the first three are independent of the County Council, whilst the last is for some purposes controlled by the County Council.

THE MUNICIPAL CORPORATION. Every borough coming under the Municipal Corporations Act is a corporation consisting of the Mayor, Aldermen, and Burgesses. Should the borough be a city, the corporation consists of the Mayor, Aldermen, and Citizens. The difference in the two kinds of corporations is merely one of name.

THE GOVERNING BODY OF THE BOROUGH. The government of the borough is carried on by the Borough Council, consisting of the Mayor, Aldermen, and Councillors. The Councillors are elected for three years, and every year one-third of the Councillors retire in rotation. An outgoing Councillor may be re-elected.

The Aldermen number one-third that of the Councillors, and are elected by the Council at the quarterly meeting held on the 9th of November. Any person who is a Councillor, or an outsider who is qualified to be a Councillor, may be elected an Alderman, but if a Councillor is elected Alderman, he vacates his seat as Councillor. Aldermen hold office for six years, one-half of them retiring every three years.

The Mayor is elected by the Council from among the Aldermen or Councillors, but any person who is qualified to be a Councillor may be elected. He holds office for a year, but may be re-elected, his election being the first business transacted at the quarterly meeting held on the 9th November. In virtue of his office, the Mayor is chairman of all meetings of the Council, and (unless a woman), a justice of the peace. He is the returning officer in parliamentary and municipal elections.

WHO MAY BE COUNCILLORS. Generally speaking, any person entitled to vote at municipal elections may be a Councillor. But clergymen of all denominations (except in Metropolitan Boroughs), persons having an interest in any contract with the Corporation, and bankrupts, may not be elected as Councillors.

BOROUGH OFFICERS. The chief officers in a borough are the Town Clerk and the Treasurer or Cashier. The Town Clerk has the custody of the charters and other documents of the borough. He issues the summonses for the meetings of the Council and takes the minutes of the Council's proceedings. The Treasurer receives all moneys and makes all payments on behalf of the Council. Where the Borough has the organisation of a county, there will also be a Clerk of the Peace, and other additional officers. Most boroughs have, under the Sale of Food and Drugs Act, a Public Analyst.

DUTIES AND POWERS OF THE BOROUGH COUNCIL. The Council manages the property belonging to the Corporation, maintains a police force, controls the borough markets and the local burial grounds, levies rates, and raises loans whenever loans are necessary to meet extraordinary expenditure of a permanent nature. It is their duty to see that the town is properly paved, cleaned, lighted, and supplied with water, unless these duties are by special Acts of Parliament entrusted to other local bodies, in which case such bodies may at any time hand over their property and their functions to the Council.

In addition to these ordinary functions, the Council may exercise special functions. Certain Acts of Parliament may apply to any borough which chooses to adopt them, e.g. the Public Libraries Act and the Baths and Wash-Houses Act. Where these Acts are adopted, the Town Council is the authority to enforce them, e.g. such Acts as the Housing of the Working Classes Acts, the Cemeteries Acts, and the Public Health Acts. Where the Borough is a County Borough, the Council controls education, primary and secondary (including technical education).

The Town Council has also certain legislative powers. It can make bye-laws for the good government of the Borough, and for the "prevention and suppression of nuisances not already punishable in a summary manner, by virtue of any Act in force in the Borough." No bye-law can come into force until it has been promulgated for forty days. It must have been approved by the Home Secretary. Bye-laws must be reasonable and must not conflict with the law of the land. The fine for breach of such bye-laws must not exceed £2.

The Council may purchase land, not exceeding five acres, for borough buildings, such as the town hall, police stations, court houses, and the like. Without the sanction of the Treasury, the Council may not sell, mortgage, or grant long leases of land belonging to the Borough, except such long leases are for the purpose of erecting workmen's dwellings.

BOROUGH FINANCE. The sources of revenue and the details of expenditure of Boroughs are usually grouped under three heads, viz., Borough Fund, the General District Fund, and Municipal Undertakings (e.g. Gas, Tramways, and the like).

The Borough Fund derives its supplies from rents of corporate property, court fees, licenses, Government grants towards Education and Police, but the chief source of income is the Borough Rate. This rate is assessed by the Council and collected by the overseers of the poor. In London the Borough Councils are themselves the overseers. Out of the Borough Fund are paid such items as salaries of officers, expenditure on municipal buildings, free libraries, Police force, Elementary Education; and in the County Boroughs, expenses on secondary and technical education, lunatic asylums, and industrial schools.

The General District Fund receives its main supplies from the General District Rate, but other sources of income are rents, licenses, baths and wash-house charges, and grants from the County Council for the maintenance of highways. The General District Fund bears the expense of maintaining the highways, fire brigade, public health and sanitary measures, public lighting of streets, public improvements of streets, parks, and recreation grounds.

Municipal Undertakings include the supply of light, tramcars, and other matters which are usually supplied by private enterprise. On this part of a Borough Council's work there is much dispute as to its merits and demerits. The profits from these undertakings are employed for local purposes, serving to reduce the rates or to prevent their increase. But it frequently happens that these municipal enterprises do not show a profit, and thus additional burdens are thrust upon the ratepayers.

Raising Loans. Borough Councils have also large powers of raising loans for works of a more or less permanent character. These loans may be raised under the authority of general Acts of Parliament or under private Acts. Under general Acts, loans may be raised for libraries, baths, parks, lunatic asylums, sanitary works, industrial schools, cemeteries. Such loans must be repaid within a certain number of years, and the consent of some Government Department (in most cases the Local Government Board) must be obtained before the money can be borrowed.

In order to raise loans, Town Councils usually apply to Parliament to pass a special Act for the purpose of sanctioning the loan. But the cost of promoting such a bill in Parliament cannot be paid out of the revenues of the corporation, unless the proposal has been approved by a majority of the whole number of the Borough Council, and also of a public meeting of the ratepayers convened for that purpose.

Audit of Accounts. The accounts of the Borough Council, with the exception of the Metropolitan Borough Councils, are not audited by the Local Government Board, but by three borough auditors, two elected by the burgesses and one appointed by the Mayor. The Mayor's auditor must be a member of the Council, the other two must not, but they must be qualified to be councillors. The accounts are audited twice a year, and after the second audit, the Town Clerk furnishes the Local Government Board with an account of the receipts and expenditure for the year. The audit of the accounts is frequently of a perfunctory character. It would be a great improvement if each Borough Council prepared an annual budget showing its financial position, and giving an estimate of the amount of money required, and the purposes for which it is needed for the ensuing year.

COUNTY BOROUGHS. A County Borough is a town of such size and importance as to be independent of all control exercised by the County Council. It is a Municipal Borough, having all the powers conferred by the Municipal Corporations Act, 1882, the Public Health Acts, and various other Acts, and has in addition all the powers of a County Council. It will thus be seen that a County Borough possesses greater powers than have been given to County Councils. In fact, the County Borough is the highest form of local self-government within the British Isles. Its powers are, of course, exercisable only within the limits of the Borough boundaries.

Any town with a population exceeding 50,000, may apply to be admitted to the ranks of a County Borough; and the application will be granted after due inquiry by the Local Government Board. There are now about sixty-five of these County Boroughs.

A County Borough is governed by the Borough Council, which is also the County Council for the area of the Borough. For the purpose of saving expense, a County Borough may agree with the County Council to take the benefit of and to share the expenditure incurred for the county institutions, such as the Police and Asylums. But apart from this, a County Borough makes no contributions to the expenses incurred for county purposes, save that if no assizes be held in the County Borough, it must contribute to the cost of the assizes.

COUNTIES OF CITIES OR OF TOWNS. In addition to these County Boroughs which have been created by the Local Government Act of 1888, there are a few ancient

towns and cities, such as Bristol, Nottingham, and Norwich which have all the organisation of a county. These are known as the County of the City of Norwich or the County of the Town of Nottingham, according as the place is a city or a town. These counties of cities or counties of towns, of which there are nineteen, are wholly independent of the shire in which they are situated. They have their own Commissioners of the Peace, their own Courts of Quarter Sessions, and appoint their own Sheriffs.

NON-COUNTY BOROUGHS. They are those towns which possess a municipal corporation, and which have all the powers of such a body, but unlike County Boroughs, are not independent of the County Council of the county in which they are situate. The chief matters in which Non-County Boroughs are controlled by the County Council are as regards Main Roads, the provision of Secondary and Technical Education, and the payment of the salaries of Sanitary Officials. Most towns come under the heading of Non-County Boroughs.

METROPOLITAN BOROUGHS. By the London Government Act of 1899, the Metropolis was divided into twenty-eight boroughs, each with its Mayor, Aldermen, and Burgesses.

Powers. They took over the powers of the old vestries, but additional powers were conferred upon them. One important point in which they differ from most provincial boroughs, is that the councils of these boroughs are the overseers of the poor, and as such have the power of assessing and levying the poor rate, which is now joined with the general district rate and treated as one rate. This general rate has all the characteristics of the poor rate, and is levied for the purpose of providing all the expenses of each Borough Council, and for the expenses of other governing bodies in London, such as Boards of Guardians, the London County Council, Metropolitan Police. These obtain the supplies they need by issuing precepts on the Borough Councils which collect the amounts required as part of the general rate, and hand them over to the body issuing the precept.

Constitution. The Borough Council consists of the Mayor, Aldermen, and Councillors. The total number of Aldermen and Councillors must not exceed seventy, of whom one-sixth are Aldermen. Bankrupts are not entitled to sit on these Councils. Nor indeed are any persons who have been convicted of crimes, persons in receipt of poor relief, or who have an interest in contracts with the Council. Clergymen of all denominations are eligible for seats in the Council.

THE CITY OF LONDON. The Corporation of the City of London is one of the few corporations whose position and privileges were left untouched by the Municipal Reform Act of 1834. It is, for all purposes except main-drainage, education, and one or two other matters, the sole local authority within the square mile of the city's area. It has its own police and its own courts of justice. It is a poor-law union, and is the sanitary authority for the port of London. It has a monopoly of all markets within seven miles of its boundaries.

The Corporation acts through three bodies—the Court of Aldermen, the Court of Common Council, and the Court of Common Hall, each of which is presided over by the Lord Mayor.

The Court of Aldermen consists of 26 Aldermen, including the Lord Mayor. These represent the twenty-six wards into which the city is divided, and a twenty-seventh ward, viz., that of Bridge Without. The Aldermen are elected for life, and are magistrates by virtue of their office. They elect the Recorder, who is a judge of the Central Criminal Court, and the presiding judge in the Mayor's Court.

The Court of Common Council consists of the 26 Aldermen, and 206 Common Councilmen, elected annually by the wards. It elects the Town Clerk, the City Remembrancer, the City Coroner, and the Secondary or Under-Sheriff. It has the control of the paving, lighting, and management of the streets, and has all the powers of an Urban District Council.

The Court of Common Hall consists of the Mayor, Sheriffs, Aldermen and all the Liverymen of the various City Companies, to the number of about 9,000. It meets on June 24th and September 29th. On this latter date it elects the Sheriff, the Chamberlain (City Treasurer), and nominates two Aldermen for the office of Mayor, one of whom is chosen by the Court of Aldermen to be Lord Mayor. The Lord Mayor is the chief magistrate and the lord-lieutenant for the city, and is admiral of the port of London.

Formerly only the members of the City Companies were citizens. But now any ratepayer in the City, or any person on the parliamentary register for the City, may, on payment of a guinea and by application at the Chamberlain's Court, Guildhall, become a freeman of the City of London.

LOCAL ELECTIONS.

We have already stated the law in regard to Parliamentary Elections (Refer to *Index*). We have now a similar duty to perform in regard to Local Elections.

MUNICIPAL ELECTIONS.

The procedure at Municipal Elections is regulated by the Municipal Corporations Act, 1882, which defines a Municipal Election as "an election to a corporate office." A "corporate office" means the office of mayor, alderman, councillor, or elective auditor.

1. THE ELECTION OF COUNCILLORS. Councillors are elected by the burgesses of the borough. No one is qualified for election as a councillor unless—

(1) He is entitled as a burgess, or, being entitled to be so enrolled in all respects except that of residence, is resident beyond seven miles but within fifteen miles of the borough, and is entered on a separate non-resident list kept for the purpose; and (2) is possessed of property to the value, in the case of a borough having four or more wards, of £1,000, and in the case of any other borough, of £500; or is rated to the poor rate in the borough on the annual value of £30, in the case of a borough with four or more wards, or £15 in the case of other boroughs.

There is, however, an additional proviso in the Act, which makes it possible for any person to be elected as councillor, if at the time of his election he is qualified to elect to the office of councillor. This qualification is alternative to the two mentioned above; but the qualification is lost in this case if the person ceases for six months to reside in the borough.

Certain persons are disqualified from becoming councillors; chief among them are clergymen and dissenting ministers (except in Metropolitan Boroughs), persons holding an office in the gift of the Council (other than that of mayor or sheriff), and persons having an interest in a contract with, or employment by, the Council.

The term of office of a councillor is three years. On the 1st November in every year, one-third of the whole number for a borough or ward go out of office, their places being filled by election. In London, however, all retire at the same time, namely, on the 1st November every third year. On the occurrence of a casual vacancy in a corporate office, an election is held by the same persons and in the same manner as an election to fill an ordinary vacancy, and the person so elected holds the office until the time when the person in whose place he is elected would regularly have gone out of office.

2. THE VOTERS. It has been said that councillors are elected by the burgesses of the borough. No one can vote as a burgess unless he has been enrolled as a burgess, and he cannot be enrolled unless

(1) He is of full age. (2) Has been in occupation of a house in the borough during the whole of the twelve months preceding the 15th July of the year of enrolment. (3) Has during the said twelve months resided within seven miles of the borough, and (4) Has been rated to the poor rate and paid all his rates,

Further, no one is entitled to be enrolled as a burgess if he (1) is an alien who has not been naturalised a British subject, or (2) has within the said twelve months received union or parochial relief or other alms, or (3) is disentitled under any Act of Parliament.

Where the borough has no wards, one burgess roll is made for the whole borough, but if there are wards, a separate roll is made for each ward. No burgess may be enrolled in more than one ward roll. Where there are wards a separate election of councillors takes place for each ward. The returning officer for the whole borough is the mayor, and each ward has an alderman assigned to it to perform the duties of returning officer.

Nine days' public notice of election must be given by the town clerk. If the election is not contested, the returning officer publishes a list of the persons elected not later than eleven o'clock in the morning on the day of the election. If the election is contested, a poll is taken by ballot in a way very similar to that in the case of Parliamentary elections.

The following are the chief points in which the procedure at Municipal Elections differs from that at Parliamentary Elections:—

(1) If one hour elapses during which no vote is tendered, the returning officer may, if he thinks fit, except in the case of a riot, close the poll before 8 p.m.
(2) In the case of an equality of votes, the returning officer always has a casting vote.

3. ELECTION OF ALDERMEN. Aldermen are elected by the Council. The number of aldermen in each council must be one-third of the number of councillors. No one may be elected an alderman unless he is qualified to be a councillor. If a councillor is elected to, and accepts, the office of alderman, he vacates his office of councillor.

The term of office of an alderman is six years. On the 9th November in every third year, one half of the whole number of aldermen go out of office, and their places are filled by election. The half to go out are those who have been aldermen for the longest time without re-election.

The election takes place at the quarterly meeting of the council on the 9th November. The outgoing aldermen are not entitled to vote. Each voter may vote for any number of persons not exceeding the number of vacancies. The method of voting is for the voter to sign and personally deliver to the chairman at the meeting a voting paper containing the names, descriptions, and addresses of the persons for whom he votes. The chairman announces the result of the voting, and then gives the voting papers to the town clerk to be kept for twelve months. In case of equality, the chairman always has a casting vote.

4. ELECTION OF THE MAYOR. The Mayor is elected by the council from among the aldermen or councillors, or persons qualified to be such; an outgoing alderman is eligible. The term of office of the mayor is one year. He may receive such remuneration as the council thinks reasonable. The election usually takes place on the 9th November, and it is the first business transacted at the quarterly meeting of the council. Outgoing aldermen are entitled to vote. In case of equality of votes, the chairman has a casting vote.

The *deputy mayor* is appointed by the mayor. The appointment must be signified to the council in writing and recorded in the minutes. The powers of a deputy mayor, in the absence of the mayor, are the same as those of the mayor himself, except (1) that the deputy may not take the chair at a council meeting, unless specially appointed by the meeting to do so; and (2) that the deputy may not act as a justice of the peace unless he is a justice.

5. ELECTION OF AUDITORS. The Municipal Corporations Act, 1882, provides for the election of auditors to audit the accounts of municipal councils. As a rule there are three, but only two are elected, the other one being appointed by the mayor. The ordinary day for electing the two "elective auditors" is the 1st March, but the Municipal council may appoint some other day instead, with the approval of the Local Government Board. The electors are the burgesses of the borough. No elector may vote for more than one elective auditor. The elections are generally held in the Town Hall, but the mayor may appoint some other suitable place. In other respects the nomination and election by ballot is practically the same as that in the case of the election of councillors. In the Metropolitan boroughs the auditors are not elected, but are appointed by the Local Government Board.

COUNTY COUNCIL ELECTIONS.

1. DISTINGUISHED FROM MUNICIPAL ELECTIONS. County Council Elections are chiefly governed by the Local Government Act, 1888, and the County Councils (Elections) Act, 1891. In most respects the members of County Councils are elected in the same manner as Borough Councils, but there are certain differences.

(*a*) **As respects the Aldermen or Councillors.** Clerks in Holy Orders and other ministers of religion are not disqualified from election. Peers owning property in the county, or persons registered as parliamentary voters in respect of the ownership of property in the county, are qualified to be aldermen and councillors, though not qualified under the Municipal Corporations Act, 1882. County aldermen may not vote in the election of other county aldermen. County councillors are elected for three years and then retire together, their places being filled by a new election. The county is divided into "electoral divisions" instead of wards, and one county councillor only may be elected for each electoral division except in the County of London.

(*b*) **As respects the Electors.** In boroughs the electors are the burgesses enrolled in pursuance of the Municipal Corporations Act, 1882, and its amending Acts; but in other places the electors are the persons registered as county electors under the County Electors Act, 1888, which Act enables any person possessing, in any part of a county outside a borough, any property which if situate within the borough would give him a burgess qualification, to be registered as a county elector in the parish in which the qualifying property is situate. Moreover, a "ten pounds occupation qualification" will also entitle a person to be registered as a county elector.

(*c*) **As respects the Chairman.** In county councils he is called the "Chairman," instead of the "Mayor." The vice-chairman is appointed by the council. The Chairman is by virtue of his office a Justice of the Peace for the county.

2. THE ELECTION OF COUNTY COUNCILLORS. The ordinary day for the election of county councillors in each county is such day between the 1st and 8th of March as the County Council may fix; and if no date is fixed, it must be on the 8th March in every third year. Returning Officers may not hold an election for a county councillor to fill a casual vacancy which occurs within six months before the ordinary day of retirement of county councillors. The county register must be completed before the 20th December in every year, and it comes into operation on the 1st January following. The County Council Chairman and Aldermen are usually elected on the 16th March instead of the 9th November as in Borough Councils. In other respects the rules governing the elections are practically the same.

DISTRICT COUNCIL ELECTIONS.

1. QUALIFICATIONS OF DISTRICT COUNCILLORS. District Councils are of two kinds: (1) Urban. (2) Rural. Candidates for election as *Urban District* Councillors must either have resided in the district for the whole of the twelve months preceding the election, or else they must be parochial electors of some parish within the district.

Candidates for election as *Rural District* Councillors are only required to have resided for the said period of twelve months or to be parochial electors of some parish within the union. As a union is often larger than a rural district, it will be seen that a person may be elected as a Rural District Councillor for a district to which he does not belong. The reason for this is that there is a provision in the Local Government Act, 1894, which gives to the members of Rural District Councils the powers and duties of Guardians

of the Poor, so that Guardians and Rural District Councillors have not to be separately elected.

N.B.—Boards of Guardians and District Councils are separate bodies with separate duties and powers. The Local Government Act does not change this. It merely provides that the same individuals in rural districts shall serve on both bodies.

Women, whether married or single, are qualified for election as District Councillors; but infants, aliens, bankrupts, etc., are disqualified to the same extent as if they were candidates for election as Guardians (see *Election of Guardians*). Moreover, no paid poor law officer may be elected as a Rural District Councillor; but this rule does not apply to Urban District Councillors.

2. ELECTORS AND THE ELECTIONS. The electors of the councillors are the parochial electors of the constituent parishes or of the various wards if the parishes are divided into wards for the purpose of such elections. Women as well as men are qualified to vote. The voting takes place by ballot, and is subject to the rules and orders made by the Local Government Board in pursuance of the Local Government Act, 1894.

The chairman is elected by the councillors, and, unless a woman or disqualified by Act of Parliament, he is by virtue of his office a Justice of the Peace.

It is the duty of the Returning Officer at an election for District Councillors to see that the nomination papers are in the correct form according to the Local Government Board's rules; but it is no part of his duty to enquire whether any candidate is qualified for election. If an unqualified candidate is elected, he may be unseated on petition, and he is also liable to penalties. The clerk of the particular District Council is the person usually appointed returning officer for the elections.

PARISH COUNCIL ELECTIONS.

1. PARISH COUNCILS. The Parish Council of a rural parish is elected from among the parochial electors or persons who have entered into residence in, or within three miles of, the parish, on or before the 25th March of the year previous to the election. The Council consists of a chairman and councillors. The number of councillors is fixed by the County Council, but it is not to be less than five or more than fifteen. Women, whether married or single, are eligible for election and to elect; but a husband and wife may not both be qualified in respect of the same property. The councillors are ordinarily elected for one year, from 15th April, and are elected by the parochial electors. There is nothing to prevent a person, if duly qualified, from being registered in more than one register of parochial electors. The following persons are disqualified from being elected to a parish council:—

(1) Infants. (2) Aliens who have not been naturalised British subjects. (3) Persons who have been in receipt of parochial or union relief within twelve months of their election. (4) Persons who have within five years of their election been sentenced to hard labour without the option of a fine, or to penal servitude, unless they have been pardoned. (5) Persons who have within five years of their election been adjudged bankrupt or made a composition or arrangement with their creditors, unless they have paid their creditors in full or had the bankruptcy annulled, or obtained a discharge with a certificate that the bankruptcy was caused by misfortune. (6) Persons who hold any paid office under the parish council. (7) Persons (subject to a few minor exceptions) who are concerned in contracts with the Council.

2. PROCEDURE AT THE ELECTIONS. The procedure at elections for parish councillors is regulated by rules framed by the Local Government Board. They provide, amongst other things:—

(1) For every candidate being nominated in writing by two parochial electors as proposer and seconder, and no more. (2) For preventing an elector at an election for a union or for a district not a borough, from subscribing a nomination paper, or voting in more than one parish or other area in the union or district. (3) For preventing an elector at an election for a parish divided into wards from subscribing a nomination paper, or voting for more than one ward. (4) For fixing the day of the poll, and the hours during which the poll is to be kept open, so, however, that the poll shall always be open between the hours of six and eight in the evening. (5) For the polls at elections held at the same date and in the same area being taken together wherever practicable. (6) For the appointment of returning officers.

The elections take place by ballot in a way similar to that of municipal elections.

ELECTION OF GUARDIANS.

1. QUALIFICATIONS. The Local Government Act, 1894, provides that there shall be no ex-officio or nominated Guardians, and that all Guardians must be elected. No one is qualified to be elected unless

(1) He is a parochial elector of some parish within the Union; or (2) has during the whole of the twelve months preceding the election resided in the Union; or (3) in the case of a guardian for a parish, wholly or partly situate within the area of a borough, is qualified to be elected a councillor for that borough.

No one is disqualified by sex or marriage from being elected as a Guardian, so that women, both married and single, are eligible. The term of office is three years, but one-third of the Guardians must retire on 15th April in each year, unless the County Council orders that they shall all retire together on that date in the third year of their office.

2. DISQUALIFICATIONS. The following persons are disqualified from election as Guardians:—

(1) Infants. (2) Aliens, who have not been naturalised. (3) Persons who have been in receipt of parochial relief within twelve months of the election. (4) Persons who within five years of the election have been sentenced to hard labour, without the option of a fine, or to any greater punishment. (5) Persons holding a paid office under the particular Board of Guardians to which they desire to be elected. (6) Persons concerned in certain contracts with the Guardians. (7) Persons who within five years of their election have made a composition with their creditors, or been made bankrupt.

This last disqualification does not apply if the debts have afterwards been paid in full, or if the adjudication has been annulled, or if the bankrupt has obtained a discharge showing the bankruptcy to be due to misfortune without misconduct.

3. BY WHOM ELECTED. The parochial electors of the various parishes elect most of their own Guardians, and if the parishes are divided into wards, the electors in each ward are those of the parochial electors who are registered in respect of qualifications within the ward. Each elector may give one vote and no more for each of any number of persons not exceeding the number to be elected. The actual procedure at the election is regulated by rules and orders issued from time to time by the Local Government Board. The voting takes place by ballot as in the case of other elections. When the parochial electors have duly elected a Board of Guardians, such board has power to elect two additional members and a chairman and vice-chairman from outside its own body, provided that such persons are qualified to act as guardians; but generally the chairman and vice-chairman are chosen from within the body.

The County Councils have the power to fix the number of Guardians which each parish may elect, and they also have the power of adding small parishes together or dividing large parishes into wards for the purpose of the election of Guardians.

The elections of Guardians as such only take place in Urban Districts; for the Local Government Act, 1894, provides that in Rural Districts the members of the Rural District Councils shall also be Guardians.

DISPUTING THE RESULT OF ELECTIONS.

1. ELECTION PETITIONS. The procedure to upset the return in Municipal and other elections is similar to that in the case of Parliamentary elections. The procedure in these cases is chiefly governed by the Municipal Corporations Act, 1882, the Municipal Elections (Corrupt and Illegal Practices) Act, 1884, the Local Government Acts, and the Rules made under these Acts. The trial of the petition takes place in an Election Court, before a Com-

missioner, who must be a barrister of at least fifteen years standing. Where corrupt or illegal practices have been alleged, instead of reporting to the Speaker, as in the case with Parliamentary electors, the Commissioner must make a report to the High Court.

2. **CORRUPT PRACTICES.** The proceedings relating to corrupt practices at municipal and local elections are similar to those for parliamentary elections, but they are governed by different Acts. The expression "corrupt practice," includes bribery, treating, undue influence, personation, or a false declaration as to election expenses. But the offence must be committed with a corrupt motive, or it will be an "illegal" practice and not a corrupt one. The commission of corrupt practices by a candidate or his agents makes the election void. Moreover, the election may be declared void if such corruption has been generally prevalent at an election, without the proved connivance of the candidates or their agents.

The commission of corrupt practices before, during, or after an election is visited with very severe punishment. The punishment includes disfranchisement and incapacity of being elected for a number of years, and also fine and imprisonment. In the case of bribery and treating, both the giver and the recipient are equally guilty. Moreover, the bribe, promise, or refreshment need not have been given directly. A man is generally responsible in law for the action of his agents acting in his supposed interests.

A person is said to be guilty of "Personation" if (1) he applies for a ballot paper in the name of some other person, or (2) having voted once he attempts to vote again at the same election. Those who counsel or abet others to commit this offence are also guilty of corrupt practices. The withdrawal of custom from a tradesman, or a threat to withdraw it, or a threat to dismiss an employee, would amount to "undue influence," if it were done with the intention of causing the voter to vote in a particular way.

3. **ILLEGAL PRACTICES.** The commission of "Illegal Practices" at an election means the doing of any act which has been declared by Parliament to be illegal. It does not matter whether or not there was an illegal motive in the commission of the act. The following are some of the principal "illegal practices":—

(1) Making and publishing false statements as to the character and conduct of a candidate. (2) Paying or contracting to pay for the conveyance of electors to or from the poll, whether for the hiring of horses or carriages, or for railway fares or otherwise. (3) Paying or contracting to pay an elector for the use of any land or premises for the exhibition of any address, bill, or notice, unless the elector receives such payment in the ordinary course of his business as an advertising agent. (4) Paying or contracting to pay for more committee rooms than are legally allowable. (5) The incurring by a candidate or his election agent of an expense greater than is legally allowable, provided that the candidate knows of the fact. (6) Knowingly inducing a person to vote who is prohibited from voting by any Act of Parliament. (7) Knowingly publishing a false statement of the withdrawal of a candidate.

The commission of illegal practices is visited with heavy penalties, and generally makes the election void.

In addition to the above offences there are other offences under the Corrupt and Illegal Practices Prevention Act, 1883, which involve penalties, but which do not make the election void unless they are committed by the candidate himself or his election agent or sub-agents. These offences include

(1) Providing money for illegal practices. (2) Employing, even gratuitously, public stage or hackney carriages (but not private vehicles) or horses kept for the purposes of hire, to convey electors to or from the poll; but the voters themselves may hire such a conveyance for taking themselves to the poll. (3) Corruptly paying a candidate to withdraw from the election. (4) Paying for bands, torches, flags, banners, cockades, ribbons, or other marks of distinction. (5) Publishing posters relating to the election without the address of the printer and publisher. (6) Using a house licensed for the sale of intoxicating liquor, or a refreshment house, or an elementary school as a committee room.

RATES.

THEIR NATURE. The expression "rate" means (1) a contribution levied by some local authority either for local government purposes or for the purpose of providing for the poor; or (2) a charge made by a public company (e.g. a water company), for services rendered. Rates differ from Taxes in that they are not of general application, each locality has its own rates according to its needs. In fact, a rate may be defined as a local tax, or a tax for local purposes. The principles which govern the law and practice of rating as we find them to-day date from the Statute 43 Eliz., c. 2, which provided for the appointment of Overseers of the Poor, who were to make the poor rate, and which provided a means for appealing against the rate. This Statute of Elizabeth's reign has been modified slightly by subsequent legislation, but it is still the principal Act dealing with the subject.

VARIETIES OF RATES.

1. **THE POOR RATE.** The most ancient and perhaps the most important of all rates is the Poor Rate. There is in law a duty imposed on every parish to make provision for its own poor, though in certain cases two or more parishes are allowed to unite in forming a Union for that purpose. The expense incurred by each parish in providing for its poor is defrayed from the Poor Rate, which is a rate levied on the occupiers of certain kinds of property. The rate is made by the overseers of the poor, who are given that power by the above-mentioned Statute of Elizabeth. Properly the only duty of the overseers is to make and to levy the poor rate, the various other local authorities having power to make rates for other purposes; but the overseers are called upon by the local authorities to levy those other rates by using their poor rate machinery. The advantage of this course of procedure is that the expense of a double levy is saved to the community.

2. **THE PUBLIC LIBRARIES RATE.** The rating of occupiers for the purpose of maintaining Public Libraries in various districts is governed chiefly by the Public Libraries Acts, 1892 to 1901.

(1) Where the library district is situate in a municipal borough, the expense of maintaining it is defrayed either out of the borough fund or borough rate, or out of a separate Library rate, made, assessed, and levied in the same manner as the borough rate.

(2) Where the library district is in an urban district other than a borough, the cost of maintenance is defrayed either out of the rate applicable to general purposes incurred in the execution of the Public Health Acts, or out of a separate rate made, assessed, and levied in like manner.

(3) Where the library district is in a parish, its expenses are defrayed out of a rate raised with and as part of the poor rate, subject, however, to this qualification, that every person assessed to the poor rate of the parish in respect of lands used as arable, meadow, or pasture ground only, or as woodlands or market gardens, or nursery grounds, is entitled to an allowance of two-thirds of the sum assessed upon him in respect of those lands, for the purposes of the library rate.

(4) In London, the expenses of the Public Libraries are paid either out of the consolidated rate levied by the Commissioners of Sewers, or by a separate rate made, assessed, and levied in like manner.

3. **THE GENERAL DISTRICT RATE.** The Public Health Acts provide for the payment of most of the expenses of urban authorities out of the district fund. Where that fund is insufficient to meet these expenses, it is provided by the Public Health Act, 1875, that the urban authority may from time to time, as the occasion may require, make and levy a rate or rates called "general district rates." Such rate may be either prospective (i.e. for the purpose of paying future expenses), or retrospective (i.e. for the payment of expenses already incurred); but if retrospective, the rate must be made within six months of the time when the expenses were incurred. Public notice of the intention to make any such rate, and of the time when it is intended to make it, and of the place where a statement of the proposed rate is deposited for

inspection, must be given by the urban authority in the week immediately before the day on which the rate is intended to be made, and at least seven days previously thereto.

4. PRIVATE IMPROVEMENT RATE. The Public Health Acts provide that whenever an urban authority has incurred certain expenses called "private improvement expenses," such authority may, if it thinks fit, make and levy on the occupier of the premises in respect of which the expenses have been incurred, in addition to all other rates, a rate or rates called "private improvement rates," of such amount as will be sufficient to discharge such expenses, together with interest thereon, at a rate not exceeding 5 per cent. per annum, in such period not exceeding thirty years, as the urban authority may in each case determine. But if any person considers himself aggrieved by any such decision of the local authority, he may, within twenty-one days after notice of such decision, appeal to the Local Government Board. The following are some of the principal "private improvement expenses."

(1) Expenses incurred in providing houses with proper and effective drainage in cases where the owner or occupier has not provided it. (2) Expenses incurred in providing houses with proper privies and ashpits. (3) Expenses incurred in supplying a house with water. (4) Expenses incurred in sewering, levelling, paving, metalling, flagging, channelling, lighting, or making good any street which is not a highway repairable by the inhabitants at large.

Section 232 of the Public Health Act, 1875, gives a similar power of making private improvement rates to *rural* authorities.

5. THE HIGHWAY RATE. The expenses incurred in repairing and keeping up Highways are frequently included in the General District Rates, but sometimes a special Highway Rate is levied.

(*a*) For *urban* districts the Public Health Act, 1875, provides (1) where the whole of the district is rated for works of paving, water supply, and sewerage, or for works for such of these purposes as are provided for in the district, the cost of repair of highways must be defrayed out of the General District Rate; (2) where parts of the district are not rated for such works, the cost of repair of highways in those parts must be defrayed out of a Highway Rate to be separately assessed and levied in those parts by the urban authority, and the cost of such repair in the residue of the district must be defrayed out of the General District Rate; (3) where no such works are established in the district, the cost of repairing the highways must be defrayed out of a highway rate to be levied throughout the whole district by the urban authority.

(*b*) The expenses incurred by *rural* district councils in carrying out their duties are divided into general expenses and special expenses; the former are generally paid by the district as a whole, whereas the latter are incurred in respect of certain contributory places within the district. The general expenses are payable out of a common fund, whereas the special expenses fall on the contributory place for which they are incurred. The expenses incurred for the repair of highways are usually treated as general expenses, but in exceptional cases the district council has the power to charge them on a contributory place. The common fund out of which the general expenses are paid is raised out of the poor rate of the parishes in the district, according to the rateable value of each contributory place.

6. SEWERS RATE. The Public Health and other Acts give to the various local authorities the power to make and maintain sewers. Generally speaking, the main difference between a sewer and a drain is that the former serves two or more houses, whereas the latter serves only one. In order to properly make and maintain their sewers, the various authorities are empowered to levy sewers rates. This rate is frequently combined with the general rate of the various districts. In certain cases, however, the local authorities are given the power to recover the expenses from the owner or occupier of the property immediately affected by the particular sewer.

7. BATHS AND WASH-HOUSES' EXPENSES. The Baths and Wash-houses Acts, 1846 to 1899, provide for the establishment and control of public baths and wash-houses in various places which adopt the Acts. If the baths and wash-houses are situate within a borough, so much of the cost of maintenance as is not covered by the income of the establishment is defrayed out of the Borough Fund. But where they are established in a parish which is not within a borough, the expenses not covered by the income are chargeable upon and paid out of the moneys to be raised or applicable for the relief of the poor of the parish.

8. THE BURIAL RATE. The law relating to Burial Grounds is contained in the Burial Acts, 1852 to 1900. They provide that the income arising from the Burial Grounds (except the fees to the incumbent, clerk, sexton, etc.), are to be applied for the purpose of defraying expenses; but where such income is insufficient for that purpose, the difference is charged on the rates. The rate may either take the form of a separate Burial Rate, or it may be raised with or as part of some other rate, as the Poor Rate, the Borough Rate, or the General District Rate.

9. BOROUGH RATE. This rate is dealt with in the Municipal Corporations Act, 1882, which provides for the payments of the rents and profits of all corporate land, and of all sums and fines payable to the corporation, to a "borough fund." The ordinary expenditure of the borough is to be paid out of this fund; but where the fund proves insufficient for the purpose, the difference is defrayed by a Borough Rate, which is assessed by the municipal council but collected by the overseers.

10. COUNTY RATE. The income received by the various county Councils is generally quite inadequate for the purpose of defraying their expenses. The balance is paid out of a county rate levied under the County Rates Act, 1852. The assessment valuations for this rate are not always the same as those for the poor rate, though the poor rate valuations are often adopted by the county rate assessment committees for convenience.

11. GENERAL RATE. The London Government Act, 1899, provides for all the expenses of London Borough Councils being paid out of one general rate, to be called "the general rate," and for the discontinuance of a separate poor rate, sewers rate, lighting rate, etc. The general rate is assessed, made and levied by the Borough Council as if it were the Poor Rate. The act further provides that all the rates collected in a Metropolitan borough from any person must, as far as is practicable, be levied on one demand note, and the demand note shall state

(1) The rateable value of the premises in respect of which the rate is levied. (2) The rate in the pound. (3) The period for which the rate is made. (4) The several purposes for which the rate is levied. (5) The approximate amount in the pound required for each purpose (including, as far as is practicable, the proportionate amount of the estimated costs of and loss in collection); and (6) The equalisation charges and other contributions to the County Council under the London (Equalisation of Rates) Act, 1894, and other enactments.

As will be seen later, a tenant is generally entitled to deduct the amount paid in sewers rate from his rent. The London Government Act, 1899, does not deprive him of this right; where the right exists, he is still entitled to deduct from his rent such portion of the general rate as represents the sewers rate.

12. POLICE RATE. The expenses of the police force in the Metropolitan police district is met by a police rate levied over the whole of the Metropolitan police district. The rate must not exceed ninepence in the pound. In Boroughs, these expenses are paid out of the Borough Fund, which is augmented by the Borough Rate and by Watch Rates. In counties the expenses of keeping up the police are defrayed by a police rate levied by the County Councils.

13. WATCH RATE. The Municipal Corporations Act, 1882, provides that where at the commencement of this Act any rate might be levied in a borough for the purpose of watching by day or by night, the council may from time to time make and levy a watch rate on the occupiers of all hereditaments within such parts of the borough as are watched by day and by night. The watch rate may be

made either yearly or half-yearly. The rate is made, levied, and collected in the same way as the Borough Rate; but it must not in any one year exceed eightpence in the pound on the net annual value of the property rated thereto. All the money raised by the watch rate goes to the borough fund.

14. LIGHTING RATE. The cost of lighting the streets in London and in Urban Districts, and in those Rural Districts the councils of which have urban powers, are borne by the various local authorities and paid out of the general rates for the particular district; but in the case of rural parishes not situate within a district the council whereof has urban powers, the parochial electors may at a parish meeting adopt the adoptive Lighting and Watching Act, 1833. Where it has been adopted the amount to be raised for the purposes of the Act is fixed by the ratepayers at the annual parish meeting. It is levied by the overseers under order of the parish meeting in the same manner as the poor rate is levied.

15. EDUCATION RATE. By the Education Act, 1902, it is provided that the expenses incurred in carrying out that Act by the various councils having powers under that Act should be defrayed:

(1) In the case of counties, out of the county fund. (2) In the case of boroughs, out of the borough fund or borough rate, or out of a separate education rate to be made, assessed, and levied in like manner as the Borough Rate. (3) In the case of an Urban District, other than a borough, out of the poor rate of the parish or parishes comprised in the district.

16. GAS AND WATER RATES. The rates dealt with above are all rates in the first of the two meanings of the word given at the commencement of this article, the gas rates and water rates have the second meaning in that they are usually a charge made by a public company for services rendered. Gas is usually paid for according to the quantity consumed as measured by the meter. The private Acts of most gas companies have provisions dealing with the testing of gas meters and the recovery of over-charges if the meters do not register correctly, but many of the Acts provide that allowances for the incorrectness of meters can only be made on the current quarter's account. Water rates, however, are generally assessed and are payable on the rateable value of the premises, though it is not unusual for an extra charge to be made where garden hoses are employed or where there is otherwise reason to believe that an abnormal supply of water will be used.

TOTAL EXEMPTION FROM RATING.

Certain property is exempt from being rated:—

1. CROWN PROPERTY, which has been held to include royal palaces, dockyards, the offices of the Secretaries of State, the Houses of Parliament, the Horse Guards, Post Offices, Assize Courts, etc., and even the judges' lodgings in the various Assize Towns. Where, however, property has been acquired by the Government under the Defence Act, 1860, for the purpose of defending the country, the Act provides that where before the Act the land was charged with rates, it shall continue to be so chargeable, but that it must not be assessed to a higher value than that at which it stood at the time when it was acquired by the Government.

2. PERSONAL PROPERTY, also, is exempt from rating. This has not always been so. Indeed, the Statute 43 Eliz., c. 2, which established the present system of rating, expressly provided for the rating of such property. However, the practice of rating personal property gradually fell into disuse until it was abolished in 1840.

3. TURNPIKE TOLLS. These are exempted from assessment to the rates by virtue of the Turnpike Roads Act, 1822, which also exempts the toll-houses erected for the purpose of collecting the tolls.

4 CHURCHES AND CHAPELS. Churches, chapels, and premises exclusively appropriated to public religious worship are exempted from the payment of rates by the Poor Rate Exemption Act, 1833. There is a proviso in the Act which exempts such buildings from being rated, if the only other use to which they are put, besides that for public religious worship, is for the purpose of holding a Sunday School, or an infant school, or for the charitable education of the poor.

5. SCIENTIFIC, LITERARY, AND FINE ARTS SOCIETIES. The Scientific Societies Act, 1843, provides that societies established exclusively for the purposes of science, literature, or the fine arts shall be exempt from rates in respect of land and buildings occupied by them for the transaction of their business and for carrying into effect their purposes; but before any such society can claim the benefit of this Act, it must cause three copies of all its laws, rules, and regulations, signed by its principal officers, to be submitted to the barrister appointed for the purpose of certifying the rules of friendly societies. If this barrister decides that any such scientific, literary, or fine arts society is entitled to exemption, he grants it a certificate to that effect. It should be noted that Religious, Educational, and other societies cannot claim any exemption from rating under this Act.

6. LIGHTHOUSES, BUOYS, BEACONS, etc. These, and also all the premises and property belonging thereto, or occupied by lighthouse authorities, or for the purpose of the lighthouse services, are exempted from rates of every kind by the Merchant Shipping Act, 1894.

7. VOLUNTEER STOREHOUSES. Storehouses appointed for the depositing and safe keeping of arms, ammunition, and stores of volunteer corps are exempted from rates by the Volunteer Act, 1863.

8. SUNDAY SCHOOLS AND RAGGED SCHOOLS. These cannot themselves claim to be exempt from the incidence of the rates; but the Sunday and Ragged Schools (Exemption from Rating) Act, 1869, gives to all rating authorities the power to exempt such schools from the rates if they think fit. Moreover, as has already been seen, if the school is a Sunday School, infant school or school for the charitable education of the poor held in a church or chapel, it is exempted from rates by the Poor Rate Exemption Act, 1833.

PARTIAL EXEMPTION FROM RATING.

Certain other property is entitled to partial relief from rating:—

1. AGRICULTURAL LAND. By the Agricultural Rates Act, 1896, it is provided that the occupiers of agricultural land in England shall be liable to pay one-half only of the rate in the pound payable in respect of buildings and other hereditaments. The Act does not apply to rates assessed under any commission of sewers or in respect of any drainage, wall, embankment, or other work for the benefit of the land; nor does it apply to those rates with which agricultural land was already assessed at a half or less than a half, as compared with other property. In this Act the expression "Agricultural Land" is defined as meaning "any land used as arable, meadow, or pasture ground only, cottage gardens exceeding one quarter of an acre, market gardens, nursery grounds, orchards, or allotments"; but it does not include "land occupied together with a house as a park, gardens, other than as aforesaid, pleasure grounds, or any land kept or preserved mainly or exclusively for purposes of sport or recreation, or land used as a racecourse."

Persons of the middle and upper classes often occupy cottages in the country; they cannot claim to be rated at one-half only in respect of their gardens, for the Act goes on to define a "cottage" as "a house occupied as a dwelling house by a person of the labouring classes."

2. TITHES. By the Tithe Rentcharge (Rates) Act, 1899, it is provided that the owner of a tithe rent-charge attached to a benefice shall be liable to pay only one-half of the amount which he would have to pay if it were ordinary rateable property. The Act does not apply in those cases where the property is already assessed at one-half or less than one-half as compared with other rateable property. Thus it is provided by the Public Health Act, 1875, that "the owner of any tithes, or of any tithe commutation rent-charge, or the occupier of any land used as arable, meadow, or pasture ground only, or as woodlands,

market gardens, or nursery grounds, or used only as a railway constructed under the powers of any Act of Parliament for public conveyance, shall be assessed in respect of the same in the proportion of *one-fourth* only of its net annual value."

N.B.—Allotments, towing paths, and land covered with water, can also generally be treated as liable only to one-fourth of their net annual value.

3. **LIGHT RAILWAYS.** By the Light Railways Act, 1896, it is provided that where the Treasury agree to make any special advance as a free grant, the order authorising the railway may make provision as regards any parish that, during a period not exceeding ten years to be fixed by the order, so much of the railway as is in that parish shall not be assessed to any local rate at a higher value than that at which the land occupied by the railway would have been assessed if it had remained in the condition in which it was immediately before it was acquired for the purpose of the railway.

4. **BURIAL GROUNDS.** It is provided by the Burial Act, 1855, that land acquired under the Burial Acts to be used as Burial Grounds shall not be assessed at a higher value than that at which the property was assessed at the time of its acquisition.

5. **VOLUNTARY SCHOOLS.** By the Voluntary Schools Act, 1897, it is provided that no person shall be assessed or rated to or for any local rate in respect of any land or buildings used exclusively or mainly for the purposes of the schoolrooms, offices, or playground of a voluntary school, except to the extent of any profit derived by the managers of the school for the letting thereof.

THE RATEPAYER.

1. **WHO PAYS THE RATES?** The Statute of Elizabeth makes the rates payable by the *occupier* of the property, whether he be the *owner* of the land or not. But certain later Statutes have made the rates payable by the *owner* in certain cases. Again, even in those cases where the occupier has to pay in the first instance, he may sometimes, if he is a tenant, deduct from his next rent the amount he has paid in rates, as will presently be seen. Questions often arise as to the precise meaning of "occupier" and "occupation" in rating cases. No really satisfactory definition has ever been given. A person may be said to be in "occupation" for rating purposes if he is in possession of the property and derives some tangible benefit from it.

The owner of a vacant house is not rateable for it as an occupier, as long as he keeps it vacant; if, however, he furnishes it and keeps it ready for habitation, he is an occupier even if he does not actually reside in it at all. If a person occupies only certain rooms in his house, and does not use certain other rooms, he is yet liable to be rated for the whole. There is an exception to this rule in those cases where each suite is to be regarded as a separate piece of rateable property, as in the case of flats.

Where a house is occupied by servants on behalf of their master, the master is usually rated and not the servants. Again, where a house which is to be let unfurnished is merely in the custody of a care-taker for the purposes of protecting it, it is generally not liable to be rated; but if the owner also at the same time uses it as a store-house for his furniture, he is liable to be rated as the occupier. The occupation of a room or rooms by a lodger does not make him rateable as the occupier thereof; as his landlord is rated in respect of the whole house.

It is provided by the Poor Rate Assessment and Collection Act, 1869, Amendment Act, 1882, that an outgoing occupier shall only be liable to pay so much of the rate as shall be proportionate to the time of his occupation, notwithstanding he may not be at once succeeded in his occupation by an incoming tenant. In like manner the incoming tenant is only liable to pay in proportion to the time of his occupation.

2. **WHERE OWNER IS RATED INSTEAD OF OCCUPIER.** As has been seen, the occupier and not the owner is generally the person who is primarily liable for the payment of the rates; though, in the case of a landlord and tenant, the parties frequently agree between themselves that the liability shall ultimately fall on the landlord. Certain Acts have, however, made the landlord primarily liable, either in substitution for or in addition to the occupier.

(*a*) By the Metropolitan Police Act, 1829, it is provided that where any property within the Metropolitan police district is occupied by an ambassador, agent, or other public minister of any foreign state, or by any other person not liable to the poor rate, all money payable for the purposes of the police by the occupier of such property shall be paid by and recoverable from the landlord or owner, who shall for this purpose be deemed the occupier.

(*b*) Under the Allotments Act, 1887, and the Local Government Act, 1894, where urban and rural district councils and parish councils acquire land under those Acts, such councils shall for the purposes of all rates, etc., be deemed to be the occupiers of all the allotments which are let.

(*c*) By the Advertising Stations (Rating) Act, 1889, it is provided that where any land is used for the exhibition of advertisements, but not otherwise occupied, the person who shall permit the same to be so used, or (if he cannot be ascertained) the owner thereof, shall be deemed to be in occupation thereof, and shall be rateable therefor.

(*d*) By the Poor Rate Assessment and Collection Act, 1869, it is provided that in the case of property of which the rateable value does not exceed £20 in London, or £13 in Liverpool, or £10 in Manchester or Birmingham, or £8 elsewhere, if the owner is willing he may enter into an agreement with the overseers by which he agrees to pay the poor rates on the property, whether occupied or not, and in exchange he is allowed a commission not exceeding 25 per cent. on the amount.

(*e*) By the same Act the local authority may *order* that the owners of such property shall be rated instead of the occupiers, and that they shall be allowed an abatement of 15 per cent. on the amount of the rate. In this case the owner is only rated so long as the premises remain occupied. If he desires to be rated, whether they are occupied or not, he may enter into an agreement with the overseers whereby he can get a further abatement not exceeding 15 per cent. So that an owner who desires to compound for the rates, whether the property is occupied or not, should wait until the local authority orders him to be rated instead of the occupier, for in that case he can get a total abatement of thirty per cent. instead of twenty-five per cent.

(*f*) By the Public Health Act, 1875, the Urban Authority is given the option, if it think fit, to rate the owner instead of the occupier, where the rateable value of the premises does not exceed £10, or where the premises are let to weekly or monthly tenants, or in apartments. The owner in this case does not get a commission or deduction as under the Poor Rate Assessment and Collection Act, 1869.

(*g*) In the case of Flats under one roof, the landlord is usually rated in respect to each of the flats which is let.

Again, by the Poor Rate Assessment and Collection Act, 1869, the occupier of any rateable property let to him for a term not exceeding three months is entitled to deduct the amount paid by him in respect of the poor rate from the next rent he pays to his landlord.

By the Rating Act, 1874, the tenant may generally deduct from the next rent the whole of the amount he has spent in rates in respect of land used for a plantation or a wood, or for the growth of saleable underwood; and half the amount he has spent in rates in respect of a tin, lead, or copper mine.

Though the tenant usually has to pay the rates, it is not uncommon for him to enter into an agreement with his landlord by which the latter has to pay them. This is generally the case where property is let in flats.

N.B.—When the landlord agrees to pay "all the rates," it does not mean that he can be called upon to pay the gas rate, for this is really in the nature of a payment for goods supplied to the tenant.

3. WHEN RATES CAN BE DEDUCTED FROM RENT. With the exception of the rates dealt with above, all rates fall in the first instance upon the tenant. In some cases, by the terms of his agreement with his landlord, there is an arrangement by which they, or some of them, ultimately fall upon the landlord. Where no mention has been made of rates in the contract of tenancy, the tenant is entitled to deduct from the next rent due to his landlord the amount he has spent in paying the tithe rent-charge and the sewers rate. (He can also deduct the Property Tax and Land Tax, but not the House Duty). The landlord must always ultimately pay the tithe rent-charge, for it is provided by the Tithe Act, 1891, that any agreement between the parties to the effect that the tenant must bear it is void.

VALUATIONS OUTSIDE THE METROPOLIS.

1. PREPARATION OF VALUATION LISTS. It is provided by the Union Assessment Committee Act, 1862, that the Board of Guardians in every union shall, in every year, at their first meeting appoint an assessment committee from among themselves. Where the union has the same bounds as a borough, the names of the committee must be transmitted to the town council, which may appoint additional members. Within three calendar months after the appointment of the committee, the overseers of each parish make a list of all the rateable property in the parish, with the annual value thereof. Moreover, unless the overseers think that the valuation last acted upon correctly shows the full annual rateable value of all the property, they must revise such valuation. The overseers must sign all the valuation lists. The valuation lists contain:—

(1) The name of the occupier. (2) The name of the owner. (3) The description of the property. (4) The name or situation of the property. (5) The estimated extent. (6) The gross estimated rental. (7) The rateable value.

The "gross estimated rental" for this purpose is the rent at which the property might reasonably be expected to let from year to year free of all usual tenants' rates and taxes. The overseers must deposit their valuation lists in the place where the parish rate books are usually kept, and must give public notice of such deposit on the following Sunday. All persons assessed to the poor rates have the right to inspect and take extracts from the lists at reasonable times. At the expiration of fourteen days from the Sunday on which the public notice of the deposit was given, the overseers must transmit the lists to the assessment committee; but the ratepayers still have the right to inspect and take copies or extracts from the lists so transmitted.

2. OBJECTIONS TO THE VALUATION LISTS. Any person who may feel himself aggrieved by any valuation list on the ground of unfairness or incorrectness in the valuation of any property included therein may, at any time after the deposit and before the expiration of twenty-eight days after the notice of the deposit, give to the assessment committee and to the overseers a notice in writing of his objection, specifying the grounds thereof.

The assessment committee holds meetings for the purpose of hearing the objections after giving twenty-eight days' notice of such meetings; but such notice is not necessary where a meeting is merely an adjournment of a previous meeting.

The committee may, whether any objection be made or not, make such alterations in the valuation lists as they think right. Where they have made any such alteration, the list must again be deposited for inspection as above. If a ratepayer appeals to the special or quarter sessions and the result of the appeal is to amend the rate, the committee must amend the valuation list in conformity thereto. When the valuation lists have been approved by the assessment committee they are delivered to the overseers for safe custody.

When any property not included in a valuation list becomes rateable, the overseers have the power to make supplemental valuation lists. The same rules as to deposit, notice, objections, etc., apply to the supplemental lists as to the original lists.

The assessment committee must cause a copy of the valuation lists for the parishes of the union to be deposited in the board room of the Board of Guardians, and such lists shall be open at seasonable times to the inspection of any of the guardians or overseers of the union free of charge, and of any ratepayer on payment of one shilling.

3. APPEAL AGAINST VALUATION LISTS. If an aggrieved ratepayer does not receive the satisfaction he desires at the hands of the assessment committee, he must give twenty-one days' notice to the assessment committee, and fourteen days' notice to the overseers of his intention to appeal to the next practicable sessions. Where the only objection is the inequality, unfairness, or incorrectness of the valuation, the appeal may be made to the Special Sessions of the Justices; but if other questions (e.g. the liability to be rated) are to be raised, the appeal must be to the Quarter Sessions. The Sessions have power to amend or quash the assessment. If both parties consent to the course, the dispute may be referred to arbitration under the Quarter Sessions Act, 1849. If the Court of Sessions thinks the case one of great difficulty, it may state a case for the opinion of the King's Bench Division, that is, to the Divisional Court, the decision of which is final unless it gives leave to appeal to the Court of Appeal.

VALUATIONS IN THE METROPOLIS.

1. THE VALUATION LISTS. The principal Act dealing with the assessment of property within the Metropolis is the Valuation (Metropolis) Act, 1869. This Act provides for the appointment of an assessment committee by the Guardians. But where the whole of a poor law union is within one of the Metropolitan boroughs, it is provided by the London Government Act, 1899, that the Borough Council shall appoint the Assessment Committee instead of the Guardians. The overseers of every parish must make, sign, and deposit a valuation list, in duplicate, before the first of June in every year. The overseers must send one duplicate of the valuation list to the surveyor of taxes of the district at the same time that the other is deposited by them. The surveyor of taxes inserts in the duplicate sent to him his estimate of the gross value of the property, if such amount differs from the amount inserted by the overseers, and transmits the duplicate to the Assessment Committee.

The overseers having deposited the valuation list in the place where the rate books are usually kept, must give public notice of the fact on the following Sunday. Not less than fourteen nor more than seventeen days after the notice the overseers must transmit their list to the assessment committee. Any person who feels himself aggrieved by anything in the valuation list may, within twenty-five days after the notice of the deposit, give to the Assessment Committee and to the overseers a written notice of his objection. The committee holds meetings to hear and determine the objections as in the case of proceedings outside the Metropolis. The notice of objection must specify the alteration in the list which the objector desires to be made. Ratepayers have the right to inspect and take copies from the lists.

The valuation lists, as approved by the Assessment Committee and as altered by the session on appeal (if any), comes into force on the 6th April of the year following that on which it was made, and lasts for five years subject to any alterations that may be made by any supplemental or provisional list.

The rate is levied notwithstanding that there may be an appeal pending, but if the Court alters the list the difference is paid, repaid, or allowed, as the case may be. For the purpose of calculating the rateable value, certain deductions are made from the gross value, and for this purpose the rateable property is divided into eleven classes. The maximum deduction varies according to the class, from one quarter to one-twentieth.

2. **APPEAL AGAINST VALUATION LISTS.** For the purpose of hearing appeals under the Valuation (Metropolis) Act, 1869, proceedings should be taken before the London Quarter Sessions. The persons entitled to appeal to these sessions include surveyors of taxes, overseers, and any ratepayer who may feel aggrieved by any decision of the Assessment Committee, or an objection to which he was a party, or by any decision of special sessions, whether he were a party or not. The Act also provides for appeals being made to special sessions in respect to the valuation lists; but the right to appeal to special sessions does not deprive a person of the right to appeal to the Quarter Sessions. If the appellant is a ratepayer, he must within seven days after giving notice of appeal enter into recognizances (i.e. a bond) with two sureties, or make a £50 deposit, as security for costs.

MAKING AND COLLECTION OF RATES. The amount of the poor rate is fixed by the overseers of the poor, and to them belongs the task of collecting it. The rate is usually made half-yearly, in the months of April and October, the overseers calculating what amount will probably be required in the ensuing six months. When the overseers have fixed the amount due from each ratepayer that amount is due immediately, so that roughly speaking rates are and ought to be paid in advance. In some cases the overseers agree to accept payments by instalments.

Other rates are assessed and determined by the various local bodies which issue a precept or order to the overseers empowering them to collect these rates at the same time as the poor rate is collected. The overseers collect the rates and then hand them over to the body issuing the precept. In the Metropolitan Boroughs, the Borough Councils are themselves the overseers, and they collect not only the local rates needed for their own purposes, but also for the purposes of Boards of Guardians, the London County Council, and the Receiver of the Metropolitan Police and other bodies.

ENFORCEMENT OF THE PAYMENT OF RATES. It is the duty of the overseers to collect the rates from the ratepayers. If the ratepayer refuses to pay his rates, no action can be brought for their recovery; but a distress may be levied on the goods of the offender. It should be noted here that this power of distress given to the overseers is not nearly so extensive as that given to landlords for the non-payment of rent. The goods of a stranger or of a lodger cannot be distrained upon for the non-payment of rates. The distress levied on the offenders' goods need not take place on the premises in respect of which he is rated, the overseers may distrain upon his goods wherever they may be found. Where a tenant leaves the premises without paying his rates, they cannot be recovered from a tenant who succeeds him. The offender cannot avoid a distress by means of a bill of sale, for by the Bills of Sale Act (1878) Amendment Act, 1882, a bill of sale is declared to be no protection in respect of personal chattels included in such bill of sale, which would otherwise have been liable to distress under a warrant for the recovery of taxes, and poor and other parochial rates. When the person liable for the payment of any rate refuses or neglects to pay it, the overseers should make a complaint before the local justices, and take out a summons against the offender calling on him to show cause why he has not paid the rate. On the hearing of the summons, if the rate is regular and legally imposed, the magistrates cannot pay heed to such arguments as are often raised by Passive Resisters. The magistrates' duty is to issue a distress warrant. If the offender tenders part of the rate, the magistrates may, if they think fit, accept it and issue a distress warrant for the balance, or they may issue a warrant in respect of the whole amount. An appeal against the issue of a distress warrant lies to the Court of Quarter Sessions; but not before the distress has been levied.

When the constable or other person having the execution of the distress warrant makes a return that he could not find sufficient goods or chattels of the offender's whereon to levy the sum due together with the costs of the levy, two or more justices, acting together, may issue a warrant committing the offender to prison for any time not exceeding three calendar months, unless the sum due be sooner paid.

THE POOR LAW.

All experience proves that blind and indiscriminate almsgiving is an evil in disguise. Unless it is regulated and carefully administered, it has only the effect of encouraging indolence and vagrancy. The State for several centuries has recognised the duty of its citizens to contribute in proportion to their means to the support of the indigent: and it has also recognised the wisdom of regulating the disposal of the funds contributed so as to obviate abuses. The Legislature has accordingly, from time to time, passed various enactments, known generally as the "Poor Laws."

POOR LAW LEGISLATION.

1. **SKETCH OF ITS HISTORY.** It was not till the reign of Henry VIII. that any organised attempt was made at poor law administration. Even then the arrangements were devised merely with a view to collecting and administering alms, the payment of which by the rich still remained purely voluntary.

The reign of Edward VI. brought matters a step further. Though in general the gifts remained voluntary, yet if a wealthy person bestowed in alms a grossly inadequate amount, having regard to his wealth, complaint might be made to the justices, who had power to order the defaulter to pay a reasonable sum.

The next advance came in Elizabeth's reign, when, in 1601, the foundations of the present poor law system were laid. The Act passed in this year (43 Eliz. c. 2) provided

> (1) That the needs of the aged and impotent poor should be attended to. (2) That work should be provided for the able-bodied poor. (3) That each parish should look after its own poor. (4) That "overseers of the poor" should be appointed in each parish to look after the interests of the poor. (5) That the overseers should have power to levy a compulsory *Poor Rate*. (6) That the overseers should have power to build workhouses in certain places. (7) That the parents, grandparents and children of the poor and impotent should, if able to do so, be compelled to contribute to the support of their relatives.

The main principles of this Statute are still law. In 1782-3, "Gilbert's Act" was passed, authorising the appointment of guardians in the place of the overseers of the poor in certain cases, and providing for the creation of unions and the establishment of workhouses. In 1819 the Select Vestry Act was passed, permitting the formation of Select Vestries to supervise the administration of the Poor Laws. In 1824 the Statute 5 Geo. IV., c. 83, provided for the punishment on summary conviction of those able-bodied persons who run away leaving their families chargeable to the parish.

In 1834 the Poor Law Amendment Act was passed, providing for:—

> (1) The appointment of Poor Law Commissioners to superintend the Guardians and Vestries, and to regulate the management of workhouses and other similar institutions. (2) The formation of Poor Law Unions, that is, the union of several parishes for the better administration of the relief of the poor in the respective parishes. (3) The building of workhouses, etc. (4) The removal of paupers to their place of settlement. (5) The creation of the so-called "workhouse test."

The principle of the "workhouse test" was that outdoor relief was withdrawn from the able-bodied, who would thenceforward have to enter the workhouse to obtain assistance.

In 1847 the Poor Law Commissioners were replaced by a Poor Law Board. In 1871 the Poor Law Board was replaced by the Local Government Board, which now supervises the various authorities which deal with Poor Law, Public Health, and Local Government matters.

2. A PAUPER'S "SETTLEMENT." Reference has been made above to the removal of paupers to their place of settlement. The law relating to "settlement" is and has been most important for those concerned in the administration of the Poor Law. Able-bodied paupers, with no intention of working, were in the habit of migrating to those parishes where they would meet with better treatment than at home; so that parishes striving to carry out the duties imposed on them by the Statute of Elizabeth's reign, were often saddled with the maintenance of paupers who ought rightfully to be chargeable to another parish. The abuses that this state of affairs brought about led to the passing of a Statute in 1662, which provided for the removal of paupers either to the parish in which they were born, or to the one in which they had acquired a "settlement." The effect of this law was that it tied people to the soil, for it prevented poor persons from travelling in search of work. Subsequent legislation has somewhat altered the law relating to the places of settlement of paupers.

When a pauper acquires a settlement, he has a right to relief under the poor laws in that particular place. Generally the settlement is in the parish in which the particular pauper was born. But a new settlement may be acquired by residence or otherwise.

A legitimate child under the age of sixteen has the same settlement that his father has; or if his mother be a widow he has her settlement. Bastards up to the age of sixteen derive their settlement from their mother. After attaining that age, children have a settlement in the place of their birth until they acquire another. Married women always have their husband's settlement.

The commonest way in which a settlement in any place, other than the place of birth, is acquired by paupers, is by continuous residence in a parish for three years; but a settlement may also be acquired by renting and occupying a house for a year, at a rent of at least £10, or by the payment of rates, or by owning an estate, or by being bound apprentice in a parish and residing therein for at least forty days.

3. REMOVAL OF PAUPERS. Where a pauper becomes chargeable to the rates, the Guardians have the power to apply to the local magistrates to have him removed to his place of settlement. But they have no power to remove him if he has resided in the district for a year before the warrant for his removal is issued. Time spent in the army or navy, or in prison, or in a hospital or lunatic asylum is not counted in reckoning the year of residence. Moreover, the Guardians cannot have a person removed to his place of settlement if the fact of his becoming chargeable to the rates was due to sickness or accident, unless the justices who grant the warrant for removal are satisfied that the disability resulting therefrom is permanent. A foreigner, having no place of settlement, cannot be removed, but if he acquires a place of settlement he may be removed there. Persons born in Scotland, Ireland, the Channel Islands, etc., are not "foreigners," so that they are liable to removal unless they have acquired rights to remain, by a year's residence as above. On the hearing by the justices of the application for the removal of a pauper, the man himself is often the most important witness as to what is his real place of settlement. He may be compelled to attend and give evidence.

Appeals against an order for the removal of a pauper to the place of his settlement are generally made to the Court of Quarter Sessions of the borough or county of the place where the order is made. But if the Boards of Guardians interested in the question prefer it, they may submit the dispute to the final decision of the Local Government Board.

Paupers returning to the places from whence they have been removed and becoming chargeable to the rates, are liable to be dealt with as "idle and disorderly persons."

4. VAGRANTS AND DISORDERLY PAUPERS. The poor law system is supposed to be sufficient for the purpose of alleviating all cases of genuine want. Therefore, begging and similar forms of imposture are not tolerated by the law. For the purpose of properly suppressing imposture and rascality, offenders are divided into three main classes:—

(*a*) **Idle and disorderly persons.** These include (1) Able-bodied paupers who have become chargeable to the rates through refusing to work. (2) Paupers returning and becoming chargeable to parishes from which they have been "removed." (3) Paupers who leave casual wards or workhouses before they are entitled to be discharged therefrom. (4) Paupers who refuse to be discharged from such places at the proper time. (5) Paupers who refuse to do their allotted tasks, or to obey the regulations of the institution in which they are placed. (6) Persons who wilfully give false names or addresses or who otherwise make false statements with a view to obtaining the benefit of the poor law. (7) Beggars, disorderly prostitutes, and unlicensed hawkers.

Idle and disorderly persons are liable on summary conviction to a month's hard labour. Appeal against a conviction lies to a Court of Quarter Sessions.

(*b*) **Rogues and Vagabonds.** These include (1) Persons who commit a similar offence after having been previously convicted as idle and disorderly persons. (2) Persons who run away leaving their wives and children chargeable to the parish. (3) Persons found wandering about without any home or other visible means of subsistence, who cannot give a good account of themselves. (4) Paupers who wilfully destroy their clothes or who injure the property of the guardians. (5) Persons who expose wounds or other deformities, or who make false statements of fact with a view to obtaining alms. (6) Persons who violently make resistance when they are arrested as idle and disorderly persons.

Various other persons, as persons who bet or game in public places, persons who expose indecent pictures, persons who live on the immoral earnings of others, and suspected persons found under certain suspicious circumstances, are also classed as rogues and vagabonds.

The maximum punishment for a rogue and vagabond on summary conviction is three months' hard labour. Appeals lie to a Court of Quarter Sessions.

(*c*) **Incorrigible rogues.** These include (1) Rogues and vagabonds, and idle and disorderly persons, who escape from confinement before the expiration of the term of their imprisonment. (2) Persons who are convicted again of a similar offence after a previous conviction as a rogue and vagabond.

The treatment awarded to incorrigible rogues is that on conviction by a magistrate they are committed to the next Court of Quarter Sessions, and are meantime kept at hard labour. The said Court of Quarter Sessions may order that the offender be imprisoned for a further period of not more than one year, and in addition the incorrigible rogue is liable, if a male, to be whipped.

POOR LAW AUTHORITIES.

1. THE LOCAL GOVERNMENT BOARD. The principal authority for the administration of the poor law is the Local Government Board. It consists of a President, appointed by the Crown, certain high officers of state as *ex officio* members, and a permanent staff with a principal Secretary at its head.

The Board has power to make special rules and regulations for the administration of the poor laws in the various unions; but copies of such rules and regulations must first be sent to the Guardians, Overseers, and Local Justices, and be open to the inspection of local ratepayers before they can be enforced. Similarly, the Local Government Board has power to revoke rules and regulations already made. No rule, order, or regulation of the Board will be valid unless it bears the signatures of the President and Secretary, together with the seal of the Board.

Every year the Board must present a general report to Parliament; and all new orders, rules, and regulations must also be laid before Parliament as soon as possible after their publication.

Workhouses cannot be built, altered, or substantially repaired without the consent of the Board, which consent is also required for the formation or alteration of unions.

The chief poor law function of the Local Government Board is the supervision of the acts of the Guardians. The control the Board exercises is so extremely stringent, that there is hardly any step which the Guardians may take without its approval or sanction, e.g. the Guardians cannot hold a board meeting in any room other than that

prescribed for the purpose, without the previous permission of the Local Government Board.

2. **BOARD OF GUARDIANS.** The Guardians of the Poor are elected bodies representing the electors in the various Unions. In *urban* districts the Guardians are a separate body from the Urban District Council, and consequently require a separate election. But in the case of *rural* districts, the Local Government Act, 1894, provides that the Rural District Councils shall also have the duties and powers of Guardians of the Poor; so that Guardians are not separately elected in such districts.

Nearly all Guardians are elected by the parochial electors; but when the body has been elected it has the power to add two additional members and a chairman to its number, who though not elected by the Parish must yet be qualified in other respects to act as Guardians. No Guardian may represent more than one electoral parish on the board. If elected for more than one, he may choose which he will represent. The Local Government Board and the County Council of the district in which the Union is situate have power to regulate the number of Guardians which each Parish or "ward" (i.e. an electoral sub-division of a large parish) may elect. Both men and women are eligible as Guardians. Every elector may cast one vote for each vacancy, but not more than one for any single candidate. The voting is by ballot.

Boards of Guardians must meet to transact business at least once a month; and they must also have an annual meeting for the election of a chairman and vice-chairman, and for the appointment of committees. Their meetings must not take place on licensed premises if other suitable premises are available. Questions at the meetings are decided by a majority of votes, the chairman being entitled to vote. He also has a casting vote if the voting is equal. The necessary *quorum* at a meeting of the Guardians is seven members or a third of the total number, whichever is the least. The transactions and resolutions of the Guardians at their meetings are recorded in their *minutes*. The meetings themselves may be held in private, should the Guardians deem it advisable.

The Overseers of the Poor are charged with the duty of collecting the Poor Rate, but on the Guardians is imposed the duty of administering it for the relief of the poor. It is the duty of the Guardians to see that the inmates of workhouses and other similar institutions are properly fed and clothed. They must also see that the inmates obey the rules of the institutions in which they are sheltered, and that they perform their allotted tasks.

It is the duty of the Guardians to appoint officials, as masters and matrons of workhouses, medical officers, porters, nurses, and relieving officers for the purpose of properly administering relief to the poor. But all such appointments must be confirmed by the Local Government Board. These officials cannot be dismissed by the Guardians, but only by the Local Government Board; the Guardians may, however, suspend them. Indeed, the sanction of the Local Government Board is needed for every important act of the Guardians.

Though the imposition and collection of the Poor Rate is primarily the work of the Overseers of the Poor, yet the Guardians have some voice in the matter, for the valuation list prepared by the Overseers is revised by the Assessment Committee of the Guardians, which committee has power to hear objections to the assessment. Appeals against the decisions of the Assessment Committee are heard by a Court of Quarter Sessions. The Assessment Committees of the Boards of Guardians are appointed at the annual meeting, and must consist of at least six and not more than twelve members of the Board. A *quorum* generally consists of three members, but the Board may fix a different number.

Guardians also have duties connected with the enforcement of the Vaccination Acts, the appointment of Registrars of Births and Deaths, and certain educational and other duties not immediately connected with the Poor Law.

The Account of Boards of Guardians have to be examined half-yearly by an auditor appointed by the Local Government Board. For a week before the audit the accounts must be open to the inspection of ratepayers, who may attend the audit and raise objections to the accounts. The auditor disallows any expenditure which has been improperly made, the difference being surcharged to the Guardians or any of them. Appeals against surcharging are generally made to the Local Government Board, but in certain cases the auditor's order may be quashed by a Divisional Court.

3. **OVERSEERS OF THE POOR.** In addition to the Guardians, poor law matters are also looked after by Overseers of the Poor. These overseers are generally appointed, not elected. In *urban* districts the overseers are generally appointed by the local justices, who, however, usually appoint the nominees of the parish vestries. The Local Government Board may, however, make an order conferring on Urban District Councils the power of appointing overseers. In *rural* districts the overseers are generally appointed by the Parish Councils. Both men and women may be appointed overseers; they must, however, be householders. Usually three or four overseers are appointed, but in certain cases the number may be increased. In the Metropolitan boroughs, the Borough Councils are the Overseers of the Poor.

Certain persons are disqualified from appointment. They include undischarged bankrupts, persons convicted of fraud, felony, or perjury, and those engaged in supplying goods to workhouses, etc. Masters of Workhouses and Relieving Officers may only be appointed with the consent of the Local Government Board. A person appointed as overseer is generally bound to serve, but certain persons are exempt from service. They include members of Parliament, judicial and magisterial officers, clerks in Holy Orders, practising barristers, solicitors, doctors, surgeons, dentists and apothecaries, civil servants, soldiers, sailors, etc.

The principal duty of the overseers is the levying of the poor rate for the parish they represent. The rates they make must receive the formal assent of the local justices, which assent the justices are bound to give. The overseers must see to the collection of the rate, and they are responsible to the Guardians for its collection. If a person refuses to pay his rates after receiving a demand note, the overseers may take proceedings before the local magistrates to enforce it. Overseers also have many other duties and powers which are not directly connected with poor law matters.

Generally all the overseers are jointly liable for their contracts, but if an overseer borrows money for the purposes of the parish, he alone is liable, as overseers have no power to contract loans in the discharge of their duties. An overseer is not generally liable for the criminal acts of his co-overseers, unless he has been guilty of gross negligence contributing to the commission of the crime.

The overseers of the poor cannot give relief to paupers except in cases of urgent necessity, for the giving of relief is the duty of the Guardians.

4. **JUSTICES OF THE PEACE.** Local Justices have not very many powers in respect of giving relief to paupers. Their principal functions are judicial. Consequently their poor law duties are chiefly confined to dealing with refractory paupers and other idle and disorderly persons. Any two local justices have, however, the power of directing that relief should be given to impotent paupers without requiring them to enter the workhouse. The justices have also the power to inspect workhouses. Applications for the removal of paupers to their places of settlement are heard by the justices.

As has already been seen, the parents, grandparents, and children of impotent paupers are bound to maintain them. The local justices have the power to assess the amount which such persons must contribute. Such persons are, however, only bound to support their legitimate blood relations. They cannot, therefore, be called on to support their relations by marriage, or illegitimate relations. If a woman commits adultery and her husband does not con-

done it, he cannot be made liable for her maintenance. Continuing to live with her would generally amount to condonation. Otherwise a man is liable for the support of his wife, and if he runs away, leaving her or his children chargeable to the parish, he may be dealt with by the justices as a rogue and a vagabond.

5. **DISTRESS COMMITTEES.** The Unemployed Workmen Act, 1905, provided for the establishment of distress committees in and out of London :—

(*a*) **In London.** By order of the Local Government Board distress committees are formed in every Metropolitan Borough, consisting partly of members of the Borough Council and partly of members of the boards of guardians and of persons experienced in the relief of distress. There is also a central body for the whole of the administrative county of London, consisting partly of members of, and selected by, the distress committees and of members of, and selected by, the London County Council, and partly of persons co-opted to be additional members of the body, and partly, if the order so provides, of persons nominated by the Local Government Board, but the number of persons so co-opted and nominated must not exceed one fourth of the total number of the body and one member at least of each committee must be a woman.

(*b*) **Outside London.** By order of the Local Government Board for every municipal borough and urban district with a population of over 50,000 (and for such municipal boroughs and urban districts with populations between 10,000 and 50,000 as obtain the consent of the Board) distress committees are formed, partly consisting of members of the council, and partly of co-opted and additional members.

DUTIES OF DISTRESS COMMITTEES. It is the duty of the various distress committees to make themselves acquainted with the conditions of labour within their area, and when so required by the central body, to receive, inquire into and discriminate between any applications made to them by unemployed persons. If the committee be satisfied that an applicant is honestly desirous of obtaining work and consider that the case is more suitable for treatment under the Act than under the Poor Law, they may endeavour to obtain work for the applicant or they may refer the case to the central body. But the distress committee has no power to provide the work themselves or contribute towards its provision.

EXPENSES OF DISTRESS COMMITTEES. The expenses of the central body and such of the expenses of distress committees as have been incurred with the consent of the central body, are defrayed out of a central fund, which is supplied by voluntary contributions and by contributions made on demand of the central body by the councils out of the borough and county funds.

REGULATIONS OF THE LOCAL GOVERNMENT BOARD. The Act gives the Board power to make regulations providing *inter alia* for the establishment of farm colonies, for determining the conditions under which a central body may aid emigration or removal, for the due performance of their duties by the distress committees, for the audit of accounts and for the holding of local inquiries.

MODES OF RELIEF.

1. **THE WORKHOUSE.** The establishment and chief control of workhouses are in the hands of the Local Government Board; but locally they are supervised by the Guardians. It is the duty of the Guardians to see that the workhouses are supplied with furniture and other necessaries. The visiting committee of the Guardians must visit and inspect their workhouse at least once a week, and make entries from time to time in the visitors' book. All guardians and local justices may visit the workhouse at reasonable times; but ratepayers cannot claim a similar right without the permission of the Guardians. The person in the actual immediate charge of the workhouse is the master, and the matron is usually his wife. The master and matron are appointed in the first instance by the Guardians, but the appointment must be confirmed by the Local Government Board. In cases of urgent necessity, the master may admit a pauper on his own responsibility; but except in such cases, he may only admit them on the order of the Guardians, the relieving officer, an overseer, or the justices.

Paupers must be admitted at any time during the day or night, and also on Sundays. On admission, adult male paupers are searched by the master and females and children by the matron. They are supplied with workhouse garments, their own clothes being taken away. The pauper's property is returned to him when he leaves. If he has money he may be compelled to maintain himself. Paupers are liable to be washed on admission, but the Guardians cannot compel them to submit to having their hair cut, unless it is necessary for sanitary reasons. On admission, paupers are examined by the medical officer. If they are found to be diseased they are placed apart in special wards. It is proposed from January 1st, 1911, that paupers who have attained the Old Age Pension age, should be qualified to receive and shall receive their pensions, the local authorities contributing to the cost in proportion to the amount they save by the removal of the persons concerned from the pauper to the pension list.

2. **CLASSIFICATION OF PAUPERS.** Healthy paupers are divided into seven main classes, but sub-divisions of these classes may be made. The classes are :—

(1) Infirm adult males. (2) Able-bodied males over fifteen years of age. (3) Boys between the ages of seven and fifteen. (4) Infirm adult women. (5) Able-bodied females over fifteen. (6) Girls between seven and fifteen. (7) Children under seven.

Each class is kept in separate wards, with the exception that infirm married couples need not be separated from each other, they may be given accommodation separate from the other paupers. The Guardians may permit various members of a family in a workhouse to see each other. Paupers must go to bed and rise at the times appointed for their class, they must have their meals in the prescribed manner, and must conform generally to the rules and regulations of the house or ward in which they are placed.

The health of the members of the various classes is looked after by the medical officer, who may change the diet of a pauper if he thinks it necessary on medical grounds, but such change must be reported to the Guardians at their next meeting. Paupers cannot be compelled to attend any service of a religion other than their own.

Paupers may quit the workhouse on giving reasonable notice of their intention to do so. They must, however, take their families with them, unless the Guardians consent to their being left behind. But the Guardians may prevent orphan children under sixteen leaving if they think it desirable.

3. **CASUAL WARDS.** Provision is made by the Poor Laws not only for the parochial poor, but also for destitute tramps who apply for shelter at night. Special wards are generally provided for such persons, so as to keep them apart from the ordinary inmates of a workhouse. In cases of urgent necessity, the master may admit casuals to the ward without an order, but except in such cases they must always have an order. The proper person to give an order is the relieving officer, but an overseer may give one in an urgent case. If the casual ward is full, the master must refer the applicant to the relieving officer. Casuals are washed and cleansed on admission. Their clothes are taken from them, but returned in the morning, special attire being provided for their use during the night. Any money found on a casual is liable to be taken away and devoted to the common fund of the Union.

Casuals generally are not entitled to be discharged before 9 a.m. on the second day after their admission, and even then they are only entitled to be discharged if they have performed their allotted tasks. They may, however, be discharged at 5.30 a.m. in summer and at 6.30 a.m. in winter. Tasks are provided for the casuals to perform, and if they do not perform them, or if they otherwise disobey the regulations of the ward, they are liable to be dealt with as idle and disorderly persons.

4. **OUT-DOOR RELIEF.** The Local Government Board evidently leans strongly against the giving of out-door relief and towards the imposition of the workhouse test. For though it is cheaper to give a family out-door relief

than to support it in the workhouse, yet there are so many that would accept such relief who would not go into the workhouse, that the giving of out-door relief becomes dearer in the long run. There are eight principal cases in which the Guardians may give out-door relief instead of imposing the workhouse test:—

(1) In cases of sudden and urgent necessity. (2) In cases of accident, or bodily or mental infirmity. (3) For funeral expenses. (4) To widows in the first six months of their widowhood. (5) To widows with legitimate children dependent on them. (6) To the wives and children of persons in prison, or abroad, or in an asylum. (7) To the wives and children of soldiers, sailors, and marines on service. (8) To the wives and children residing within the Union of men residing elsewhere.

Out-door relief should be given to able-bodied men only under very exceptional circumstances.

5. **LABOUR TESTS.** When there is no room in the workhouse, and also in those cases where the Guardians think it undesirable to impose the workhouse test or to give ordinary out-door relief to able-bodied paupers, they may provide a labour test, so that on completing a prescribed task the pauper may receive some out-door relief. The test is generally stone breaking or oakum picking, but other tasks may be imposed instead.

6. **MEDICAL RELIEF.** Sick wards and infirmaries are attached to most workhouses, and medical attendance may be obtained in these in the same way as ordinary shelter in the workhouse. But paupers permanently sick or disabled, residing within a Union and receiving poor law relief, are generally given a ticket by the Guardians which will enable them to obtain medical assistance, attendance, and medicines from the medical officer.

7. **PAUPER LUNATICS.** When the medical officer of a Union learns that a pauper resident in the district it a lunatic, he must give notice of the fact to the relieving officer within three days. If there is no relieving officer, the notice must be given to an overseer. Within three days of receiving the notice the relieving officer or overseer must give notice to a magistrate of the district. The magistrate may order the temporary removal of the lunatic to the workhouse. Dangerous lunatics must not be kept in a workhouse for more than fourteen days. They should be sent to an asylum. Lunatics in an asylum who are not dangerous may be removed to and detained at a workhouse with the consent of the Local Government Board.

8. **APPRENTICESHIP OF PAUPER CHILDREN.** The Guardians have certain powers of apprenticing pauper children in workhouses. They must not apprentice any child for more than eight years, nor any child under the age of nine, nor any child who cannot read and write. No child under fourteen may be bound as an apprentice without his own consent, and no child under sixteen may be bound against the consent of his father. The consent of the mother is required in the case of an illegitimate child under sixteen. The Guardians should exercise great care in the children's interest when they are binding them to serve as apprentices. They should not bind them to infants or married women, or journeymen, or chimney-sweeps. They should also keep a register of their apprentices, and see that they are visited at least once a year.

9. **MAINTENANCE OF RELATIVES.** The Statute of Elizabeth provided that the parents, grand-parents and children and grand-children of the poor and impotent should, if able to do so, be compelled to support them. By other Acts a husband is compelled to support his wife. The guardians also have power to make an order against a putative father to contribute towards the maintenance of his offspring, though primarily it is the duty of the mother of an illegitimate child to support it. The liability to support pauper relatives does not extend to brothers, sisters, uncles, aunts, or other collateral relations.

PUBLIC HEALTH.

HEALTH LEGISLATION. It is little more than half a century since the legislature began to take a serious interest in the health of the community as a whole. Prior to 1845 the law of the country on this subject was in a very anomalous condition. Different places would from time to time apply to Parliament for Improvement Acts to regulate their water supply, drainage, etc. The powers conferred by these Acts varied according to the requirements of the various localities concerned. The inconsistency and inconvenience of this state of affairs brought about the passing of various "clauses" Acts.

These Acts contained clauses which the various localities might incorporate, either wholly or in part, in their Private Local Acts. Amongst these Acts may be mentioned the Markets and Fairs Clauses Act, the Gasworks Clauses Act, the Commissioners Clauses Act, the Waterworks Clauses Act, the Towns Improvement Clauses Act, and the Cemeteries Clauses Act—all passed in 1847. In the following year was passed the Public Health Act, 1848, and although it has been repealed by the Public Health Act, 1875, it is historically important as being the basis of the present law on the subject.

The year 1875 is by far the most important year in the history of Public Health. The Public Health Act, 1875, is a vast and comprehensive piece of legislation, setting forth in code form the bulk of the law on the subject. In sundry respects, dealing chiefly with administration, it has suffered amendment by subsequent Acts; but generally speaking it contains the law of Public Health as we find it to-day. It does not apply, however, except in a few minor details, to the Metropolis.

Until recently the sanitary affairs of London were governed by various "Metropolis Management Acts"; but in 1891 a codifying Act, known as the Public Health (London) Act, 1891, was passed. It does not, however, entirely supersede the Metropolis Management Acts. The powers conferred by this Act are very similar to those conferred by the Public Health Act, 1875, and the Acts amending it. It has been itself amended by the Public Health (London) Acts, 1893 and 1896. It deals with Nuisances, Offensive Trades, Smoke, Refuse Removal, Closets, Infectious and Epidemic Diseases, Hospitals, Mortuaries, etc.

SANITARY AUTHORITIES.

Under the Public Health Act, 1875, all England, except the Metropolis, was divided into districts of two kinds, called respectively Urban Sanitary Districts and Rural Sanitary Districts, or more shortly, Urban Districts and Rural Districts. These districts are subject, respectively, to the jurisdiction of the Urban and Rural Sanitary Authorities. The Urban Sanitary Authorities are now (under the Local Government Act, 1894) divided into Urban District Councils and Borough Councils.

1. **URBAN DISTRICT COUNCILS** consist of a chairman and councillors. The CHAIRMAN of a district council (whether Urban or Rural) is, unless a woman or personally disqualified, by virtue of his office a justice of the peace for the county in which the district is situate. A woman, though not eligible as justice of the peace, may be elected either as councillor or chairman. Amongst those personally disqualified from becoming justices of the peace are undischarged bankrupts, sheriffs, and practising solicitors.

COUNCILLORS to be elected must themselves be parochial electors, or have resided in the district for twelve months previously. They are elected by the parochial electors for a term of three years, but, unless the County Council otherwise orders, one-third of their number must go out of office every year, their places being taken by newly elected councillors.

2. **BOROUGH COUNCILS.** In boroughs the control of sanitary affairs is vested in the Borough Councils by virtue of Section 6 of the Public Health Act, 1875. The Urban Authority in the Boroughs being the Mayor, Aldermen and Burgesses acting by the Council. The Local Government Act, 1894, did not alter this in any way.

3. **RURAL DISTRICT COUNCILS.** The Rural Sanitary Authorities, now (since the Local Government Act, 1894) called Rural District Councils, consist of a chairman and councillors, the councillors being elected by the parishes

or other areas for the election of Guardians in the district. These Rural District Councillors also act as Guardians of the Poor in their respective parishes. No person is qualified for election unless he is a parochial elector of some parish within the Union, or has during the whole of the year preceding his election resided within the Union. No person is disqualified from election by sex or marriage. The term of office is three years, but, as in the case of Urban District Councillors, one-third of their number must retire annually.

POWERS OF LOCAL AUTHORITIES.

1. BYE-LAWS. Local authorities have, under the Public Health Acts, the power to make bye-laws for a vast number of different purposes. Under the principal Act they have power to make bye-laws regulating the cleansing of pavements, the removal of refuse, the well-ordering of common lodging houses, the conduct of offensive trades, the management of mortuaries and the construction of new streets and buildings. They also have power to make bye-laws for the proper management of pleasure grounds, markets, slaughter-houses, etc. Urban authorities can also make bye-laws in respect of the stands for hackney carriages and the rates of hire. But it must be clearly understood that no local authority has any power to make a bye-law which is repugnant to the law of the land or to the provisions of the Act under which it is made. The local authorities may attach to these bye-laws such penalties as they may think reasonable; but these penalties must not exceed £5 for each offence, or, in the case of a continuing offence, forty shillings for each day after written notice of the offence from the local authority.

The Bye-laws made under the Public Health Acts do not take effect until they have been submitted to and confirmed by the Local Government Board, which has power to allow or disallow them as it thinks fit. It will not confirm any bye-law unless notice of the intention to apply for confirmation has been given in a local newspaper at least one month before the making of the application, and unless a copy of the proposed bye-laws has been open for inspection by the ratepayers of the district during office hours for a whole month before the application. If any ratepayer, after having perused the proposed bye-laws, objects to them, he should apply to the Local Government Board with a view to prevent their confirmation. It is the duty of the Local Government Board to consider both the legality of and the policy underlying the proposed bye-laws; but it must not be supposed that the Local Government Board's confirmation can make valid any bye-law which is repugnant to the law of the land.

All bye-laws made by a local authority under the Public Health Acts must be printed and hung up in the office of such authority and be open to the inspection of ratepayers at all reasonable hours. In all legal proceedings the mere production of a copy of the bye-laws made by urban or rural district councils and signed and certified by the clerk of the council is, until the contrary is proved, sufficient evidence of the due making, confirmation, and existence of the bye-laws.

2. PROTECTION OF LOCAL AUTHORITIES. It would be manifestly unjust that any person, who acting in a *bona fide* manner endeavours to carry out his duties under the Public Health Acts, should be personally responsible for his actions in such a way that legal proceedings may be taken against him for any illegality he may have committed. Accordingly, it is provided in Section 265 of the Public Health Act, 1875, that no member or officer of a local authority, or person acting under the direction of such authority, is under any personal liability for anything done by him *bona fide* for the purpose of executing the Act. This, of course, does not mean that a local authority can avoid the consequences of the wrongful acts of itself or its servants, acting within the scope of their authority. It merely means that the local authority is responsible as a whole and not individually. It should be sued in its corporate name. The exemption from individual responsibility even extends to contractors who have *bona fide* contracted with the local authority to carry out some work under its direction. But a member, officer, or servant of a local authority is not exempted from personal liability if he acts entirely beyond the scope of his authority.

Moreover, it is laid down in the Public Authorities Protection Act, 1893, that no legal proceedings can be brought against any person for any act done in pursuance of any Act of Parliament or any public duty or authority, in respect of any alleged neglect or default in the execution of any such Act, duty, or authority, unless the proceedings are commenced within six months after the wrongful act or omission complained of.

Further, where the proceeding is an action for damages, the defendant is allowed to tender amends before the commencement of the action, and if in the opinion of the Court the plaintiff has not given the defendant a sufficient opportunity for tendering amends before the commencement of the action, the Court may award to the defendant costs to be taxed as between solicitor and client.

3. POWERS OF RATING. The powers given by the Public Health Acts for the purpose of defraying the expenses of local authorities in carrying out their duties under the Acts are not the same for Urban and Rural Districts.

(*a*) In the case of URBAN AUTHORITIES, all expenses not otherwise provided for are defrayed out of the district fund and general district rate, except in the case of borough councils where, if before 1875 they were payable out of the borough fund or borough rate, they must continue to be paid out of the same fund or rate. Before the general district rate can be made, a week's notice of the intention to make it must be publicly given, and a statement of the proposed rate must be open to the inspection of ratepayers.

General district rates are levied on the occupiers of all kinds of property assessable to the Poor Rate; but the urban authority may at its option levy a reduced rate on the owner instead of the occupier where the rateable value of the premises is under £10, or where the premises are let to weekly or monthly tenants or in apartments. Certain kinds of property, too, are to be assessed at only one quarter of their net annual value; these include allotments, tithes, tithe rent charges, arable, meadow, pasture or woodlands, market gardens and land covered with water, towing paths and railways.

(*b*) In the case of RURAL AUTHORITIES, the expenses incurred are divided into general expenses and special expenses. The former being the expenses of the establishment and officers of the rural authority, the expenses in relation to disinfection and, generally, all expenses incurred for the benefit of the district as a whole. Special expenses are those incurred in respect of any particular contributory place within the district, and include the cleansing of the sewers and providing and maintaining the water supply of such places. *General expenses* are payable out of a common fund to be raised out of the Poor Rate of the parishes in the district according to the rateable value of each contributory place; but *Special expenses* are a separate charge on each contributory place. Where, however, the expenses are incurred for the common benefit of any two or more contributory places, the local authority may apportion the expenses between them.

(*c*) Again, where the expenses have been incurred in respect of some private improvement, local authorities, whether urban or rural, have power to levy a private improvement rate. If a person fails to pay any rate, levied under the Public Health Acts, for a space of fourteen days after it has been lawfully demanded in writing, an order for its payment may be obtained from a court of summary jurisdiction, and in default of compliance with such order, a distress warrant may be issued.

REMOVAL OF NUISANCES.

1. WHAT IS A NUISANCE? Nuisances generally are either public or private. Vice-Chancellor Kindersley, in the leading case of Soltau *v.* de Held (21 L.J. Ch. 153), declared that "to constitute a public nuisance the thing must be such as in its nature or in its consequences is

a nuisance—an injury or a damage to all persons who come within the sphere of its operation."

A PUBLIC NUISANCE is dealt with by indictment or information and punished by fine and imprisonment; but if an individual can show that he has suffered some special damage in consequence of the nuisance, he can bring an action for damages.

A PRIVATE NUISANCE is one which does not affect the public generally, but only some particular individual or individuals. These nuisances are not subject to the criminal law. Civil actions may be brought to restrain them or to obtain compensation for any substantial damage they may have caused.

The Public Health Acts have declared a number of things to be nuisances, and have provided for their being dealt with summarily. Amongst these statutory nuisances are fireplaces which do not as far as practicable consume the smoke arising therefrom, and factory chimneys which emit volumes of black smoke. Again, such things as pools, ditches, privies, urinals, cesspools, drains, and ashpits must not be allowed to get into a condition which is offensive or injurious to health, for if they do they will be treated as nuisances.

2. **KEEPING SWINE.** Section 47 of the Public Health Act, 1875, makes it an offence to keep swine or pigstyes in any dwelling-house, or so as to be a nuisance to any person, in any urban district. There is a similar provision with heavier penalties in the Public Health (London) Act, 1891.

3. **OFFENSIVE TRADES.** The Act of 1875 declares certain trades to be offensive and forbids their being established in any urban district without the written consent of the urban authority. The trades specified are those of blood, bone, soap, or tripe boilers, fellmongers and tallow melters. The penalties imposed are very heavy.

4. **REFUSE REMOVAL.** Local authorities have power to undertake or contract for the removal of house refuse from private premises; and where they have exercised this power it is an offence for any one else to remove, or to obstruct authorised persons from removing, such refuse. But there is a provision exempting occupiers of houses from liability in respect of such refuse as is produced on their own premises and intended to be removed for sale or for the occupier's own use if it is meantime kept so as not to be a nuisance. If the local authority, after having undertaken or contracted for the removal of the refuse, unreasonably neglects to have it removed within seven days of being requested in writing to do so by the occupier of the premises, it renders itself liable to penalties.

5. **STREET MUSIC.** This objectionable practice may frequently be treated as a public nuisance and punishable as such; but there are other remedies, thus:—

(*a*) **In London.** By the Metropolitan Police Act, 1839, every person, except the guards and postmen belonging to the Post Office in the performance of their duty, who blows a horn or uses any other noisy instrument in any thoroughfare or public place is liable to a penalty not exceeding forty shillings. Again, by the Metropolitan Police Act, 1864, any householder may require any street musician or street singer to depart from the neighbourhood of his house on account of the illness, or on account of the interruption of the ordinary occupations or pursuits of any inmate of the house, or for other reasonable or sufficient cause. Penalty for refusing to go away when so requested, a fine not exceeding forty shillings, or imprisonment for not more than three days.

(*b*) **Outside London.** The above Acts do not apply outside the Metropolis, but in most populous districts the playing of street music and other nuisances are sufficiently regulated by bye-laws issued by the various local authorities under the powers conferred on them by the Local Government and other Acts.

DISEASE PREVENTION.

The legislature has passed innumerable statutes with a view to the prevention of disease. It is impossible in the space at our command to deal with more than a very few of them.

1. **VACCINATION.** The law on this subject is to be found in the Vaccination Act of 1867 and its amending Acts, in the Vaccination Act, 1898, and in the Local Government Board's Vaccination Order, 1898, and in the Vaccination Act, 1907.

It is the duty of Guardians to appoint public vaccinators, who must be properly qualified medical men. Parents are required under a penalty of twenty shillings to have their children vaccinated before they are six months old, either by the Public Vaccinator or by some medical practioner. If, however, the parent within four months from the birth of the child makes a statutory declaration that he conscientiously believes that vaccination would be prejudicial to the health of the child, he will be exempt from the penalty. But he must deliver the declaration to the vaccinating officer within seven days after making it.

Though the cost of public vaccinations is paid from the Poor Rate, yet it is expressly provided that the acceptance of it does not amount to Parochial Relief or subject the parent to any disability or disqualification.

2. **EPIDEMIC, ENDEMIC, AND INFECTIOUS DISEASES.** Under the Epidemic and other Diseases Prevention Act, 1883, whenever any part of England appears to be threatened with or affected by any formidable epidemic, endemic, or infectious disease, the Local Government Board may make regulations for the speedy interment of the dead, for house to house visitation, for the provision of medical aid and hospital accommodation, for the promotion of cleansing, ventilation, and disinfection, and for guarding against the spread of disease.

The Infectious Disease (Prevention) Act, 1890, which applies to London and to such Urban or Rural Sanitary Districts as adopt it, deals with the inspection of dairies and the prohibition of the sale of milk in certain cases. It also deals with the cleansing and disinfecting of premises, bedding, etc., and regulates the disposal of the bodies of persons who have died from infectious diseases. It is an offence under this Act to knowingly cast infected refuse into any ash bin or receptacle for refuse.

3. **NOTIFICATION OF DISEASE.** Under the Infectious Disease (Notification) Acts, 1889 and 1899, where a person in any house, other than a hospital, is suffering from small pox, cholera, diphtheria, membranous croup, erysipelas, scarlatina, scarlet fever, typhus, typhoid, enteric, or relapsing, continued or puerperal fever, or from such other infectious disease as the local authority may, with the consent of the Local Government Board, direct, the head of the house and the medical practitioner in attendance must notify the fact to the medical officer of health for the district.

4. **SEWAGE AND DRAINAGE.** Generally speaking, the difference between a sewer and a drain is that the latter is one which receives the drainage of a single house, whilst the former receives that of two or more houses.

By the Public Health Act, 1875, all sewers within the district of a local authority are vested in that authority, unless they are sewers made by any person or company for profit, or under the authority of a private Act of Parliament, or of the Commissioners of Sewers.

5. **SANITARY POWERS.** Local authorities are given the following powers:—

(1) They may purchase, make, and maintain sewers necessary for the purpose of effectually draining their districts.

(2) They may carry any sewer through, across, or under any street, or under any cellar or vault situated under the pavement or carriage-way of any street.

(3) They may even carry their sewers into, through, or under any lands whatever within their district, after giving reasonable notice in writing to the owner or occupier.

(4) They may alter and improve sewers in any way that may be found desirable, and should the local authorities deem it necessary, they can discontinue the use of a sewer, if they provide an equally effective one for any person who may have been deprived of its use.

The Public Health Acts give local authorities powers

to construct works for the disposal of sewage, but they must be careful to create no nuisance in the exercise of these powers. They are not allowed to pollute with their sewage any natural stream, watercourse, canal, pond, or lake; and they must keep their sewers properly cleansed and ventilated.

The owners and occupiers of premises within the district of a local authority are entitled to empty their drains into the sewers of that authority; but before doing so they must give notice of their intention, and they must also have the connections made under the direction and control of the local authority. Where any house is without a drain sufficient for its effectual drainage, the local authority must, by written notice, require the owner or occupier of the house, within a reasonable time, to make a covered drain emptying into the local authority's sewers or cesspools, under the direction of the authority. It is an offence to build a house without proper and effectual drainage in any urban district.

SALE OF FOOD, DRUGS, POISONS, AND COAL.

1. UNSOUND FOOD. Under Section 116 of the Public Health Act, 1875, as amended by Section 28 of the adoptive Public Health Acts Amendment Act, 1890, Medical Officers of Health and Inspectors of Nuisances have power to inspect any articles intended for human food sold or exposed for sale within their districts; and if such food appears to be diseased, unsound, unwholesome, or unfit for human food, they may seize it and take it before a magistrate, who, if satisfied as to the justness of the complaint, may order the destruction of the unsound food and inflict a penalty of £20 or, in his discretion, he may send the offender to prison for three months. It is also an offence to hinder the inspectors in the exercise of their duty.

2. ADULTERATION OF FOOD AND DRUGS. Under the Sale of Food and Drugs Act, 1875, and its amending Acts (1879 and 1899) it is an offence to knowingly adulterate any article of food, intended for sale, with any ingredient or material that would render it injurious to health, or, in the case of a drug, that would affect its quality or potency.

It is likewise an offence to sell to the prejudice of the purchaser any article of food or any drug which is not of the nature, substance, and quality of the article demanded; but in the case of spirits adulterated only with water, it is a good defence to prove that the spirit is not thereby reduced more than twenty-five degrees below proof in brandy, whisky, or rum or thirty-five degrees in the case of gin. Again, in the case of compound articles and compound drugs containing ingredients other than those asked for, it is a good defence to show that a label has been attached to the article to the effect that it is a mixture, provided, of course, that the added ingredients are not injurious to health or intended fraudulently to increase its bulk, weight, or measure, or to conceal its inferior quality.

3. SALE OF MARGARINE. The sale of this substance is chiefly regulated by the Margarine Act, 1887, and the Sale of Food and Drugs Act, 1899. Every package of this substance must be branded on its top, bottom, and sides with the word "Margarine" in capital letters at least three-quarters of an inch square. If exposed for sale by retail it must bear a label with letters at least an inch and a half square; and it must be delivered to the customer in a paper wrapper on which the word is printed in capital letters not less than half an inch long. Margarine manufactories are required by law to be registered.

4. SALE OF HORSEFLESH. Under the Sale of Horseflesh, etc., Regulation Act, 1889, horseflesh, which term includes the flesh of asses and mules, must not be sold in any shop which does not bear a conspicuous sign with letters at least four inches in length to the effect that such flesh is sold there. Again, horseflesh must not be sold for human food under the guise of some other kind of food.

5. SALE OF POISONS. By the Arsenic Act, 1851, every person who sells arsenic must enter full particulars of the sale in a book kept for the purpose, which entry must be signed by both the purchaser and the vendor. No one may sell arsenic to any one unknown to him, unless the sale is made in the presence of a witness known to both parties. Arsenic must not be sold to a minor. The Act does not apply to the sale of arsenic made up as medicine in accordance with a doctor's prescription, nor to the sale of arsenic by wholesale to retail dealers. Offences against the Act are punishable with a penalty not exceeding £20.

The Poisoned Grain Prohibition Act, 1863, imposes a penalty not exceeding £10 on every person who offers or exposes for sale or sells any grain, seed, or meal which has been so steeped or dipped in poison, or with which any ingredient has been so mixed as thereby to render it poisonous and calculated to destroy life. The Act does not, however, apply to the selling of any solution or infusion, or any material or ingredient for dressing, protecting, or preparing any grain or seed for *bona fide* use in agriculture only.

By the Pharmacy Act, 1868, persons are forbidden to retail poisons unless they are pharmaceutical chemists, or chemists and druggists within the meaning of the Act, and duly registered as such, or unless they are legally qualified apothecaries, veterinary surgeons, or dealers in patent medicines. Moreover, every compound containing any poison, within the meaning of the Pharmacy Act, 1868, which is prepared or sold for the destruction of vermin is treated as a poison under that Act. The Act makes it unlawful to sell any of the poisons to which the Act refers, either by wholesale or retail, unless the bottle or box containing it is distinctly labelled with the name of the article and the word "poison," and the name and address of the seller. The other regulations respecting the sale of poisons in general are similar to those relating to arsenic (See above).

6. SALE OF BREAD. By the Bread Act, 1836, and other Acts it is provided that, with the exception of fancy bread and rolls, all bread sold must be sold by weight. The penalty for selling bread otherwise than by weight is a sum not exceeding £2. Bread must be sold by avoirdupois weight under a penalty not exceeding £5 nor less than £2. Sellers of bread must provide in some conspicuous part of their shops, on or near the counter, a beam and scales with proper weights in order that all bread there sold may be weighed in the presence of the purchasers under a penalty not exceeding £5. All carts used by bakers or sellers of bread must be provided with proper weights and scales under a penalty not exceeding £5.

7. SALE OF COAL. The Weights and Measures Act, 1899, provides that all coal is to be sold by weight unless sent by boat-load or railway-truck direct from the colliery to the purchaser. Local authorities have power under this Act to make bye-laws regulating the sale of coal, and many of such bye-laws provide *inter alia* for the carrying of proper scales and weights by carts delivering coal.

PUBLIC PROTECTION.

1. POLICE.

The London policeman dates from Sir Robert Peel's Act, 1829, by which a Metropolitan Police force was created. This was followed, in 1835, by the institution of a police force in boroughs, and in 1839 in counties.

POWERS AND DUTIES OF POLICE CONSTABLES.

1. TAKING INTO CUSTODY. A policeman may arrest without warrant in various cases:—

(1) When on reasonable grounds he suspects a person of having committed a felony.

(2) To prevent a breach of the peace, or whenever a breach of the peace has been committed in his presence.

(3) Under the Vagrancy Act, persons guilty of street gaming and other offences.

(4) Under the Penal Servitude Acts, any person "on ticket of leave," or under police supervision, suspected of having committed any offence.

It is the duty of every citizen to assist a policeman in the execution of his duty, and if called upon by a policeman to assist him in effecting an arrest, the citizen must give every assistance in his power, otherwise such citizen will be guilty of a crime.

2. **DEALING WITH CONFESSIONS.** In regard to confessions by a prisoner, it is the duty of a policeman to warn him that anything he may say may be given in evidence against him. Further, he must not compel, or induce, or persuade a prisoner to confess. The confession must be entirely voluntary on the part of the prisoner, otherwise it cannot be given in evidence against him.

3. **DISCIPLINARY REGULATIONS.** Generally speaking, policemen may vote, but must not canvass or take part in parliamentary or municipal elections. For neglect of duty, resigning without permission, refusing to give up accoutrements on discharge, a policeman may be convicted summarily in a Police Court or Court of Petty Sessions, or may be suspended, fined, or reduced in rank. It is an offence to harbour, on licensed premises, constables on duty.

4. **DISPOSAL OF PROPERTY** (stolen or lost). Property in the possession of the police in connexion with a criminal charge may be recovered by the owner of such property on his applying to a Court of Summary Jurisdiction. The Court will order the delivery of the property to him. Any person who claims to have a better right to such property may take legal proceedings at any time within six months of such order, but not afterwards.

Unclaimed property in the possession of the police may be sold and the proceeds applied in payment of necessary expenses, payment of compensation to the person who has delivered the property to the police, making payments for the benefit of discharged prisoners, or such other purposes as the Home Secretary may think fit.

5. **OBSTRUCTING THE POLICE.** Assaulting or obstructing the police in the execution of their duties is a criminal offence punishable with fine and imprisonment. Where the obstruction is with a view to assisting the escape of a criminal, the person so assisting him is regarded as an accessory to the crime if it be a felony, and as a principal if it be a misdemeanour. It is also a crime to refuse to come to the assistance of a police officer when called upon by him to do so.

CONTROL AND MAINTENANCE OF THE POLICE.

The police forces of England and Wales may be dealt with under the headings of Metropolitan Police, County Police, and Borough Police.

1. **METROPOLITAN POLICE.** London County (excluding the City, which has its own police force), within a radius of 15 miles from Charing Cross, is under the control of the Commissioners of Police for the Metropolis. There is a Chief Commissioner with three Assistant Commissioners, who are justices of the peace for London, Middlesex, Hertford, Kent, Surrey, Essex, and Bucks, and on the river Thames. They have power to issue warrants for the purpose of raiding gaming houses and for searching for stolen goods. They grant licenses for hackney and stage carriages. They cannot sit at Quarter Sessions.

The expenses of maintaining the police force are met by a police rate not exceeding ninepence in the pound. This rate is collected by the Metropolitan Borough Councils, and handed over to the receiver of police.

The whole force is under the direct control of the Home Office, and not, as in other cases, under that of the local authorities.

2. **COUNTY POLICE.** The county police are controlled by a joint committee appointed annually by the County Council and the Justices of the Peace from each body. They appoint the chief constable, divide the county into police districts, and fix the total number of police, and the number for each district, subject to the approval of the Home Secretary.

There is an annual inspection of the police, and if the report be unsatisfactory, the Home Secretary will refuse a certificate, and thereupon the county will lose the contribution from the Exchequer, which amounts to half the cost of the pay and clothing for the year.

The chief constable appoints his subordinates, and decides on the promotion of the officers.

3. **BOROUGH POLICE.** In the municipal corporations the police are under the control of the local Watch Committee appointed by the Town Council, and consisting of the mayor and one-third of the Council. This committee is responsible for the discipline of the force, and may appoint, dismiss, or suspend constables. Quarterly returns concerning the borough force must be made to the Home Secretary.

The force is annually inspected and reported upon by Inspectors of Constabulary. If the report be unsatisfactory, the Home Secretary refuses to grant a certificate of efficiency. Thereupon the borough loses the contribution paid by the county treasurer out of the grants made by the Exchequer. This contribution amounts to half the cost of the pay and clothing of the force.

The expenses of the borough police are met by a rate not exceeding eightpence in the pound, and by a grant of half the cost of the pay and clothing made by the Government.

2. PROTECTION FROM FIRE.

THE LONDON FIRE BRIGADE. In the Metropolis it is the duty of the County Council to provide an efficient fire brigade. The Metropolitan Fire Brigade was formed under an Act passed in 1774. In 1806 the Metropolitan Board of Works took over the Fire Brigade, and by the Local Government Act, 1888, the London County Council assumed its control. In 1904 the title of the brigade was altered from "Metropolitan Fire Brigade" to "London Fire Brigade." The brigade is under the command of a chief officer who is usually a retired naval officer. The present chief officer is Lieutenant Sampson Sladen, R.N., salary £900. On the occasion of a fire the officer in charge of the regular firemen may also take command of any volunteer fire brigade or of any persons who voluntarily place their services at his disposal, and may remove, or order any fireman to remove, any persons who interfere by their presence with the operations of the fire brigade. The fire brigade officers have power to take any measures that may appear expedient for the protection of life and property, even to the extent of breaking into or pulling down premises, but they must be careful to do as little damage as possible. Police constables are expected to assist the fire brigade in the execution of their duties. They may close any street in or near which there is a fire. All damage done by the fire brigade in the execution of their duties is, by virtue of the Metropolitan Fire Brigade Act, 1865, to be deemed "damage by fire" within the meaning of any fire insurance policy; so that a policy holder could recover such damage from the insurance company.

SALVAGE CORPS. All insurance companies insuring property in the Metropolis against fire are bound by law to contribute towards the expenses of the London Fire Brigade. These insurance companies have power to establish a salvage corps, that is, a body of men charged with the duty of attending fires and saving insured property. It is the duty of the Fire Brigade, subject to its regulations, to afford the necessary assistance to the salvage corps, and upon the application of an officer of the corps to hand over the custody of any property that may be saved from the fire.

FIRE BRIGADES OUTSIDE THE METROPOLIS. Under the Public Health Act, 1875, in urban districts and in those rural districts where the council has acquired urban powers, the district council may provide such engines, horses, water-buckets, pipes and other implements for protection from fire as they may think fit. They may also employ fire-men, build fire-stations and generally make such rules and regulations as they may think necessary or proper.

In boroughs the council may by resolution delegate to the watch committee its powers for the establishment of a fire brigade.

In rural districts the parish councils and meetings have under different Acts similar powers of establishing and maintaining fire engines and fire-men.

LETTING OFF FIREWORKS. By the Explosives Act, 1875, if any person throws or lets off any fireworks in any highway, street, thoroughfare, or public place, he is liable to a penalty not exceeding £5. Moreover, if a person wilfully or negligently throws fireworks or other dangerous substances about, he is responsible for any damage that may ensue, and the burden of proof will be upon him to show that he took all proper precautions to avoid accidents.

CHIMNEYS ON FIRE. If a person wilfully sets a chimney on fire, or causes it to be set on fire, he is liable to a penalty not exceeding £5. It should be noted this provision will not prevent the offender being indicted for the felony of arson for which the maximum punishment is penal servitude for life (except in the case of His Majesty's arsenals, etc., where it is death).

If a chimney accidentally catches fire (except in London), the person occupying or using the premises is liable to a penalty not exceeding ten shillings, unless he can prove to the satisfaction of the court that the fire was in nowise due to the omission, neglect, or carelessness of himself or his servant.

The law relating to accidental chimney fires in London is somewhat different. By the Metropolitan Fire Brigade Act, 1865, if the chimney of any house or other building within the Metropolis gets on fire (whether any one has been guilty of negligence or not) the occupier is liable to a penalty not exceeding twenty shillings; but if the occupier can prove that he has incurred the penalty by reason of the neglect of any other person, he may recover summarily from such person the whole or any part of the penalty. It will thus be seen that though no one is bound by law to have his chimneys periodically swept, he is liable to a penalty if a fire results from his neglect.

3. LUNACY.

In this article the word lunatic will be used in its widest sense to include idiots and all persons who are *non compos mentis*, whether their infirmity takes the form of mere delusions or renders them dangerous or incapable of managing their affairs. *Prima facie* the law presumes everyone to be sane, so that it would be interfering with the liberty of the subject and opening the way for manifold abuses were people to have an unrestricted power of detaining those whom they regarded as lunatics.

DETENTION OF LUNATICS.

There are only five ways in which it is lawful to detain a lunatic against his will:—

1. **AFTER INQUISITION.** The inquisition is a legal inquiry as to whether a person is of unsound mind and incapable of controlling himself and his affairs. He can demand a trial by jury if he wishes it. If the result of the inquiry is that he is found incapable as above, he is called a lunatic, "so found by inquisition," and a person called a "committee" is usually appointed as a sort of guardian for him. By the Lunacy Act, 1890, a lunatic so found by inquisition may be received in an institution for lunatics, or as a single patient, upon an order signed by his "committee."

2. **AFTER PETITION.** Except in the case of pauper lunatics, and lunatics so found by inquisition, the ordinary way for a person to be detained is under a reception order made by a judicial authority under the Lunacy Acts, 1890 and 1891. The judicial authority is either a justice of the peace especially appointed for lunacy matters, or a county court judge or a magistrate. The course of procedure is for someone connected with the alleged lunatic, and preferably the husband or wife, to present a petition to the judicial authority, together with a statement of particulars, signed by the petitioner, and two medical certificates. The judicial authority hears the petition, and if satisfied makes the reception order.

3. **UNDER AN URGENCY ORDER.** In cases of urgency, where it is expedient either for the welfare of a person (not a pauper) alleged to be a lunatic, or for the public safety, to place such person under restraint, he may be detained upon an urgency order made (if possible) by the husband or wife, or by a relative, and accompanied by a medical certificate.

4. **UNDER A SUMMARY RECEPTION ORDER.** If any constable, relieving officer, or overseer has knowledge that *any person* (whether a pauper or not) is a lunatic wandering at large, the Lunacy Act, 1890, gives him power to immediately apprehend and take the alleged lunatic before a justice, who must call in a medical practitioner to make an examination, and who will, if satisfied, make a summary reception order.

5. **UNDER A COMMISSIONERS' ORDER.** Under the Act of 1890 any two or more of the Commissioners in Lunacy may visit a pauper lunatic or alleged lunatic not in an institution for lunatics or workhouse, and may, if they think fit, call in a medical practitioner. If finally they are satisfied that the pauper is a lunatic, they have power to make a reception order.

N.B.—All reception orders expire at the end of a year from their date of issue; but in the case of any institution for lunatics, the Commissioners may, by order, direct that it be continued.

An Act passed December, 1909, specially provided for the Superannuation allowances to officers and servants employed in Lunatic Asylums in Great Britain and Ireland.

ASYLUMS.

It is impossible in the space at our command to give more than a very brief outline of the law relating to the care and management of lunatics. Those who desire to have the care and control of persons thus unhappily afflicted, should provide themselves with copies of the Lunacy Acts, 1890 and 1891, and of the rules made under these Acts for their guidance.

1. **LUNATICS IN PRIVATE FAMILIES.** If it comes to the knowledge of the Commissioners that any person appears to be, without an order and certificates, detained or treated as a lunatic by any person receiving no payment for the charge, they may require such person to send them a report or periodical reports, by a medical practitioner, of the condition of the patient. The Commissioners may at any time visit the patient and report to the Lord Chancellor.

2. **LICENSED HOUSES.** In and around London the licensing of houses for the reception of lunatics is in the hands of the Commissioners in Lunacy; but elsewhere the county and borough justices hold sessions for the purpose of granting licences. Before the justices may grant a new licence the house must be inspected and reported on by one or more of the Commissioners. The licensee, or one of them, must in all cases undertake to reside in the house. No alterations may be made in a licensed house without the consent of the Commissioners. If the licensee dies or becomes incapable, the Commissioners or justices may transfer the licence to someone else for the unexpired term of the same.

3. **HOSPITALS.** Every hospital for the reception of lunatics must have a resident medical attendant, as must also those houses which are licensed for a hundred or more patients. Hospitals for the reception of lunatics require to be registered. If the superintendent of a registered hospital knowingly permits any lunatic to be detained or lodged in any building not shown on the plans of the hospital sent to the Commissioners, he is guilty of a misdemeanour.

4. **COUNTY AND BOROUGH ASYLUMS.** The Act of 1890 requires all local authorities to provide and maintain asylums for the accommodation of pauper lunatics. The local authorities may provide asylum accommodation for pauper and private patients, together or in separate asylums, and they may provide separate asylums for idiots or for persons suffering from any particular class of mental disorder.

Local authorities are given power to unite with each

other for the purpose of providing and maintaining district asylums.

OFFENCES AGAINST THE LUNACY ACTS. Every person who, except under the provisions of the Lunacy Acts, 1890 and 1891, (1) receives or detains a lunatic or alleged lunatic in an institution for lunatics, or who (2) *for payment* takes charge of, receives to board or lodge, or detains a lunatic or an alleged lunatic in an *unlicensed house*, is guilty of a misdemeanour, and in the latter case is also liable to a penalty not exceeding £50. It is also a misdemeanour (1) to neglect to send to the Commissioners the notices prescribed by the Act on the removal, discharge, or death of a patient; or (2) to make wilful misstatements of any material fact in any petition, reception order, certificate, or report; or (3) to omit to send to the coroner notice of the death of a lunatic; or (4) to obstruct any visitor or Commissioner exercising the powers conferred on him by the Lunacy Acts, or (5) to illtreat or wilfully neglect a patient.

The usual punishment for misdemeanours is fine or imprisonment, not exceeding two years, or both fine and imprisonment. The breach of other rules and regulations is punished by the infliction of heavy fines.

4. TREATMENT OF OFFENDERS.

Imprisonment of criminals is punitive, remedial and protective. It is the aim or our prison authorities to punish criminals for their wrong-doing, to reform them if possible, and to take care that they do not become a source of danger to the public at large.

PENAL SERVITUDE. This form of detention was first introduced by the Penal Servitude Act, 1853, in substitution for transportation, which was finally abolished in 1857. Wherever by an Act passed before 1853, a person might be sentenced to transportation, he may now be sent to penal servitude. Where under any Act of Parliament a court has power to award a sentence of penal servitude, the sentence may, at the discretion of the court, be for any period not less than three years. The greatest amount of penal servitude authorised by any Act is a life sentence; but where the Act authorising penal servitude does not state a maximum the courts have no power to order more than five years, under the Penal Servitude Act, 1891. Persons sentenced to penal servitude are detained in convict prisons, and are liable to be removed from one such prison to another. By the Prisons Act, 1898, the Prison Commissioners and other persons appointed by the Home Secretary, have many duties in respect of the inspection and regulation of convict prisons. The mode in which sentences of penal servitude are to be carried out is regulated by prison rules (made by the Home Secretary); in making such rules regard is paid to the sex, age, health, industry, and conduct of the prisoner. No prison rule may come into force until a draft thereof has lain before each House of Parliament for not less than thirty days. Corporal punishment may be inflicted on persons sentenced to penal servitude who break the prison rules. Various acts give the Secretary of State power to release on licence (ticket-of-leave) prisoners before the completion of their term of penal servitude. Conditions are appended to the licences whereby the prisoners are required to notify the police if they change their address. Where a prisoner on ticket-of-leave is convicted of an offence, he forfeits his licence, and must complete his original term besides being punished for the second offence.

HARD LABOUR. In every case where a court has power to award a sentence of penal servitude, and in the case of nearly every serious crime, a prisoner may be sentenced instead to imprisonment with hard labour. But in no case may a court now sentence a criminal to more than two years' hard labour. Hard labour generally consists in tread-mill, crank turning, shot-drill, oakum picking, and other forms of unproductive and useless labour authorised by the prison rules. The very fact that the labour is unproductive is a part of the punishment, and, as many think, makes two years of hard labour a severer punishment than penal servitude for seven years.

IMPRISONMENT WITHOUT HARD LABOUR. All but the least serious of crimes may be punished with ordinary imprisonment. Such imprisonment with very few exceptions may not be for a longer period than two years. By the Prisons Act, 1898, provision is made for persons sentenced to imprisonment without hard labour being divided into three divisions, according to the gravity of their offence, and the circumstances of the case. Moreover, the same Act provides that where a person is imprisoned in default for the payment of a debt, he is to be placed in a separate division and treated under special prison rules, and not placed in association with criminal prisoners nor compelled to wear prison dress, unless his own clothing is unfit for use. Provision is usually made in the prison rules for enabling a prisoner sentenced to imprisonment to earn by special industry and good conduct a remission of part of his sentence.

RELEASE ON PROBATION. By the Probation of Offenders Act, 1907, where the court by which a prisoner is tried is of opinion that, having regard to the character, antecedents, age, health, or mental condition of the person charged, or to the trivial nature of the offence, or to the extenuating circumstances under which it was committed, it is inexpedient to inflict any punishment or any other than a nominal punishment, it may in lieu of imposing a sentence of imprisonment, make an order discharging the offender conditionally on his entering into a recognizance to be of good behaviour, and to appear for sentence, if called on, for any period not exceeding three years. The Court may, if it think fit, add conditions to the recognizance providing for the supervision of the offender, or prohibiting him from associating with thieves or undesirables, or requiring him to abstain from intoxicating liquor, and, generally, for securing that he should lead an honest and industrious life.

HABITUAL CRIMINALS. By the Prevention of Crime Act, 1908, where a person is convicted on indictment of a crime committed after the 21st December, 1908, and subsequently pleads or is found guilty of being a habitual criminal, and the court passes a sentence of penal servitude, if the court is of opinion that by reason of his criminal habits and mode of life it is expedient for the protection of the public that he should be detained for a lengthened period of years, it may pass a further sentence ordering that, on the determination of the sentence of penal servitude, he be detained for such period not exceeding ten years or less than five as the Court may determine. Such detention will be called "preventive detention," and the discipline during the period of preventive detention will be less severe than that for ordinary prisoners. Before a man can be found guilty of being a habitual criminal he must, since the age of sixteen, have been at least three times convicted of crime, and be leading persistently a dishonest or criminal life.

BORSTAL SYSTEM. Where a person between the ages of sixteen and twenty-one is convicted on indictment, and it appears that, by reason of his habits or tendencies or association with persons of bad character, it is expedient to do so, the Court may, in lieu of ordinary sentence, order him to be detained in a "Borstal Institution" (i.e., a place where young offenders may be given such industrial training and be subject to such influences as will conduce to reformation). The term is from one to three years, but after six (or in the case of females three) months the offenders may be released on licence.

N.B.—A person, placed by a judge under police supervision, must keep the police informed of his whereabouts, and on failure to do so is liable to imprisonment for twelve months.

5. REGISTRATION OF BIRTHS AND DEATHS.

By the Births and Deaths Registration Acts, 1836 to 1901, provision is made for keeping a register of all births, deaths, and marriages of His Majesty's subjects in the

United Kingdom. Every Registrar must at all reasonable times allow searches to be made in his registers and grant certified copies of any entries on payment of a fixed fee. The fee for searching is 1s. for any year, and 6d. for each additional year. The fee for a certificate is 2s. 6d. and a penny for the stamp.

Severe penalties are attached to the giving of false information in respect of the registration of births and deaths.

BIRTHS. In the case of every child born alive, it is the duty of the father and mother of the child, and in default of them, of the occupier of the house where the child is born, and of each person present at the birth, and of the person having charge of the child, to give to the Registrar information of the birth within forty-two days thereof. In those cases where living new-born children are found exposed, it is the duty of the finder and of the persons into whose charge such children are placed to give information to the Registrar within seven days. In the case of an illegitimate child, the father is not required to give the information, and, indeed, he will only be registered as the father on the joint request of himself and of the mother. Illegitimate children are usually registered in the mother's name. If the Notification of Births Act, 1907, is adopted by a local authority, notice of a birth must be given in writing, by post or otherwise, within 36 hours after the birth, at the office or residence of the medical officer of health.

No charge is made for registering a child within three months of its birth, unless the Registrar goes to the informant at his request. For registering a birth between three and twelve months the fee is 2s. 6d.; after twelve months 5s.

When the birth of any child has been registered, and the name by which it was registered is altered, or if it is registered without a name, when a name is given to it the parent or guardian of such child may within twelve months after the registration deliver to the Registrar a certificate containing the new name, which the Registrar must add to the original entry without any erasure. If the name is changed in baptism, the certificate must be signed by the minister who performed the rite. Still-born children are not registered. If a child is born at sea in a British ship, or in any ship carrying passengers to or from a port in the United Kingdom, the master of the ship must record the particulars thereof in his log. On the arrival of the ship in the United Kingdom, the master must make a return of the facts to the Registrar General of Shipping and Seamen. If the child is born on one of His Majesty's ships, the captain makes the return to the Registrar General of England, Scotland, or Ireland, as the case may be.

DEATHS. The death of every person dying in the United Kingdom, and the cause of such death, must be registered. When a person dies in a house it is the duty of the nearest relatives of the deceased present at the death, or in attendance during the last illness, to give notice to the Registrar within five days after the death. In default of such relatives, the duty of informing the Registrar devolves upon the relatives who reside in the same district as the deceased, and in default of them, upon the occupier and inmates of the house where the death occurred, and upon the person causing the body to be buried.

Where a person dies in a place which is not a house, the duty of informing the Registrar falls primarily on the relatives of the deceased, and in default of them it falls on every person present at the death, and on every person finding or taking charge of the body or causing it to be buried.

The deaths of still-born children are not registered, but such a child may not be buried until the person having control of the burial ground has received a certificate that the child was still-born. The certificate in this case must be signed by a medical practitioner, or if such cannot be obtained, by one of the persons who would have to give notice of the death or by the coroner.

6. BURIAL OF THE DEAD.

PERSONS RESPONSIBLE FOR BURIAL. The persons whose primary duty it is to cause a dead body to be buried are his executors. It is the duty of the executors to give the deceased a decent burial, according to his wealth and station, and to pay for it out of his estate. But though the executors are primarily liable, it is also the duty imposed by law on the householder of any house where a death occurs to give the body a decent burial. If, however, the deceased was a pauper, the guardians or overseers have power to bury the body at the expense of the parish to which the pauper rightfully belonged. In the case of bodies cast up by the sea or found in rivers, they must be buried by the parish where they are found.

CREMATION. The Cremation Act, 1902, gives to burial boards and other burial authorities the power to provide and maintain crematoria for the purpose of burning human remains instead of burying them. But no crematorium may be constructed nearer than two hundred yards from any dwelling-house, without the written consent of the owner, lessee, and occupier, nor within fifty yards of a public highway, nor in the consecrated part of a burial ground.

The Secretary of State has power to make regulations prescribing in what cases and under what conditions the burning of any human remains may take place, and directing the disposition or interment of the ashes. The breach of these regulations involves the offender in heavy penalties, and in certain cases in imprisonment. The incumbent of any ecclesiastical parish is not under any obligation to perform a funeral service at a cremation, but with the permission of the bishop any clerk in Holy Orders may perform such service.

CHRISTIAN BURIAL. Every baptised Christian has the right of being buried in consecrated ground if he has not "laid violent hands upon himself." A verdict of suicide (*felo de se*) would formerly have disentitled him to the privilege, and that is why coroner's juries are so fond of adding to their verdicts a rider denoting that the act was committed during temporary insanity. The rider has lost some of its force, for a suicide may now, by virtue of the Interments (*Felo de se*) Act, 1882, be buried in consecrated ground, but no clergyman can be compelled to take the service. Moreover, interments may by virtue of the Burial Laws Amendment Act, 1880, take place in consecrated ground without any service or with a service other than that of the Church of England if forty-eight hours' notice in writing is given to the incumbent.

DISORDERLY CONDUCT AT FUNERALS. By the Burial Laws Amendment Act, 1880, all burials, whether with or without a religious service, must be conducted in a decent and orderly manner; and every person guilty of any riotous, violent, or indecent behaviour at a burial, or wilfully obstructing such burial or any such service, or delivering an address not being part of a religious service, or otherwise permitted by lawful authority, or wilfully endeavouring to bring into obloquy or contempt the Christian religion, is guilty of a misdemeanour.

THE BURIAL ACTS, 1852—1900. These Acts provide for the appointment of Burial Boards by parishes. In Urban Districts the functions of a Burial Board are usually performed by the District Council. In other cases the Burial Board is a body elected from and by the parochial ratepayers, and consists of from three to nine persons, of whom a third retire annually. The expenses of an ordinary parish Burial Board are defrayed out of the Poor Rate, but where the functions are exercised by an Urban District Council they are paid either out of the General District Rate or out of a separate Burial Rate. Burial Boards manage, subject to the control of the Local Government Board, the burial grounds under their care. The Local Government Board has power to make a compulsory order for District Councils to provide cemeteries where they are needed in the interests of public health.

BURIAL CERTIFICATES. By the Registration of Births and Deaths Act, 1874, the Registrar of Births and Deaths is required to give, without fee or reward, either to the person giving information of the death or to the undertaker, a certificate for burial. But a Coroner upon holding an Inquest may give the undertaker an order for burial before registration of the death. The person who buries or performs any funeral or religious service for the burial of a dead body without having such an order or certificate, must within seven days give notice of the fact in writing to the Registrar; if he fail to do so he is liable to a penalty not exceeding £10.

EDUCATION LAW.

THE CENTRAL AUTHORITIES. English Education Authorities may be placed in two groups, "central" and "local." The Board of Education, the Board of Agriculture, the Home Office, the War Office, the Admiralty, and the Local Government Board are the Central Authorities, all having jurisdiction in matters educational. Of the six authorities named, the Board of Education is by far the most important. The other five have a very limited jurisdiction, restricted to a few institutions maintained for special purposes. The Local Government Board deals with Poor Law Schools, the Home Office with Reformatory and Industrial Schools, the War Office with Army Schools, the Admiralty with Naval Schools, and the Board of Agriculture distributes certain grants made for the purpose of encouraging education in agriculture.

THE BOARD OF EDUCATION. The Board of Education was constituted by an Act passed in 1899. For more than half a century preceding that date there existed a body known as the Education Department. This Department dealt only with Elementary Education, but the Board of Education has cognizance of Elementary and Higher Education, and speaking generally, it may be said that it has to guide and control the local educational authorities, who are charged with the duty of providing and maintaining educational facilities.

The Board of Education consists of a President, the Lord President of the Privy Council, His Majesty's principal Secretaries of State, the First Commissioner of the Treasury, and the Chancellor of the Exchequer. The President is appointed by the Crown and may receive a salary of not more than £2,000 a year. The Board is assisted in its duties by a Consultative Committee consisting of 18 members.

LOCAL EDUCATION AUTHORITIES. The Education Act, 1902, created local education authorities as they now exist. There is no part of England which is not included in an area under the control of a local education authority, and some parts are, for certain purposes, within the area of two authorities. The counties may be taken as the principal areas, but out of these are carved portions which are either entirely or partly outside the control of the County Councils acting as local education authorities. All County Boroughs, certain non-County Boroughs, and Urban districts have their own local education authorities, but their powers differ in their respective areas.

On November 25th, 1909, an Act was passed in respect of the Local Education Authorities, containing provisions that receipts or payments to Managers for Education other than elementary, should be accounts of the local Council, under the Act of 1902, enabling a council to unite with other councils for establishing and maintaining schools and colleges; defining the validity of undertakings by students on entering training colleges.

POWERS AND DUTIES OF LOCAL EDUCATION AUTHORITIES:—

(1) **County Councils.** The powers and duties of these Councils include the provision of Higher and Elementary Education within their respective areas.

(2) **County Borough Councils.** Their powers and duties are exactly the same as those enjoyed by County Councils.

(3) **Councils of Non-County Boroughs with populations of over 10,000.** These are the Councils of the old boroughs, which existed long before County Councils came into being, many of these being of most ancient character. These Councils control Elementary Education, but in the matter of Higher Education, the County Councils have concurrent powers.

(4) **Councils of Urban Districts with a population over 20,000.** Their powers and duties are exactly the same as those of the Councils of Non-County boroughs with like populations.

(5) **Non-County Boroughs with a population of 10,000 and less, and Councils of Urban Districts with population of 20,000 and less.** These Councils have powers in Higher Education only. The provision of Elementary Education is a duty which falls upon the Council covering the area, and even in Higher Education the County Councils have powers concurrent with those of these Borough and Urban District Councils. The Councils of these "10,000 and under" districts are not local education authorities in the statutory meaning of the term, although they have powers in respect of Higher Education.

EDUCATION COMMITTEES. Local education authorities must establish education committees. The Education Act, 1902, clearly sets forth what functions *must* be performed by these committees, and also those which *may* be so performed. The Act says:—

> "All matters relating to the exercise by the Council of their powers under this Act, except the power of raising a rate or borrowing money, *shall* stand referred to the Education Committee, and the Council before exercising any such powers shall, unless in their opinion the matter is urgent, receive and consider the report of the Education Committee with respect to the matter in question. The Council *may* also delegate to the Education Committee, with or without any restrictions or conditions as they think fit, any of their powers under this Act, except the power of raising a rate or borrowing money."

It will thus be seen that a local education authority may divest itself during pleasure or for a fixed period of all its powers (except that of raising a rate or borrowing money), and confer them on an education committee. The members of this committee may include persons who are not members of the council, but more than half the members *must* be councillors, except in the case of the committee of a County Council. In that case a majority of councillors is not a statutory condition. The committees are constituted in accordance with schemes framed by the various councils and approved by the Board of Education.

WHAT ARE PUBLIC ELEMENTARY SCHOOLS? An Elementary School, as its name denotes, is one in which elementary education is the principal part of the education given, but with the prefix "public" a new factor is introduced. A *public* elementary school is one which receives grants from funds voted by Parliament for the purposes of education, and such grants cannot be made unless the following conditions are fulfilled:—

(1) No scholar must be compelled to attend or to abstain from attending any Sunday School or place of religious worship.

(2) Any scholar may be withdrawn by his parent from attendance at any religious observance or instruction in the school.

(3) Religious instruction, if given, must be given either at the beginning or end of the school meeting, and then only. The times of the giving of such instruction must be set forth in a Time Table, which Time Table must be approved by one of His Majesty's Inspectors.

(4) No scholar shall be examined by His Majesty's Inspector in religious knowledge, nor shall His Majesty's Inspector inquire into any instruction which may be given in religious subjects.

These conditions are contained in the famous "Conscience Clause," which was made law in 1870, and has remained so since that date without modification of any kind.

SCHOOLS FOR HIGHER EDUCATION. The statutory definition of higher education is exclusive rather than inclusive. "Education other than elementary" is the definition given in Section 2 of the Education Act, 1902. Elementary education is also statutorily defined as "instruction given in a public elementary day school under the regulations of the Board of Education to scholars,

who at the close of the school year will not be more than sixteen years of age" (Sec. 22 (1) v (2) Education Act, 1902). All local education authorities have cast upon them the duty of considering the educational needs of their respective areas and of taking such steps as seem to them desirable, after consultation with the Board of Education, to supply or aid the supply of Higher Education. There is a limit as to the annual expenditure which a Council may incur on this form of education. The education limit is the sum of the amount handed to the Council under the provisions of the Local Taxation (Customs and Excise) Act, 1890 (commonly called the "Whisky Money"), and of an amount equal to that produced by a twopenny rate. The smaller non-county borough Councils and the Councils of the smaller Urban districts, although not local education authorities, may spend annually in the promotion of Higher Education a sum not greater than that produced by a penny rate.

DEFAULTING LOCAL EDUCATION AUTHORITIES. It is the duty of the local education authority to maintain and keep efficient *all* public elementary schools within their area (Sec. 7 Education Act, 1902). If the local education authority fail to perform their duty, then the Board of Education may, after holding a public enquiry, make such order as they may think necessary, and any such order may be enforced by *mandamus*.

SOURCES OF INCOME. From whence does the money come for the purposes of education? In the case of Higher Education there are three sources of income: (1) The "Whisky Money" paid to the Local Authorities under the provisions of the Local Taxation Act, 1890. (2) Parliamentary grant for instruction in Science and Art, subject to conditions laid down by the Board of Education. (3) The County rate. This rate must not exceed twopence in the £ in the case of County Councils (unless with the consent of the Local Government Board), and must not exceed one penny in the £ in the case of Councils of Boroughs or Urban Districts. A Council of a County borough is not limited as to its expenditure from the rate fund.

To meet the expenditure on Elementary Education, sums are drawn from the following three sources: (1) Parliamentary Grants; (2) School Fees, where the local education authority allow them to be charged; (3) The local rate. As to the amount which may be drawn from the local rate, there is no restriction, as in the case of Higher Education.

APPOINTMENT OF TEACHERS—HIGHER EDUCATION. In institutions providing Higher Education, the appointment and dismissal of teachers is vested in the Council, if the institution is provided and maintained by the Council. By far the larger number, however, of places of Higher Education are of a private or semi-private nature. Many are governed by schemes formulated either by the Board of Education or the Charity Commissioners. These Schemes constitute bodies of governors, and prescribe the powers of these bodies, which include that of appointing the head teacher, and sometimes that of appointing the assistant teachers. In many cases, however, the power of appointing the assistant teacher, is vested in the head teacher. So far as the qualifications of the teachers in these schools are concerned, there is no binding rule. The bodies of governors and the councils usually have an unfettered discretion in making their choice.

APPOINTMENT OF TEACHERS—ELEMENTARY EDUCATION. Teachers in these schools cannot be recognised except under certain conditions and qualifications. These conditions and qualifications are prescribed by the Board of Education and embodied in a "Code of Regulations for Public Elementary Schools," a public document which is published annually by the king's printers. The power of appointment of teachers for Council schools is in the Council, as is also the power of dismissal. The teachers hold office "during the pleasure" of the Council, and have no vested interest in the office beyond that which accrues as a result of the contract of hiring and service made between the Council and the teachers.

RELIGIOUS INSTRUCTION—HIGHER EDUCATION. We have stated that a council may either aid or provide a place of Higher Education. In the case of an institution which is "aided" only, the Council cannot intervene in any way in the matter of religious worship or instruction. With regard to an institution provided and maintained by the Council it is imperative that "no pupil shall, on the ground of religious belief, be excluded from or placed in an inferior position in any school, college, or hostel provided by the Council, and no catechism or formulary distinctive of any particular religious denomination shall be taught in any school, college, or hostel so provided" (Sec. 4 Education Act, 1902). But at the request of parents the buildings may be used for the purpose of giving *any* religious instruction, provided no cost is defrayed by the Council.

RELIGIOUS INSTRUCTION—ELEMENTARY EDUCATION. The State entirely dissociated itself from religious instruction in 1870. Before that date the State Inspector examined in religious subjects, and no school could receive a Parliamentary Grant unless the Inspector reported on the religious instruction. But the Education Act, 1870, provided that no grant should be given for religious instruction, and further, that a school might receive parliamentary aid, even although no religious instruction was given in that school. But this same Act went much further, for it brought into being the famous "Conscience Clause," the purport of which we have given under the heading, "What are Public Elementary Schools?" Accordingly, any scholar may be withdrawn by his parents from religious instruction without forfeiting any of the other benefits of the school.

THE "COWPER-TEMPLE" CLAUSE. "No religious Catechism or religious formulary which is distinctive of any particular denomination shall be taught in the school" (Education Act, 1870, Sec. 14 (2). This is the famous Cowper-Temple Clause, which now applies to all Council Schools, as it formerly did to all Board Schools. A local education authority may determine that there shall not be given any religious instruction in its schools, but if religious instruction is given the character must be such as not to infringe the clause quoted above. Of course, Biblical instruction may be given, but no part of the Church Catechism other than the Lord's Prayer and the Decalogue can be taught in a Council School.

COMPULSORY ATTENDANCE AT SCHOOL. One of the duties of local education authorities is that of enforcing the law as to the attendance of children at school. If a child of school age is not attending school or is attending irregularly, then it becomes the duty of the local education authority (after having made investigation) to summon the parent of the child before a court of summary jurisdiction. If the Court is satisfied that the child ought to attend and does not do so, then a penalty not exceeding 20s. with the costs may be inflicted for each offence. If the child is employed by any person, that person also is liable to a penalty of an amount not exceeding 40s. for each offence.

NO PENALTY IN CERTAIN CASES. If on being summoned the parent can bring himself within any one of the following exceptions, then no penalty can be inflicted:

EXCEPTION 1. That there is no Public Elementary School open which the child can attend within three miles of the child's residence. EXCEPTION 2. That the child is prevented from attending school by sickness or other unavoidable cause. As to what is an "unavoidable cause" much discussion has arisen, and no general rule can be stated, but one or two decided cases will serve to indicate the view of the Court.

(1) The parents of a child were in poverty, but in no degree as a result of their own idleness or misconduct. Their child had received an elementary education and was twelve years old. Without the child's earnings the parents could not provide food for the rest of the family. The Magistrates held (and on appeal, the High Court upheld them) that the circumstances constituted good "cause" for non-attendance (London School Board *v.* Duggan).

(2) A child of ten years presented himself at a voluntary

school for admission, which was refused by the Managers. The local education authority informed the parent that the child must attend another school. There were other schools in the neighbourhood with vacant places, but the parent would not send the child to one of them. The Board of Education held that the Managers of the first School were justified in refusing to admit the child. On being summoned, the parent pleaded the above circumstances as a reasonable "cause" for the non-attendance, but the magistrates did not allow the plea, and a penalty was inflicted. On appeal, the decision of the justices was upheld (Jones *v.* Rowland).

EXCEPTION 3. That the child is under efficient instruction in some other manner. The parent may be instructing the child at home, and if the local education authority are satisfied that such instruction is efficient, then no proceedings should be commenced. If the parent will not allow the local education authority to satisfy themselves by examining the child or some other means as to the efficiency of the education being given, then the issue of a summons is justifiable, and it will be for the magistrates to decide as to the question of the "efficiency" of the instruction being given.

WHEN A CHILD MUST ATTEND SCHOOL. The provisions respecting this are contained in several Acts of Parliament. They are summarized in the following paragraphs.

(1) **A child between the ages of five and twelve.** Such a child must attend school full time. The only exception to this rule relates to a child employed in agriculture, and then only if the local education authority have made special provisions in their bye-laws. If the bye-laws contain no special provision, the general rule applies. The local bye-laws may provide for the partial exemption from school attendance of a child who has reached the age of eleven years, and who fulfils the following conditions (*a*) The parent must give notice to the local education authority that the child is to be employed in agriculture. (*b*) The child must have reached the Standard named in the bye-laws as qualifying for partial exemption. (*c*) The child cannot claim total exemption until the age of thirteen is reached; and (*d*) The child must attend school 250 times in each year, between the ages of eleven and thirteen.

(2) **A child between the ages of twelve and thirteen.** Such a child must attend school full time, unless he has reached the Standard fixed by the local bye-laws for either partial or total exemption. If the bye-laws do not provide for partial exemption, then full time attendance is compulsory until the total exemption Standard has been reached. No child under the age of thirteen can be employed full time in a Factory, Workshop, or Laundry. If so employed, the child must attend school half-time, although that child may have reached the total exemption Standard. No child under the age of thirteen can be employed below ground in a mine, nor must employment above ground exceed half-time.

(3) **A child between the ages of thirteen and fourteen.** In localities where bye-laws extend to a child of the age of fourteen years, then a child between these ages must attend school until either partially or totally exempted by the bye-laws. If the bye-laws do not so extend, then the child must attend school until he has either passed Standard IV. *or* has obtained a certificate of having made 350 attendances after five years of age, in not more than two schools during each year for five years. These years need not be consecutive. If the bye-laws do not extend beyond the age of thirteen, then such a child may be employed half-time in a Factory, Workshop, or Laundry without educational test, provided it attend school half-time; but full time employment is illegal unless the child has either passed Standard V. *or* has obtained an attendance certificate as set forth in the former part of this paragraph. A girl between these ages cannot be employed below ground, but a boy may be so employed provided he is either partially or totally exempted from school attendance.

PART III.

GENERAL PRINCIPLES & PRACTICE OF ENGLISH LAW.

SOURCES OF THE LAW.

There is no one book, or series of books, in which the Law of England is authoritatively given. We have no complete code of law such as Napoleon gave to France, or such as exists in some of our dependencies. The law as we have it to-day has come to us from the customary law of our remote forefathers, from Statute Law and from the Canon Law. Jurists have sometimes divided our laws into the two divisions: (1) the written law; (2) the unwritten law. Sir Matthew Hale spoke of these divisions as the *lex scripta* and the *lex non scripta*. The former consists of Acts of Parliament, which were, of course, reduced to writing when drafted and passed, and are still to be found in their original form. The unwritten law, or *lex non scripta*, includes all the general customs relating to law known as the Common Law, and also some particular laws relating to certain places and classes of persons. "And," Sir Matthew Hale says, "when I call those parts of our laws *leges non scriptæ*, I do not mean as if those laws were only oral, or communicated from the former ages to the later merely by word; for all those laws have their several monuments in writing, whereby they are transferred from one age to another, and without which they would soon lose all kinds of certainty; the laws of England which are not comprised under the title Acts of Parliament are for the most part extant in records of pleas, proceedings, and judgments; in books of reports and judicial decisions. But I style those parts of the laws *leges non scriptæ* because their authoritative and original institutions are not set down in writing in that manner, or with that authority that Acts of Parliament are; but they are grown into use and have acquired their binding power and the force of laws by a long and immemorial usage, and by the strength of custom and reception in this kingdom.

1. **THE COMMON LAW** may be defined then as the body of English customary law as distinct from that embodied in Acts of Parliament. It was derived from the three great bodies of Customary Law which prevailed in various parts of England during the Saxon times, viz., the Dane Law, the Mercian Law, and the Wessex Law. During the Norman period, the King's Court selected such of these customs as were generally applicable to the whole country, and rejected the rest. The customs which were retained may be described as the custom of the King's Court, and formed what we now know as the Common Law.

Few Englishmen realise how many rights, privileges, and liabilities they have which have never been the subject of an Act of Parliament. Some of this common law is as ancient as the Early Britons, and Blackstone has pointed out that "however compounded, and from whatever fountains derived, it has subsisted immemorially in this kingdom; and, though somewhat altered and impaired by the violence of the times, in great measure it weathered the rude shock of the Norman conquest. This endeared it to the people in general, as well because its decisions were universally known, as because it was found to be excellently adapted to the genius of the English nation. In the knowledge of this law consisted great part of the learning of the dark ages." Our judges have always sought to apply to new combina-

tions of circumstances, as they arose, the rules of law which were found in these ancient legal principles and judicial precedents.

2. **THE STATUTE LAW** is, of course, to be found in the Acts of Parliament. It is to be noted that Parliament (King, Lords and Commons) has power to alter any law or to make any new one. The dream of the reformer is to see our multitudinous statutes consolidated, but in the meantime a great reform has been carried out by the Statute Law Revision Acts, which have removed from the Statute book a host of provisions which had become obsolete, and is still pursuing its useful work.

3. **THE OLD CANON LAW** is of no force in England, though our modern law in some particulars has doubtless been influenced by it. The term is now often applied to the Canons of the Church, which are Ecclesiastical laws ratified after the Reformation by 25 Henry VIII., c. 19, so far as they were not repugnant to English law. They were revised in 1603, and are still binding on the clergy.

THE LAW COURTS.

THE CROWN. All judges and other executive officers of the law derive their power from the Crown; in other and familiar words, the King is the fountain of justice. "All jurisdiction exercised in these kingdoms that are in obedience to our King," wrote Matthew Bacon, whose Abridgment of the Law has been a standard work for nearly two centuries, "is derived from the Crown; and the laws, whether of a temporal, ecclesiastical, or military nature are called his laws; and it is his prerogative to take care of the due execution of them. Hence, all judges must derive their authority from the Crown, by some commission warranted by law; and must exercise it in a lawful manner, and without any the least deviation from the known and stated forms."

One of the PREROGATIVES OF THE CROWN is the *power of pardoning offenders*, and it is a power which cannot be delegated in this country to a subject. In practice, the power is always exercised on the advice of the Home Secretary. But colonial governors are often empowered by their commissions to grant pardons, as the Act of Parliament (27 Henry VIII, c. 24, s. 1), limiting the exercise of the power to the King personally does not apply to the colonies. There are certain technical limitations to the exercise of the royal pardon which will be found explained at length in works like Hawkins' Pleas of the Crown.

THE HOUSE OF LORDS:—The highest court of appeal in England is the House of Lords, to which an appeal lies from any order or judgment of the Court of Appeal. Appeals from Scotland and Ireland also go to the House of Lords, while those from India or the Colonies go to the Judicial Committee of the Privy Council. The history of the judicial functions of parliament is one of great interest, but cannot be detailed here (consult Hallam's Constitutional History and Taswell Langmead's Constitutional History). The Appellate Jurisdiction Act, 1876, sec. 5, provides that an appeal shall not be heard and determined unless there are present not less than three of the following persons: (1) the Lord Chancellor, (2) the ordinary Lords of Appeal as appointed by the Act, and (3) such Peers of Parliament as are, for the time being, holding or have held any high judicial office. It is thus ensured by Statute, as was already a rule regularly followed, that some members of the Court shall be trained and experienced lawyers. It is very seldom that any peers, not lawyers by training, take any part in appeals, but they are not disqualified from attending, and the late Lord Denman sat and voted in the appeal of *Bradlaugh v. Clarke*. All appeals to the House of Lords must begin by petition, which prays "that the order or judgment appealed against may be reviewed before His Majesty the King in his Court of Parliament, in order that the said Court may determine what of right according to the law and custom of this realm ought to be done in the subject matter of such appeal." The House of Lords has power to sit and hear appeals during the prorogation of Parliament, and also during dissolution, if authorised to do so by the King under his sign manual.

JUDICIAL COMMITTEE OF THE PRIVY COUNCIL. This judicial body was created by 3 & 4 William IV., mainly to hear appeals from India and the Colonies, though it has other functions, especially the hearing of ecclesiastical appeals under the Clergy Discipline Acts, and with regard to "Patents." The Court is constituted of the Lord President of the Council, the Lord Chancellor, the Lords Justices, members of the Privy Council who have held high judicial office, and others whose qualification is given by various Acts of Parliament. The chief of these are lords ordinary of appeal, appointed by virtue of the Appellate Jurisdiction Act, 1876.

THE SUPREME COURT OF JUDICATURE.

At a time well within the memory of most adults, the Court of Chancery and various kinds of Common Law Courts were existing side by side, each having its own separate jurisdiction, to the annoyance and bewilderment of litigants. It was no uncommon thing for a common law court to order a litigant to do some special act which the Court of Chancery at once forbade him to do. The more reasonable system which now prevails was introduced by the Judicature Acts, 1873 and 1875. Under these acts all the Courts which now sit at the Royal Courts of Justice in the Strand were united and consolidated into one Supreme Court of Judicature, consisting of two permanent Divisions, the Court of Appeal and the High Court of Justice.

1. **THE COURT OF APPEAL** consists of the Lord Chancellor, the Lord Chief Justice of England, and the Master of the Rolls as ex-officio judges, and of five ordinary judges whose title is that of Lord Justice of Appeal. Each judge must be a barrister of at least fifteen years' standing, or have had at least one year's experience as a judge of the High Court. It hears and determines appeals from the High Court of Justice or from any of its judges.

2. **THE HIGH COURT OF JUSTICE** is subdivided into the following three divisions—(1) the Chancery Division, (2) the King's Bench Division, in which the jurisdiction formerly exercised by the Court of King's Bench, the Court of Exchequer, the Court of Common Pleas, and the London Court of Bankruptcy is now vested, and (3) the Probate, Divorce, and Admiralty Division.

THE HIGH COURT OF JUSTICE.

1. **CHANCERY DIVISION.** The history of the development of the Chancery Court, of which the present Chancery Division is the successor, is one of great interest. It arose out of the jurisdiction of the Chancellor as a member of the King's Council. But his Court, known as the Court of Chancery, competent to give relief to suitors, and to override the common law where it was thought equitable (hence the name Court of Equity) to do so, had an independent existence from the reign of Edward III. up to 1875. The Chancery Division has the Lord Chancellor as its President, and its active judicial staff consists of six judges, the number having been increased by one a few years ago. One result has been to do away with the old and often well-founded complaint of delays in chancery. There is now no division of the High Court where cases are so promptly heard, and the only one where there are practically no arrears. The business with which the Chancery Division deals is regulated by section 34 of the Judicature Act, 1873, and is mainly as follows:—(1) the administration of the estates of dead persons; (2) the dissolution of partnerships and the taking of partnership and other accounts; (3) mortgages, with their redemption and preclosure; (4) the raising of portions or other charges on land; (5) the sale and distribution of the proceeds of property, subject to any lien or charge; (6) trusts, both charitable and private, and their execution; (7) the rectification or setting aside or cancellation of deeds or other written instruments;

(8) the specific performance of contracts between vendors and purchasers of real estate, including contracts for leases; (9) the partition or sale of real estates; (10) the wardship of infants and the care of infants' estates. Differing from the practice in the King's Bench Division, every case commenced in the Chancery Division must be marked with the name of one of the judges. The name of the judge is ascertained by a system of rotation, and the litigant is not at liberty to select the judge before whom the cause shall be tried.

2. **KING'S BENCH DIVISION.** It is so called because, in former times, the King frequently sat there in person. Its judicial staff consists of the Lord Chief Justice and fourteen puisne judges. Its powers are very great. They include the hearing of almost all kinds of actions, and the restraining of inferior courts by means of writs of certiorari, prohibition, and mandamus. It orders by a writ of Habeas Corpus the immediate bringing up to the Court of any persons wrongly deprived of their liberty. Most of its sittings for the trial of actions are known as sittings in *nisi prius*. The origin of the name is due to the fact that formerly all questions in dispute were ordered to be tried at Westminster (where the Courts were then situated), in some Easter or Michaelmas term, before a jury, *nisi prius* (unless before) the day fixed judges of assize should come into the county where the action arose. A good deal of the work of the judges in this Division consists in going on circuit through the county towns of England and Wales, and holding assizes for the trial of civil and criminal cases. The judges of the Division also sit in rotation at the Central Criminal Court, formerly known as the *Old Bailey*.

3. **COURT FOR CROWN CASES RESERVED.** The judges of the King's Bench Division may sit together (five forming a quorum, of whom the Lord Chief Justice must be one) as a Court of Criminal Appeal, known as the Court for Crown Cases Reserved. Here they can deal only with questions of law, for we have no Court of Criminal Appeal for re-hearing questions of fact. The questions of law are usually reserved for their consideration by Assizes or Quarter Sessions.

4. **PROBATE, DIVORCE, AND ADMIRALTY DIVISION.** The third division of the High Court is the Probate, Divorce, and Admiralty Division. It has two judges, the first of whom is known as the President of the Division. The matters with which the division deals is indicated in the title. In the Admiralty Division the judge is often assisted by two assessors, who are usually officers or past officers in the mercantile marine.

5. **DIVISIONAL COURTS.** Each Division of the High Court may sit in what are known as Divisional Courts. In the Chancery Division this power is very seldom exercised. In the Probate, Divorce, and Admiralty Division the two judges occasionally sit together to hear cases in which some abstruse point of law arises. It is, however, in the King's Bench Division that Divisional Courts are brought most into use. There they hear appeals from County Courts and inferior courts of record, decide cases stated by Courts of Summary Jurisdiction, Recorders and Stipendiary Magistrates, hear applications for mandamus and certiorari against judges of inferior courts, magistrates and others, and transact much important business affecting local government.

VARIOUS OTHER COURTS.

1. **THE ECCLESIASTICAL COURTS,** which formerly had extensive jurisdiction concerning wills relating to personal property, divorces and other matters, are still of importance with regard to church matters. The *Archdeacon's Court* has existed certainly from before the time of the Norman Conquest. When the archdeacon does not himself sit as judge, his place is taken by a person known as the Official. Since the Church Discipline Act of 1840, no criminal suit in regard to ecclesiastical offences or offences against good morals can be begun against a clergyman in this Court. The *Court of Arches* is a Court of which the judge is the Archbishop of Canterbury, whose place is usually taken by the Dean of Arches. The Court takes its title from the Church of St. Mary-le-Bow, the steeple of which is on pillars arranged like arches (*Sancta Maria de arcubus*), where the sittings formerly took place. This Court has important, though seldom utilised, powers under the Public Worship Regulation Act. The *Consistory Court* is the Court of each bishop for the trial of Ecclesiastical causes in his diocese. The Chancellor of the Diocese usually presides, and there is an appeal to the Archbishop. The *Provincial Courts* are the Courts of either of the archbishops. They are generally presided over by a judge, who is appointed jointly by the archbishops, and who is usually the same person as the Dean of Arches, and he has extensive powers. For a full statement concerning the whole of the Ecclesiastical Courts, reference should be made to Phillimore's Ecclesiastical Law.

2. **THE COUNTY COURT** is one of great and growing popularity. Its jurisdiction has been much extended by the County Courts Act, 1903, which came into operation on 1st January, 1905. Hitherto, in most cases, its jurisdiction had been limited to cases in which the amount claimed did not exceed £50. But now the County Court may deal with all personal actions where the debt, demand, or damage claimed is not more than £100, or where the debt or demand claimed is reduced by an admitted set-off to £100. Further information as to the actions which may be brought in the County Court will be found in the section relating to Procedure. There are fifty-four County Court Circuits in England and Wales, each having its judge, who must be a barrister of at least seven years' standing.

3. **OTHER CIVIL COURTS.** There are numerous other Courts in England, the majority of which are now of slight importance. Prominent among the exceptions is the MAYOR'S COURT OF LONDON, an ancient court of record, that is a court "the records of which are absolutely authoritative, as distinguished from courts not of record, the acts of which may be evidenced by rolls and records, but are not absolutely established thereby." It has unlimited jurisdiction in personal actions, if the cause of action arises wholly or in part within the city. Another important court is the PASSAGE COURT OF LIVERPOOL, which has its special judges, and extensive jurisdiction in cases where the defendant resides within the borough, or the cause of action arose there. The Court has important Admiralty jurisdiction. Among the LOCAL COURTS OF RECORD, about forty in number, there are many which have had no sittings for many years. The two Universities of Oxford and Cambridge have each a UNIVERSITY COURT, in which the Chancellor may exercise considerable authority in ecclesiastical, criminal and civil matters affecting its members, and especially as regards its undergraduates. There are also throughout the country various MANORIAL COURTS, whose powers are now of little more than academic interest.

4. **ASSIZE COURTS.** Coming now to courts exercising *Criminal Jurisdiction*, we must mention first the Assize Courts held several times each year in every county. The King's Commission to hold the assize is issued to His Majesty's judges, one of whom usually presides, but it may be directed also to some King's Counsel or other barrister, who then, if need be, takes the place of the judge. The commission is in several parts, the united effect of which is to empower the judge to try treasons and felonies, to clear the gaols of all prisoners, and to try all civil causes.

For the purpose of holding the Assizes the country is divided into eight circuits:

(1) **The Western:** Cornwall, Devon, Dorset, Hants, Somerset, and Wilts.
(2) **The Northern:** Cumberland, Lancashire, and Westmoreland.
(3) **The Midland:** Bedford, Buckingham, Derby, Leicester, Lincoln, Northants, Notts, Rutland, and Warwick.
(4) **The Oxford:** Berks, Gloucester, Hereford, Monmouth, Oxford, Stafford, Salop, and Worcester.
(5) **North Eastern:** Durham, Yorkshire, and Northumberland.

(6) **South Eastern:** Cambridge, Essex, Herts, Huntingdon, Kent, Norfolk, Suffolk, Surrey, and Sussex.
(7) **North Wales.** Anglesey, Carnarvon, Chester, Denbigh, Flint, Merioneth, and Montgomery.
(8) **South Wales:** Brecknock, Cardigan, Carmarthen, Glamorgan, Pembroke, and Radnor.

London and Middlesex are not included in the Circuit System. Civil cases are tried in the High Court of Justice in the Strand, and criminal cases, which in the country would be sent to the Assizes, are tried at the Central Criminal Court formerly known as the "Old Bailey."

5. QUARTER SESSIONS. By far the larger amount of the work in connection with charges of crime is done by Justices of the Peace, familiarly known as magistrates, some of whom are *Stipendiary* Magistrates. (Their appointment and duties have been already described. Refer to "Magistrates" in *Index*.) The assemblies in which justices of the peace have their highest criminal jurisdiction are known as Quarter Sessions. In counties, these sessions are held quarterly, and, excepting treasons, murders, capital felonies, and some other serious crimes (such as those punishable by penal servitude for life), all manner of offences may be tried there. Quarter Sessions may, however, try burglary, but the maximum punishment which they can inflict is penal servitude for fourteen years. The chairman is elected by the magistrates themselves. The Court has also wide jurisdiction with regard to vagrancy, the administration of the poor laws and highways. In boroughs having a separate court of quarter sessions, the Recorder presides.

6. PETTY SESSIONS. The ordinary sittings of justices of the peace are known as Petty Sessions. A petty sessional court is defined by the Interpretation Act, 1889, as a court of summary jurisdiction, that is, one empowered to deal with various offences and complaints without the intervention of a jury. It consists of two or more justices, or of a borough police magistrate sitting in a court house or place at which they or he are accustomed to sit for holding special or petty sessions. The justices have the assistance of a clerk, who is always a man with some legal training and frequently a solicitor. They can hear and deal with a very large number of offences.

PROCEDURE IN THE COURTS.

We do not propose to give an account of the procedure in *all* the Courts—a course that would be tedious and profitless to the general reader—but only in the Courts where cases are tried of most concern to the general public.

1. THE HIGH COURT—KING'S BENCH DIVISION.

WRIT OF SUMMONS (Issue of). The commencement of every action in the High Court is by the issue of a writ of summons. It may be issued in London or (except in Probate cases) in a District Registry. District Registries are established in provincial towns in order to facilitate proceedings in cases which arise outside the Metropolitan area. These Registries are under the direction and charge of an official known as the District Registrar. Writs are issued on the application of the plaintiff himself, or on that of a solicitor acting for the plaintiff. In London, the place of issue is the Writ Department, at the Central Office of the High Court of Justice. The fee is ten shillings. It is issued in duplicate, the duplicate being filed by the Court officials, while the original is handed to the person issuing.

FORM OF THE WRIT. The form of the Writ is prescribed, and after stating the name of the plaintiff (or plaintiffs), and the defendant (or defendants), and the Division of the High Court to which the action is assigned, it runs as follows:—

"Edward, by the grace of God, etc., to A. B. (the name of the defendant). We command you that within eight days after the service of this Writ on you, inclusive of the day of such service, you do cause an appearance to be entered for you in an action at the suit of C. D. (the name of the plaintiff). And take notice, that in default of your doing so, the plaintiff may proceed therein, and judgment may be given in your absence.

Witness, etc.————"

In certain rare cases, such as actions against justices, officers of the army, navy, customs, and excise in their official capacity, it is necessary to give a month's notice before issuing a writ; but in all other cases it is not incumbent on the plaintiff to give any notice to the defendant before doing so.

ENDORSEMENT OF WRIT. On the back of the Writ there must be an endorsement setting forth the ground of complaint or the nature of the relief which the plaintiff seeks, also the name and address of the plaintiff and his solicitor (if he brings his action by a solicitor), and an address for service within three miles of the Royal Courts of Justice, Strand. The endorsement is usually very succinct and gives no particulars. "The plaintiff claims damages for slander"; "The plaintiff claims £120, arrears of salary"; "The plaintiff's claim is for the price of goods sold and delivered," are common forms. In the case of an action to recover damages for libel, the endorsement must indicate the book, newspaper, or document in which the libel was published. In actions for a debt or a liquidated demand (i.e. for a sum certain or capable of being made certain) arising out of a simple contract or on a statutory debt, or for the recovery of land, there may be an endorsement giving fuller particulars. The writ is then said to be *specially endorsed*. If a writ has been so endorsed and the defendant does not appear within the eight specified days, final judgment may be signed and execution issued, three days after the close of the period for appearance.

SERVICE OF WRIT. A true copy of the writ of summons must be served personally on each defendant, and may be served at any hour of the day or night, except on Sundays. Within three days of service, the person serving must endorse on the original writ the date of service. If the action is against a firm, then service on a partner, or on a person in control of the business is valid. If a Limited Company are the defendants, then service may be performed by sending a copy of the writ through the post to the Registered Office of the Company. If husband and wife are sued (as is frequently the case in action for defamation when the wife is the actual defamer), then both must be served. An infant (a person under twenty-one years of age) is effectively served by the delivery of a copy to his father or other legal guardian. In many cases the defendant's solicitor will accept service and undertake to appear.

When the defendant has not named any solicitor, and personal service cannot be effected, an order for substituted service will be made. Such substituted service may be made on some person connected with the defendant, or by sending a copy through the post to the defendant or by advertisement. An order for substituted service is only made after a Judge (Chancery Division) or a "Master" (King's Bench Division) has been satisfied by means of an affidavit that personal service cannot be promptly effected.

ENTERING APPEARANCE. The Writ commands the defendant to "cause an appearance to be entered" within eight days. Appearance must be entered either at the Central Office or the District Registry. The command may be obeyed either by the defendant himself or his solicitor, and it is done by handing in to the proper officer two copies of a memorandum containing an address for service and the name and address of the defendant's solicitor, or stating that the defendant appears in person. Two shillings must be paid for each defendant appearing. One copy is returned to the defendant "sealed" with the official stamp, and he thus has evidence that he has appeared, and the other copy is filed by the official. Notice of appearance should be given by the defendant to the plaintiff or to the plaintiff's solicitor. In the case of either party to the action (plaintiff or defendant) having given

the name of a solicitor at the beginning or at any subsequent stage of the proceedings, all further notices and documents are thereafter delivered to the solicitor.

DEFAULT OF APPEARANCE. As stated in a previous paragraph, judgment may be very promptly obtained by the plaintiff if a writ is specially endorsed and if no appearance is entered within eight days. If the claim is for a liquidated demand, for liquidated damages, or for recovery of land, judgment for the amount claimed, or relief sought, may be at once entered, whether the writ be specially endorsed or not. But in some cases, e.g. where the claim is for an injunction, judgment cannot immediately be entered on default of appearance by the defendants. In these cases, the plaintiff must file at the Writ Department, Central Office, an affidavit of service of the writ, and also at the Filing Department a statement of claim. The action will then proceed as though the defendant had appeared. The plaintiff need not endeavour to actually serve the Statement of Claim, for technical service is effected by filing a copy of the Statement of Claim at the Filing Department. After the lapse of ten days, if no defence has been entered, the plaintiff may serve notice of motion for judgment. In due course the motion is set down for hearing, and judgment for the plaintiff entered, unless the defendant puts in an appearance, and shows good cause why the final step should not be taken.

Again, where the claim is for unliquidated damages (e.g. damages for personal injuries) or for the detention of chattels, the plaintiff is not entitled to sign final judgment, should the defendant fail to enter an appearance. The plaintiff can only obtain an *interlocutory* judgment, that is, a judgment in his favour but not stating the amount of damages to which he is entitled. The damages or the value of the chattels are subsequently assessed by a jury or by an Official Referee. When the damages are assessed, the plaintiff may sign final judgment for the amount so assessed.

SUMMONS FOR DIRECTIONS. If within the "eight days" named in the Writ the defendant enters an appearance, the plaintiff has to take the next step, by making application for a *Summons for Directions*. In Admiralty Actions, in Trials without Pleadings, and in proceedings under what is known as "Order 14," (which deals with cases where the writ has been specially endorsed,) this summons is not necessary. As its name implies, the object of this step in an action is to obtain from the Court directions as to the future course of the action. The plaintiff must issue the summons within fourteen days of the date upon which the defendant enters an appearance. In default of this being done, the defendant may apply for the dismissal of the action. Four days before the summons is to be heard, the defendant must be served with it. At the hearing of the summons, the officer of the Court decides, after having heard the parties or their solicitors upon such details as pleadings, the place of trial, whether the action shall be tried by special or common jury, the discovery (i.e. production) of documents, etc. Formerly these details were decided by a number of summonses, and this *general* summons was introduced with the view to saving expense to the parties.

PLEADINGS.

This is the name given to certain documents which have to be prepared by the parties to an action before the trial. Usually they are two in number: (1) Statement of Claim; (2) Defence. These are the only pleadings which can be delivered without special leave.

1. OBJECT OF PLEADINGS. The following are the purposes which pleadings serve:—

(1) They enable the parties to know exactly what are the matters in dispute, and to know what facts they must prove at the trial. Neither party can, at the trial, give evidence of matter not contained in the pleadings except by leave of the Court. This prevents either side from being taken by surprise.

(2) Further, pleadings are useful in determining the proper mode of trial. If the matter in issue is a pure point of law, it should be decided by the judge without the aid of a jury. On the other hand, the matter may be a series of involved accounts, which should be dealt with by an official referee, or it may be question of fact to be decided by a jury.

(3) Lastly, pleadings serve as a record of the matters in dispute between the parties. It is most important that there should be certainty as to these matters, for decisions on them made by a final Court cannot be upset or even re-opened by any subsequent proceedings.

2. STATEMENT OF CLAIM. The first step in the pleading is the Statement of Claim. As we have already said, there must be endorsed on the Writ of Summons a short statement indicating the nature of the plaintiff's claim, but except when the Writ is specially endorsed with precise particulars, this "short statement" must be elaborated, and in his Statement of Claim the plaintiff must give the material facts upon which he relies and the specific relief which he claims. But the evidence by which the plaintiff propose to prove his case must not be stated. Usually the time within which the Statement of Claim must be delivered to the defendant or his solicitor is fixed by an order made when the Summons for Directions (see above) is heard; but if no time is fixed, then the delivery must take place within twenty-one days from the date of the order for directions. If the Statement of Claim is not delivered within the time specified, then the defendant may apply to have the action dismissed. Frequently, however, the time for delivery is extended on the application of one of the parties to the Court.

3. THE DEFENCE. The Writ, Summons for Directions and Statement of Claim are documents which must be served or delivered by the plaintiff. The Defence is the first document (in the ordinary course) which is delivered by the defendant. In it he states whether he admits or denies the various allegations in the plaintiff's Statement of Claim. It is not necessary that the defendant should specifically admit any statement, as omission to deny is construed as admission. With regard to denials, it is well to note that a defendant may succeed in an action and yet be ordered to pay part of the costs, if the Court or Judge is of opinion that the defendant unnecessarily compelled the plaintiff to prove facts which ought to have been admitted. If the Writ was specially endorsed with particulars of claim, then the defence must be delivered within eighteen days from the date of service of the Writ, the day of service included; but if a Statement of Claim has been delivered, then within ten days of such delivery or within such shorter period as may have been fixed by the Order for Directions.

4. REPLY. Until recent years, a "Reply" by the plaintiff *always* formed part of the pleadings, but now, except in Admiralty Actions, no reply may be delivered unless ordered by the Court. Leave is not given to deliver a reply unless the defendant sets up a case in his Defence to which the plaintiff wishes to reply, or unless the defendant sets up a definite counter-claim, or unless the plaintiff wishes to allege new facts.

PAYMENT INTO COURT. A defendant may, before or at the time of delivering his defence in an action for debt or damages, pay into Court a sum of money to meet the plaintiff's claim. A defendant may admit liability on part of the claim, and it is then a question for the plaintiff to decide whether he will take the money out of Court and close the matter or proceed further. Should the plaintiff continue the action and not recover more than the amount paid into Court, the defendant will be entitled to the whole costs of the action. If the claim is one for unliquidated damages (i.e. damages not certain in amount), such as the general damages claimed in an action for personal injuries, then the defendant may pay into Court any sum, at the same time denying liability. In this case, should the plaintiff succeed in his action, even though he may recover less than the amount paid in, he will be entitled to *all* costs down to the date of payment into Court, and the subsequent costs entailed by the proving of the liability of the defendant.

RIGHT TO A JURY. Speaking generally, it may be said that either plaintiff or defendant has a right to trial

with a jury. There are exceptions, however. In the Chancery Division, unless otherwise ordered by the Court, actions are tried without juries, neither party being entitled to claim a jury as a matter of right. In the King's Bench Division, any matter requiring long examination of documents, accounts, or local investigation may be tried without a jury. Further, the Court may, if it shall appear desirable, direct a trial without a jury under certain circumstances. Either party, when entitled to a jury, may have a special jury on giving notice to that effect.

THE TRIAL.

1. NOTICE OF TRIAL. Notice of trial has to be given by the plaintiff within six weeks of the close of the pleadings. Ten days is the usual notice given, but shorter notice may be given with the consent of the parties or by Order of the Court. This does not in any way indicate that the action will be heard on the tenth day, but merely that it will not be heard before that day. The action is set down in the list and takes its turn, unless a special day for the hearing is fixed by the Court.

2. NON-APPEARANCE AT THE TRIAL. Should neither party appear at the hearing, the action is struck out. If the plaintiff appear and not the defendant, then the plaintiff may proceed to prove his case and judgment may be given. If the defendant appear and not the plaintiff, the defendant is entitled to dismissal of the action with costs. "Appearance" does not necessarily mean appearance in person of the parties. In fact in the large majority of cases the parties appear by counsel.

3. COURSE FOLLOWED AT THE TRIAL. The following are the steps taken in the conduct of the Trial:—

(1) The plaintiff (or his counsel) opens his case with a speech and then calls his witnesses. Each of them is examined by the plaintiff's counsel, and may be subjected to cross-examination by the counsel for the defence. If, during the cross-examination, new matter is introduced, the plaintiff's counsel may re-examine, but not otherwise.

(2) After the close of the plaintiff's evidence, if the defendant (or his counsel) intends to call evidence, he opens his case with a speech, then calls his witnesses, and makes a second speech, to which the plaintiff's counsel has the right of reply.

(3) If, however, defendant's counsel does not intend to call any witness, the plaintiff's counsel sums up the evidence he has called before the defendant's counsel begins. Afterwards, defendant's counsel addresses the Court on the whole case, and has thus the advantage of the last word.

4. JUDGMENT. If the trial be with a jury, the judge then addresses the jury, and tells them the points upon which they have to make a decision, at the same time summarizing and commenting on the evidence which has been adduced. Often, the judge submits to the jury a series of questions to which they have to give replies, and based on these replies the judge gives a decision or judgment.

APPEALS. An appeal from a decision of a judge or a judge and jury, provided that decision be a final judgment, may be entered within three months from the time when the judgment or order was signed. All appeals are by notice of motion, and the appellant must at least one week before the appeal is likely to come on leave three copies of the notice of appeal, three copies of the judgment, and three copies of the pleadings. The respondent to the appeal (i.e. the party to the action who has won in the Court below) may apply to the Court of Appeal for security for costs, and this is usually granted if the appellant is poor or the appeal is of a frivolous nature. If the security ordered is not given within fourteen days, the appeal is struck out.

A party dissatisfied with a judgment or order may apply for a new trial within eight days after the trial, if it took place in London or Middlesex. If the trial took place elsewhere, notice of motion for a new trial must be served within seven days after the end of the circuit in which the trial took place. The grounds for which an application for a new trial may be based are various:—

(1) That the judge misdirected the jury.
(2) That the judge wrongly rejected or wrongly received certain evidence.
(3) That there was no evidence to go to the jury.
(4) That fresh evidence has been discovered.
(5) That the jury found a verdict against the weight of evidence.
(6) That the damages were excessive or inadequate.
(7) That the defeated party was taken by surprise.

ENFORCEMENT OF JUDGMENT.

1. FIERI FACIAS. A judgment for the recovery of money is usually enforced by the issue of a command to the sheriff of the county in which the party has goods and chattels. The sheriff is commanded "quod fieri facias de bonis, etc." The document sent to the sheriff is called a writ of "Fi Fa," and it becomes his duty to make of the goods and chattels of the party the amount of the judgment debt. The sheriff may sell the goods, subject to certain restrictions. One of these restrictions is that the goods cannot lawfully be sold unless the landlord be first paid any rent due before execution. It should also be noted that the sheriff cannot break open of any inhabited house for the purpose of executing the writ, nor can the writ be executed on a Sunday. Wearing apparel, bedding, tools, and implements, not exceeding £5 in value, are protected from seizure.

2. WRIT OF ELEGIT. Where it is necessary to take the debtor's land in order to satisfy a judgment, then a writ of Elegit must be issued. As in the case of "Fi Fa," this writ is issued to the sheriff, who, on its receipt, must empanel a jury for the purpose of enquiring as to the location and value of the lands of the debtor. Having made this enquiry, the sheriff makes what is known as a "return" to the writ, and this "return" vests the legal estate of the lands in question in the judgment creditor, who is thenceforward known as the tenant in elegit. The lands are held by him until the full amount of the judgment debt has been satisfied out of the rents.

3. WRIT OF SEQUESTRATION. A writ of sequestration is usually used to enforce the judgments or orders of the Chancery Division. The following are instances in which this procedure has to be employed:—

(1) Enforcing the payment of a sum of money to the credit of an action pending. (2) Enforcing judgment pronounced for the recovery of title-deeds or heir-looms. (3) Enforcing an order to a person to execute a certain deed.

Although these writs are usually issued in connexion with Chancery Division actions, they may be used when occasion arises in connexion with actions in which the proceedings have been in the King's Bench Division.

4. ATTACHMENT OF DEBTS. Any person who has obtained a judgment or order for the recovery or payment of money may apply to a Court or a judge for an order that all debts owing or accruing to the judgment debtor shall be attached to answer the judgment or order. If the Court makes such an order, then the person who owes the judgment debtor any sum is called the "garnishee." The garnishee is summoned to appear before the Court or judge or an officer of the Court to show cause why he should not pay the money owing to the judgment creditor for the purpose of satisfying the judgment debt. The garnishee may either admit or dispute the debt, but even if he admits it he should not pay the money to the judgment creditor until he has received the order of the Court.

5. WRIT OF ATTACHMENT. We have already dealt with attachment of debt. In certain cases judgments or orders of Courts can be enforced by attachment of the person. A writ is addressed to the sheriff, requiring him to attach the defendant, in other words, to arrest him and lodge him in gaol.

This writ may be issued for the purpose of (1) Enforcing a judgment for the recovery of any property other than land or money. (2) Enforcing a judgment or order against a corporation which has been wilfully disobeyed. In this the officers or members (or both) of the corporation are attached. (3) Enforcing an order to any person to produce documents required for the purposes of an action.

6. COMMITTAL. There is not a great difference between attachment and committal. Committal is the

proper remedy when the offender has committed contempt of Court by doing what he ought not to do, while attachment is the remedy when the contempt consists of not doing what he has been ordered to do. The writ of attachment is addressed to the sheriff. No writ is issued in a case of committal, but a warrant which is handed to the tipstaff of the Court for execution. Release from prison can only be obtained from an order of the Court for discharge, except in certain cases under the Debtors' Act, 1869. In these cases, at the end of a year, the prisoner is entitled to discharge.

2. COUNTY COURTS.

THEIR JURISDICTION. All England, with the exception of London, is divided into Districts for County Court purposes, and each District has its Court. A Registrar is appointed to each Court, who must be a solicitor of at least five years standing. He deals with the routine work of the Court and makes decisions in undefended cases. Each Court is under the care of a judge, who must be a barrister of at least seven years standing. He is entitled to the prefix "His Honour."

The County Courts can deal with all personal actions where the debt, demand, or damage claimed is not more than £100, whether as a balance of account or otherwise. Personal actions include those of contract and tort. With regard to the latter, however, it should be noted that actions for libel and slander cannot be tried in the County Court, unless with the consent of the parties or unless the case has been remitted from the High Court on its being shown by the defendant to the satisfaction of the Court that the plaintiff has no visible means of paying his costs. The same rule applies in actions for seduction and breach of promise of marriage.

This Court also has jurisdiction in actions for ejectment, where neither the value of the land, etc., claimed nor the rent thereof exceeds £100 per year; but if the title to other land is affected, then the defendant or his landlord may apply to have the action tried in the High Court.

COMMENCEMENT OF ACTION. Action in the County Court is commenced by the entry of a plaint. This is entered in the plaint book by the officials of the Court, after the person desiring to sue has filled in a form (called a *præcipe*) giving the particulars required as to the plaintiff, his address, the defendant, his address, the amount claimed, etc. If the plaintiff is illiterate, the Registrar's clerk must fill up the *præcipe*. On the entry of the plaint, the plaintiff has to pay certain fees, which vary in amount with the amount of the debt or claim.

A summons is then issued to the defendant calling on him to appear at the Court on a certain day to show cause why judgment should not be entered against him. The summons may be served on the defendant personally, or on any person apparently not less than sixteen years old, at the residence or place of business of the defendant. If the defendant admit the claim before the hearing day, he may save half the hearing fee and subsequent costs. If the defendant dispute the claim, he need not give notice of his intention to do so, unless the summons is a default summons, in which case he must within eight days give a written notice of his intention to defend, but it will be sufficient if he appear at the Court (either personally or by solicitor or counsel) on the hearing day. If the claim exceeds £5, either the plaintiff or the defendant may claim trial by a jury of eight persons.

COUNTY COURT TRIALS. The procedure in the actual trial of the action is similar to that already described in an action in the High Court.

APPEALS. An appeal may be made to the High Court against *any* determination or direction of a County Court Judge in point of law or equity, or upon the admission or rejection of any evidence, provided at the trial the judge is asked to take a note of the question of law raised, of the facts relating thereto, and of his decision thereon. Thus litigants have the right of appeal on a question of law, whatever may be the amount of the debt or the nature of the claim.

There is also a *right* of appeal (1) in all equity actions or matters; (2) in all actions of ejectment; (3) in all actions respecting title; (4) in all actions where the debt or damage claimed exceeds £20; (5) in all actions for the recovery of tenements where the rent or value of the premises exceeds £20.

Although the parties have no *right* of appeal in other matters, yet the judge may give leave to appeal in *any* matter or action upon which he has given a decision.

NEW TRIAL. A County Court Judge may order a new trial on grounds which would be sufficient for granting a new trial in the High Court. The order may be made upon such terms as the judge shall think reasonable, and pending the re-hearing he can stay all proceedings.

ENFORCING JUDGMENT OR ORDER. A judgment or order for the payment of money must be prepared by the registrar and delivered to the bailiff, who must serve it by post or otherwise on the party to whom it is addressed within twenty-four hours. For a sum not exceeding £20, exclusive of costs, the order may be for payment by instalments, the time of payment and the amount of such instalments being fixed by the Court. Should the debtor make default in the payment of any one instalment, execution may issue for the whole sum remaining due, including costs. Where judgment has been given for a sum exceeding £20, the judge has no power to order payment by instalments, except with the consent of the plaintiff. On the issue of execution, the bailiff or his officers may seize and take any of the goods and chattels of the debtor, excepting the wearing apparel and bedding of such debtor or his family and the tools and implements of his trade to the value of £5.

JUDGMENT SUMMONS. If a creditor thinks fit, he may proceed against his debtor (after judgment) by means of a judgment summons. If it is proved to the satisfaction of the Court that the debtor has, or has had, since the date of the judgment or order made against him, the means to pay his debt, and has refused or neglected to do so, such debtor may be committed to prison for a term not exceeding six weeks.

COURT FEES. For every plaint a fee of one shilling in the pound. When the claim exceeds forty shillings, and an ordinary summons is to be served by a bailiff, an additional fee of one shilling; and if there are more than three defendants to be served with the summons, an additional fee of one shilling for each defendant above three. The fee for trying the case is two shillings in the pound.

For every default summons to be served by a bailiff the fee is one shilling, and where there are more defendants than one, a fee of one shilling for each defendant who has to be served with the summons by a bailiff.

The Treasury has power to make, with the consent of the Lord Chancellor, orders as to the fees to be made on any proceedings in the courts. A table of all fees must be posted in some conspicuous place in every court house and in every registrar's office. Want of space makes it impossible to set them out at length here and summaries are dangerous. The tables which are posted are divided into two schedules. Schedule A for court fees and schedule B for officers' fees.

3. PROCEDURE IN CRIMINAL MATTERS.

ARREST. An offence has been committed and an individual is suspected of having committed that offence. How is he to be brought before the proper authority? This may be done either by arrest or by summons. Only in certain cases is arrest permissible, the right of the subject to personal liberty being jealously guarded. Usually an arrest is not made without the authority of a warrant, a "warrant" being an order in writing instructing an officer (constable or other) to bring the suspected person before a Court. Warrants may be issued by the Privy Council, Judges of the High Court, Justices of the Peace, and Coroners.

A constable may arrest without a warrant

(1) Anyone whom he suspects of having committed a felony.

(2) Anyone committing a breach of the peace in his presence, or about to commit a breach of the peace, or

committing an indictable offence by night, or doing malicious injury to property.

A private person may arrest without a warrant

(1) Anyone whom he suspects of having committed a felony, provided that a felony has actually been committed.

(2) Anyone whose freedom will lead to a breach of the peace.

(3) Anyone committing treason or about to commit treason.

(4) Anyone committing offences under the Vagrancy Acts, e.g. street gaming and the like.

(5) Anyone for whom he has become bail in order to give him up so that he (the bailor) may be discharged from his liability.

It follows, of course, that where a private person may arrest without a warrant, so also can a constable.

SUMMONS. A Justice of the Peace, a Stipendiary Magistrate, or a Metropolitan Police Magistrate has the power to issue a summons on an information being laid before him, or on a complaint being made to him.

An information is required if the charge is one which renders the person liable to imprisonment or fine, but a complaint only is necessary if all that is desired by the applicant is an order for the payment of money. An information must always be in writing, unless it is laid in the Metropolitan district, but a complaint (as a rule) may be made orally. The summons calls on the person named therein to appear at a certain time or place, and states succinctly the nature of the information or complaint. If the person named does not obey the summons, then the Court may issue a warrant for arrest, after the proper serving of the summons has been proved and the information or complaint has been made on oath. No warrant, however, can be issued, if the summons had been issued for the purpose of recovering civil debt.

SUBPŒNA. It is within the discretion of a Court to issue a summons ordering a person to attend and give evidence in any case, and if such witness fail to appear, he may be arrested by authority of a warrant. Such a summons is called a *Subpœna*, but the person on whom it is served is not bound to obey it, unless he has been offered a sum sufficient to cover the reasonable expenses incurred in attending the Court.

SUMMARY CONVICTION. If the offence specified in the information is one which can be finally disposed of by the magistrates, or if an order for payment is asked for, the following is the procedure at the hearing. The defendant is told the nature of the charge or the claim, and is asked whether he pleads "guilty" or "not guilty" in the case of an offence, and in the case of a claim whether he wishes to show cause why an order should not be made. If he pleads "guilty," or shows no cause, then he is convicted or an order made, but otherwise, the prosecutor or complainant states his case and calls his witnesses. The defendant has the right to cross-examine each witness, and to state his defence and call his witnesses after the prosecutor has completed his case. Both prosecutor and defendant have the right to be represented by solicitor or counsel, and if so represented the statements are made and the witnesses examined and cross-examined by the advocates instead of by the parties.

ADJOURNMENT.—RECOGNIZANCE. It is within the power of the Court to adjourn the hearing, and pending the adjourned hearing they may order that the defendant be kept in custody. It is not usual for this to be done, as in ordinary cases the defendant's freedom is unfettered, and he simply has to obey the summons to appear at the adjourned hearing as on the first occasion. In some cases, before being allowed freedom, recognizances (with or without sureties) are required from the defendant to appear on the day named. A recognizance is really a contract, whereby the defendant and his sureties (if any) bind themselves to pay to the king a certain sum of money, if on the day fixed for the adjourned hearing the defendant does not appear. If recognizances have been taken and the defendant or witness (for witnesses may be bound over by recognizance to appear) does not put in an appearance when required to do so, the recognizance is said to be "estreated"; because it was formerly the custom to *extract* the recognizance or bond from the records of the Court where it had been filed and to forward it to the Exchequer Court which took proceedings to enforce the penalty.

PROBATION OF OFFENDERS ACT, 1907. A court of summary jurisdiction, before whom an offender has been brought and proved guilty, may dismiss the charge, or discharge the offender conditionally on his entering into a recognizance to be of good behaviour and to appear for conviction if called on. The Act also provides for the appointment of "Probationary Officers," whose duty it is to see that the offender observes the conditions of his recognizance, and to advise, assist, and befriend him, and, when necessary, to endeavour to find him suitable employment.

COMMITTAL FOR TRIAL. With some offences, magistrates cannot finally deal. In such cases if unrefuted evidence is given, which leads the magistrates to form the opinion that the accused may have committed the offence, then the magistrates must send the case for trial by jury. The procedure before the magistrates is nearly the same as that described under the heading "Summary Conviction." There is, however, one very important difference. The evidence of each witness is taken down in writing, and when complete is read over to the witness, who signs the document or "deposition" as it is technically called. The deposition is also signed by the magistrates. If the magistrates decide to commit, then the accused is either sent to prison to await trial at the next quarter sessions or assizes, or he is released on bail.

BAIL. A person who is "bailed out" is delivered to his sureties, who undertake to produce him at the sessions or assizes. The justices have power to grant or allow bail in *all* cases except treason. In serious cases, however, it is seldom allowed. In nearly all cases of misdemeanour the magistrates *must* allow bail, but they have discretion as to the amount in which the accused and his sureties shall be bound. If the accused fail to find sureties in the amount fixed, he must await trial in prison. Before accepting the sureties tendered by the accused, it is usual for the police to make enquiries as to whether the parties named as sureties have the means to pay the sum fixed, if the prisoner should not appear at the trial. The sureties obtain discharge from their bail if they either deliver the accused up at the trial or before the time of trial. This latter course is only justifiable if there is cause to believe that the accused contemplates non-appearance.

A BILL OF INDICTMENT. After a person has been committed for trial, the next step is to prefer a "bill of indictment" against him. This preferment is made before the grand jury of the Court to which the accused has been committed. A "bill of indictment" is a written statement of the offence with which the person is charged. The grand jury sit in private and they examine the witnesses for the prosecution (whose names are on the back of the bill) or some of them. The defendant does not appear before the grand jury nor is he permitted to be represented in any way. If the grand jury are satisfied that there is a *prima facie* case against the accused, they find a "true bill," but if they are not so satisfied then they find "not a true bill," and the accused is at once a free man, but he may be afterwards arrested on the same charge if fresh evidence is forthcoming; whereas if the prisoner had been found "not guilty" by the petty jury, he could not afterwards be arrested and tried on the same charge.

ARRAIGNMENT OF PRISONER. A "true bill" having been found, the defendant is brought into open court by the police officers if already in custody, or surrenders himself, and is then arraigned. His name is called and the indictment (no longer called a bill of indictment) read over to him. He is then asked whether he pleads "guilty" or "not guilty." On a plea of guilty, the Court may at once pass sentence or order him to be detained in custody until a later time during the same sessions or assizes, when sentence is given. If "not guilty" is pleaded, it puts on the prosecution the onus of proving all they allege against the prisoner. If the defendant

refuses to plead, then the Court may order the plea of "not guilty" to be entered, and the trial will then proceed just as it would have done had the prisoner himself pleaded.

THE HEARING. The trial of a defendant who has pleaded "not guilty" takes place before a judge (at the assizes) and a jury, or before a chairman or recorder (quarter sessions) and a jury. The course followed at the trial is the same as that already described in Civil Cases before the High Court (see p. 479).

VERDICT AND SENTENCE. After the witnesses have been examined and the speeches of counsel made, the judge sums up the whole case to the jury, and explains the law as it affects the matter before the Court. If the jury can agree upon their verdict (which must be unanimous) without retiring they do so, but if not, they are placed in charge of an officer of the Court, who takes them to a private room for consultation. If they cannot agree on a verdict, then the judge may discharge them and the defendant may be put on his trial before a new jury. If a verdict of "guilty" be returned, the judge proceeds to pass sentence.

CRIMINAL APPEAL. A person convicted on indictment, criminal information or Coroner's inquisition, or as an incorrigible rogue, has a right of appeal to the Court of Criminal Appeal on any ground which involves a question of law alone. If the ground of complaint involves a question of fact alone, or a question of mixed law and fact, or is directed against the severity of the sentence, the leave of the Court of Criminal Appeal, or a certificate from the judge who tried the prisoner that it is a fit case for appeal, is necessary before an appeal can be heard. Notice of appeal, or of an application for leave to appeal, must be given within ten days of conviction. The court has power to quash a conviction or to vary a sentence. It has power even to impose a sentence of greater severity than that imposed by the judge at the trial—a power which is necessary as a check to frivolous appeals. Though the Court has no power to order a new trial it can affirm a conviction where it is of opinion that, although the point raised in the appeal might technically be in favour of the appellant, no substantial miscarriage of justice has actually occurred. The court is independent of and does not interfere with the prerogative of Pardon (see p. 427).

4. SPECIAL PROCEDURE FOR PAUPERS.

ADVICE. There are many people, especially in our large towns, who are quite unable to afford the means of procuring legal advice on matters of every-day occurrence. Such people are in the habit of applying to their local stipendiary magistrate for advice. There is no legal duty imposed on the magistrate to give any such advice; but in practice he almost invariably does so; especially if the facts disclosed show that some one is endeavouring to take an unfair advantage of the person's ignorance or poverty.

SUING IN FORMA PAUPERIS. The presence of solicitors or counsel is not essential in any case that comes before our courts. A litigant, be he plaintiff or defendant, may always appear and conduct his case in person, paying the court fees, and acting generally as his legal representatives would have done had they been employed. But some persons are too poor even to pay the court fees. Such persons are allowed to sue or defend *in formâ pauperis*, "as a pauper." They must first submit their case to a barrister for his opinion. If the barrister's opinion be favourable, the pauper must make an *affidavit* (i.e., a statement on oath duly sworn before a Commissioner for Oaths) which must declare:

(1) That the litigant is not worth £25, his wearing apparel and the subject-matter of the dispute only excepted; and (2) that the case submitted to counsel contains a full and true statement of all the material facts to the best of the pauper litigant's knowledge and belief.

He should also prepare a written petition to the court applying for leave to sue or defend *in formâ pauperis*. If the leave is granted, a counsel and a solicitor will be assigned to the pauper. No court fees will be payable and the services of the counsel and solicitor will be gratuitous, except for the solicitor's out-of-pocket expenses.

POOR PRISONERS. In criminal cases it often happens that a prisoner or his friends while able to raise a guinea or so for the purpose of his defence are yet unable to afford to pay both solicitor and counsel. The general rule is that counsel (i.e., barristers) can only be instructed through a solicitor; and as solicitors have not the right of audience in criminal cases at quarter sessions or assizes, it might appear that both a solicitor and a barrister would have to be employed by a prisoner. But this is not so, for there is an exception to the general rule, whereby for the fee of £1 3s. 6d. it is possible for a prisoner to secure the services of any barrister present in the court, without the intervention of a solicitor.

JURIES.

A Jury is a body of men selected according to law, whose function it is to decide, under the guidance of a Judge, what is the truth in questions of fact arising in the course of a trial, whether in a civil or a criminal case. It will be seen in the following account of our Jury system that there are various kinds of juries differing in the number of men composing them, in their qualifications, and in the precise part they are called upon to perform.

CIVIL CASES.

1. **WHEN THE TRIAL MAY BE BY JURY.** Not in all Civil cases does there exist a right to trial by Jury, but in actions of slander, libel, false imprisonment, malicious prosecution, seduction, breach of promise of marriage, and generally where the claim is for damages, either the plaintiff or the defendant may signify his desire to have the issues of fact tried by a judge with a jury. In all High Court actions the mode of trial is by a judge without a jury, unless one of the parties to the action insists on exercising his right to trial by jury. A court or a judge may, however, at *any* time order *any* cause to be tried by a judge with a jury.

2. **COMMON AND SPECIAL JURIES.** A trial may be either by a judge and a common jury or by a judge and a special jury. In the majority of cases the former is the method, but when the action is one in which either the plaintiff or the defendant is entitled to have a jury, then either party may claim a special jury. If the plaintiff desire a special jury he must give notice to the defendant at the time he gives notice of trial. In the case of the defendant he must give notice not less than six clear days before the day for which notice of trial has been given. Whichever party applies for a special jury, that party is in any event liable to the costs over and above those which would have been incurred had a common jury been engaged, unless the judge specially certifies for a special jury. If he so certifies, then the costs of the special jury fall in the ordinary way upon the loser in the action.

3. **COMMON JURYMEN.** Every man not disqualified or exempted, in England or Wales, between the ages of twenty-one and sixty, is liable to serve as a juryman in the county in which he resides, if he has in that county freehold or copyhold property of the annual value of £10; *or* if he has leasehold property to the annual value of £20; *or* is a householder assessed to the Poor Rate on a value of not less than £30 (Middlesex), or £20 (other counties). In the City of London there is a special qualification to the effect that the juror must be an occupier of premises within the city, and be possessor of property of not less value than £100. Women cannot act on a jury except to determine whether a woman convicted of murder is pregnant. For that purpose a jury of matrons is empannelled, for no woman is hanged while pregnant.

4. SPECIAL JURYMEN. Certain of those who are liable to serve as common jurymen are also liable to serve as special jurymen. These are (1) persons legally entitled to be called Esquires; (2) persons of higher degree (Knights, Baronets, etc.); (3) bankers or merchants; (4) occupiers of private dwelling houses assessed to the poor rate or inhabited house duty at a value of not less than £100 in a town of 20,000 inhabitants and upwards. In the case of smaller towns and rural areas, the value is £50 and upwards, unless the occupier happened to be a farmer, when the value remains at £100; (5) all farmers occupying lands and premises rated at a value of not less than £300.

5. COMPULSORY ATTENDANCE OF JURYMEN. If a juror is duly summoned to attend a Court and fails to do so, he is liable to a fine, unless reasonable cause is shown for his non-attendance. Reasonable causes include: absence from the United Kingdom, illness, or permanent residence in another part of the country. No person is liable to be summoned to serve on any jury or inquest more than once in any one year, provided there remain on the jurors' list persons who have not already served in that year. Exemption from serving as a common juryman cannot be claimed either by special jurors or grand jurors.

6. MODE OF SUMMONING A JURY. Seven days before what is known as Commission Day (the first day of each sitting of the Court) the Sheriff makes up his "panel" of jurors. This "panel" is a slip of parchment bearing the names of those jurors summoned to attend. The summons may be issued by post. The names of the jurors are written on slips of paper and placed in a box. Twelve slips are drawn out and the persons whose names are thereon are called, and if all reply they form the first jury, unless a "challenge" is made. Should one or more fail to answer the call or be challenged, then other slips are drawn until the number of twelve is completed. The other jurymen on the panel may either be discharged from further attendance, or called upon to form another jury, or ordered to remain during the sitting of the Court so as to be available should necessity arise.

7. CHALLENGE. Before the jurors are sworn, either party may "challenge." To "challenge" is to raise an objection either against all the jurors on the panel or to individual jurors. Objection to the whole panel may be taken on the ground that the summoning officer has failed in his duty from partiality to one of the parties to the action or other cause. Such a challenge is very unusual, but if it be made its validity is determined by the Court or by two persons (called "triers") appointed by the Court.

An individual juror may be challenged on various grounds, such as infancy, old age, alienage, conviction of crime, partiality. If such a challenge be made, the place of the challenged juror is taken by another juror, or two "triers" are appointed for the purpose of determining the validity of the objection raised. The right of challenge is rarely exercised in England, but it is frequently resorted to in Ireland, but only in criminal cases.

8. MODES OF SWEARING JURORS. There are three modes of swearing jurors. The first and most general is that of kissing the New Testament held in the right hand after the oath has been taken. The second is that practised by members of the Hebrew faith; instead of the New Testament the book used is the Old Testament, and the oath is taken with the head covered. The Oaths Act of 1888 prescribes a third method, which may be used by any person who desires to affirm instead of taking the oath. This affirmation is made in the Scotch form without any kissing of the book and with uplifted hand. Such an affirmation is usually made by a juror who has no religious belief, or whose religious persuasion enjoins him not to take an oath. Believers in any creed can be sworn in any manner which they consider binding.

9. VERDICT—WITHDRAWAL OF JUROR. The verdict of a jury must be unanimous, unless both parties in the case agree to accept a verdict of the majority. In some cases, after the trial has commenced a juror is withdrawn. This is done when neither party wishes that the case should proceed. Usually such a course is pursued on the suggestion of the judge, both plaintiff and defendant agreeing thereto. When this is done the action is at an end, and any further proceedings to try the same issue cannot be taken, and each party pays his own costs.

CRIMINAL CASES.

1. THE GRAND JURY. A grand jury consists of not more than twenty-three persons nor less than twelve. In the case of every person committed for trial to an assize or sessions, there must be presented to the grand jury a bill of indictment. This bill informs the accused as to the charge against him. It is the duty of the grand jury to satisfy themselves that there is a *prima facie* case for submission to the petty jury (i.e. the ordinary jury of twelve men). The grand jury sits in private and hears some of the evidence which is to be submitted to the petty jury on behalf of the prosecution. If the evidence is satisfactory, then the grand jury find that the bill of indictment is true.

2. CASES FOR THE GRAND JURY. Nearly all the accused who appear for trial by a grand jury have been committed by an inferior court of summary jurisdiction or a coroner's jury. This process is, however, not an essential preliminary to a presentment to a grand jury. A supposed criminal may be arrested and brought before a grand jury under the authority of a warrant issued by the Privy Council or a Secretary of State, or on an information filed by the Attorney General with leave from the Court of King's Bench, such leave being granted at the instance of an individual. A private person still has the right (although now almost obsolete from disuse) to prefer a bill to the grand jury against an absent party and without giving any preliminary notice. This, however, is a dangerous procedure, as it renders the prosecutor liable to costs should the accused be acquitted.

3. SPECIAL AND PETTY JURIES. With regard to petty juries, the statements already made respecting common juries in civil cases apply generally. It is for the petty jury to decide whether the accused is guilty or not guilty. The obtaining of a special jury is not so simple a procedure in criminal cases as it is in civil cases. Application must be made to the Court of King's Bench by way of motion. This motion can be made on behalf of the Crown or of any prosecutor or defendant, but no special jury can be claimed if the alleged offence is a misdemeanour to be tried on the Crown side of a court of assize or at a sessions.

4. THE RIGHT OF CHALLENGE. Under the heading Civil Cases we dealt with this right. The rights there stated also obtain in criminal cases, but in addition to these which are for cause shown, a defendant in certain criminal cases can challenge peremptorily individual jurors, and need not show any cause. If the accused is charged with murder or any other felony, the number of his challenge is limited to twenty, if with treason to thirty-five, if with an attempt to injure the person of the monarch to twenty. There is no right of challenge by the defendant without cause shown, if the charge is one of misdemeanour.

JURY.—COUNTY COURT. In every action tried by a County Court in which the claim exceeds £5, either party has the right to demand trial by jury, and even in cases where the claim is under £5, the judge may order a jury to be summoned. There is one exception to this general rule which prevents trial by jury if the action is of such a nature as would assign it to the Chancery Division were it tried in the High Court. The jury consists of eight persons, and is selected from among the jurors who are qualified and liable to serve at the assizes. The party requiring a jury to be summoned must give notice to the Registrar of the Court and pay the sum of 8s., which sum is considered as costs in the action unless otherwise ordered by the judge.

JURY.—CORONER'S COURT. A coroner's jury consists of not less than twelve nor more than twenty-three "good and lawful men." In contradistinction to one of the rules

respecting other juries is the fact that there is no age limit for service on a coroner's jury. Generally, however, it may be taken that the persons qualified and liable to serve as jurymen in civil and criminal cases are also liable to service on coroner's juries. A person who has been duly summoned to serve on a coroner's jury and does not appear, may be fined a sum not exceeding £5.

REMUNERATION OF JURYMEN. A common juryman is not legally entitled to any payment, but in the High Court it is the usual practice to give a fee of 1s. if the trial is in London, and 8d. if in the country, in respect of each case in which he is sworn. This applies to civil cases only, as no fee is allowed under any circumstances in a criminal case. A special juror is allowed for his services a sum not exceeding one guinea for each case, however long it may last. As a matter of practice the full guinea is usually paid, although it is within the discretion of the judge to allow a smaller sum.

FUNCTIONS OF JUDGE AND JURY. Broadly speaking, in any trial, questions of fact must be decided by the jury, and questions of law by the judge. It is within the province of the judge to prevent vexatious and irrelevant cross-examination, to decide as to the admissibility of evidence, to allow amendments, to postpone or adjourn the trial, and to rule as to any questions of law which present themselves. It is also the duty of the judge to summarize the evidence and to put before the jury the issues of fact upon which they have to decide. If the evidence as to fact is conflicting, whatever may be the opinion of the judge he must leave it for the decision of the jury.

The jury may persist in finding a verdict contrary to the opinion and direction of the judge. If, however, it can be shown to another Court that the verdict is against the weight of evidence, or that evidence has been improperly admitted or rejected, then a new trial may be ordered.

PERSONS EXEMPT FROM SERVING ON JURIES. All who have reached the age of sixty; Peers; Members of Parliament and officers of the Houses of Lords and Commons; judges; clergymen and ministers not following any secular employment except that of schoolmaster; practising barristers; practising solicitors and their managing clerks; officers of the courts of law and the clerks of the peace or their deputies; coroners; keepers in public lunatic asylums and houses of correction, and all subordinate officers of the same; medical men and pharmaceutical chemists; officers of the navy, army, militia, and yeomanry, while on full pay; licensed pilots and masters of vessels in the buoy and light service; household servants of His Majesty, his heirs and successors; officers of the post office, officers and officials connected with the Customs and Inland Revenue Service; police officers, magistrates of the Metropolitan police courts, their clerks, ushers, doorkeepers and messengers; members of the London County Council or of any municipal borough, and every justice of the peace assigned to keep the peace therein.

TO SECURE EXEMPTION. It is advisable to inspect the jury list posted early in September each year at the entrance to places of worship, and in the case of your name appearing there to state to the overseers of the parish, or other local authority preparing the jury list, the grounds on which exemption is claimed. This should be done without delay, as the lists are revised and confirmed by the justices, each year, in the last week of September. Remember it is not sufficient to be entitled to exemption, it is necessary to claim exemption, and to do so before the justices have confirmed the list. You may, for instance, have reached the age of sixty, but that fact will not be operative until you have taken steps to make it known in the right quarter.

CORONERS AND INQUESTS.

THE CORONER AND HIS DUTIES. Every part of the British Isles, with the exception of Scotland, is within the jurisdiction of a Coroner. He is the most important civil officer in the country, and ranks next to the sheriff, whose duty he performs, when the sheriff is prevented from doing so. His most important duty is that of inquiring into the cause of the death of any person whose dead body is lying within the area of his jurisdiction, if there is reasonable cause to suspect that such person has died either a violent or unnatural death. He must also make inquiry if the cause of death is unknown or if the person has died in prison. Other duties are imposed upon Coroners, the two principal of which are referred to in subsequent paragraphs, which deal with Treasure Trove and Fire Inquests.

WHO MAY BE A CORONER. Although it is generally conceded that a Coroner should be a medical man, yet there is no binding rule on this point. He must be a "fit person," but cannot be either a councillor or an alderman. This prohibition is necessary, because the election of a Coroner now rests with the County and Borough Councils. Councils having elected a Coroner, have no power to dismiss him from his office. He holds office for life, except that in cases of extreme misconduct or incapacity he may be dismissed by the Lord Chancellor. In early times the office of Coroner was honorary, but later and down to 1860 Coroners were paid by fees for each inquest held. Now, however, the Coroners for counties are paid fixed salaries, which are subject to revision every five years. In Boroughs they are still paid by fees. Every Coroner must appoint a deputy, who must be a fit person and approved by the Chairman of the County Council or the Mayor of the Borough, as the case may be. The justices of the High Court are coroners *ex officio*, and there are certain bodies which have the power of electing their own coroner. These bodies include the University of Oxford, the Admiralty, the City of London, and the Dean and Chapter of Westminster.

INQUEST AND JURORS. A formal inquiry conducted by a Coroner is called an Inquest. The inquiry is made by a jury of not less than twelve nor more than twenty-three "good and lawful men." These jurors are summoned by the Coroner to determine who the deceased was, and how, when, and where he came by his death. Any male householder of the full age of twenty-one years is liable to be summoned as a juror, unless he is specially exempted by Statute. There is no age limit above which exemption from service may be claimed, but certain classes are exempted by various Acts of Parliament. Among the exempted are the soldiers in the regular army, dentists, income tax commissioners, and practising barristers. If a person fails to answer a summons to appear as a juror, or if he appear and refuse to serve without reasonable excuse, then the Coroner may inflict a fine not exceeding £5, or he may issue a warrant for the apprehension of the offender, and on his being brought to the Court commit him to prison for contempt in not obeying the Coroner's summons.

WHEN AN INQUEST MUST BE HELD. The Coroner *must* hold an inquest if there is lying within his district the dead body of a person as to whose death there is reasonable cause to suspect that it was not natural. An inquest is not necessary in the case of a still-born infant, but in some instances an inquest is held for the purpose of determining whether a child was still-born, and if not still-born, how it came by its death. No still-born child can be buried lawfully without a written certificate signed by a medical practitioner to the effect that the child was still-born. If no medical practitioner was present at the birth, then a declaration to that effect must be made, and also that the child was still-born. Liability to a penalty of £10 is incurred by any person who disobeys the law in this respect.

Whenever there exists any reasonable suspicion as to the cause of death, it is the duty of the person entertaining that suspicion to give information to the Coroner's officer or to the police. The information given need not be upon oath. It is the duty of the Coroner's officer to make enquiries and to collect information as to the circumstances of death. This information he conveys to the Coroner,

who decides whether it is necessary to hold an inquest or not. The information collected by the Coroner's officer may be inaccurate, but if that information is of such a character as to raise doubt as to the cause of death, then it is the positive duty of the Coroner to hold an inquest.

On the other hand, the Coroner has no absolute right to hold inquests in every case in which he chooses to do so. "It would be intolerable," said Mr. Justice Stephen, "if he (the Coroner) had power to intrude without adequate cause upon the privacy of a family in distress, and to interfere with their arrangements for the funeral. Nothing can justify such interference, except a reasonable suspicion that there may have been something peculiar in the death, that it may have been due to other causes than common illness. In such cases the Coroner not only may, but ought to hold an inquest."

WHAT TO DO WHEN DEATH OCCURS. Every death should be registered and a Certificate of Registry obtained before the funeral. This certificate is given by the Registrar for the District, but before he can give it, personal information respecting the death must be given by the nearest relative of the deceased present at the death or in attendance during the illness. In default of any relative, then any person present at the death, or the occupier of the house in which the death occurred, may give the information and sign the Register. Written information may be substituted for personal if accompanied by a certificate of the cause of death signed by a registered medical practitioner, and sent within five days of the death. In this case the time for signing the register is extended to fourteen days, but in every other case the information must be given and the register signed within five days. No fee can be demanded by the Registrar for giving the necessary certificate.

SUDDEN DEATH. The law assumes that in every case of sudden death an inquiry is necessary; but an inquest may be unnecessary if a doctor familiar with the case will give a certificate to the effect that the cause of death was natural. If no such certificate is obtainable, information should be at once given to the Coroner's officer, as otherwise delay in the burial may be occasioned. The burial cannot take place until the death has been registered, and the Registrar cannot register in the case of a sudden death until he has had produced to him either a doctor's certificate or a certificate of the finding of the Coroner's Jury. In the case of a prolonged enquiry by a jury, the Coroner may make an order for burial, before the registry of death, but this procedure is exceptional.

PROCEDURE AT AN INQUEST.

1. OPENING OF THE COURT. The Court is opened and not less than twelve of the persons summoned are called into the jury box. They appoint a foreman, and after having been sworn diligently to inquire concerning the death in question, and to give a true verdict according to the evidence, they proceed to view the body. This "view" cannot be dispensed with. Under all ordinary circumstances the Coroner's Court is open to the public, but it is within the Coroner's sole discretion to order the Court to be cleared of the general public, or to exclude from the room in which the enquiry is being held any particular person or persons. If during the progress of the enquiry any person obstructs or hinders the enquiry, the Coroner can either fine that person or commit him to prison.

2. WITNESSES. All persons who have any knowledge respecting the circumstances of the death should attend for the purpose of giving evidence, but usually the evidence is given by witnesses who have been summoned by the Coroner's officer. The non-appearance of a witness who has been summoned by the Coroner's officers is a serious matter, for disobedience to the summons may be followed by apprehension or fine at the discretion of the Coroner. The Coroner swears and examines each witness, and then asks the jury if they desire to put any questions. The Coroner may then permit persons interested, or their representatives, to ask questions, but they have no right to do so. This applies to counsel and solicitors who may appear on behalf of interested parties, for it is entirely within the discretion of the Coroner to allow or not to allow *any person* to examine a witness or to address the jury.

The function of a Coroner's Court is that of inquiry and not that of trial, and hence statements are often permitted in the course of the inquiry which would not be evidence at the trial of a person charged with causing the death of the deceased person. A Coroner is not prohibited from receiving unsworn statements, but such statements are rarely received, and should not be allowed to influence the jury when arriving at their verdict.

3. VERDICT. After the evidence has been heard, the Coroner usually addresses the jury, stating the question or questions which they have to answer. He summarizes the evidence, and tells the jury what their verdict should be if they find certain facts. If, for instance, they find as a fact that the deceased died from injuries caused by a fall down a cliff, the verdict may be "accidental death," "manslaughter," or "murder." It is the Coroner's duty to instruct the jury what verdict to give on their findings as to facts.

4. MURDER OR MANSLAUGHTER. If the verdict be either murder or manslaughter by a known person, then the Coroner must issue his warrant for the arrest of that person. In the case of a verdict of manslaughter, the accused may be admitted to bail by the Coroner, but he has no power to accept bail if a verdict of murder has been found. In a case of murder or manslaughter, the evidence of all witnesses must be put into writing by the Coroner, signed by each witness and by the Coroner. The statements are called "depositions," and copies of these must be supplied to the person charged, on his demand and payment of the usual fees.

5. A MAJORITY VERDICT. The verdict of the majority of a Coroner's jury, provided that majority consist of not less than twelve, may be accepted. If at least twelve of the jury cannot agree on a verdict, then the Coroner has power to detain them as long as he may think fit, or he may adjourn the enquiry until the next assizes, when they may be charged by the judge. If after being charged by a judge they cannot agree, then they may be discharged.

EXHUMATION OF A BODY. A Coroner has power to order the churchwardens and overseers of a parish where a body is buried to permit its disinterment for the purpose of holding an inquest upon it. Exhumation is now, however, usually carried out by order of the Home Secretary, issued either by his own motion or at the instance of the Coroner. Under certain circumstances the High Court of Justice may order exhumation, as for instance where a Coroner has neglected to hold an inquest which should have been held, or where the interests of justice demand that a second inquest be held.

TREASURE-TROVE INQUESTS. "Treasure-trove is where any money, coin, gold, silver, plate, or bullion is found hidden in the earth or other private place, the owner thereof being unknown. And in such case the treasure found belongs to the Crown; but if he that hid it be known, or afterwards found out, the owner and not the Sovereign is entitled to it." (Stephen's Commentaries, ii. 555). From a very early date a Coroner has had jurisdiction to inquire as to found treasure, and this jurisdiction has been continued by recent legislation. The provisions set forth in the Coroner's Act, 1887, and which govern the procedure in enquiries by Coroners into causes of deaths, apply also to enquiries respecting treasure-trove.

FIRE INQUESTS. It is certain that in the 12th and 13th centuries Coroners held enquiries respecting alleged arson, and in 1859 an attempt was made to revive the practice. With one exception, however, it is not within the power of Coroners to make enquiry as to fires, unless arising in connection with an enquiry respecting deaths. The solitary exception is that of the City Coroner, who is authorized to hold Fire Inquests, as such, by the City of London Fire Inquests Act, 1888.

LAW OF EVIDENCE.

In a Court of Justice the ordinary man is frequently surprised to hear evidence rejected, which to his mind seems perfectly good evidence and material to the case which is being tried. In a court of law the "best" evidence only is admissible, and therefore a copy of a letter will not be admitted in evidence, if the original can be obtained. Similarly a witness must tell what he himself knows, and not what some one else has told him, except in certain cases when what is called "hearsay" evidence is accepted. It may be laid down as a general rule, that only such matters will be admitted in evidence as are relevant to the issue in dispute, i.e. which tends to prove or to disprove the main fact in dispute (which is called the *fact in issue*).

WHAT EVIDENCE IS ADMISSIBLE.

1. MATTERS USUALLY ADMITTED AS RELEVANT. Anything that a party to a lawsuit or a prosecution said or wrote is admissible in evidence, if it is *against* the interests of that party, and if it throws light on the matter in dispute, but it will not usually be admitted if it is in his *favour*. Again, anything which a party has done in the matter which is in dispute, or anything which explains the matter in dispute, will be admitted in evidence both *for* and *against* that party.

So, too, anything said or written by an outsider to, or in the presence of, a party to a lawsuit, is admitted in evidence if it throws any light on that party's subsequent conduct. Moreover, anything said or done by an outsider the moment that a material act was done, or so shortly before or after it, that it may fairly be said to form part of the transaction in question, will be admitted in evidence, even though it was not said or done in the hearing or presence of either party to the lawsuit or the prosecution.

> For example, the fact in issue was, whether A. murdered B. by shooting him. The fact that a witness in the room with B. when he was shot saw a man with a gun in his hand pass a window of the room in which B. was shot, and thereupon exclaimed, "there's butcher" (a nickname of A.), was admitted as evidence against A.

Of course such evidence would not conclusively prove that A. was the murderer, because the witness might be mistaken, but it would be admitted as tending to show at the time the occurrence took place, the witness's impression as to who the murderer was.

Lastly, when it is important to know the state of a man's mind when he did an act, anything he said or did while accomplishing the act, or anything which he did or said in other transactions, if it throws light on the state of his mind when he did the act is admissible in evidence. This is often done when it is sought to prove that a man is insane when he committed a murder.

2. MATTERS USUALLY NOT ADMITTED IN EVIDENCE. Anyone's opinion on the matter in issue, unless professional or expert opinion, and what other people said or did behind the back of the party *against* whom the evidence is tendered, are not allowed to be given in evidence.

> *N.B.* The word "party" means in a civil case the plaintiff or the defendant. In a criminal case it means the prisoner but not the prosecutor.

3. CIRCUMSTANTIAL EVIDENCE. As opposed to direct evidence which goes straight to prove the matter in dispute, circumstantial evidence merely proves surrounding circumstances from which the fact in issue may be inferred. For example, a passer-by sees a man emerging from a public house and wiping his mouth, the passer-by would naturally infer that the man had been taking a drink, though he had not actually seen the man doing so. In murder trials this is frequently the only evidence that is given to prove the murderer's guilt.

4. SECONDARY EVIDENCE. Sometimes first hand evidence is not available, as for instance the statements made by the victim of a murder. In that case the dying declaration of the victim will be allowed in evidence (see *Hearsay Evidence*). In other cases the original of a document may be lost or destroyed, and so therefore the document itself cannot be put in evidence, but evidence of its contents may be given, as for example a *copy* of the document can be put in, or a person may state from memory what the contents of the document were.

5. WHEN VERBAL EVIDENCE IS NOT ADMITTED. It is a general rule of the law that where the terms of a contract have been reduced to writing, no verbal evidence of those terms may be given; nor will any verbal evidence be admitted which tends to alter, add to, or contradict those terms.

But there are several exceptions to this general rule:—

(1) Verbal evidence is always admissible to prove fraud or a mistake (e.g. of a material date) of such a nature as to entitle one of the parties to relief.

(2) If it has been verbally agreed that the performance of the written contract is to depend on some condition precedent, oral evidence of this agreement may be given.

(3) Oral evidence would be admitted to prove the existence of any customary terms usually incorporated by implication in the particular kind of contract, provided they are not inconsistent with the written terms.

6. HEARSAY EVIDENCE. It would not be in the interests of the due administration of justice that persons should be called to give evidence on matters of which they have no first-hand knowledge; otherwise, the real truth, often only obtained by cross-examination, would seldom be arrived at. There are, however, certain exceptions to the rule excluding hearsay evidence; these exceptions chiefly concern the admissions of parties, matters affecting public rights, the declarations of deceased persons, and confessions.

A party to a suit may make admissions either on his pleadings or otherwise. These admissions are admissible in evidence against him. The admissions, too, of a partner are evidence against his co-partner in matters affecting the partnership.

In cases where a public right is claimed (e.g. a right of way), the origin of the right may be lost in obscurity, so the law allows the general belief of the inhabitants of the place to be admitted as evidence.

7. DECLARATIONS OF DECEASED PERSONS. The persons who know most of the truth of a matter in dispute may be dead. It would be wrong, therefore, always to exclude as hearsay any declarations they may have made when alive.

Consequently, where a deceased person has made a statement in the ordinary course of his business, such statement is admissible. And where the dead person, knowing the facts of the case, has made a declaration which is against his pecuniary interest, the declaration may be given in evidence. So, too, where a will has been lost or stolen, any declarations of the testator as to his testamentary intentions are evidence of those intentions. Pedigrees inscribed in Family Bibles and other similar records are also admitted as evidence of relationship. In cases of murder and manslaughter, a declaration as to the cause of death made by the victim after giving up all hope of recovery and in immediate fear of death is admissible against the prisoner.

8. CONFESSIONS. Persons guilty of crime may make confessions, and such confessions are admissible as evidence against them, but not against their accomplices or any one else. But such confessions will not be admissible unless they are voluntary, and they will not be deemed voluntary if they are made in consequence of any threat or inducement held out by a person in authority. The prosecutor is deemed a person in authority for such a purpose; so, too, are judges, magistrates, constables, and other officers of justice.

It lies with the prosecution to show that a confession is voluntary; but a confession does not become involuntary by the fact that it was made whilst the accused was drunk, though obviously this fact would diminish its value: nor is it involuntary when made under promise of secrecy.

COMPETENCY OF WITNESSES.

1. INFANTS, LUNATICS, ETC. An infant (a person under twenty-one years of age) is not by reason of his

infancy precluded from giving evidence. If, in the opinion of the judge, the infant is possessed of sufficient intelligence to understand the nature of the oath and the necessity for telling the truth, his evidence is perfectly admissible. There is no legal limit of age in this respect.

It would be well to point out here that the admissibility of evidence must not be confounded with its reliability. Generally not much weight can be attached to the evidence of a child of extremely tender age, though in some cases the evidence of a child is better and less liable to be corrupted by evil motives than that of a grown person. Monomaniacs and other lunatics are competent witnesses during their lucid intervals, if they are capable of comprehending the nature and obligations of the oath, though little weight will, of course, be attached to their evidence. Generally speaking, however, lunatics and idiots are not allowed to give evidence. Drunkenness, again, whether occasional or habitual, is no bar to the competency of a witness who understands the necessity for speaking the truth.

2. **ACCUSED PERSONS.** Except in certain revenue cases and in trials for the non-repair of, or nuisances in connection with, public highways, bridges and rivers, or in proceedings instituted for the purpose of enforcing purely civil rights, a person accused of a criminal offence cannot be called as a witness for the prosecution.

He may, however, by virtue of the Criminal Evidence Act, 1898, be called as a witness for the defence. But only if he wishes to be called. He is not bound to give evidence, and if he prefers not to go into the witness-box, the counsel for the prosecution must not make any comment to the jury on the fact that the prisoner could have given evidence to clear himself if he had chosen to do so.

If, however, he does avail himself of the opportunity to give evidence on oath, he renders himself liable to be cross-examined. But the cross-examining counsel must not ask him any question showing him to be a bad character, unless the prisoner relies for his defence on his own good character or on the bad character of the witnesses for the prosecution.

If the accused does not care to be sworn, he will generally be allowed to make a statement in his own defence (*always*, if he is undefended), and on this statement he will not be cross-examined.

3. **HUSBAND AND WIFE.** The consort of an accused person can, at common law, be compelled to appear as a witness for the prosecution in cases of treason and in cases where the husband is indicted for personal injuries to the wife. By statute the consort may be called in many more cases. Thus the consort may be called (1) Where the offence is connected with the non-repair of highways, or a nuisance to highways, bridges, and rivers, or, (2) Where the proceedings are to enforce a purely civil right, or (3) In cases of desertion or neglect to maintain his family, or (4) In cases of rape, indecent assault, and abduction, or (5) for offences under the Married Women's Property Act, 1882, the Criminal Law Amendment Act, 1885, and the Prevention of Cruelty to Children Act, 1904. The principal statutes which have effected this change in the common law are the Evidence Act, 1877, and the Criminal Evidence Act, 1898. The husbands or wives of the accused can be called as witnesses for the *defence* in all cases. They are liable to cross-examination, but they cannot be compelled to disclose any confidential communication made to them by their consorts during marriage.

BURDEN OF PROOF. PRESUMPTIONS. The burden of proving any given fact lies in law on the person whose case depends on the existence of that particular fact, not on the person who denies it. This is the general rule, though there are exceptions, as will be seen later.

The burden of proof is generally on the plaintiff in civil cases, and almost invariably on the prosecution in criminal cases. But while the burden may, at the outset, lie on the plaintiff or prosecutor, as the case goes on, it is frequently shifted to the defendant or accused. Thus in a libel action the plaintiff must prove that the words are libellous, that they refer to him, and that they have been published. When he has done this, the burden is shifted to the defendant, who to succeed in the action must prove that the words are true (but in *criminal* trials for libel, mere truth is not a sufficient defence, the publication of the words must also be for the public good), or that they are fair and *bona fide* comment on a matter of public interest, or that they are privileged, or, in the case of a newspaper libel, that they were published without malice and that an apology has been publicly made.

The burden of proof is often affected by *presumptions*; some of these legal presumptions are so potent that no amount of proof will be allowed to shift or contradict them, while others again are only *prima facie* and will be shifted by a very little evidence. Thus the legal presumptions that "a child under the age of seven cannot commit a felony," and that "everyone knows the law" (which means that ignorance of the law is not any excuse for a crime), are presumptions which no amount of evidence will be allowed to rebut. But the presumption that "a child between the ages of seven and fourteen is incapable of committing a crime" may be rebutted on proof that the child is possessed of a wicked and mischievous nature. Again, a person is "presumed to be innocent," but only until his guilt has been proved to the satisfaction of the jury.

Where a defendant pleads the statute of limitations, the burden of proving that the action is not barred by the statute lies on the plaintiff. This is an exception to the general rule given above. Again, in an action for malicious prosecution there is a presumption that there was reasonable and probable cause for the prosecution, so that the plaintiff must rebut this presumption by proving the absence of such cause.

The burden of proof is not always on the party who brings the action. Where a plaintiff heir-at-law seeks to upset a will proved in common form, the burden of proving the will in solemn form lies on the defendant.

COMPELLING THE ATTENDANCE OF WITNESSES. In civil cases, where it is desired to secure the attendance of a particular witness, he should be served with a *subpœna ad testificandum* which is issued by the Court. The original *subpœna* must be shown to the witness; but only a copy need be given to him. It should be served a sufficient time before his attendance is required, to enable him to put his more pressing affairs in order and to cancel his appointments; but domestic troubles or business arrangements are no excuse for disobeying the *subpœna*. The witness in a civil case is not bound to attend unless his reasonable travelling and other expenses are tendered to him. What his reasonable expenses are depends to a great extent on the position of the particular witness.

If the witness is called to give evidence on a matter of personal opinion or professional skill, and not as a mere witness to the facts of the case, he is entitled to reasonable compensation for his loss of time.

If a person is not required to give evidence, but merely to produce a document in his possession, he should be served with a *subpœna duces tecum*.

In cases of felony or misdemeanour the committing magistrates are in the habit of binding over by recognizances (i.e., a bond with a penalty which is *estreated* or forfeited if the witness fails to appear) the witnesses that appear before them, commanding them to appear at the trial. In other cases their attendance is secured by *subpœna*.

If the witness is in criminal custody, the person who desires his attendance should apply by affidavit to one of the judges of the King's Bench Division, or to the Home Secretary, for an order for him to be brought up and examined at the trial; and if he is in civil custody, an application, supported by an affidavit, should be made to a judge in chambers. Another way of securing his attendance is by a writ of *habeas corpus ad testificandum*.

The offence of refusing to appear as a witness when properly summoned to do so is usually regarded as con-

tempt of court and may, as such, be visited with imprisonment. Occasionally it is subject to indictment. Where the defaulting witness has been bound over to appear, his recognizances are liable to be estreated. A witness attending a trial cannot be arrested on any civil process while there, or on his way there or back.

PERSONS PRIVILEGED TO WITHHOLD EVIDENCE. Not every kind of person can be called as a witness, and those called on to give evidence cannot be compelled to answer every question that may be put to them. Generally speaking, no person can be compelled to give an answer to a question which would render him liable to criminal proceedings. The law will not allow the powers of courts of justice to be employed as a means of extorting confessions of crime.

The law, too, with a high regard for the sanctity of married life, regards communications which pass between married couples as privileged. No husband or wife can be compelled to disclose any such communication. Of a somewhat similar nature are the communications which pass between a person and his legal advisers. No barrister or solicitor can, without his client's consent, be called upon to disclose any communication that his client may have made to him in his professional capacity. But such communication must not have been made in the furtherance of some criminal object, or the privilege lapses.

The law is not on the same footing with regard to confidential communications to medical men and confessions to priests. Medical men can be compelled to disclose such communications. With regard to priests, the authorities are somewhat conflicting. The better opinion appears to be that while the priest may, if he likes, disclose such a communication, it would be contrary to good feeling to compel him to do so, and that judges would not countenance any such compulsion.

Jurymen, again, cannot be called upon to disclose information they have obtained in their capacity of jurors; nor can any question be asked as to what may have happened during their consultations. Similarly, judges cannot be called on to disclose anything which has come to their knowledge in the discharge of their official duties; barristers cannot be compelled to give evidence as to any remarks they may have made in Court in their legal capacity. Nor can Members of Parliament be compelled to testify, without the consent of the House, as to what has occurred in debate.

Under the Bankers' Books Evidence Act, 1879, no officer of a bank can be compelled, in any action in which the bank is not a party, to give any evidence of the bank's transactions, or to produce the books of the bank without an order from the judge. So when a party desires evidence of such a nature, he must apply to a judge for an order to inspect and take copies of such entries in the banker's books as he may require. For reasons of public policy, civil servants and other state officials cannot be compelled to disclose communications they have received in their official capacity, without the consent of the heads of their respective departments.

THE OATH. The general rule is that evidence is not admissible unless it is given on oath, or by some form of affirmation which the law regards as equivalent to an oath. If a person objects to taking the oath on the ground that he has no religious belief, or that the taking of an oath is contrary to his religious belief, he may make a solemn affirmation which has in law the same effect as an oath.

There is no particular compulsory form for the oath. The witness may adopt any form which would be binding on his conscience or employ any ceremonies required by his religion. In the case of a Christian, the usual ceremony is for the witness to hold a copy of the New Testament or Gospels in his naked right hand and listen attentively whilst the officer of the court says: "The evidence which you shall give between the parties shall be the truth, the whole truth, and nothing but the truth, so help you God." After which the witness must kiss the book.

In the case of an affirmation, the witness must say: "I, John Jones (or whatever his name may be), do solemnly, sincerely, and truly declare and affirm, that the evidence I shall give will be the truth, the whole truth, and nothing but the truth." Scottish witnesses usually swear with uplifted hand, instead of touching or kissing the book. Jews are sworn on the Pentateuch, with their heads covered. And Mohammedans are sworn on the Koran.

The ceremony in the case of a Chinaman is peculiar. The witness kneels down and breaks a saucer, whereupon the officer of the court says: "You shall tell the truth, and the whole truth; the saucer is cracked, and if you do not tell the truth, your soul will be cracked like the saucer."

If a witness, contrary to his oath or affirmation, wilfully gives false evidence, either by stating a thing to be true, when he knows it to be untrue, or by stating a thing to be true when he knows nothing whatever about its truth or falseness, he is guilty of perjury, which is a misdemeanour punishable with penal servitude for seven years.

There are two exceptions to the general rule excluding evidence not given on oath, in addition to the case already mentioned, where the accused makes an unsworn statement. These exceptions were made by the Criminal Law Amendment Act, 1885, and the Prevention of Cruelty to Children Act, 1904. Under the first of these acts, where a person is charged with defiling a girl under thirteen years of age, the girl may make an unsworn statement, if in the opinion of the Court she understands the duty of speaking the truth. Under the second Act there is a similar provision which extends not only to the child cruelly treated, but also to other children, witnesses of the cruelty. The unsworn evidence of children is not, however, to be accepted without corroboration.

AN AFFIDAVIT. This is a written statement on oath sworn before a Commissioner for Oaths, and used in cases where oral evidence is not required; for instance, in support of an application for an injunction. Affidavits usually require to be stamped with a 2s. 6d. stamp.

CRIMINAL LAW.

WHAT IS A CRIME? A crime is an act of commission or omission which is punishable by law. As an example of a crime by simple omission, may be mentioned the neglect of children by their parents or guardians. For an act to be a crime it is necessary that the doer of the act shall have a genuine intention to do the act; that is, he must so fix his mind upon the act as to know that it will be the actual one done by him when the moment for doing it comes. This criminal intention is generally referred to as "the guilty state of mind," and unless this is present the law does not regard the act as a crime, except in certain cases where the law says that the doing of an act is a crime irrespective of the intention of the wrong-doer, e.g. offences against the licensing laws, committing nuisances, and the like. When a criminal intention is present, we say the person is actuated by malice.

DIFFERENCE BETWEEN A CRIME AND A TORT. A crime, as we have seen, is an act committed or omitted which is unlawful, and for which the law provides a definite punishment. A tort, on the other hand, is a wrong which arises, according to that celebrated jurist, Sir Frederick Pollock, Bart., from either of the following circumstances:

(1) It may be an act not justified or excused by the law, and intended by the doer to cause harm, and which actually does cause harm.

(2) It may be an act contrary to law which causes harm not intended by the doer.

(3) It may be an act or an omission which causes harm not intended, but which should have been foreseen and prevented.

(4) It may consist in not preventing harm which the party was bound within certain limits to prevent.

It has been frequently stated that a tort is a breach of duty fixed by law, and for which redress can be obtained by a lawsuit. In other cases, a tort has been defined as

a wrong independent of contract, because in a contract the wrongs which arise are restricted by the terms of the contract. Torts embrace wrongs, some of which are of a personal character; some affect property, whilst others affect persons and property, either or both. Certain acts may be either a crime or a tort; i.e. the injured party may bring a criminal prosecution against the wrong-doer or may bring an action for damages, e.g. libel.

SUMMARY AND INDICTABLE OFFENCES. Breaches of the criminal law are divisible into (1) offences punishable upon summary conviction, that is, without the intervention of a jury, and (2) indictable offences, that is, such crimes as can only be adequately punished after trial by jury. Such crimes are called indictable because the accusation must be formally set down in writing as preliminary to a trial before a jury. The charges thus preferred in writing constitute an *indictment*, and the *counts* of an indictment are its several parts, charging distinct offences. Indictable offences are triable at quarter sessions, or at the assizes (in London, at the Central Criminal Court), or in the King's Bench Division of the High Court.

LIMITS OF RESPONSIBILITY for doing what in ordinary circumstances would constitute a crime:—

1. Children under seven years of age are held incapable of committing a crime.

2. Children between seven and fourteen years of age:—No act done by a child between these ages is held to be a crime unless it can be shown that the child has sufficient capacity to know that the act is wrong. The law presumes that between these ages innocence still continues, but if it can be shown that malice, revenge, craft, cunning, and such like exist, then the doer of the act is held responsible.

3. Lunatics. No act committed by a lunatic is a crime if at the time when the act is done the doer, in consequence of a defective mental power or of any disease of the mind, is incapable of knowing the nature of the act, or from knowing that the act is wrong, or from being unable to control his own conduct, unless such inability to control himself has been produced by his own default.

> Thus, if A kills B under the delusion that he is breaking a jar, A's act is not a crime. But if A allows his mind to dwell upon and desire B's death, and then, under the influence of mental disease, this desire becomes uncontrollable, and A kills B, the act of A would be a crime.

The law presumes every person to be sane and responsible for his acts until the contrary be proved.

4. Persons acting under fear. A person who acts in company with others under threat of being killed, or instantly of receiving grievous bodily harm if he refuses to act with them, is in one case not held to be guilty of the crime committed. This is where the threats have been applied by rebels or rioters. But threats of future injury, or the command of another, does not excuse any offence. Thus a man may be forced to serve in a rebel army under threat of immediate death if he refused. He would not, in this case, be guilty of a crime.

5. Married women are held to be innocent of a crime if they commit acts of theft, or if they knowingly receive stolen goods in the presence of their husbands. It is presumed that they act under the coercion of their husbands; but this presumption may be set aside if it can be shown that as a matter of fact they were not coerced by their husbands. This presumption of innocence does not apply to high treason, murder, manslaughter, or robbery.

6. Acts done under the authority of law are not crimes unless it can be shown that undue force or undue liberty was exercised in the doing of such acts.

7. Acts in self-defence. The law does not regard it as a crime if a person kills or grievously wounds another, if that person has to kill or wound in order to save himself from death or grievous wounding, and provided also that he does not use more force than he believes to be really necessary under the circumstances. Thus a householder may kill a burglar if he has good reason to know that his own life or the lives of members of his family are in point of fact in immediate danger.

8. Drunkenness. As a rule, drunkenness is no excuse for a crime, but if the drunkenness be not voluntary, as may be the case when brought about by the contrivance of others, the prisoner will not be held responsible for his conduct whilst under the influence of drink. Again, where a person's drunken habits cause insanity, or a temporary fit of madness like delirium tremens, so as to make him incapable of distinguishing right from wrong, he will not be accountable whilst acting in that state of his mind.

ACCESSORIES OF CRIMES. Accessories are those who are not actually present at the commission of a felony, and who are not the chief actors in it, but are in some way connected with it. These are divided into two classes:—

> (1) An accessory "before the fact" is one who directly or indirectly counsels, commands, or influences any person to commit a crime, which is really committed in consequence of such counselling, commanding, or influence.
>
> (2) An accessory "after the fact" is one who knows that a crime has been committed, and does such acts as are calculated to enable the doer of the crime to escape from punishment. This does not apply to a married woman who does such acts on behalf of her husband.

Any person who shall become an accessory before the fact to any felony may be indicted, tried, convicted, and punished in all respects as if he were a principal felon; and any person who becomes an accessory after the fact to any felony, may be indicted and convicted either as an accessory after the fact with the principal felon, or he may be indicted and convicted of a substantive felony. In order to substantiate the charge of harbouring a felon, it must be shown that the party charged did some act to assist the felon personally.

DISTINCTION BETWEEN FELONIES AND MISDEMEANOURS. In English law, crimes are divided into "Felonies" and "Misdemeanours." The difference between them does not depend upon their gravity or seriousness, it is purely historical. Before the Felony Act of 1870, certain crimes at Common Law brought with them the loss or forfeiture of goods. Felony was in past times an act for which a man lost or gave up his "fee" or estate. The only practical distinction between felony and misdemeanour is that for felony arrests may be made by private persons acting without judicial authority. The chief felonies are treason, murder, arson, rape, theft. It has been said that the word "misdemeanour" is applied to all those crimes and offences for which the law has not provided a particular name.

CRIMES AGAINST THE PUBLIC.

1. TREASON. Every one commits high treason who forms and displays by any overt act, or by publishing any printing or writing, an intention to kill or destroy the king, or to do him any bodily harm tending to death or destruction, maim or wounding, imprisonment or restraint. The foregoing includes such acts as attempts to depose the monarch, to levy war against the monarch, or to instigate any foreigner to invade the realm or any of the British dominions. Treason is a capital offence.

2. MISPRISION OF TREASON. Misprision of treason consists in knowing that some other person has committed high treason, and refraining from giving information thereof to a judge of assize or a justice of the peace. Any person convicted of this offence is punished by imprisonment for life, and forfeits all his goods and the profits of his lands for life.

3. ATTEMPTS TO ALARM OR INJURE THE SOVEREIGN. The following are regarded by the law as attempts to alarm or injure the Sovereign:—

> (1) To point, aim, present at or near the person of the king, any firearm, loaded or not, or any other kind of arm. (2) To discharge at or near the person of the king, any loaded arm or explosive material. (3) To strike, or to strike at, the person of the king in any way whatever, or to throw anything at or upon the king. (4) To attempt to do any of these acts, or to produce or have near the person of the king, any arm or destructive or dangerous thing, with intent to use the same to injure or alarm the king.

Upon conviction for any of the above, the punishment is imprisonment and whipping.

4. **TREASON FELONY.** The crime of Treason Felony means the general defiance of public government, and includes any attempts or acts which have for their purpose the overthrow by means of force of the existing system of government. The Treason Felony Act was passed in 1848. The use of explosives by the Fenians, Gallagher and others, in 1883, amounted to Treason Felony. Intending to depose the king, intending to levy war, inciting to mutiny or to invasion of the realm are treason felonies, the maximum punishment for which is penal servitude for life.

5. **SEDITION.** A seditious intention is an intention to bring into hatred or contempt, or to incite disaffection against the King, the Houses of Parliament, the administration of justice, or to incite His Majesty's subjects, otherwise than by lawful means, to alter the mode of government, or to incite any person to disturb the peace, or to raise discontent, or to promote feelings of ill-will and hostility between different classes of His Majesty's subjects. There is no such offence as "sedition" itself known to the law. There are seditious libels, seditious conspiracies, and seditious meetings.

Unlawful Oaths. It is unlawful to administer, to cause to be administered, to assist in administering, to be present at and to consent to the administering or taking of any oath or obligation which is intended to be binding upon the person taking the same, when such oath has reference to mutinous or seditious purposes, or to the disturbance of the peace. It is further unlawful to obey the orders or commands of any body of men not lawfully constituted; it is also unlawful not to inform or give evidence against any associate, confederate, or other person. Punishment upon conviction, varies from penal servitude for life to three years' imprisonment.

Unlawful Societies. Any club or society is unlawful if its members are required, or permitted to do any unlawful act or undertaking, or to take any oath not required or authorised by law. It may be mentioned that the various monastic orders now existing in England and also the Jesuits are unlawful societies within the meaning of this term.

Unlawful Drilling. All assemblies which are held in order that those assembled may train or drill themselves, or be trained or drilled in the use of arms, or for practising military movements are unlawful unless duly authorised. Punishment on conviction—seven years' penal servitude.

6. **FOREIGN ENLISTMENT ACT.** Any person commits a misdemeanour who, within the limits of His Majesty's dominions, prepares or fits out any naval or military expedition to proceed against any friendly state, or is engaged in such preparation or fitting out, or assists therein, or is employed in any capacity in such expedition; or who, being a British subject, accepts or agrees to accept commission in any foreign state at war with any friendly state; or who, if he be a master of a ship, takes or has on board within His Majesty's dominions any illegally enlisted person. Punishment is fine and imprisonment and forfeiture of ships.

7. **MUTINY.** Mutiny is a felony for which the maximum punishment is penal servitude for life. It includes any malicious endeavour to seduce any person serving in His Majesty's forces from duty and allegiance, or to incite or stir up any person to commit any act of mutiny.

8. **COINING.** Every person commits a felony who makes, gilds or silvers any current counterfeit coin; or who files, clips, or alters any coin with intent to make it pass for current gold or silver coin; or who buys, sells, receives pays, or puts off any counterfeit gold or silver coin at a lower rate than it imports, or was apparently intended to import, or offers to do any such thing whether or not such coin was in a fit state to be uttered, or whether or not the counterfeiting was finished; or who imports any counterfeit coin from beyond the seas, knowing it to be counterfeit; or who makes, or mends, or has in his possession any puncheon, matrix, stamp, or die pattern or mould adapted and intended to be used in the making of counterfeit coins. It should be remembered that coining *good* money without the permission of the Crown is also a crime.

9. **BLASPHEMY** includes the publishing of matter relating to God, Jesus Christ, the Bible, or the Book of Common Prayer, intended to wound the feelings of mankind, or to excite contempt and hatred against the Church by law established, or intended to promote immorality. The punishment is fine and imprisonment not exceeding three years.

10. **SACRILEGE.** This is a felony punishable with penal servitude for life. It consists in (1) Breaking and entering a church, chapel, meeting-house, or other place of divine worship, and committing a felony therein, or (2) Being in such a place, committing a felony therein and then breaking out.

11. **DISTURBING PUBLIC WORSHIP.** Any person maliciously or contemptuously disturbing a lawful meeting of persons assembled for worship or molesting any person there, is liable to a fine of £40. "Brawling" in a place of worship or in a burial ground is punishable by a fine of £5 or two months' imprisonment.

12. **CONCEALMENT OF TREASURE-TROVE.** Any person finding treasure, that is to say, gold or silver, either in the shape of coin, plate, or bullion, which was hidden in ancient times, and which has now no owner, commits a misdemeanour if he conceals such treasure. It makes no difference whether a person finds the treasure himself, or received it from another person who was ignorant of its nature. Such treasure is the property of the Crown.

13. **LOST AND FOUND.** When a person has found a lost article, the owner of which may not improbably be found, he must not keep it with the intention of claiming a reward. If any reward is given, it is of the nature of a gratuity, the loser not being obliged to give any. If the finder in the supposed case retains the article in his own possession, he is guilty of larceny. He is not bound, however, to advertise the find. His duty is to hand it over to the police, and if the owner is not found within a reasonable time (usually three months) the finder may claim it from the police, for he has a right to it against the whole world except the true owner. If the true owner is found, even after the three months, the article must be returned to him. People who lose their property often insert advertisements in the newspapers announcing the fact, and sometimes offering a reward for its return. They should be careful how they word these advertisements, for by the Larceny Act, 1861, if such advertisement contains any words purporting that no questions will be asked of the person returning the property, or even that a return will be made to any pawnbroker who has lent money on it, the advertiser, the printer, and the publisher will have to pay a penalty of £50 to the person who first undertakes, with the consent of the Attorney-General, to sue them for it.

OFFENCES AGAINST PUBLIC JUSTICE.

1. **PERJURY** means false swearing, knowing it to be false. In order, however, for such false swearing to be perjury, it must take place in a judicial proceeding, and before a competent authority; the false swearing must also be material to the issue being tried; that is to say, it is perjury to swear falsely in any circumstances which conduce to the explanation of the case.

Procuring a person to commit a perjury, which he actually commits in consequence of such procurement, is *subornation of perjury*. The maximum punishment for either of these offences is seven years' penal servitude.

2. **BRIBERY.** Every one who gives or offers to any person holding any judicial office, and every person holding any judicial office who accepts any bribe, commits a misdemeanour. This crime is now very rare. Bribery of voters includes a series of acts such as giving, lending, or promising money or any valuable consideration, or accepting the same with a view to procure the return of any person in any election.

3. **INTERFERENCE WITH SUITS.** The following are the chief forms of such interference:—

(*a*) **Common Barratry** implies moving, exciting, or maintaining suits or quarrels either at law or otherwise.

(*b*) **Maintenance** implies assisting the plaintiff in any

legal proceeding in which the person giving the assistance has no valuable interest, or in which he acts from any improper motive.

(c) **Champerty** implies that the motive of the maintainor is an agreement that if the suit maintained by him succeeds, the subject matter of the suit shall be divided between himself and the plaintiff.

4. **INTERFERENCE WITH THE COURSE OF JUSTICE.** Of the other ways of interference with the course of justice, may be mentioned the following:—

(a) **Embracery.** Any one who by any means whatever, except the production of evidence and argument in open court, attempts to influence or instruct any juryman, or to incline him to be more favourable to one side than the other, commits the misdemeanour of embracery.

(b) **Compounding Offences.** The crime of compounding an offence is the taking of any reward for refraining from prosecuting a person for felony. The punishment on conviction includes fine and imprisonment.

(c) **Misprision of Felony** consists in the concealment of felony, whether such felony be at Common Law or by Statute. If a man silently observes the commission of a felony without using any endeavour to apprehend the offender, or without giving information as to the offender, he is guilty of "misprision of felony."

(d) **Contempt of Court** is an insult to a Court of Justice, or any defiance or resistance to its authority. "If the attempt be committed in the face of the Court, the offender may be instantly apprehended and imprisoned at the discretion of the judges, without any further proof or examination." Doing anything calculated to prejudice a fair trial of any case, or the disobedience of a judicial order, or the interference with the due course of justice amounts to contempt of court. Commenting in a newspaper on the facts of a case which is proceeding (*sub judice*) at the time, especially if it be in a way calculated to influence the jury, and writing letters about such a case to the judge and jury who are trying it, are instances of gross contempt of court.

OFFENCES AGAINST THE PUBLIC PEACE.

1. **A RIOT** is an unlawful assembly which has actually begun to execute the purpose for which it assembled by a breach of the peace and to the terror of the public. A lawful assembly may become a riot if those assembled proceed to execute an unlawful purpose, and to terrorise the people, although the assembly had not that purpose when it assembled. The punishment is imprisonment with hard labour.

Wherever twelve or more persons are unlawfully and tumultuously assembled to the disturbance of the public peace, the magistrate must read a proclamation calling upon them to disperse in the King's name. This is popularly known as "Reading the Riot Act." Any person obstructing the reading of this proclamation, or remaining for one hour after it has been read, is guilty of felony and liable to penal servitude for life.

If the mob is actually committing crime, it is lawful to disperse them by force without reading the Riot Act, and if in so doing any member of the mob is killed, such killing is not murder.

The proclamation runs:—"Our Sovereign Lord the King chargeth and commandeth all persons being assembled immediately to disperse themselves, and peaceably to depart to their habitations or to their lawful business, upon the pains contained in the Act made in the first year of King George for preventing tumultuous and riotous assemblies. GOD SAVE THE KING."

2. **PRIZE FIGHTS.** Not only are the combatants in a prize fight guilty of a breach of the peace, but all persons who assemble for the purpose of seeing the fight are principals in the breach of the peace, and are indictable for an assault as well as the actual combatants. All prize fights are illegal, and all persons engaged in them are punishable by law. If one of the combatants kill the other, not only is he guilty of manslaughter, but also the seconds, promoters, and everybody present and approving. Sparring as an exhibition of skill is not unlawful unless the fighting continue so as to endanger the lives of the exhibitors.

3. **DUELLING.** If two persons deliberately engage in a duel, it may be regarded as a felony even if no injury is done to either party. The possibility of its being classified as a heinous offence arises from the fact that legally it is an attempt to murder. Should either party be killed, such killing is murder. Both seconds as well as the living principal are liable to be punished as murderers in the event of a duel proving fatal.

4. **SENDING THREATENING LETTERS.** Any person who maliciously sends or delivers, directly or indirectly, or causes to be received, knowing the contents thereof, any letter or writing threatening to kill any person, is guilty of a felony. So also is any person who, knowing the contents thereof, sends or causes to be sent any letter or writing threatening to burn or destroy any house, barn, or building, or any rick of hay, grain, or straw, or any agricultural produce, or any ship or vessel, or to kill, maim, or wound any cattle. Maximum punishment is ten years' penal servitude.

5. **A LIBEL** is a malicious defamation either in printing, writing, or drawing or caricature, which tends to blacken the memory or the reputation of any person or persons, and expose him or them to public hatred, contempt, or ridicule. It is no answer to an indictment for libel for the defendant to prove that the libel is true, unless he can show that it was for the public benefit. If a libel tends to make a breach of the peace, it is punishable criminally, though communicated only to the person defamed and not published to a third party. (See "Libel" under *Torts*.)

6. **FORCIBLE ENTRY AND DETAINER.** Forcible entry means entering upon any lands or tenements, in order to take possession of them, in a violent manner; and it is immaterial whether such violence consists in actual force applied to any other person or in threats, or in breaking open any house, or in collecting together an unusual number of persons for the purpose of making such entry. Forcible detainer consists in having wrongfully entered upon any lands or tenements, and then detaining such lands or tenements in such a way as would need forcible means to repossess them.

OFFENCES AGAINST PUBLIC TRADE.

1. **COMBINATIONS TO INTERFERE WITH TRADE.** Any conspiracy between two or more persons to do or to procure to be done any act to restrain trade is punishable by law.

2. **COUNTERFEITING TRADE MARKS.** This may be done in a variety of ways, such as by forging or counterfeiting any trade mark, applying any forged or counterfeit trade mark to any article; enclosing any article in any case or vessel bearing a forged trade mark; attaching any article to any case, cover, reel, ticket, or label to which any trade mark has been falsely applied. Punishment for this misdemeanour includes fine and imprisonment.

3. **ABSCONDING DEBTORS.** By the Debtor's Act, 1869, if any person who is adjudged a bankrupt, or has his affairs liquidated by arrangement after the presentation of a bankruptcy petition against him or the commencement of a liquidation, or within four months before such presentation or commencement, makes preparation for quitting England and for taking with him any of his property amounting to £20 or upwards, which ought by law to be divided amongst his creditors, he commits a felony and is liable on conviction to two years' imprisonment with hard labour. Moreover by the same Act, where the plaintiff in a superior court proves, at any time before final judgment, on oath to the satisfaction of the judge, that he has a good cause of action to the amount of £50 and upwards, and that there is a probable cause for believing that the defendant is about to quit England, the Judge may order the arrest and detention of the defendant, for a period not exceeding six months, unless he gives security that he will not go out of England without the leave of the court.

4. **FRAUDULENT DEBTORS.** These are persons adjudged bankrupt who fraudulently fail to fully and truly discover to the trustees all their property, to deliver up to the trustee such property as is in their custody or

under their control, to deliver up as the trustee directs all books, papers, documents, and writings relating to their property. The maximum punishment is two years' imprisonment.

5. **UNDISCHARGED BANKRUPT OBTAINING CREDIT.** Any undischarged bankrupt under the Bankruptcy Act of 1883 who obtains credit to the extent of £20 or upwards from any person without informing such person that he is an undischarged bankrupt, commits a misdemeanour, and is liable to two years' imprisonment.

6. **FALSE CLAIMS ON A BANKRUPT'S ESTATE.** Any person is liable, upon conviction, to one year's imprisonment with hard labour who, being a creditor, wilfully and with intent to defraud, makes any false claim, or any proof, declaration, or statement of account, which is untrue in any material particular.

7. **SMUGGLING.** The law punishes persons by fine varying from £100 to £500, who assemble together in order to smuggle, or who actually do unship, land, run, carry, convey, or conceal any spirits, tobacco, or prohibited goods. Likewise any person who in any way resists or obstructs any officer of the army, navy, marines, coast-guard, customs, or any other person lawfully employed for the prevention of smuggling, in the execution of his duty, is liable to a fine of £100.

OFFENCES AGAINST PUBLIC MORALS AND HEALTH.

1. **NUISANCES.** A nuisance is an act which is not warranted by law, or an omission to discharge a legal duty, which act or omission obstructs or causes inconvenience or damage to other persons in the exercise of rights common to all His Majesty's subjects. Thus the failure to repair a public highway is a common nuisance. Every one who commits a common nuisance is guilty of a misdemeanour.

2. **DRIVING TO THE PUBLIC DANGER.** Any person having charge of any carriage or vehicle, who by careless or furious driving or racing does or causes to be done any bodily harm to any person, is guilty of a misdemeanour and liable to two years' imprisonment. (Refer to *Motor Cars and Motor Cycles.*)

3. **VAGRANCY.** There are three classes of vagrants recognised by law: (1) Idle and disorderly persons; (2) Rogues and Vagabonds; (3) Incorrigible rogues. For a statement of the law respecting these three classes of vagrants, see "Punishment of Vagrants," under *Poor Law Administration.*

4. **INDECENCY.** The leading idea with reference to indecent conduct is that whatever outrages decency and is injurious to public morals is criminal in the eyes of the law and is a misdemeanour. As examples of such criminal conduct may be mentioned: (1) Undressing on the beach and bathing near inhabited houses. (2) The publication of any obscene books or pictures. (3) Any obscene exhibition to which spectators are admitted on payment.

5. **BIGAMY** means marrying again during the lifetime of the first wife or husband. If, however, it can be proved that the person charged really believed and had reasonable grounds for believing that his or her wife or husband was dead at the time of the second marriage, then the charge fails. Likewise if the person charged has neither seen nor heard of or from the first wife or husband for seven years immediately preceding the second marriage, the charge also fails. The maximum punishment is seven years' penal servitude.

6. **UNWHOLESOME FOOD.** The law forbids any person to wilfully expose, or cause to be exposed for sale articles of food unfit for consumption, or to knowingly permit unwholesome ingredients to be mixed in articles of food. Such acts are held to be dangerous to the health or life of the public.

7. **GAMING AND GAMING HOUSES.** Gaming means playing at games either of chance or of mixed chance and skill. The keeper of a gaming-house may be fined up to £50 and costs, or in default may be sent to gaol for twelve months. An Act of 1853 makes it a specific offence to publish advertisements, handbills, placards, etc., showing that any house is kept or opened for the purpose of betting. The Vagrant Act of 1873 contains the following clause respecting gambling:

> Every person playing or betting by way of wagering or gaming on any street, road, highway, or other open and public space, or in any open place to which the public have or are permitted to have access, at or with any table or instrument of gaming, or any coin, card, token, or other article used as an instrument or means of gaming, at any game or pretended game of chance, shall be deemed a rogue and a vagabond.

The aim of the legislature in recent times has been to reduce the opportunities of gambling by poor people. It has prohibited, under a penalty not exceeding £30 and costs, or two months' imprisonment, the sending or publishing in any way of any letter, telegram, or advertisement, whereby it is made to appear that any person will give information or advice as to any bet or wager relating to a horse-race or any other sport, or will make on behalf of any other person any such bet or wager. By the Betting and Loans (Infants) Act, 1892, the sending of any such letter or advertisement to an infant (i.e., any one under twenty one years of age), is made a misdemeanour to which imprisonment and heavy fines are attached.

It should be noted that gaming and wagering transactions being void in law, no action can be brought to recover any money alleged to have been won in any such transaction. (Refer to "Illegal Agreements" in *Index.*)

8. **STREET BETTING.** By the Street Betting Act, 1906, "any person frequenting or loitering in streets or public places, on behalf either of himself or of any other person, for the purpose of bookmaking, or betting, or wagering, or agreeing to bet or wager, or paying, or receiving, or settling bets," shall be liable to a maximum fine of £10; for a second offence, to a fine not exceeding £20; and for a third or subsequent offence, on conviction on indictment, to a fine of £50 or six months' imprisonment, or, on summary conviction, to a fine of £30 or three months' imprisonment. The penalties incurred by a third offence are also incurred whenever a bookmaker has any betting transaction in a public place with a person under 16 years of age. A constable is authorised by this Act to take into custody without warrant any person found committing an offence under this Act.

9. **HOUSES OF ILL FAME.** A house of ill fame is a house or room or set of rooms in any house, kept for purposes of prostitution. It is immaterial whether indecent or disorderly conduct is or is not perceptible from the outside. Persons keeping such houses are liable to be sentenced to hard labour.

By the Vagrancy Act, 1898, every male person who knowingly lives wholly or in part on the earnings of prostitution, or who in any public place persistently solicits or importunes for immoral purposes, may be dealt with as a rogue and a vagabond. (Refer to "Rogues and Vagabonds" in *Index.*) Again under the Vagrancy Act, 1824, prostitutes behaving in a riotous or indecent manner in a place of public resort are liable to imprisonment with hard labour for one calendar month.

10. **FORTUNE TELLING.** It is an offence against the Vagrancy Acts to pretend or profess to tell fortunes, or to use any subtle craft, means, or device, by palmistry or otherwise to deceive or impose on any of His Majesty's subjects.

11. **RAFFLES AND LOTTERIES.** By the Gaming Act, 1802, the keeping of an office for the purpose of carrying on any lottery not authorised by Parliament is punishable with a penalty of £500, and imprisonment as a rogue and a vagabond. By the Lotteries Act, 1823, the selling of tickets or chances in any lottery (including Foreign State Lotteries) not authorised by Act of Parliament, or the publishing of any scheme for the sale of such tickets or chances involves a penalty of £50 and punishment as a rogue and a vagabond. Whether or not a prize competition in a newspaper amounts to a lottery depends on whether the prizes are to be won by the skill of the competitors or by chance.

Raffles often take place at bazaars. They are quite

illegal, being lotteries, and the fact that they are being conducted on behalf of a Charity makes no difference whatever. Certain lotteries, however, are authorised by Act of Parliament, and chief among them are those carried on by Art Unions under a Royal Charter or under a Constitution and rules approved by the Privy Council.

12. ALIENS. The Aliens Act, 1905, makes it possible for immigration officers to prevent the landing in this country of undesirable alien immigrants if they be lunatics, idiots, or persons suffering from any disease or infirmity which renders them likely to become a charge on the rates or otherwise a detriment to the public. They may also be excluded if they cannot show that they have in their possession, or are in a position to obtain, means of decently supporting themselves and their dependants; or if they have been sentenced for an extraditable crime in a foreign country; or if they have already been expelled from this country under an Expulsion Order. Alien Immigrants are not, however, to be excluded merely on the ground of want of means, if they are seeking a refuge in this country to avoid religious or political persecution. If an alien is convicted of any serious offence, the Secretary of State may, on the certificate of the court which tried the case, order him to be expelled from the country, either in lieu of, or in addition to, the ordinary sentence.

OFFENCES AGAINST INDIVIDUALS AND THEIR PROPERTY.

1. HOMICIDE, that is, the killing of a human being by a human being, whether by an act or by an omission; whenever, in fact, the death of a person can be proved to be the result of such act or omission. Unlawful homicide with malice aforethought is *murder.*

2. SUICIDE. When a person kills himself in a manner which in the case of another person would amount to murder, he is guilty of murder, and every person who aids and abets any person in so killing himself is an accessory before the fact, or a principal in the second degree in such murder.

3. MANSLAUGHTER is unlawful homicide without malice aforethought. Thus, if a man strikes another not intending to kill him, or to do him grievous bodily harm, and the blow causes death, the crime is manslaughter, not murder. Every person who kills another is presumed to have wilfully murdered him, unless the circumstances are such as to raise a contrary presumption. In the case of three men who were firing at a target, and the shot from one of their rifles killed a boy who was on a tree, it was held that all three were guilty of manslaughter. Lord Chief Justice Coleridge said:

> "If a person will, without taking proper precautions, do an act which is in itself dangerous, even though not an unlawful act in itself, and if in the course of it he kills another person, he does a criminal act which in law constitutes manslaughter."

To reduce murder to manslaughter, the "provocation" must be such as would upset not merely a hasty and hot-tempered person, but one of ordinary sense and calmness. A person convicted of manslaughter is liable to penal servitude for life.

4. ATTEMPT TO MURDER. Any one who attempts to commit murder is guilty of felony and is liable on conviction to penal servitude for life. The following are among the things which are looked upon as attempts to commit murder: administering poison or any other destructive thing; wounding or causing serious bodily harm; shooting at any person; attempting to drown, suffocate, or strangle any person; destroying or damaging any building by means of explosive substances. The punishment is the same as for manslaughter.

5. ABORTION is any attempt to bring about the miscarriage of any woman whether she be pregnant or not, and any person who administers or causes to be taken by the woman any poison or other noxious thing, or who unlawfully uses any other instrument or any means whatsoever with the like intent, is liable on conviction to penal servitude for life.

6. ABDUCTION. Any person who from motives of *lucre* takes away or detains against her will a woman of any age who has expectations of a fortune with intent to marry her is guilty of felony and is liable to penal servitude for fourteen years. The same punishment applies to the taking away *by force* or detaining against her will of a woman of any age with intent to marry her. Any person who for immoral purposes takes any unmarried girl under the age of *eighteen* years out of the custody of her parents or guardians is liable to imprisonment for two years. Any person who unlawfully takes or causes to be taken any unmarried girl under the age of *sixteen* years out of the possession and against the will of her parents or guardians, is guilty of the crime of abduction, and is liable to two years' imprisonment. It matters not whether the girl consents or not, or whether the prisoner believed that the girl was over the age of sixteen years.

7. OFFENCES AGAINST CHILDREN. Any person who by force or fraud steals or decoys away or detains a child under fourteen years of age, with the intention of withdrawing or withholding such child from the possession of its parents or guardians, is guilty of felony, and is liable on conviction to a punishment of seven years' penal servitude. And any person who receives or harbours any such child, knowing it to be thus dealt with, is liable to the same punishment.

Unlawfully to abandon or to expose any child under the age of two years so as to endanger its life or its health, or to injure it permanently, is an offence punishable with penal servitude for five years. Any person convicted of concealing the birth of a child is liable to two years' imprisonment. (See under *Children's Charter*, p. 563A.).

8. CRUELTY TO ANIMALS. It is an offence under the Cruelty to Animals Act, 1849, punishable with a penalty not exceeding £5, or imprisonment with or without hard labour not exceeding three months, to cruelly beat, ill-treat, over-drive, over-ride, abuse or torture any animal. Similar punishment is awarded under the Wild Animals in Captivity Protection Act, 1900, to those who infuriate, tease or terrify animals or who cause them unnecessary suffering. Moreover, no unlicensed person may perform any experiment calculated to cause pain upon any living vertebrate animal under penalty of fifty pounds. The vivisection of such animal is only permitted in the case of those who hold special licences from the Home Secretary. Even in such cases the conduct of the experiments is subject to restrictions imposed with the view to obviating, as far as possible, the infliction of pain.

9. ASSAULTS. An assault is an attempt unlawfully to apply the least actual force to the person of another, either directly or indirectly. It is also the act of using a gesture towards another, so as to give him reasonable grounds to believe that the person using such gesture meant to use actual force upon him. It includes also the act of depriving another person of his liberty. Common assaults are punishable by fine or imprisonment. When the assault occasions actual bodily harm, then it is punishable by a maximum punishment of five years' penal servitude. When the assault is with intent to maim or to disfigure or disable, the crime is punishable with penal servitude for life.

Any person who assaults, resists, or wilfully obstructs any peace officer in the execution of his duty, or any person aiding such officer, is liable upon conviction to two years' imprisonment and hard labour.

10 LARCENY, or theft, is the act of dealing unlawfully with anything capable of being stolen, with the intention of permanently converting the thing to the use of any person other than the owner.

> Thus, if a carter converts his master's cart to his own use, or if a man finds lost property and knowing the owner converts it to his own use; or if a man finds money in a bureau sent to him for repairs, and appropriates it; or if a post office clerk destroys two letters to hide his mistake in sorting—all these acts amount to theft.

11. RECEIVING STOLEN GOODS OR MONEY, knowing them to have been stolen, or unlawfully obtained, is a crime. It is also a crime to take any money or reward

directly or indirectly on the pretence of helping any person to recover any stolen property, unless the receiver uses due diligence to cause the offender to be brought to trial.

12. **EMBEZZLEMENT.** This crime is theft by a clerk or servant, or any other person employed in the capacity of clerk or servant, when such person converts to his own use anything received by him from another person for his master or employer. The test to establish the crime of embezzlement is this, viz., "whether the person charged is under the control and bound to obey the orders of his master. He may be so without being bound to devote his whole time to his master." A person indicted for embezzlement must be shown either to have been "a clerk or servant," or, at all events, to have been "employed for the purpose, or in the capacity of, a clerk or servant." The maximum punishment is fourteen years' penal servitude.

13. **OBTAINING GOODS BY FALSE PRETENCES.** When goods are obtained by false pretences, it means that they are obtained by false representation made either verbally, by writing, or by conduct, and such a representation may amount to a false pretence, although a person of common prudence might easily have detected its falsehood. It amounts to this, that if a particular idea is intended to be conveyed, and it really is conveyed, and if such idea be false, then the conduct amounts to a "false pretence." But the false representation must be of an *existing* fact, otherwise there is no crime. For example, a single man induces a woman to part with her money on the pretence that he is going to marry her and to furnish a home for her. Here the false statement is made with regard to a *future* event, and therefore there is no crime. Had a married man done the same thing, he would by his conduct have led the woman to believe that he was a single man, and therefore he would have made a false representation of an existing fact, and hence would have been guilty of the crime of false pretences. The maximum punishment for false pretences is five years' penal servitude.

14. **BURGLARY** is the breaking and entering a dwelling house between 9 p.m. and 6 a.m., with intent to commit a felony, or the breaking out after having committed one inside, or after having gone in with the intention of committing one. "**Breaking**" means the breaking of any part, internal or external, of the building itself, or the opening by any means whatever of any door, window, shutter, cellar-flap, or any other thing intended to cover openings to the house, or to give passage from one part to another. "**Entering**" means the entrance into the house of any part of the offender's body, or of any instrument held in his hand for the purpose of intimidating any person in the house, or of removing goods. Persons convicted of burglary are liable to penal servitude for life.

15. **HOUSEBREAKING** differs from burglary in two important particulars: (1) It is not material between what hours it is committed. (2) It is not confined to dwelling houses alone, but extends to out-houses, shops, school houses, etc. The maximum punishment for housebreaking is fourteen years' penal servitude.

16. **FORGERY** means making a false document with intent to defraud. And this may be done by alteration of its contents, by adding to its contents, or by signing it in the name of any other person with the intention to defraud. The punishment varies according to the nature of the offence, the maximum being penal servitude for life.

17. **OFFENCES AS TO DOCUMENTS.** The law is very severe in the case of any person fraudulently destroying, cancelling, or obliterating documents relating to property:—

(*a*) **Wills.** Any person who either during the life of the testator, or after his death, steals, or for any fraudulent purpose destroys, cancels, obliterates, alters, or conceals the whole or any part of any will or testamentary instrument, commits a felony, and is liable, upon conviction, to penal servitude for life.

(*b*) **Registers.** Any person who destroys, defaces, injures, or fraudulently alters any register of births, deaths, baptisms, or burials required by law to be kept, or who does any of the above things to a certified copy of such registers; or who inserts or causes to be inserted false entries; or who forges the seal belonging to any register office or burial board, is liable, on conviction, to a minimum punishment of penal servitude for life.

(*c*) **Title Deeds.** Any person who steals, destroys, cancels, obliterates, or conceals, with fraudulent intent, the whole or any part of any document of title to lands, commits a felony and is liable, on conviction, to five years' penal servitude.

(*d*) **Judicial Documents.** Any person is liable to five years' penal servitude who steals or unlawfully and maliciously cancels, obliterates, injures, or destroys any original document belonging to any Court of Record, or in any way relating to the business of any office or employment under His Majesty.

(*e*) **Disclosure of Official Documents.** Any person who wrongfully obtains possession of such documents (including plans of any fortress, arsenal, etc.), or wrongfully communicates such documents or information thence derived, will be held guilty of a misdemeanour; and where such communication is made to the agent of a Foreign Power, will be held guilty of felony and be liable to penal servitude for life.

18. **RECOVERY OF STOLEN PROPERTY.** If goods have been stolen and have not been sold again in *market overt*, the owner may retake them wherever he finds them, provided he do so without a breach of the peace. If he fears committing such a breach, he should bring a civil action for their return. If the stolen goods have been bought by a *bonâ fide* purchaser in market overt, the owner must first prosecute the thief to conviction, upon which he may either apply to the court for an order for their restitution or bring a civil action for their return.

If the property stolen has been pawned, the court has power to make the restitution order on such terms as it may think just, usually on payment to the pawnbroker of the amount he has advanced. In cases where the property has not been stolen but has been obtained by *false pretences*, or some other misdemeanour, the owner cannot as a rule recover it from a *bonâ fide* purchaser.

CONTRACTS.

No branch of English law is so important as that relating to contracts. All the business of every-day life is based on contract, and probably at least nine-tenths of the litigation which arises is owing to some breach, real or supposed, of contract. It is important, therefore, to form a correct idea as to

WHAT IS A CONTRACT? It is often said that a contract is an agreement between parties, but that definition is not enough. It must be an agreement of such a nature as will be recognised and enforced by law. A contract has been defined as "an agreement entered into between two or more persons sanctioned by the law, by which agreement each undertakes to do, or to abstain from doing, a specified act or acts, in consideration of the other or others doing, or abstaining from doing, some other act or acts." It is true that every contract is an agreement, but not every agreement is a contract. The law requires before an agreement becomes an enforceable contract, that certain requirements shall be fulfilled, such as the legal capacity of the parties, the legality of the object aimed at, and, in some cases, the way in which the contract is evidenced. Before proceeding further with contracts, it will be convenient to explain what is meant by a *Deed*.

WHAT IS A DEED? Most people have had occasion at some time or other to sign or witness a deed, as they are always used in the transfer of houses and land. A deed is a written instrument, sealed and delivered, and Coke says it must be written on paper or parchment. In practice it is always signed, but there have often been long arguments as to signature being necessary. By the

common law signature was not necessary; but in certain cases the Statute law makes it obligatory. The seal in olden times was always that of the person signing; now it generally takes the form of an ordinary red wafer. The document must be "delivered," which is simply the handing over of the writing by the person to be bound thereunder. But in modern practice, the delivery is done by the person signing placing his finger on the seal and saying, "I deliver this as my act and deed." Deeds have always been most seriously regarded by the law. "It is called a deed," says Blackstone, "because it is the most solemn and authentic act that a man can possibly perform with relation to the disposal of his property; and therefore a man shall always be estopped by his own deed, or not permitted to aver or prove anything in contradiction to what he has once so solemnly and deliberately avowed." In the present day, a deed may be either written, printed, type-written, or lithographed. When a deed is made by one person only, it is called a *deed poll;* when by two or more persons, it is an *indenture.* Formerly, when deeds were made between two or more persons, it was usual to write the copy for each on the same piece of parchment, with some words or letters written between them. The parchment was then cut with a saw-like edge, and it was always easy to see by these indentations that the one piece had been cut from the other. Hence the name indenture. By the Real Property Act, 1845, it is provided that a deed purporting to be an indenture shall have the effect of an indenture though not actually indented. An *escrow* is an instrument, executed as a deed in favour of one person, but delivered to a third person, to be held by him till the beneficiary does something stipulated for, when this condition is performed the escrow becomes a deed.

FORMS OF CONTRACT.

Contracts may be divided into three classes—contracts by matter of record, contracts under seal, that is by deed, which are sometimes spoken of as specialties, and contracts not under seal which are called simple contracts and sometimes parole contracts.

1. CONTRACTS OF RECORD are contracts which are founded on the authority of a court of record. Their main feature is that they prove themselves; in other words, the mere production of the record of the court is sufficient evidence of the existence of the contract. Further, they require no consideration to render them binding. A judgment of a Court ordering a person to pay a sum of money to another is a contract of record, but such contracts are not really contracts, as they lack the essential ingredient of agreement between the parties.

2. CONTRACTS UNDER SEAL. Such contracts are those made by deed, and speaking generally, they require no consideration to support them. It is, however, allowable in disputing the validity of a deed to show that the consideration was illegal or immoral, or that the deed was obtained by duress or fraud. If the contract be in restraint of trade, and it is made without consideration, although under seal, it will be held to be void.

3. CONTRACTS NOT UNDER SEAL, or simple contracts, may be made either in writing or by word of mouth. The law requires writing in various cases, including assignments of copyright, Bills of Exchange and Promissory Notes, contracts of Marine Insurance, acceptance and transfer of shares, acknowledgment of a debt barred by the Statute of Limitations, and all contracts coming under section 4 of the Statute of Frauds, or section 4 of the Sale of Goods Act, 1893.

The latter requirements as to Contracts which must be in Writing are so important, especially to tradesmen, that special reference must be made to them. The Statute of Frauds enacts by the fourth section:—

> That no action shall be brought whereby to charge any executor or administrator upon any special promise to answer damages out of his own estate; or whereby to charge the defendant upon any special promise for the debt, default or miscarriage of another person; or to charge any person upon any agreement made upon consideration of marriage; or upon any contract or sale of lands, tenements or hereditaments, or any interest in or concerning them or upon any agreement that is not to be performed within the space of one year from the making thereof; unless the agreement upon which such action shall be brought or some memorandum or note thereof, shall be in writing and signed by the party to be charged therewith, or some other person thereunto by him lawfully authorised.

The Sale of Goods Act by section 4 enacts:—

> A contract for the sale of any goods of the value of ten pounds or upwards shall not be enforceable by action unless the buyer shall accept part of the goods so sold, and actually receive the same, or give something in earnest to bind the contract, or in part payment, or unless some note or memorandum in writing of the contract be made and signed by the party to be charged or his agent in that behalf.

If these requirements are not rigidly complied with, the agreement is unenforceable, and no action against the party can be successful simply for the want of proper evidence to prove the existence of the contract. More upon the subject will be found in the section relating to "Sale" in *Commercial Guide.*

In the ordinary affairs of life there are numerous transactions where no formal declaration of intention to pay is made. The man who, rushing to his train past a bookstall to the keeper of which he is well known, seizes a newspaper, is under an obligation to pay. This is an *Implied Contract.* In such matters the law is always ready to imply intention from conduct.

THE ESSENTIALS OF A CONTRACT.

There are certain features common to all simple contracts. They are offer, acceptance and consideration.

1. OFFER First there must be an *offer* by one of the parties. It need not be, and frequently is not, made in words. For instance, the penny omnibus passing along the street makes an offer to carry passengers, though the conductor may not have said a word. Persons entering the omnibus are deemed to have accepted the offer and to have agreed to pay the proper fare. Another familiar form of offer is the one which appears in advertisements offering rewards for lost articles. A offers a reward of £1 to any one who will find and return to him his lost dog; when B, in answer to the advertisement, returns the dog he is entitled to the £1. The danger of making general offers by advertisement was shown in what is known as the Smoke-ball Case. Carlill *v.* Carbolic Smoke Ball Co. [1893], 1 Q. B. 256.

> The Company issued an advertisement in which they said "£100 reward will be paid by the Carbolic Smoke Ball Company to any person who contracts the increasing epidemic, influenza, after having used the ball three times daily for two weeks, according to the printed directions supplied with each ball. £100 is deposited with the Alliance Bank, Regent Street, showing our sincerity in the matter." A Mrs. Carlill, on the faith of this advertisement, bought a Carbolic Smoke Ball, used it as directed, for the stipulated period, but afterwards was attacked by influenza. She brought an action to recover the £100, and Mr. Justice Hawkins gave judgment in her favour. The Company appealed, it being contended that the words in the advertisement expressed an intention but did not amount to a promise. Further, that the plaintiff had never intimated her acceptance of the offer, if one had been made. But the Court held there had been an offer and a valid acceptance, and the Company had to pay the £100.

2. ACCEPTANCE. The second essential of a contract is acceptance. This may be given in several ways, but is usually by assent, either verbal or written. A writes to B, "I will sell you 100 tons of coal for £50, if I get a letter by return of post." B accepts the offer by return, and the contract is complete. The acceptance may be by a promise, as where an employer promises wages for services offered. It may, as we have seen, be made by the doing of an act, as the return of a dog advertised for. As a rule the acceptance, like the offer, must be communicated to the other party to the contract, but the necessity of communicating the acceptance may be waived by the terms of the offer, as was the case in the Smoke Ball Case, where Lord Lindley said, "The true view in a case of this kind is, that the person who makes the offer shows by his language and by the nature of the transaction that he does not expect and

does not require notice of the acceptance apart from notice of the performance." Another rule with regard to acceptance is that it must be to an offer which was intended to, and was capable of, creating legal relations. The acceptance must also be in the identical terms of the offer. Thus, if A offers to B a truck load of potatoes free on rail at Canterbury, and B replies, "I accept your offer carriage paid to London," there is no contract, for B has introduced a new condition. It must be noticed that an offer may be withdrawn or varied at any time before acceptance, and that it may be determined by the effluxion of the prescribed or of a reasonable time, or by the death of either of the parties before acceptance. (See "Offer" and "Acceptance" under *Sale* in *Commercial Guide*.)

3. **CONSIDERATION.** The third essential in all simple contracts is that there must be what the lawyers call consideration. Familiar as the term is, the exact definition is not so easy. It is not by any means necessary that it should consist of money. The late Mr. Justice Lush said, "a valuable consideration, in the sense of the law, may consist either in some right, interest, profit or benefit accruing to the one party, or some forbearance, detriment, loss, or responsibility, given, suffered, or undertaken by the other." It may, therefore, be either a present act, forbearance or sufferance, or a promise to do, forbear, or suffer. The Courts will never enquire into the adequacy of the consideration, as was shown in a case which has become historic. It is known as Thornborow *v.* Whitacre, and is to be found in Lord Raymond's Reports, p. 1164.

> Mr. Thornborow, one day early in the reign of Queen Anne, said to Mr. Whitacre, "If I give you £5 down, will you give me two rye corns next Monday, four grains on Monday week, eight grains on the following Monday, and so on in proportion each Monday for a year." There were no Board Schools in those days, and Mr. Whitacre readily agreed to the proposal. He took the £5, and set about fulfilling the contract. But he found it impossible for all the rye grown in England that year would not have been sufficient. Mr. Thornborow brought an action. Mr. Whitacre urged there was no adequate consideration. But the Court held there was consideration, and the defence failed.

The importance of consideration may be shown from the other examples. A says to B, "Will you give me £50 a year for life?" B agrees, but the agreement cannot be enforced because there is no consideration. But it is otherwise if A, a gentleman, says to B, a lady, "Will you marry me?" and B replies "I will," for here the mere promise of the one is the consideration for the promise of the other. Agreements which lack any of the essentials, offer, acceptance or consideration, are therefore not enforceable contracts. An agreement made without consideration is sometimes called *nudum pactum*—a naked agreement. It must be noticed that the consideration must be a legal one, and it must not be immoral. Nor will a past consideration make the agreement enforceable, unless it consists of services rendered by the plaintiff at the defendant's request.

WHO MAY CONTRACT?

With regard to the capacity of parties, it may be generally stated that all persons of adult age may enter into contracts. But the following points must be noticed.

1. **CONTRACTS OF INFANTS.** First as regards *infants*: that is, persons under twenty-one years of age. The old rule of Common Law was that contracts entered into by an infant were not enforceable against him unless they were for necessaries. If the contract were for his benefit, however, he could enforce it as against the other party, and the other party could in certain cases enforce it against the infant, e.g. a contract of apprenticeship. After reaching the age of twenty-one he could ratify any contract he had made. Two recent Acts have materially modified the former law. The Infants' Relief Act, 1874, provides that all contracts entered into by infants for the payment of money lent or for goods supplied (other than necessaries), and all accounts stated with infants are absolutely void. It further provides that even if the infant on reaching full age shall ratify the contract, it shall not be enforceable. The second Statute, the Betting and Loans (Infant) Act, 1892, also provides in section 5, that if an infant who has contracted a void loan agrees, after he comes of age, to repay it, the agreement, and any instrument, negotiable or otherwise, given in pursuance of such agreement, shall be void absolutely as against all persons whatsoever. The law, therefore, is that, except with regard to necessaries, no infant can be sued on a contract, though the infant may sue supposing the other contracting party is an adult.

An infant's necessaries are not merely food and clothing, but all those things which, taking into consideration his station in life, it is essential for him to have. In the case of Peters *v.* Fleming, the infant was an under-graduate at Cambridge. His father was a Member of Parliament, and a man of considerable means. The jury found that four rings, a gold watch chain, and a pair of breast pins were necessaries, and a court of four judges refused to disturb the verdict. There is an important provision in the Sale of Goods Act, 1893, which says, "where necessaries are sold and delivered to an infant . . . he must pay a reasonable price therefor; 'necessaries' in this section mean goods suitable to the condition of life of such infant . . . and to his actual requirements at the time of sale and delivery." Tradesmen, therefore, who supply even "necessaries" to a minor do so at great peril, for the young gentleman may show that he was already well supplied, and in those circumstances the tradesman cannot recover. The chief authority for this proposition is the case of Johnstone *v.* Marks. In that case, Mr. Johnstone, a tailor, had supplied clothes to young Mr. Marks. When he sued for the amount, the defence was made that Mr. Marks was an infant. "That may be so," said Mr. Johnstone, "but these clothes were necessaries." "No they were not," said Marks, "for although you did not know it, I had plenty of clothes already." So Mr. Johnstone could not recover. Lord Esher, on the case coming before him, said:—

> "It lies upon the plaintiff to prove, not that the goods supplied belong to the class of necessaries as distinguished from that of luxuries, but that the goods supplied, when supplied, were necessaries to the infant. The circumstance that the infant was sufficiently supplied at the time of the additional supply is obviously material, as well as fatal to the contention of the plaintiff."

There are still some contracts made by infants upon which an infant may be sued after he has attained his majority. Where infants acquire an interest in permanent property to which obligations are attached as e.g. under a lease, or make a contract which involves continuous rights and liabilities and have taken some benefit under such contract, as e.g. a contract under which they became possessed of shares in a company; such infants will be bound unless they expressly disclaim or repudiate the contract within a reasonable time after they have attained their majority.

2. **CONTRACTS OF MARRIED WOMEN.** Under the Common Law, any contract entered into by a married woman was void, and that remained the law until the passing of the Married Women's Property Acts, the most important of which is the Act of 1882. There were a few exceptions to the *Common Law Rule* as to the contracts of married women being void; (1) a married woman might have contractual rights concerning a *chose in action* assigned to her, or with regard to her own personal services; (2) the wife of the king could also make contracts as a *femme sole* (i.e., an unmarried woman); (3) so could the wife of a man who had been outlawed; (4) by custom of the City of London, a married woman might trade there, and make the necessary contracts; (5) and a divorced woman reverted to her former position as *femme sole*. Under the *Married Women's Property Act*, 1882, a married woman may sue and be sued with regard to her separate property. [Refer to section relating to the law of *Husband and Wife*.]

3. **CONTRACTS OF LUNATICS AND DRUNKEN PERSONS.** Lunatics, like infants, are liable for contracts for necessaries, even though the other contracting party knew of the lunacy. As regards other contracts, provided they be fair, the lunatic is liable unless he can prove that the

other party knew of his condition. "When a person enters into a contract and afterwards alleges that he was so insane at the time that he did not know what he was doing, and proves the allegation, the contract is as binding on him in every respect as if he had been sane when he made it, unless he can prove further that the person with whom he contracted knew him to be so insane as not to be able of understanding what he was about." (Lord Esher). The contracts of *intoxicated persons* follow the same rules. It must be noticed, too, that though a contract entered into by a drunken person may be avoided by him if he can show that the other party to the contract knew of his condition, yet if he ratify his contract after becoming sober, he will be held liable for it. It is never open to one party to a contract to avoid it on the ground that the other party was intoxicated when it was entered into.

4. CONTRACTS OF CORPORATIONS. A corporation can contract only through an authorised agent. A non-trading corporation, such as a borough council, must contract under seal, unless the contract be of trifling importance, like the hire of a porter. Trading corporations, of which the most familiar examples are Limited Companies, can contract like a private person in regard to all matters within the scope of their powers as defined by the Memorandum of Association. Thus, where the law requires a private person to contract by deed, so must a Limited Company; and where a private person can enter into a contract by a simple writing or by word of mouth, so also can a Limited Company.

Certain statutes, like the Public Health Acts, have made it imperative that the contracts of corporations should be under seal. Thus, where the sanitary authority of a locality enter into a contract for the execution of sanitary works, the contract must be under seal, otherwise the party executing the works will not be able to sue either for the contract price or for the value of the work he has actually done.

5. CONTRACTS OF ALIENS. With few exceptions, an alien has the same contractual capacity as a British subject. It is provided in the Naturalization Act that no alien can become owner of a British ship. As regards aliens who are at war with Great Britain, they cannot contract without licence from the Crown, nor, during war, can they enforce any existing contract. But on peace being restored, all their rights under existing contracts are restored. Foreign States, and their representatives here, as well as the officials and household of the latter, cannot be sued here unless they care to submit themselves to the jurisdiction.

6. SOME SPECIAL DISABILITIES. No *convict* whose offence has been either treason or felony can make a valid contract, nor enforce one already made, during the continuance of his punishment. A *barrister* cannot sue for his fees. *Medical men* were under much the same disability until 1858, but now they can sue for their professional fees. The College of Physicians has power to make bye-laws prohibiting their Fellows from exercising the privilege.

AGREEMENTS WHICH ARE VOID OR VOIDABLE.

If there be certain flaws in an agreement, they may render it "void," that is, destitute of legal effect; or they may only make it "voidable," which means that one of the parties to the agreement has the option of affirming or rejecting the agreement. Sir William Anson explains the difference in this way:—

> A *void* contract, when shown to be void, can create no legal rights, the whole transaction is null and falls to the ground. A *voidable* contract is a contract with a flaw, of which one of the parties may, if he please, take advantage. If he do not exercise this right within a reasonable time, so that the position of parties is altered, or if he take benefit under the contract, or if third persons acquire rights under it, his power of avoidance ceases, and he is bound by the contract.

1. MISTAKE IN CONTRACTS. A mistake on the part of one of the parties does not vitiate a contract. But where there is a genuine mistake as to the nature of the transaction, or as to the person with whom the contract is made or (in some cases) as to the subject matter of the contract, the contract will be void. In fact there is no contract. The following cases give apt illustrations.

> (1) Mackinnon, a very old man, was induced to indorse a bill for £3,000. He was told it was a guarantee: in fact it was an ordinary bill of exchange. It afterwards came into the possession of one Foster, for value, who sued Mackinnon for the amount. The jury found there was no negligence on the part of Mackinnon, and it was held that Foster could not recover. Such a proceeding, Mr. Justice Byles said, "was invalid, not merely on the ground of fraud, where fraud exists, but on the ground that the mind of the signer did not accompany the signature; in other words, that he never intended to sign, and therefore in contemplation of law never did sign the contract to which his name is appended; and therefore there was no contract."
>
> (2) One Jones had been in the habit of buying leather piping from a Mr. Brocklehurst. He sent to him an order for some piping, which was received by a Mr. Bolton, who had just purchased Brocklehurst's business. Bolton executed the order without advising Jones of any change in the business. Jones sometime afterwards learned that the goods had not come from Brocklehurst, and refused to pay for them. It was held that Bolton could not recover, because there was no contract made with him.
>
> (3) A contract was made for the sale of a cargo of corn, the contracting parties believing that it was then on its way from Salonica to England. But the corn had got damaged, and at the time the contract was made it had been unloaded and sold at Tunis. The contract was held to be void, one of the judges remarking that it clearly implied "that there was something to be sold and something to be purchased, whereas the object of the sale had ceased to exist."

2. MONEY PAID BY MISTAKE. The general rule is that if money has been paid under a mistake of facts it is recoverable, but that money paid under a mistake as to the law is not. This is in accordance with the old legal maxim, *Ignorantia facti excusat; ignorantia juris non excusat* (ignorance of the fact excuses; ignorance of the law does not excuse). Every Englishman is presumed to know the law. "Every man," said Lord Ellenborough, "must be taken to be cognisant of the law: otherwise there is no saying to what extent the excuse of ignorance might not be carried. It would be urged in almost every case."

3. MISREPRESENTATION. Each party to a contract is expected to exercise ordinary care and to make due investigations and enquiries. But where one of the parties is at the mercy of the representations of the other, and cannot make enquiries for himself, any misrepresentations by the other, though made innocently, will render the contract voidable. In contracts of insurance and the sale of land (as to both of which more will be said hereafter), any material misrepresentation, though innocent, may cause the contract to be set aside.

4. CONCEALMENT. But in certain contracts it is not enough that there should be no material misrepresentation; there must also be a full disclosure of material matters. "These," says Sir W. Anson, "are contracts in which one of the parties is presumed to have means of knowledge which are not accessible to the other, and is then bound to tell him everything which may be supposed likely to affect his judgment. In other words, every contract may be invalidated by material misrepresentation, and some contracts even by non-disclosure of a material fact. Contracts of marine, fire, and life insurance, contracts for the sale of land, for family settlements, and for the allotment of shares in companies, are of the special class affected by non-disclosure.

5. FRAUD. Fraud on the part of one of the parties will vitiate any contract. There has always been a reluctance on the part of judges to define fraud, but from a consideration of the cases it may be said to be a false representation of fact, made with the knowledge that it is false, or with a reckless disregard as to whether it is true or false, with the intention that the party to whom it is made should act upon it, and which does actually induce him to act upon it. Not every misrepresentation is a fraud, for a misrepresentation may be made innocently. *Caveat emptor* (let the buyer beware), has long been a

maxim of the law; and a seller is not obliged to make known the existence of defects in the articles he sells, but the law will not allow him to state such defects do not exist. Where there has been a misrepresentation, the only remedy of the party aggrieved is an action to set aside the contract; where there has been fraud he may bring an action for the wrong committed. "No action," Lord Justice Bramwell once said, "is maintainable for a mere statement, although untrue, and although acted on to the damage of the person to whom it is made, unless that statement is false to the knowledge of the person making it." But under the Directors' Liability Act, directors are liable to persons who have taken shares on the faith of a prospectus which contains false statements that the directors honestly believe, unless they had reasonable grounds for such belief, or unless they made the statements on the report of an expert whom they honestly and reasonably believed to be competent, or unless the statements were a correct version of an official document.

6. DURESS AND UNDUE INFLUENCE. A contract made under duress or undue influence is also voidable. *Duress* consists in actual or threatened violence or unlawful imprisonment to the contracting party or his wife, child, or parent. It must be inflicted or threatened by the other party to the contract, or by some one acting under him. *Undue influence* is often presumed from the relationship of the parties, as in the case of transactions between solicitor and client, guardian and ward, parent and child, trustee and cestui-que trust (that is the person possessing the equitable right to property vested in the trustee). In these cases the burden of proving the validity of the transaction lies upon the person obtaining the benefit under it.

7. CONTRACTS WHICH MUST BE IN WRITING. It is a common error to suppose that verbal contracts cannot be enforced in a Court of Law. The true rule is that any legal contract, whether verbal or otherwise, can be enforced unless there is in existence some Act of Parliament which requires such a contract to be in writing. There are many such Acts. The Statute of Frauds, 1677, provides that the following contracts cannot be enforced unless they be in writing, or unless some note or memorandum thereof in writing has been signed by the defendant or his authorised agent.

> (1) Promises by an executor or administrator to answer damages out of his own estate. (2) Promises to answer for the debt, default, or miscarriages of another person. (3) Agreements made in consideration of marriage (i.e. promises to pay a person money if he will marry some one). (4) Contracts concerning lands, tenements, or hereditaments, or interests therein. (5) Agreements incapable of being performed within the space of one year from the making thereof.

Lord Tenterden's Act, 1828, provides that no action may be brought whereby to charge any person by reason of any representation or assurance made concerning the character, conduct, credit, ability, trade or dealings of any other person, unless such representation or assurance is in writing signed by the party to be charged. The Sale of Goods Act, 1893, provides that contracts for the sale of goods of the value of £10 or upwards, cannot be enforced by action unless the buyer accepts part of the goods so actually sold and actually receives the same or gives something in earnest, or part payment, or unless some note or memorandum in writing of the contract be made by the party to be charged or his agent.

Other Statutes require that leases must be by deed, unless they be leases for a term not exceeding three years, upon which the rent reserved amounts to two-thirds at least of the full annual value of the property. Moreover, by other Acts, acknowledgments of debts barred by the Statutes of Limitations, Assignments of Copyright, Contracts of Marine Insurance, Assignments of *choses in action* (i.e., proprietary rights enforceable by action), Bills of Exchange, Promissory Notes, Acceptances and Transfer of Shares in Companies, and certain contracts made between solicitors and their clients, are not enforceable unless they be in writing.

ILLEGAL AGREEMENTS

1. GAMING. There are some agreements which from their very nature are illegal, and which therefore cannot become enforceable contracts. Wagering and gaming contracts are prohibited by statute. Sec. 18 of the 8 & 9 Vict. c. 109 provides:—

> That all contracts or agreements whether by parol or in writing, by way of gaming or wagering, shall be null and void: and that no suit shall be brought or maintained in any court of law or equity for recovering any sum of money or valuable thing alleged to be won upon any wager, or which shall have been deposited in the hands of any person to abide the event upon which any wager shall have been made.

The matter is carried farther by Sec. 1 of the Gaming Act, 1892, which says:—

> "Any promise, express or implied, to pay any person any sum of money paid by him under, or in respect of, any contract or agreement rendered null and void by the Act of 8 and 9 Vict., c. 109, or to pay any sum of money by way of commission, fee, reward, or otherwise, in respect of any such contract, or of any services in relation thereto or in connection therewith, shall be null and void, and no action shall be brought or maintained to recover any such sum of money."

The effect of these statutes is to make all wagers and all transactions collateral thereto null and void. With regard to speculative transactions in which certain outside-brokers engage, if it appears that, looking at the transactions as a whole, the contract is not one for the *bonâ fide* purchase or sale of shares, but merely a gamble in differences, it is void as a wager. Money or securities deposited "to cover differences" may be recovered by the depositor even in a wagering transaction.

Gambling on loss by Maritime Perils was dealt with by an Act passed in October, 1909, the measure being an outcome of a movement to prevent the evil consequences which were believed to arise from persons deriving pecuniary benefits from disasters at sea, which it was believed were frequently and deliberately brought about. (For particulars of Maritime Insurance (Gambling Policies) Act of 1909, see p. 663.)

2. AGREEMENTS AGAINST PUBLIC POLICY. A contract which is for the benefit of an enemy, or which is an affront to a friendly foreign power, will not be enforced by the courts. Nor will contracts be enforced which have for their object the sale of public offices, the assignment of the salaries or pensions attaching to such offices, the securing of votes of members of Parliament, contracts to present to Ecclesiastical benefices in consideration of money or other payment also come under the same head. Agreements to commit a crime or a wrong are also illegal.

3. INTERFERING WITH THE COURSE OF JUSTICE. Any contract which tends to interfere with the course of justice will not be enforced. Any agreement which has for its object the stifling of a prosecution or the compounding of offences is illegal and void. "You shall not," said Lord Westbury, "make a trade of a felony. If you are aware that a crime has been committed you shall not convert that crime into a source of profit or benefit to yourself." There is an exception, however, in those cases where civil and criminal remedies exist side by side. A compromise of a prosecution is then permissible. Lord Chief Justice Denman expressed the rule thus:—

> We shall probably be safe in laying it down that the law will permit a compromise of all offences, though made the subject of a criminal prosecution, for which offence the injured party might sue and recover damages in an action. It is often the only manner in which he can obtain redress. But if the offence is of a public nature, no agreement can be valid that is founded on the consideration of stifling a prosecution for it.

In this connection we may refer to MAINTENANCE, which is defined as "the offence of intermeddling in a suit that in no way belongs to one, by maintaining or assisting either party, with money or otherwise, to prosecute or defend it. It is an offence against justice, as it keeps alive strife and contention, and perverts the remedial powers of the law into an engine of oppression. A man may, however, maintain the suit of his near kinsman, servant,

or poor neighbour, out of charity and compassion, with impunity; or he may maintain a suit in which he has any interest, actual or contingent." CHAMPERTY, which is an agreement between a plaintiff or a defendant in a suit and a third person to share in the profits of a suit is also illegal.

4. RESTRAINT OF MARRIAGE. Any agreements restricting freedom of marriage are discouraged by the courts as being injurious to the moral well-being of the community.

> Mr. Newsham Peers, a gentleman who lived a century and a half ago, gave a document to Mrs. Catherine Lowe, which said, "I do hereby promise Mrs. Catherine Lowe that I will not marry with any person beside herself; if I do I agree to pay to the said Catherine Lowe £1,000 within three months next after I shall marry any one else." Ten years later the gentleman altered his mind and married another lady. Mrs. Lowe, therefore brought an action to recover the £1,000, but it was decided the agreement was void as being in restraint of marriage.

But the cases show that conditions are valid which prohibit a person marrying before reaching the age of twenty-one, or with a named person, or with a person of a particular nationality or religion or calling in life. In other words, it appears to be the law that a condition is good if it does not directly or indirectly "import an absolute injunction to celibacy." Marriage brokerage contracts or agreements to pay money for bringing about a marriage are also illegal.

5. RESTRAINT OF TRADE. Formerly it was held that contracts in general restraint of trade were void, but that contracts in partial restraint of trade were good. Nowadays the distinction between general restraint and partial restraint is no longer of importance. The true test is, is the restraint *reasonable*, does it only do what is necessary to protect the interests of the party for whose benefit the covenant not to carry on the trade was given. If it does this and nothing more the restraint, whether general or partial, is reasonable and perfectly good. A restraint upon the pupil of a dentist not to practise dentistry after his apprenticeship within 200 miles of his master has been held to be unreasonable, but a restraint upon a linen draper's assistant not to carry on that business within half a mile of her employer has been held reasonable. So long as a restraint is reasonable as to space, it does not matter for how long a time the condition is imposed.

What is reasonable as to space depends upon the circumstances of the case. What would formerly have been regarded unreasonable as to space would now, under modern industrial conditions, be held perfectly reasonable. Thus, Nordenfelt was a maker of guns, which he supplied to every civilised government. He sold his business to a company, and agreed that for twenty-five years he would cease to make guns or to carry on any business likely to compete with such business as the company was carrying on for the time being. It was held that owing to the nature of the business the restriction was reasonable though unlimited in point of space, and was therefore perfectly good.

ASSIGNMENT.

1. ASSIGNMENT OF CONTRACTS. As we have seen, the general rule is that the only persons who can be affected by a contract are those who are parties to it. And we shall hereafter see that certain contracts are ended by the death of one of the parties thereto. But it is nevertheless possible for some of the parties to a contract to drop out and for others to take their place, and this may be done either by the voluntary act of the contracting parties or by operation of law. At common law "a chose in action" (that is, a right to demand by action a debt or sum of money or other right) was not assignable unless by agreement of all the parties concerned, except in the case of negotiable instruments (bills of exchange, etc., as to which reference should be made to the special section dealing with that matter), which were excepted for the sake of mercantile convenience. There was another exception, for it is a prerogative of the Crown that a chose in action vested in it may pass under the sign manual. The courts of equity, however, always gave relief from the common law rule, and allowed assignment of all rights of action where they thought it equitable to do so. By a statute of the reign of Henry VII., the common law rule was modified, as the assignee was enabled to sue in the name of the assignor. This remained the law down to 1873, when the *Judicature Act* provided that any absolute assignment in writing by the assignor should at law, conditionally on express notice being given to the debtor, effectually transfer the chose in action, always provided that such assignment should not purport to be by way of charge only. *Any right to a debt therefore may now be assigned.* An apt illustration is found in one of the first cases to come before the Courts after the framing of the Judicature Acts.

> Mr. Gough was a shipbuilder, and he was building a ship for Mr. Bannister for which he was to be paid £1,375. But Mr. Gough owed some money to Mr. Brice, a solicitor, and gave to him a writing addressed to Mr. Bannister in these words:—"I do hereby order, authorise and request you to pay to Mr. William Brice, solicitor, Bridgwater, the sum of £100 out of moneys due or to become due from you to me, and his receipt for same shall be a good discharge." On the day he received this Mr. Brice served a written notice on Mr. Bannister, informing him of the assignment. But Mr. Bannister said he had nothing to do with Mr. Brice, and paid the shipbuilder direct. Then Mr. Brice sued Mr. Bannister for the £100, and Lord Chief Justice Coleridge gave judgment for the plaintiff. The case was then taken to the Court of Appeal, and the judgment was upheld. Being so soon after the passing of the Judicature Act it was new law, and the reluctance of the judges to find as they did was shown by Lord Justice Bramwell, who said:—"I have reluctantly come to the conclusion that this judgment should be affirmed . . . It does seem to me a strange thing, and hard on a man, that he should enter into a contract with another and then find that because that other has entered into some contract with a third, he, the first man, is unable to do that which it is reasonable and just that he should do for his own good. But the law seems to be so; and any one who enters into a contract with A must do so with the understanding that B may be the person with whom he will have to reckon."

In order that the assignment of a chose in action (other than a negotiable instrument) should be valid, the assignment must be in writing, notice must be given to the person liable, and the assignee must have given some consideration for the assignment. Further, the assignee takes the chose in action subject to all the equities, that is, whatever defence the debtor might have if sued by the assignor, will be equally good against the assignee. In the case of negotiable instruments the assignment is by simple delivery of the instrument, notice need not be given to the person liable on it, and the assignee who takes it in good faith and for value takes it free from the equities; that is, he is the absolute owner of the amount of the instrument, and whatever defences the debtor might have had against the assignor will be of no avail against the assignee.

2. ASSIGNMENT OF LIABILITIES. But a person cannot assign his liabilities except by permission of the person to whom he is liable, and of the assignee. This is really the formation of a new contract, and is called a NOVATION. That a person should not be able to transfer his liabilities is only reasonable, for as Lord Chief Justice Denman once said, "You have a right to the benefit you contemplate from the character, credit and substance of the party with whom you contract."

> Mr. Sharpe, a coachmaker, entered into an agreement to furnish Mr. Drummond with a carriage for the term of five years, at seventy-five guineas a year. At the time of making the contract a Mr. Robson was a partner with Mr. Sharpe, but this was unknown to Mr. Drummond, the business being carried on in the name of Mr. Sharpe only. Before the expiration of the first three years the partnership was dissolved, and Mr. Sharpe left it altogether. Mr. Drummond was informed of the dissolution, and that Mr. Robson was now the owner of the carriage and would look to Mr. Drummond for the hire. Mr. Drummond said under these circumstances he would not keep the carriage, and returned it. The Court held that he was entitled to do so. "The defendant," said Lord Tenterden, "may have been induced to enter into this

contract by reason of the personal confidence which he reposed in Sharpe, and therefore have agreed to pay money in advance. The latter, therefore, having said it was impossible for him to perform the contract, the defendant had a right to object to its being performed by any other person, and to say that he contracted with Sharpe alone, and not with any other person."

It must be noticed, however, that liabilities may be assigned by consent of all the parties. And it might be provided in the original contract that the assignees and heirs of the promisor should be bound if the contract relates to the sale of land. In cases also where the contract is to do work which may be done by any ordinary workman, the Court will not avoid the contract because the work is not done by the contracting person himself. Lord Chief Justice Cockburn, in one judgment, and referring to the case of carriage hire just quoted, said:

"When a person contracts with another to do work or perform service, and it can be inferred that the person employed has been selected with reference to his individual skill, competency, or other personal qualification, the inability or unwillingness of the party so employed to execute the work or perform the service is a sufficient answer to any demand by a stranger to the original contract of the performance of it by the other party, and entitles the latter to treat the contract as at an end, notwithstanding that the person tendered to take the place of the contracting party may be equally well qualified to do the service. Personal performance is in such a case of the essence of the contract, which, consequently, cannot in its absence be enforced against an unwilling party. But this principle appears to us inapplicable in the present instance (the repair of railway waggons), inasmuch as we cannot suppose that in stipulating for the repair of these waggons by the company—a rough description of work which ordinary workmen conversant with the business would be perfectly able to execute—the defendants attached any importance to whether the repairs were done by the company, or by any one with whom the company might enter into a subsidiary contract to do the work."

3. **ASSIGNMENT BY STATUTE.** In addition to the provision of the Judicature Act with regard to assignment (see above), there are a few special statutory exceptions to the Common Law rule: (1) With regard to LIFE INSURANCE POLICIES it is provided by 30 and 31 Vict., c. 144, that they may be assigned in a form prescribed by the Act, and that when this is done the assignee may sue in his own name. (2) POLICIES OF MARINE INSURANCE are somewhat similarly assignable by reason of 31 and 32 Vict., c. 86, but the statute contains no provision as to notice. In both cases the assignee takes the policy subject to all such defences as would have been available against the assignor. (3) SHARES IN PUBLIC COMPANIES are assignable under the Companies' Acts; indeed, as Lord Blackburn said in one case, "the great object when joint stock companies were established was that the shares should be easily transferred." (4) Also MORTGAGE DEBENTURES issued by companies under the Mortgage Debenture Act are assignable in the form prescribed in the Act.

DISCHARGE OF CONTRACT.

We have now to notice the means by which the obligations created by a contract are discharged. This may be done by the mutual agreement of the parties, by the performance of the contract, by a breach of the contract (which gives a right of action to the aggrieved party to the contract), by circumstances arising which make the performance of the contract impossible, and, in some cases, by operation of law.

1. **BY MUTUAL AGREEMENT OF THE PARTIES.** While a simple contract is still executory (an executory contract is one which is not completed; an executed contract which is completed or performed), it may before breach be discharged by parol agreement. But the consent of both parties is necessary. This is called waiver or release, and it is not necessary that the agreement should be in writing. But if the contract has been executed on one side, it cannot be discharged by a parol waiver without consideration or deed. As to contracts under seal, the old Common Law rule was that it could only be discharged by agreement expressed under seal; or as it was sometimes expressed, "a contract must be discharged in the same form as that in which it is made." This is still the rule, excepting that it has been somewhat modified by the Judicature Act. The Equity Courts were accustomed to grant an injunction to restrain action upon a deed in breach of a subsequent parol agreement, and the same principle is now recognised in all the Courts. Parol or simple contracts may be set aside either by writing or word of mouth, except in the cases where by law the original contract must be in writing. In these cases a total recession may be by word of mouth, but if a new contract is being substituted for the old, then this must be in writing.

2. **BY SUBSTITUTED AGREEMENT.** When the original contract is so altered by agreement between the parties that a new contract is created, the old one is discharged. The same result follows when a new party is introduced by agreement. These rules are well illustrated in the following cases:—

Mr. Neats entered into a contract whereby Mr. Thornhill was to build for him six houses and complete them by a given date or pay a penalty. But while the work was in progress it was mutually agreed that Thornhill should do other work at the houses, and it was impossible if this work was to be done to complete the houses in the stipulated time. It was held that the second agreement was so inconsistent with the first that it amounted to a waiver of the undertaking that a sum should be paid for the delay.

Mr. Hart, an officer serving in the King's forces in India, deposited money with a firm of bankers trading as Alexander & Co. Henry Alexander, one of the partners, retired. Hart continued to trade with the firm, and had notice of the retirement of the partner mentioned. Some years later Alexander & Co. failed. Thereupon Hart sued Henry Alexander for the sum of money due to him by the firm. It was held that he could not recover. The fact that he had continued to bank with the firm after notice of the defendant's retirement amounted to a recession of the original contract and to the formation of a new one. Baron Parke said, "If one partner goes out of a firm and another come in, the debts of the old firm may, by the consent of all the three parties—the creditor, the old firm, and the new firm—be transferred to the new firm."

The waiver of the old contract may be either expressly stated, or, as it was in this case, implied from the conduct of the parties.

3. **BY IMPOSSIBILITY OF PERFORMANCE.** Circumstances sometimes arise, after the formation of a contract, which make its performance an impossibility. As a rule such impossibility does not exempt the promisor from liability, for he might have guarded himself by the terms of the contract. Thus, if a man enters into a covenant to keep a house in good repair, and the house be accidentally burnt down, he is liable; or if a merchant undertakes to deliver a cargo on a certain quay by a given date, and is hindered by a dock labourers' strike, he is liable. But in each case the contracting party may protect himself by a clause in the contract. But there are *exceptions to the general rule*, and these may be treated under the headings Act of God and Legal Impossibilities.

4. **BY ACT OF GOD.** Act of God is a phrase used by lawyers to indicate "a direct, violent, sudden, and irresistible act of nature, which could not, by any reasonable care, have been foreseen or resisted," such as sudden severe storms, tempests and lightning. This is one of the few defences open to a common carrier who fails to safely deliver goods; he is always freed from liability if he can show that an act of God, as here defined, proved the sole, direct and irresistible cause of the loss. But the carrier must show that the loss could by no reasonable precaution under the circumstances have been prevented. It has been held that fire and fog do not come under the definition "Act of God." In all contracts for personal service the Act of God is taken to excuse the promisor unless the exact contrary appear on the face of the contract. Thus in a contract between master and servant, the contract is ended by the death of the master, though that occur before the end of the specified period. So if an actor, or public singer, or lecturer be taken suddenly ill, his non-appearance would not give rise to an action, but his negligence in not giving the earliest possible notice of his illness would do so. And such an illness as

renders a person unfit to do the public work he has contracted to do, gives to the other party the right of rescinding the contract.

Messrs. Spiers and Pond, in the year 1874, engaged Madame Poussard to sing at the Criterion Theatre. She was to take an important part in a new French opera, and the engagement was for three months. The first performance was fixed for November 28th, and Madame Poussard attended some rehearsals. But she was suddenly attacked with illness and could not attend any of the rehearsals in the final week, when alone all the music had been received from the composer. Nor could she attend on the first four days of the performance, and her place was taken by another lady. On the fifth day Madame Poussard tendered her services, but they were refused. She brought an action, but it was held that she could not recover.

In many theatrical, and in nearly all music hall contracts between owners or managers and artistes, there is a "no play no pay" clause, which means that if the artiste is unable to perform, for any reason, no payment is due in respect of that performance.

5. BY LEGAL IMPOSSIBILITIES. The rule is that where the impossibility is caused by some change in the law occurring after the formation of the contract, the promisor is discharged. In one case a Mr. Bailey had leased from a Mr. de Crespigny, at Camberwell, a piece of land for eighty-nine years. Mr. de Crespigny was also the owner of an adjoining piece of land, and he had covenanted that neither he nor his assignees would put up any buildings thereon. But soon afterwards the London, Brighton and South Coast Railway Company obtained an Act of Parliament authorising them to put up buildings on that piece of land, which they proceeded to do. Mr. Bailey thereupon brought an action for damage against Mr. de Crespigny, but he failed. It was held that the defendant was discharged from his covenant by the subsequent Act of Parliament, which compelled him to assign to the railway company, and so put it out of his power to perform the covenant. "The legislature, by compelling the defendant to part with his land to a railway company," said Mr. Justice Hannen, "whom he could not bind by any stipulation, as he could an assignee chosen by himself, has created a new kind of assign, such as was not in the contemplation of the parties when the contract was entered into.

6. BY DESTRUCTION OF THE SPECIFIC OBJECT. In contracts where the continued existence of a particular thing is essential to the performance, its destruction, if owing to fault of neither party, is a discharge. In 1861 Mr. Caldwell, the proprietor of the Surrey Gardens and Music Hall in South London, let them for four nights to Mr. Taylor, who desired to give entertainments there. Before the date arrived an accidental fire occurred and the place was quite destroyed. Mr. Taylor, who had incurred a good deal of expense in making the necessary preparation, thought Mr. Caldwell ought to pay damages, and sued him. The decision, however, was in Mr. Caldwell's favour, the Court saying, that "in the absence of any express or implied warranty that the thing shall exist, the contract is not to be construed as a positive contract, but as subject to an implied condition that the parties shall be excused in case, before breach, performance becomes impossible from the perishing of the thing without default of the contractor."

Another example of this rule of law may be found useful. A firm, Appleby & Co., contracted to erect certain machinery on the premises of Mr. Myers, the price to be paid on completion of the work. When some of the work had been completed and the remainder was in progress, the premises, with all the machinery and materials thereon, were destroyed by accidental fire. It was held that both parties were excused from further performance of the contract, and that no liability attached to either side.

7. BY PERFORMANCE. Every contract is fully discharged when all parties thereto have fulfilled their obligations. But one or two points have to be noticed. The performance must be in strict conformity with the terms of the contract. Thus in the case of the sale of goods, a seller does not perform the contract by delivering either a larger or a smaller quantity of goods than that mentioned in the contract. Mr. Mills ordered four dozen bottles of wine from Mr. Hart, who sent eight dozen. Mr. Mills refused to keep the lot, but retained thirteen bottles, sending the remainder back. Mr. Hart thereupon sued Mr. Mills for the price of four dozen. It was held that the defendant, by retaining the thirteen bottles, had not acquiesced in the misperformance of the contract, and that the plaintiff could not compel Mr. Mills to carry out the original contract. The defendant paid the price of the thirteen bottles, and this of course went to the plaintiff, the Court saying, "The defendant orders two dozens of each wine and you send four; then he had a right to send back all; he sends back part. What is it but a new contract as to the part he keeps?"

8. BY PAYMENT. Where a contract depends upon the payment of a sum of money, the payment of such sum is, of course, a good discharge, or in other words is *accord and satisfaction*. So if in substitution of a contract a new contract is entered into which stipulates for the payment of a certain sum, the payment of that sum is a good discharge. Or if a person agrees with another that he will forgo a right of action in consideration of the payment of a specified sum, the payment of that sum is again a good discharge.

But the *payment of a smaller sum* in satisfaction of a larger is not discharge of a debt. This is an important point for business people to consider, and it is one that is often overlooked. Thus, if A owes B a sum of £8, and B, in a moment of generosity, accepts £5 in settlement, and gives a receipt for £5, saying it is in full discharge, this does not prevent B at some future time, or his personal representative in the case of his death, suing for the other £3. This is because there is no consideration for the acceptance of the smaller amount, and therefore it is a *nudum pactum* ("a bare agreement"). But if there be any benefit to the creditor thrown in, that will turn the scale, and give sufficient consideration to support the agreement. So if any new agreement is substituted, as for instance the handing over of a book, or piece of furniture, irrespective of its value, in settlement of a debt, and it is handed over, that will be a good discharge; or the acceptance of a negotiable instrument—a cheque or bill of exchange—in settlement of a debt, although it be for a less sum than the original debt, is a good discharge, for that sets up a new contract between the parties. It may be noticed, too, that the payment of a smaller sum may be discharge for a larger one, will be a good discharge if the receipt in full satisfaction is given under seal, for as we have seen a contract under seal needs no consideration. (See *Debt.*)

9. BY TENDER. A promisor in a contract may be quite ready and willing to fulfil his obligation, but may be prevented by the refusal of the other party. In such a case it is the duty of the promisor to offer to fulfil his promise, which is called a tender. Thus one Startup contracted to deliver to Mr. Macdonald ten tons of linseed oil within the last fourteen days of March. He tendered them on the evening of March 31st, and they were refused on the ground that this was an unreasonable hour. Mr. Startup then brought an action and succeeded, it being held that he had tendered the oil within the period specified in the contract. If the obligation consists in the *payment of money*, it is the duty of the promisor to tender the exact amount in

Legal tender. Bank of England notes are legal tender for any amount above £5 (except in the case of the Bank of England itself, which must on request pay in gold). Gold coins are also legal tender to any amount; silver coins are legal tender up to forty shillings; bronze coins up to twelve pence.

The money must be actually produced unless the creditor expressly dispenses with the tender. The tender must also be unconditional, but tender under protest is a valid tender. When a promisor has made a tender and it has been refused, there is not a discharge of the debt, but it puts the creditor in the wrong. No interest is recoverable after such a tender, even though the contract provides for it. If the creditor sues and the amount tendered is paid into court, not only can he get no costs, but will have to pay those incurred by the debtor.

10. BY BREACH. It is not every breach of a contract which operates as a discharge. But if one of the parties to a contract gives notice that he does not intend to fulfil his obligation, that discharges the other, and gives him the immediate right of action. A Mr. Delatour engaged Mr. Hochster to act as his courier upon a long tour. The services were to begin on June 1st, but before that date Mr. Delatour altered his mind and informed Mr. Hochster that he would not require his services. Mr. Hochster at once began an action, though the 1st of June had not arrived, and the Court said he was entitled to do so, and said, "Where there is a contract to do an act on a future day, there is a relation constituted between the parties in the meantime by the contract, and they implied by promise that in the meantime neither will do anything to the prejudice of the other inconsistent with that relation." A similar conclusion was arrived at when Miss Frost sued Mr. Knight for breach of his promise to marry. The promise had been to marry the plaintiff on the death of the defendant's father, but before that event occurred, Mr. Knight had announced his intention of not fulfilling his promise, and had broken off the engagement. Miss Frost at once began an action, and she recovered damages. "The promisee," said Lord Chief Justice Cockburn, "has an inchoate right to the performance of the bargain, which becomes complete when the time for the performance has arrived. In the meantime he has a right to have the contract kept open as a subsisting and effective contract. Its unimpaired and unimpeached efficacy may be essential to all his interests. His right acquired under it may be dealt with by him in various ways for his benefit and advantage." But in all such cases the remuneration must have reference to the entire contract and not to part of it, and if the promisee still insists on a performance, he cannot take the refusal as a discharge. Another breach which acts as a discharge is where one of the parties by his act or deed makes the performance of the contract impossible. Familiar examples are where a man has promised marriage to a woman at a certain date, but before that time has married some one else; or where a man has contracted to give a lease of certain property, but before completing the lease has sold the property.

11. BY OPERATION OF LAW. A contract is discharged by the judgment of a court of law. A simple contract is discharged by a contract under deed, between the same parties on the same subject matter. Where a contract in writing has been altered by one of the parties without the consent of the others, those others are discharged from their liabilities. When a bankrupt has obtained an order of discharge he is discharged from liability on contracts existing at the time of his bankruptcy, as to which see the special section of this work relating to bankruptcy.

REMEDIES FOR BREACH OF CONTRACT.

1. ACTION FOR DAMAGES is the most usual remedy for breach of contract. As to the mode of starting such action, reference should be made to "Procedure in the Courts," p. 477. The damages claimed should be those which represent the loss sustained, for, as Baron Parke expressed it, "the rule of the common law is, that where a party sustains a loss by reason of a breach of contract, he is, so far as money can do it, to be placed in the same situation, with respect to damages, as if the contract had been performed." But there is, as the same learned judge pointed out, an exception in the case of the sale of real property. "Contracts for the sale of real estate are merely on condition that the vendor has a good title; so that, when a person contracts to sell real property, there is an implied understanding that, if he fail to make a good title, the only damages recoverable are the expenses which the vendee may be put to in investigating the title." Damages cannot be recovered if they are too remote, that is, only such loss can be recovered as may be reasonably supposed to have been within the contemplation of the parties when the contract was entered into. Nor must they be based on the intention of punishing the party who has committed the breach. But in assessing the damages, respect may be paid to prospective loss arising from the refusal of the defendant to perform his contract.

2. SPECIFIC PERFORMANCE of a contract will sometimes be ordered by the Courts. Formerly this remedy could only be obtained in the Courts of Equity, but since the Judicature Act it is obtainable in all courts. Specific performance is most commonly resorted to, and most readily granted by the courts, in matters affecting the sale of land, and it will sometimes be granted though the provisions of the Statute of Frauds have not been rigidly complied with. Land is of a limited extent, and a purchaser may have set his heart upon possessing some particular property, or have chosen it from considerations of health, neighbourhood, or business convenience. In such a case, damages at law would be an inadequate recompense.

The remedy of specific performance is not confined to contracts for the sale of land, but is extended to all contracts where damages would be an insufficient or inadequate remedy, e.g. contracts for the sale of a patent, or of rare and curious works of art, or of shares in a private company. In all these cases damages would be an inadequate remedy, either because the things are limited in number and cannot be bought in the open market, or because, as in the case of a patent, it would be impossible to calculate the profits arising from its use, and therefore it would be impossible to assess the damages.

In no case in which damages afford an adequate remedy will specific performance be granted. "The remedy by specific performance," said Lord Justice Kay, "was invented and has been cautiously applied, in order to meet cases where the ordinary remedy by action for damages is not an adequate compensation for breach of contract. The jurisdiction to compel specific performance has always been treated as discretionary, and confined within well-known rules."

> Generally speaking, the effect of these rules is that specific performance will not be granted (1) in money-lending transactions, (2) in actions where the plaintiff would be adequately compensated by the payment of damages, as in a contract to buy shares, and (3) in cases where the Court could not enforce an order for specific performance, as where the land claimed by the plaintiff is situate abroad.

3. INJUNCTION. In some cases the courts will grant the remedy of injunction. This remedy is available in cases where the court could not enforce specific performance. Especially is it valuable for the enforcement of negative covenants. Thus, where a tenant covenanted not to carry on the trade of a retailer of wine, the court granted an injunction to restrain him from doing so. Sometimes it will be granted to enforce the negative covenants in a contract the positive covenants of which cannot be enforced by specific performance. An example may be found in the case of actors and public singers who have contracted to act or sing at a certain place and have expressly agreed not to act or sing elsewhere.

> The best known case is that in which Mdlle. Wagner had agreed with Mr. Benjamin Lumley that she would sing at his theatre, Her Majesty's, in London, during a stated period of time, and that during that time she would not sing elsewhere. She afterwards refused to sing at the theatre, and arranged with another theatre proprietor to sing elsewhere. Mr. Lumley then brought an action against her, and Lord Chancellor St. Leonards refused to make an order of specific performance, for it could not make a vocalist sing against her will, but granted an injunction restraining her from singing elsewhere.

The Lord Chancellor said, "Whenever this court has not proper jurisdiction to enforce specific performance, it operates to bind men's consciences, as far as they can be bound, to a true and liberal performance of their agreements; and it will not suffer them to depart from their contracts at their pleasure, leaving the party with whom they have contracted to the mere chance of any damages which a jury may give. The exercise of this jurisdiction has, I believe, had a wholesome tendency towards the maintenance of that good faith which exists in this country to a much greater extent, perhaps, than in any other."

THE STAMPING OF DOCUMENTS. Although not strictly a portion of the law of contracts, it is desirable to say something here concerning the stamping of documents. Elsewhere in this work will be found a list of the chief documents which require stamping, the value of the stamps to be attached, and whether such stamping may or may not be by adhesive stamps (see pp. 502–3 and 682. The important point to remember here is, that if a document needs stamping (as, for instance, all agreements do), it cannot be produced in court for any purpose (other than to prove fraud or a criminal offence), until it has been properly stamped, and the penalty for stamping a document after date is the substantial one of £10. There is also in such cases another fee of £1 to go to the officer of the court, and it not unusually happens that the subject matter in dispute is of less value than the penalty for stamping amounts to. Besides, certain instruments cannot legally be stamped after execution. (Refer to "Unstamped Documents" p. 684). When an adhesive stamp is used, the person who stamps the document must cancel the stamp by writing either his name or initials across it.

THE LAW OF TORTS.

WHAT IS MEANT BY TORTS? A tort (from the Latin word *tortus*—twisted, tortured) means a wrong to person or property, for which damages may be recovered in a civil Court. The word as used by the lawyers has received many definitions. One is that it is a wrong independent of contract, and that is the definition adopted in the Common Law Procedure Act, 1852. Sir Frederick Pollock takes up twenty pages of his admirable work on *Torts*, in defining, or rather in indicating, what a tort is. But the definition already quoted is sufficient for our present purpose. A tort may be a harmful, unlawful act, an omission of specific duty, a violation of another right, or an act of omission causing harm which might with due diligence have been foreseen and prevented; it may consist in "not avoiding or preventing harm which the party was bound, absolutely or within limits, to avoid or prevent." It is quite possible for the same act to constitute a breach of contract, a tort and a crime. A familiar instance is where a railway accident happens, say, through the criminal negligence of a signalman. Here the signalman is himself guilty of a crime, and may be indicted for manslaughter, while a passenger has two rights of action against the Railway Company, one for not fulfilling their contract to carry him safely, and one for a tort. And in the case of libel, to take another example, the person aggrieved may often proceed either in the criminal or civil courts.

ESSENTIALS OF TORT. It is sometimes thought by laymen that the mere doing of an act which causes another person to suffer damage will enable the injured party to bring an action for damages. But this is not the case. No action may be brought unless some right belonging to the plaintiff has been invaded by a wrongful act or omission on the part of the defendant, or of some person for whom the defendant is legally responsible. This may be shown best by three examples.

(1) In the reign of Henry IV. a worthy schoolmaster at Gloucester had been carrying on his work for some time when a rival appeared and started another school next door. The result was that the master of the original school found his profit diminishing, he got only twelve pence a quarter from each pupil instead of forty pence as formerly, and he brought an action against the new comer to recover damages. But he failed.

(2) A certain miller was dependent on a good flow of water to keep his millwheels turning. The local board of health sank a well for the purpose of supplying the inhabitants of the district with water. They had a perfect right to do this, though the unfortunate miller suffered considerably. It was held that he could not recover anything.

(3) At a certain election the returning officer wrongfully refused to record the vote of the plaintiff, a legally qualified voter. The candidate for whom he had intended to vote was nevertheless elected. In the action the defendant, the returning officer, pleaded that inasmuch as the result of the poll would have been the same, the plaintiff had suffered no damage by the rejection of his vote. Nevertheless the plaintiff won the action.

The first two of these cases establish the rule that mere loss or damage to the plaintiff, unaccompanied by any *wrongful* act or omission, is never a ground for an action. The third case establishes a rule, which is subject to a few exceptions, that even when no damage has been suffered an action may be brought by a person whose rights have been wrongfully invaded. The few exceptions to this rule are called by lawyers, "cases where damage is the gist of the action." They include actions for nuisance, negligence, and deceit, and most actions for slander.

TRESPASS.

1. TRESPASS TO REAL PROPERTY. A familiar form of tort is that known as trespass. Trespass may be either to land, or property, or to the person. A trespass on land "is an entry on another man's ground without a lawful authority, and doing some damage, however inconsiderable, to his real property. For the right of *meum* and *tuum*, or property in lands, being once established, it follows as a necessary consequence that this right must be exclusive; that is, that the owner may restrain to himself the sole use and occupation of his soil; every entry, therefore, thereon, without the owner's leave, and especially if contrary to his express orders, is a trespass or transgression" (Blackstone).

The proper person to bring an action for trespass is the person who is either in possession of the property at the time, or the person entitled to the immediate possession thereof. Thus, where the property is in the hands of a tenant, he, and not his landlord, must bring the action. But if it is in the hands of a caretaker, his master can bring the action, as he is entitled to the immediate possession of the property. To a certain extent the possessor of the property and his servants are allowed to take the law into their own hands. They may eject the trespasser; but they must not use more force than is reasonably necessary for the purpose, and they must give him the opportunity of retiring before they employ any force. Otherwise they will be guilty of an assault, which is a trespass to the person that may be treated both as an actionable tort and as a crime.

2. "TRESPASSERS WILL BE PROSECUTED." Every one is familiar with the notice boards often erected by the side of apparently well-worn roads cautioning people against using them. They may read simply "Private, no road," as to which a recently retired judge said he always went on these roads with the utmost confidence, for he concluded that some one was endeavouring to stop an old right of footway. Or they may read "Trespassers will be prosecuted," which Professor Maitland says is a "wooden falsehood," for mere trespassing on land is not a criminal offence, and therefore a trespasser cannot be prosecuted, though he may be liable to a civil action. Therefore the only meaning of the latter form of notice is that the man in possession may begin an action against him. There are, however, two forms of trespass in which the offender may be prosecuted. The first is trespassing in search of game. The second is doing wilful damage in connection with trespass. Thus, when Mr. G., desiring to make a short cut, walked across Mr. C.'s grass field for a distance of 130 yards, passing warning notice boards on the way, and persisted in going on after Mr. C. had asked him to retire, and did damage (as the justices estimated) to the value of sixpence, he was fined and the High Court upheld the conviction. In such cases the evidence of wilful intent to do damage does not need to be strong, for as Lord Justice Blackburn once said, "malice may be deemed to exist where any person does an act injurious to another without lawful excuse." But it should be noticed that there must in such cases be injury to the land or to cultivated crops, or to the fencing or other property. For instance, damage to mushrooms (unless they are cultivated) will not be a criminal offence.

3. REMEDIES FOR TRESPASS. It does not follow, however, that there is no remedy for trespass. Just as every Englishman's house is his castle, so every man has the right to the exclusive use of his own close, and for any entry upon it an action will lie. "By the laws of England," said a body of judges many years ago, "every invasion of private property, be it ever so minute, is a trespass. No man can set his foot upon my ground without my license, but he is liable to an action, though the damage be nothing." It is very seldom, however, that any action is started against a person for trespass upon a private road or footpath, unless it be done wilfully to annoy the possessor, for damages would be strictly nominal if awarded at all. In connection with trespass, it should be noticed that a man is liable for damages if he allows his cattle to stray on the lands of another. As a rule, a man is bound to so fence his own land that his cattle cannot escape, but he need not fence against his neighbour's cattle. Usage and local customs may alter this rule, and all railway companies must fence their own lands, and if they fail to do so, and cattle stray from rightful custody upon the line, and are injured, damages may be claimed.

4. TRESPASS TO PERSONAL PROPERTY. What are known as the trespass and conversion of personal property occur when a person wrongfully interferes with and exercises dominion over the goods of another, thereby wrongfully depriving him of their use and enjoyment. Here again the action must be brought by the person entitled to the immediate possession of the property, who need not be the true owner. When a person finds lost property, other than *treasure trove*, he must give it up to the true owner; but he has the right to its possession as against every one except the true owner.

> Thus in the case of Armory *v.* Delamirie, a chimney-sweep found a jewel. He took it to a pawnbroker, who offered him three half-pence for it. The offer being refused, the defendant Delamirie refused to give up the jewel. It was held that the finder, i.e. the possessor, had a remedy against all but the true owner, for the finder is the owner until the true owner makes his appearance, and that, on non-production, the jewels abstracted must be presumed to be of the finest water, because it is a maxim of the law that every presumption is made against a wrong doer. In this case the pawnbroker was guilty of conversion.

A person is liable for conversion of goods if, dealing with them at the request of the apparent owner, his dealing purports to involve a transfer of the supposed property in the goods. For instance, if a maid stole some silk from her mistress and sent it to her dressmaker to be made into a dress, afterwards to be returned to her, the dressmaker would not be liable in conversion; if, however, the maid directed a third person to sell the silk, that third person would be liable in conversion, even though she believed the silk to belong to the maid. An auctioneer is liable in conversion, when he sells the goods of another, even though he had no notice of the apparent owner's want of title. It has been held that an auctioneer selling the goods which had been assigned under a Bill of Sale by the instructions of the assignee was liable in conversion, where the assignee had no legal right to give such instructions.

WHEN CAN A WRONG-DOER GIVE A TITLE? The foregoing are examples of the legal rule, that no person can give a better title to property than he himself possesses. But there are exceptions to the rule, and in two cases a transferor can give a better title to an article than he himself possesses. They are the cases of negotiable instruments and sale in market overt. Where a person has given value for a Bill of Exchange or other negotiable instrument, and is unaware that it has been stolen, he obtains a good title to it and may sue upon it, although, of course, the thief or anyone aware of the theft could not do so. This only applies to *negotiable* instruments, so that where a cheque has been marked "not negotiable," a *bona fide* holder for value would have no more right to sue on it than the thief had. (See under "Cheques" in *Commercial Guide.*)

SALE IN MARKET OVERT. The second exception is in the case of goods sold in market overt. If a purchaser buys goods in market overt, *bona fide*, and without notice of any defect or want of title on the part of the seller, he acquires a good title to that which he buys. There is, however, a limitation to the application of the rule, as it is provided by the Sale of Goods Act, 1893, that if the goods have been stolen, and the thief has been prosecuted to conviction, the title to the goods reverts to the original owner.

> "Market overt," or open market, is a name given to certain markets and shops which have acquired the privilege by grant or custom. All shops in the *City* of London are markets overt for the sale of the class of goods usually dealt with by them, but not for the sale of other kinds of goods. Outside the city few, if any, shops have the privilege, though country market places usually have. The sale in the market overt must be a genuine and open sale, otherwise the privilege is lost.

Where goods have been obtained by fraudulent means, amounting to larceny, the thief has no title, and can give none except by selling in market overt; but where goods have been obtained by fraud, the person who has so obtained them may either have no title at all, or a voidable title, according to the nature of the transaction. If the nature of the fraud be such that there never was a contract between the parties, as for instance, if A obtains goods from B by falsely pretending to be X, then the person who so obtains the goods has no title at all and can give none. But if the person defrauded really intended to part with the property in, and possession of, the goods, although induced to do so by fraud, there is a contract which he may affirm or disaffirm at his election. Hence the person who obtains the goods has a voidable title, and can give a good title to an innocent purchaser while the matter is in suspense, that is, where the sale takes place before the defrauded person repudiates the contract or takes steps to recover the goods.

> "If," says Lord Cairns, "the chattel has come into the hands of the person who professed to sell it, by a *de facto* contract, that is to say, a contract which is purported to pass the property to him from the owner of the property, then the purchaser will obtain a good title, even although afterwards it should appear that the true circumstances connected with that contract would enable the original owner of the goods to reduce it and set it aside."

SALE OF HORSES IN MARKET OVERT. Where a horse is stolen and is afterwards sold in market overt, even to a *bona fide* purchaser for value, the property will not pass unless certain formalities are complied with. The horse must be exposed in open market for one hour between 10 a.m. and sunset, and an exact description of buyer, seller, horse and terms of contract must be entered in the book-keeper's book. If these formalities have been duly observed, the rightful owner cannot recover the horse from a *bona fide* purchaser unless he, within six months of the sale, refunds to the purchaser the sum the latter has paid.

RE-CAPTION AND REPLEVIN. Where a person has been wrongfully deprived of goods, other than negotiable instruments in the hands of a *bona fide* holder for value, provided they have not meantime been sold to an innocent purchaser in market overt, he is not always bound to go to law to recover them. He may take possession of them wherever he finds them if he can manage to do so without creating a disturbance or breach of the peace; this is the right of *re-caption.*

The action of *replevin* is one for the return or replevying of goods unlawfully distrained or seized under colour of distress or otherwise. The owner obtains the return of his goods on giving security to the Registrar of the District County Court, to prosecute an action of replevin forthwith, and to return the goods if a return be ordered by the Court. The action must be brought within one week in the High Court, but a period of one month is allowed before action brought in the County Court. (See under *Landlord and Tenant.*)

OTHER WRONGS AND LIMITATION OF ACTIONS. Other wrongs to personal property are the infringement of trade marks, the infringement of copyright, and the infringement of patents, as to each of which see the

different sections dealing with these matters. There are certain limitations as to the period in which actions may be brought. Actions for slander must be brought within two years, injuries to the person within four years, all other wrongs within six years. Actions against magistrates and constables or others in the execution of their public duty must be brought within six months. The Statute does not begin to run "until the time when such fraud shall or with reasonable diligence might have been first known or discovered." Claimants who are infants, under coverture or of unsound mind, may bring their actions within six years after their disability has ceased. But in no case can any such action be brought after thirty years, except in the case of concealed fraud.

DEFAMATION OF CHARACTER.

No branch of the law of torts is more interesting or more often of practical importance than that relating to libel and slander, or defamation of character. Every person has a legal right to earn the good-will and respect of his fellow-men. If, therefore, someone publishes concerning him a defamatory statement which causes him to be shunned by others, such publication is an invasion of his legal right, and generally a cause for action.

1. DISTINCTION BETWEEN LIBEL AND SLANDER. If in writing, printing, or in other more or less permanent form the defamation is a libel; if in spoken words or meaning gestures, it is slander.

There is another distinction between libel and slander in the matter of the consequences that flow from the making of the defamatory statement. Libel may be treated as a tort or as a crime, generally at the option of the person libelled; whereas slander is only a tort, unless perchance it happens to be obscene or blasphemous. Moreover, in an action for slander, the plaintiff must generally prove that he has suffered some special damage by reason of the defamatory statement. This is not the case in an action the libel.

2. PUBLICATION ESSENTIAL. No action will lie for libel or slander unless there be publication. Publication is a communication of the libellous or slanderous words to some one other than the plaintiff. To write a defamatory letter and send it enclosed in an envelope to the person himself would not be publication, and if the second person himself received the letter and no one else saw it, no action would be maintainable, but the person writing and sending the letter might be prosecuted criminally, as such a letter tends to a breach of the peace. It would be different if the letter was dictated and then forwarded. The letter would necessarily have been published, and its contents communicated to the dictatee. So again, it would be libel if a defamatory letter were written and posted with the knowledge that it would probably be opened by plaintiff's clerk or secretary. The defamatory statement would be a libel also if written on a post-card, and this is a point which irate correspondents who use post-cards should bear in mind. A husband and wife are "one;" therefore the statement made orally or in writing by a husband to his wife, defamatory of X, is not libel or slander, as there is no publication. There is publication, however, if a defamatory letter be sent to a wife about her husband.

3. WHAT THE PLAINTIFF MUST PROVE. The plaintiff must prove that the defamatory publication was aimed at him individually, or as determined December 6th, 1909, by the House of Lords, in the case of Artemus Jones *v.* the proprietors of the "Manchester Sunday Chronicle," that persons understood him or her to be the person meant. Thus, in a certain case a person said to three of the witnesses: "One of you three is perjured." It was held that none of the three could bring an action, as the defamatory statement admittedly only referred to one of them, and there was no evidence available to show which one that was. Moreover, a person is at absolute liberty to publish a defamatory statement concerning any considerable class of persons. Thus, if you said or wrote "All old women are liars." No old woman could bring an action against you. But if the class is such a small one that all its members can be easily ascertained or identified, any of them can bring the action. Thus, if the words in the first example given had been "*All* you three are perjured," the defamatory statement would undoubtedly be actionable.

You cannot avoid the consequences of an action for libel or slander by disguising or omitting the plaintiff's name. If he can prove to the satisfaction of the jury that he is the individual aimed at, he has a right of action against you. Even words of praise, used ironically, are actionable if their hidden meaning is defamatory; but in such case the plaintiff must set forth in his statement of claim, the special meaning complained of, with an averment that the persons to whom it was published had knowledge of facts which would lead them to understand it in its defamatory sense; for unless he does this the judge will have to decide whether the words complained of are defamatory in their ordinary and natural meaning, and if he thinks they are not, the action will fail. Generally speaking, the judge has first to decide whether the words are of such a character that an ordinary reasonable person would consider them defamatory; and if so, the jury has to decide whether in the particular circumstances they actually bore that meaning.

4. WHEN SPECIAL DAMAGE MUST BE PROVED. In libel, an action lies on mere proof of publication and without proof of special damage; in slander, with four exceptions, noticed hereafter, special damages are essential to an action. Libel has always been regarded as a greater injury than oral defamation. "Oral slander is sudden and fleeting, whereas libel is deliberate, permanent, and in general propagated further. Hence a vague imputation of dishonesty, if oral, is not actionable, unless the imputation had reference to the business of the person defamed, and had the effect of damaging him in it. But such an imputation, if published in writing or in print, even without reference to his business, and without proof of any evil resulting from it, is actionable." (J. W. Smith.)

The four kinds of slander in which proof of this special damage is not necessary are as follows:—

> (1) Where the words accuse plaintiff of having committed a criminal offence. (2) Where the words allege that the plaintiff is suffering from certain disgraceful diseases or the plague. (3) Where the words affect the plaintiff in his trade or profession; for instance, to say that a surgeon is unskilful. (4) Where, the plaintiff being a woman or a girl, the words impute unchastity. This latter exception is the creation of a statute—"The Slander of Women Act, 1891."

As regards the first exception, it must be noticed that the allegation of *any* criminal offence comes within it, it need not be an offence indictable at assizes. As regards the second, the allegation must be, that the person is, at the time, suffering from a certain kind of disease; an allegation that he did, at some previous time, suffer from it is not sufficient. The reason of the difference is plain, as in one case the imputation causes a person to be shunned by society, but not so in the other. As regards the third exception, the test seems to be "will the words spoken hinder the man in his means of livelihood?" but the words must affect the man in his calling and be spoken in relation thereto.

5. REPETITION OF LIBEL. A person who repeats a libel or a slander is liable. So a news-agent who sells a paper containing a libel is *prima facie* liable. But both Lord Esher and Lord Justice Bowen agreed in the case of Emmens *v.* Pottle that a news-vendor would not be so liable if he did not know that the newspaper contained a libel; that his ignorance was not due to any negligence on his part; and that he did not know, and had no ground for supposing, that the newspaper was likely to contain libellous matter. The same applies to the owner of a circulating library, when one of the books he circulates contains a libel.

6. DEFENCES: JUSTIFICATION. The following defences are available to a libel action:—(1) Justification. (2) Fair comment. (3) Privilege. (4) Apology—where the libel is contained in a newspaper or other periodical publication. As to the first, *Justification*, if the defendant can

prove that the words complained of are *true*, he has a good defence to a civil action. But the words must be substantially true. For instance, in Bishop *v.* Latimer, a newspaper published a report with the heading "How Lawyer Bishop treats his Clients." The report did furnish an instance where one client of Lawyer Bishop had been ill-served by him, and the case was accurately reported, but it was held that the title was not justified by the facts, and Lawyer Bishop was held to be entitled to damages. The report would be privileged, but the headline was the libel. This is a point not always sufficiently well borne in mind by the conductors of journals prone to give sensational headlines to their paragraphs.

So, again, the plea of justification will not avail the defendant if gross exaggeration be proved. If X, a journalist, libels Z, and Z stigmatises X as "a libellous journalist," he cannot successfully plead justification from this isolated offence. Nor if A accuses B of having been a bankrupt three times, the plea of justification will not avail him, if he can prove that B failed on one occasion only. If, however, the gist of the libel is proved to be in substance correct, and that the inaccuracies produced no different effect on the mind than the strict truth would do, the plea of justification will succeed. In a criminal prosecution for libel, the defence of justification is of no avail unless the accused can prove that the publication of the defamatory words is for the *public benefit*, for "the greater the truth, the greater the libel," unless it is for the public benefit that the truth should be made known.

7. FAIR COMMENT. If the defendant can prove that the words complained of are a fair and *bona fide* comment as a matter of public interest, no action of libel will be maintainable, because fair comment is not defamatory, is not libellous. The judge decides whether the matter is one of public interest, and the jury find whether the comment is in fact unfair, if the judge holds that there is some evidence of the unfairness of the comment. "It is only when the writer goes beyond the limits of fair criticism," said Lord Justice Bowen, "that his criticism passes into the region of libel at all." There must be an attack which touches the character of the plaintiff to constitute libel. You might say with safety that a play is immoral, and be within the limits of fair criticism; a different consequence might ensue if you said the actor was immoral. The right of comment on matters of public interest affords the writer on such matters a great deal of freedom. "Every latitude," said Lord Esher, "must be given to opinion and to prejudice, and then an ordinary set of men, with ordinary judgment, must say whether any fair man would have made such a comment. Mere exaggeration or even gross exaggeration would not make the comment unfair. However wrong the opinion expressed may be in point of truth, or however prejudiced the writer, it may still be within the prescribed limit. The question which the jury must consider is this: would any fair man, however prejudiced he may be, however exaggerated or obstinate his views, have said that which this criticism has said?" On the other hand, no criticism is fair which imputes dishonourable conduct, and justification will not avail a defendant unless he can prove that the plaintiff was in fact guilty of such conduct. For instance, an action would lie against a journal which accused a witness in a case as being guilty of perjury.

8. ABSOLUTE PRIVILEGE. The defendant in an action for libel or slander may also plead privilege as a defence. This means that the defamatory words were published in a place or on an occasion of such a nature that no action will lie. It is well to bear in mind that privilege is of two kinds. It may be absolute or qualified. In a case of absolute privilege it is not material whether there may be malice as well. All state, parliamentary, and judicial proceedings are absolutely privileged. A member of Parliament in the House of Commons, a judge, counsel, jury, and a witness in the High Court, may utter slanderous statements about the plaintiff, and even if actuated by malicious motives in doing so, no action would lie, though the observations be irrelevant to the matter in issue or be untrue. This applies to High Courts, but it would not be so altogether in the Inferior Courts. The privilege extends to the Judge of an Inferior Court, provided he has jurisdiction in the matter. The statements of a Justice of the Peace made in office are privileged unless the words are not connected with the matter in issue. This privilege does not extend to the Theatre and Music Hall Licensing Committees of the London County Council, as was shown in the well-known case of the Westminster Aquarium *v.* Parkinson. The proceedings, to secure protection, must be judicial proceedings. In the same way public policy requires that everything said in naval and military and state proceedings, and between counsel, solicitor, and client, should be absolutely privileged.

9. QUALIFIED PRIVILEGE. The distinction between absolute privilege and qualified privilege is that in a case of qualified privilege, if malice be proved, the libel or slander is actionable.

> "An occasion is privileged," said Lord Esher, "when the person who makes the communication has a moral duty to make it to the person to whom he does make it, and the person who receives it has an interest in hearing it. Both these conditions must exist in order that the occasion may be privileged."

It is not the legal duty of the master to give a character to his servant, but it is his moral duty to do so, and the person who receives the character has an interest in hearing it. Such communications are privileged, but if it can be shown that the person who made the communication acted maliciously towards the servant, then the matter would be actionable. Fair and impartial reports of proceedings in Parliament or in any Court of Justice, or even on *ex parte* matters, when the aggrieved party is not present or represented, are also privileged, and any public meetings and certain meetings of certain public bodies (if they are open to the public) are also privileged.

10. PRIVILEGED OCCASIONS. The question whether "occasion is privileged" is a *question of law*, and always a matter for the judge. The occasion is privileged if the duty is legal, social, or moral. But it is not sufficient to confer privilege on the person making the communication that he *believed* he owed the duty. At the same time there may be privilege even when the communication is volunteered.

> For instance, I give a servant a good character. I discover afterwards she is a thief. I make a second communication. The second communication is privileged if made without malice. It is so also if a master discharging one of his servants tells others his reason for doing so.

Bona fide communications made on reasonable grounds are privileged (1) "When the circumstances are such as to cast on the defendant the duty of making the communication to a third party" (Lord Lopes), or (2) When there is a common interest between the person who makes the statement and the one to whom it is made. Examples of the former privilege may be found in communications made by a father to his child, a master to his servant, or a servant to his master, a patient to his doctor, or a client to his solicitor. Examples of the second are to be found in communications to relatives concerning family matters, or by a ratepayer to the local authority upon some question affecting the rates, or by a schoolmaster or college tutor to a parent concerning a son. But such communications must be made reasonably, without exaggeration, and to the person directly affected. Yet the presence of a third party will not necessarily destroy the privilege. Thus, at a meeting of poor law guardians, one member made a communication to the others which, in ordinary circumstances, would be privileged; reporters were present, but it was held that their presence did not destroy the privilege, as it was a matter over which the guardian had no control.

> Communications may be made in self-defence, and in reply to an attack from another, but the privilege would be lost if the publication was excessive or disproportionate to the matter in issue. Such excessive publication would be evidence of malice, which would destroy the qualified privilege.

Bona fide, accurate, and impartial reports of proceedings in Courts of Justice, Parliament, and public meetings are

privileged if they are "substantially a fair account of what took place" in court. Privilege will be lost if the publication of proceedings are prohibited by order of the court, or are blasphemous, seditious, or immoral. No comment is privileged until the proceedings terminate. As to privilege in reporting Parliamentary proceedings the law is exactly similar to that with regard to the publication of judicial proceedings.

11. APOLOGY. An apology, however ample, is no defence to an ordinary action for libel; but if the libel has been published in a *newspaper* and an action is brought against those who have the conduct of it, provided the defendants have not been guilty of malice or gross negligence, they are allowed to insert a full apology in the paper and to tender pecuniary compensation to the plaintiff; and if they do this they can plead it as a good defence to the action. It must be borne in mind that where a libel appears in a newspaper or other periodical the injured party may sue the original writer, the editor, the proprietor, the printer, the publisher, the newsvendor, and indeed any one who assists in disseminating it. Where an apology has been made it is usually taken into consideration in mitigation of damages; if such be awarded.

12. MALICE. It is necessary to say a word as to what is meant by malice in actions for libel. In practically every pleading in cases of libel, the lawyers allege that the defendant used the words complained of maliciously. By this they mean that he used the words without legal excuse. But this is not the malice which is alluded to as doing away with qualified privilege. This malice, is malice in fact, that is a disposition to injure another in a spirit of revenge, spite or ill-will. "If," said Lord Justice Brett, (afterwards Lord Esher), "a defendant uses a privileged occasion to gratify his anger or his malice he uses the occasion not for the reason which makes the occasion privileged, but for an indirect and wrong motive. . . . There are certain tests of malice. Malice does not mean malice in law, a term in pleading, but actual malice, that which is popularly called malice. If a man is proved to have stated that which he knew to be false, no one need enquire further. Everybody assumes thenceforth that he was malicious, that he did a wrong thing for some wrong motive. So if it be proved that out of anger, or for some other wrong motive, the defendant has stated as true that which he does not know to be true, and he stated it whether it is true or not, recklessly, by reason of his anger or other motive, the jury may infer that he used the occasion, not for the reason which justifies it, but for the gratification of his anger or other wrong motive."

13. "THE GREATER THE TRUTH, THE GREATER THE LIBEL" Necessarily, but briefly, this old and misleading maxim must be noticed. "In a civil trial," says Dr. Blake Odgers, "the truth of the matters contained in a libel is and always was a perfect answer to the action; the plaintiff was never allowed to recover damages for an injury done to a reputation to which he had no right. But in all criminal proceedings, the truth of the libel by the common law constituted no defence. The maxim used to be 'the greater the truth, the greater the libel,' meaning that the injudicious publication of the truth about A would be more likely to provoke him to a breach of the peace, than if some falsehood were invented about him, which he could easily and completely refute. Accordingly, on a criminal trial, whether of an indictment or an information, no evidence could be received of the truth of the matters charged, not even in mitigation of punishment." This rule has been modified by Lord Campbell's Act, 1843, under which it is a defence to a criminal action to show that the words published were true, if it can also be shown that it was for the public benefit they should be published. The statute does not apply to cases of blasphemous, obscene, or seditious words, and it is always necessary to raise the defence by a special plea of justification.

14. SLANDER OF TITLE AND SLANDER OF GOODS. False statements made maliciously for the purpose of injuring any person's title to property, or of disparaging his goods, are actionable if they cause him special damage. Special damage means any pecuniary loss or the loss of some temporal advantage, not a mere injury to the feelings.

FRAUD.

In considering contracts we have seen that fraud makes any agreement of no effect. We have now to see that fraud of itself gives a right of action against the person guilty of it. The jurist Pothier defined fraud as "any kind of artifice by which one deceives another," and Professor Holland says it is "the intentional determination of the will of another to a decision harmful to his interests, by means of a representation which is neither true nor believed to be true by the person making it." It may be said to be a false representation of an existing fact made with a knowledge of the falsehood, or without belief in its truth, or in reckless disregard whether it be true or false, with the intention that it should be acted upon by the complaining party. No action, however, lies unless damage is the gist of the action; that is to say, there must be fraud and actual damage, and this damage must be the natural and probable cause of plaintiff's action on the faith of the defendant's statement or representation.

1. PROOF OF FRAUD. Fraud is proved when it is shown that a false representation of an existing fact (not of something to be done in the future) has been made (1) knowingly, or (2) without belief in its truth, or (3) recklessly careless whether it be true or false. In the leading case of Derry *v.* Peek, Lord Herschell said, "in my opinion making a false statement through want of care falls far short of, and is a very different thing from fraud, and the same may be said of a false representation honestly believed though on insufficient grounds." Thus, in the case of Angus *v.* Clifford, it was held not to be fraud to make a false statement carelessly, though not recklessly. In this case the false statement relied on was inserted in a prospectus. It stated that the reports of certain engineers were "prepared for the directors," while as a matter of fact they were prepared for the vendors of the property with a view to the formation of the Company. There was, however no evidence that these reports were exaggerated or incorrect.

2. MISTAKE IS NOT FRAUD. A mere statement of opinion, though erroneous, does not constitute fraud. The fact, however, that the maker of a false statement had nothing to gain by it, is not a sufficient defence. There must be a misrepresentation of fact, false in itself, or misleading, because combined with a suppression of the truth. Thus an action of deceit lay where the vendor of a house knowing of a defect in the wall, plastered it up and papered it over, but it must be shown that the plaintiff was actually deceived by the defendant's conduct. If the plaintiff did not examine the wall which contained the crack, he could not be said to have been deceived by the defendant, and in that case an action would not lie. Again, an action will lie when it can be proved that the opinion was not held. Lord Justice Bowen once said, "that the state of a man's mind was as much a fact as the state of his indigestion." But where there is no duty to disclose, non-disclosure is not fraud. Defendant once let a house for a term of years, knowing it to be required for immediate occupation, without disclosing to plaintiff that it was in a ruinous condition. It was held that no action for fraud lay. A news agency once transmitted by mistake a piece of news which caused plaintiff to ship large quantities of corn, which resulted in heavy loss. The defendants were adjudged not liable, as they were unaware that the representation in their telegram was false. An action of deceit will not, therefore, lie for a representation which the defendant honestly believed to be true. It is important to bear this in mind. But it is believed that a defendant would be liable in an action of fraud if, after making a representation, he discovered previous to the plaintiff acting upon it that it was false, and yet did not apprise him of the fact.

3. MISREPRESENTATION TO A THIRD PARTY. He who knowingly makes a false statement, intending others to act upon it, is liable for any damage resulting to any one to whom it may have been intended to be communicated, and who has in fact acted upon it. So in the leading case of Langridge *v.* Levy. Levy sold a gun to the father of the plaintiff with this advertisement tied round its muzzle:—"Warranted, this elegant twist gun by Nock, with case complete, made for his late Majesty George IV., cost sixty guineas; can be had for twenty-five." Levy also represented that the gun was sound. The warranty was false to Levy's knowledge, and shortly after one of the sons (the plaintiff) used the gun in a fair manner, when it exploded and injured his hand. Levy was held liable.

4. FRAUDS BY COMPANY PROMOTERS. Owing to the injury which the public suffered by reason of the insertion of untrue statements in the prospectuses of various companies, the *Directors Liability Act*, 1890, was passed, providing that where a prospectus or notice invites persons to subscribe for shares, debentures, or debenture stock of a company, every person who is, or has agreed to become a director of the company at the time of the issue of the prospectus or notice, and every promoter of the company, and every person who has authorised the issue of the prospectus or notice, is liable to pay compensation to all persons who subscribe for any shares, debentures, or debenture stock, on the faith of such prospectus or notice, for any loss or damage they may have thereby sustained, unless it is proved.

(1) That the statement was made on the authority of an expert, and that the defendant had reasonable ground for believing the expert to be competent; or (2) That the statement was made on the authority of a public official document or statement; or (3) That the defendant had reasonable ground to believe, and did up to the time of the allotment continue to believe that the statement was true.

The Assurance Companies Act, 1909, renders any person liable to a fine or imprisonment, if any account, balance sheet, abstract, statement or other document required by the Act is false in any particular to the knowledge of the person who signs it.

5. MISREPRESENTATION BY AGENTS. Agency plays such a large part in modern mercantile life that it is necessary to consider the liabilities of both principals and agents for the misrepresentation of frauds of agents. If an agent makes misrepresentations, the broad principle is that the principal is liable, except when both he and the agent believe the agent's misrepresentations to be the truth. It follows that the principal is liable when he authorises the making of a false representation. It does not affect the principal's liability whether the agent knows it to be false or thinks it to be true. The principal is also liable when the agent makes a representation knowing it to be false, if the false representation is made by the agent in the general course of his engagement, even without any specific authorisation from his principal, and if made in the interests of the principal; for if the agent made the false representation solely in his own interests, the principal would not be liable. If an agent makes a false representation thinking it to be true, the contract can be rescinded. If a principal knowingly keeps the knowledge from his agent, the principal is liable, but where the information is held back by the principal through inadvertence the liability of the principal must still be regarded as doubtful.

Formerly there was little doubt as to the principal's liability, but in view of the decision in Derry *v.* Peek the original view must be modified.

In Angus *v.* Clifford the Court of Appeal decided that there was no actionable fraud where the defendant carelessly made a false statement without appreciating the importance and significance of the words used, unless indifference to their truth were proved. With greater reason it must be supposed that a principal would not be liable for an inadvertent holding back of knowledge. The law, however, must be taken to be unsettled on this point, as the decisions are contradictory.

The fact that the principal is liable in many cases does not exculpate the agent. He, too, may be sued in all cases where he was a party to the fraud.

NEGLIGENCE.

The great majority of cases arising in tort are based upon some alleged negligence of the party proceeded against. It is the duty of every man to exercise due care in his every act, and any damage arising from his neglect of this rule is a tort.

1. WHAT IS NEGLIGENCE? Negligence is defined by Mr. Justice Willes as "the absence of such care, skill and diligence as it is the duty of a person to bring to the performance of a work." If a person is guilty of negligence, and the natural and probable result of that negligence is that another person suffers damage, the injured party may bring an action for tort.

Thus, if A throw a lighted squib into a crowd, and the persons in the crowd, to avoid injury, throw it from hand to hand, and it finally injures C, the original thrower A is liable. On the other hand, when B's servant washed a van in the public street (which was in contravention of the *Metropolitan Police Act*) on a very frosty day, with the result that the water turned into ice and did not escape down the gully as it would have done on an ordinary day, and C's horse slipped on the ice and was injured, it was held that A was not liable, as the accident was not the natural consequence of his act.

"Where," said Chief Justice Bovill, "there is no knowledge in the person doing the wrongful act, that such a state of things exists as to render the damage probable, if injury does result to a third person, it is generally considered that the wrongful act is not the proximate cause of the injury, so as to render the wrong doer liable in an action."

2. WHAT THE PLAINTIFF MUST PROVE. The plaintiff must generally prove that the defendant has been negligent. Thus, if in crossing a road a person is run over by a hansom, the burden will in the first instance be on the plaintiff to prove that the defendant was driving recklessly, not on the defendant to prove that it was an accident. And this is the general rule, though in a few cases where the cause of the mischief is entirely under the defendant's control, his negligence will be presumed. Thus, if a workman is carrying some bricks on the top of a building and he lets one fall on the plaintiff's head, he will be presumed to have been carrying it negligently, and the burden of rebutting this presumption will be on him.

3. CONTRIBUTORY NEGLIGENCE. It sometimes happens that both a person suffering damage and the person causing it have been negligent. In such a case, the person suffering the damage is said to be guilty of contributory negligence. As a general rule, such a person cannot recover damages from the other party, but he may recover if the defendant, by the exercise of ordinary care, might have avoided the accident. Thus, where a plaintiff left his donkey lying in the public road, with its legs tied, and the defendant, driving carelessly, drove over the donkey and killed it, he was held to be liable.

"Although," said Baron Parke, "the ass may have been wrongfully there, still the defendant was bound to go along the road at such a pace as would be likely to prevent mischief. Were this not so, a man might justify the driving over goods left on a public highway, or even over a man lying asleep there, or the purposely running against a carriage going on the wrong side of the road."

In cases of contributory negligence of children it cannot be expected that they will exercise the same amount of care as persons of mature years. Yet if a child gets into mischief, by doing what he knows to be wrong, he will be guilty of contributory negligence. If the child is under the control of an adult and such adult is guilty of contributory negligence, the child will not be able to recover damages for an injury received through the defendant's negligence.

LIABILITIES OF CARRIERS AND OTHERS. Carriers of goods are insurers as well as carriers; railway companies in carrying passengers are not insurers, and their duty is only to take due care. They do not warrant the safety of their carriages, and are not responsible for a latent defect which it was impossible to discover. In the case of the sale of a chattel for a specific purpose, there is an implied warranty of its fitness, and the vendor is liable for an accident, though it be caused by a latent defect in the chattel.

Thus, if a person purchased a bun, and inside that bun there was a stone. If the purchaser broke a tooth in biting the bun, he could bring an action against the vendor even if the jury found that the latter had not been negligent. For the vendor must have known that the bun was sold to be eaten, and the law says that he therefore impliedly warranted that it was fit to be eaten, which it was not.

The law which makes carriers of goods responsible for any damage that may result thereto, even when not caused by any negligence on the part of the carrier or his servants is peculiar. At common law if goods were entrusted to a carrier there were only three defences that he could raise to an action brought in consequence of damage to or loss of the goods.

(1) That the loss or damage arose from an "Act of God"; that is to say, that the loss was sustained by lightning or other natural cause that no amount of human foresight or care could possibly have prevented it. (2) That the loss was due to the "King's Enemies," i.e., that they had been seized by an enemy to the Crown. (3) That the damage was due to "Proper Vice," or an inherent defect in the goods themselves, such as the natural deterioration of perishable articles, or the natural consequences of bad packing, or of the dangerous nature of the goods themselves.

This common law liability of a carrier has been somewhat narrowed by the provisions of the Land Carriers Act, 1830, which allows carriers to make special contracts with their customers relating to the carriage of their goods and which provides that land carriers are not to be held responsible for the loss of, or injury to, certain specified articles of a value exceeding £10, unless the customer, on delivering them to the carrier, declares their value and agrees to pay an enhanced price for their carriage.

The articles specified by the Act are gold or silver coin, gold or silver in a manufactured or unmanufactured state, precious stones, jewellery, watches, clocks or time-pieces of any description, trinkets, bills, bank notes, orders, notes or securities for the payment of money, English or foreign stamps, maps, writings, title-deeds, paintings, engravings, pictures, gold or silver plate, or plated articles, glass, china, silks in a manufactured or unmanufactured state, whether wrought up with other materials or not, furs, and real lace.

FALSE IMPRISONMENT is unlawful detention of the person, and this always gives right of action. It may be actual by laying hands on the person, or it may be constructive, that is to say, without actual application of force, e.g. by a bailiff telling some one that he is wanted and making him accompany him. If the party is under restraint, and the officer manifests an intention to make a caption, it is not necessary there should be actual contact. If there is a resignation of personal liberty induced by the exercise of another, it is imprisonment. There need not necessarily be incarceration. On the other hand, partial restraint is not sufficient; it must be total. "Imprisonment is a total restraint of liberty of person" (Patteson J.). A man is not imprisoned who has an escape opened to him, that is, Sir Frederick Pollock apprehends, a means of escape which a man of ordinary ability can use without peril of life or limb. The verge of a cliff, or the foot of an apparently impracticable wall of rock, would in law be a sufficient boundary, though peradventure not sufficient in fact to restrain an expert diver or mountaineer. All that plaintiff has to do is to prove the imprisonment. It is for defendant to justify it if he can.

MALICIOUS PROSECUTION. If a person takes criminal or bankruptcy proceedings against another, maliciously and without reasonable probable cause, and the case ends in the defendant's favour, his action may be treated as malicious prosecution. But the aggrieved person must prove that he has sustained damage in pocket or reputation or health.

MAINTENANCE AND CHAMPERTY. Both offences give the right of action for damages. *Maintenance* is the wrong of aiding a party in litigation without interest in the suit or lawful cause of kindred, affection or charity. Actions for maintenance in modern times are rare. That an action for maintenance can be brought successfully was proved in Alabaster and others *v.* Harness and others. *Champerty* is a species of maintenance. It is maintenance in consideration of an interest in the subject matter of the action to be maintained. Champertous bargains are forbidden and void. It is sufficient that the transaction should "savour of champerty," and accordingly be "against the policy of the law."

NUISANCES. It is a principle of the English Law that every person is bound to avoid using his property in such a way as to avoid injuring other person's, neither must he do anything to the hurt of the property of his neighbour. "Nuisance," says Sir Frederick Pollock, "is the wrong done to a man by unlawfully disturbing him in the enjoyment of his property, or in some cases in the exercise of a common right." A nuisance may be public or private. A public nuisance is an act affecting the public at large, or some considerable portion of them. A private nuisance is an act affecting some particular individual or individuals as distinguished from the public at large. In the case of a public nuisance, the remedy is by indictment or information. Where the public nuisance injures a private person more than it injures the public at large, the aggrieved person has also the remedies given in cases of private nuisance.

REMEDY FOR PRIVATE NUISANCE. The remedy in a private nuisance is an action for damages, or an injunction, or both, or by *abatement*. Abatement may be the removal of the nuisance by the injured party after notice to remove the same, if it be unsafe to wait for legal process. Where it is necessary to enter another's land to abate the nuisance, the removal must be peaceable, without danger to life or limb. A nuisance causing personal discomfort to maintain an action must interfere with "the physical comfort of human existence"; it is not sufficient if temporary annoyance be caused by the execution of lawful works. A nuisance causing damage to property will maintain an action for damages. In the case of St. Helen's Smelting Company *v.* Tipping, it was held that the fumes from plaintiff's works which killed plaintiff's shrubs were sufficient cause of action for nuisance against the defendants. Neither does it make any difference that the very nuisance complained of existed before the plaintiff became owner or occupier.

INJURY TO A MAN'S MODE OF LIVELIHOOD. It used to be held that a special cause of action existed "where a violent or malicious act is done to a man's occupation, profession or way of gaining a livelihood." There are now, however, several decisions going to prove that such actions to be maintained must be based on damage to the plaintiff by reason of trespass, nuisance, or some act of the defendant which is otherwise unlawful in itself, and that in no such case is the cause of action determined by "malice." In the famous action of Allen *v.* Flood the facts were as follows:—The defendants, Flood and Taylor, were shipwrights employed "for the job" on the repairs to the woodwork of a ship, but were liable to be discharged at any time. Some iron-workers who were employed on the iron-work of the ship objected to the respondents being employed, on the ground that the respondents had previously worked at iron-work on a ship for another firm, the practice of shipwrights working on iron-work being resisted by the trade union of which the iron-workers were members. The appellant, Allen, who was a delegate of the union, was sent for by the iron-workers and informed that they intended to leave off working. The appellant informed the employers that unless the respondents were discharged all iron-workers would be called out or knock off work (it was doubtful which expression was used); that the employers had no option; that the iron-workers were doing their best to put an end to the practice of shipwrights doing iron-work, and that wherever the respondents were employed the iron-workers would cease work. There was also some evidence that this act was done in order to punish the respondents, Flood and Taylor, for what they had done in the past. The employers, in fear of this threat being carried out, which, as they were aware, would have stopped their business, discharged the respondents and refused to employ them again.

The respondents brought an action against Allen, and

the jury found that he had maliciously induced the employers to discharge the respondents and not to engage them again and gave the respondents a verdict for damages. The Court of Appeal upheld this decision, but the House of Lords (Lord Halsbury and Lords Ashbourne and Morris dissenting) reversed the decision, holding that Allen had violated no legal right of Flood and Taylor, done no unlawful act, and used no unlawful means in procuring the respondents' dismissal; his conduct, therefore, was not actionable, however malicious his motive might be, and the appellant was entitled to judgment.

The effect of this far-reaching judgment is therefore, that an act lawful in itself is not converted by a malicious or bad motive into an unlawful act so as to make the doer of the act liable to civil action.

In the later case of Quinn *v.* Leatham it was decided by the House of Lords that a combination of two or more, without justification or excuse, to injure a man in his trade by inducing his customers or servants to break their contracts with him or continue in his employment, is, if it results in damage to him, actionable. In this same case Lord Lindley said, "Coercion or threats, open or disguised, not only of bodily harm but of serious annoyance and damage, is *prima facie*, at all events, a wrong inflicted on the persons coerced; and in considering whether coercion has been applied or not, numbers cannot be disregarded." Lord Lindley, in fact, in the course of his judgment expressly said that the decision in Allen *v.* Flood "may be easily misunderstood and carried too far." These words illustrate the difficulty which many lawyers find in reconciling the decision in Quinn *v.* Leatham and Allen *v.* Flood.

ACTION FOR SEDUCTION. The action for seduction is brought by the plaintiff for the loss of the woman's services by the wrongful act of the defendant, her seducer. It must be brought by the woman's master or mistress. If she has no master or mistress, the action cannot be brought; but if she is living at home, assisting in the housework and generally making herself useful to her parents, they will be considered to be her masters, even though she receive no wages. It follows from this that a master cannot be sued for the seduction of his own servant. The only exception being where he has engaged her for the purpose of seducing her, and not *bona fide* to act as his servant. It is necessary that the woman should have been in the service of the same master both at the time of the seduction and at the time of her subsequent illness.

For example, when a girl was seduced when in the service of A and proved pregnant during her service with B, it was held that the seducer was not liable. Nor can the plaintiff maintain an action if he has allowed profligate persons to obtain the society of the girl, or in other ways caused his own injury.

The damages recoverable are not merely for the actual damage sustained, but for the anxiety, distress of mind, loss of society and comfort, as well as dishonour suffered by plaintiff. "I am of opinion," says Lord Eldon, "that the jury may take into their consideration all she (the mother) can feel from the nature of the loss. They may look upon her as a parent losing the comfort as well as the service of her daughter, in whose virtue she can feel no consolation, and as the parent of other children whose morals may be corrupted by her example."

ENTICING AWAY A SERVANT. An action also lies for enticing away a servant, that is, for wilfully inducing a servant to commit a breach of his contract of service whereby his employer suffers damage. If there is a proof of a relationship of master and servant, any fraud whereby the servant is induced to absent himself or herself affords a ground of action, "when once the relation of master and servant at the time of the acts complained of is established." A married woman living apart from her husband in her father's house may for the purpose of this action be a servant, even though the relation might be determined by the will of the husband.

LIABILITY FOR THE WRONGS OF OTHERS. It is a peculiarity of English law that not only is a man always responsible for his own torts, but that he is also frequently responsible for torts committed by those in his employ. This subject is dealt with at greater length elsewhere in this work under *Principal and Agent*, and *Master and Servant*. It will be sufficient, therefore, to state here that in addition to the servant, the master will be responsible if the servant commits a tort in the course of his usual duties, and within the scope of his implied authority. If these two conditions have been fulfilled the master will not be allowed to exonerate himself by proving that the servant had acted contrary to orders. Two examples will suffice:

(1) In Limpus *v.* London General Omnibus Co. The defendants had forbidden their drivers to race with other busses. Nevertheless one did so and the result was a catastrophe. It was held that the driver was acting in the course of his usual duties and that the defendants were liable.

(2) In Storey *v.* Ashton. A servant of the defendant took a fellow servant out for a purely private excursion of their own in one of the defendant's vans, but without the knowledge or consent of the defendant. The servant could have no implied authority to do such a thing, and the defendant was held not liable for the damage his servant did.

TORTS AND MARRIED WOMEN. For torts committed by or against a wife during marriage, she is sued or sues just as a single woman, and sums recovered against her are to be paid out of the separate estate. The husband may be joined to his wife in these actions, because the husband's old common law liability for his wife's torts committed during marriage is not interfered with by the Married Women's Property Act, 1882, and therefore a husband is liable for wrongs committed by his wife during marriage.

By the Married Women's Property Act, the wife is liable for her torts committed before marriage, but sums recovered against her are to be paid out of her separate property. By section 14 of the Act, however, it is provided that the husband is liable for his wife's torts committed before marriage to the extent that he has obtained property through her, and he may be sued jointly with her or alone. If a husband commits a tort against his wife, the wife may maintain an action against the husband, but only for the protection and security of her own separate property. Beyond that, neither husband nor wife can sue the other for a tort.

TORTS BY AGENTS OF CORPORATIONS. A corporation is liable for the torts committed by its agents, provided that the tort committed is within the scope of their authority and in the interests of the corporation.

INFANT'S TORTS. The rule that an infant cannot generally be made responsible for his contracts has no application in the case of torts. An infant is personally responsible for his torts, and may be sued for damage resulting from them. Some cases, however, may be treated as both torts and breaches of contract, and in these the infant is allowed to derive the benefit of treating them as contracts. Thus in a certain case an infant contracted for the hire of a horse, and rode it lame. This being a breach of contract, the defendant was held not liable. If he had taken the horse without permission, there would have been no contract, so in that case he would have been liable.

THE RULE OF THE ROAD. There is no law which compels a person to keep to any special side of the road; there is, however, a well-known custom which riders and drivers recognise, and which is so far recognised by the courts, that a man will be presumed to have been negligent who ignores it. The rules as to driving are, that in meeting other vehicles, each party shall keep to the left, and the left side is called the near side; that in passing another vehicle the driver shall keep to the right or off side: and that in crossing the driver coming transverse shall bear to the left hand, so as to pass behind the other carriage. It may be said to be the duty of every driver to keep to his near side of the road, but he is not bound to do so. If he were it would, for instance, be impossible for a cab to set down a passenger on the off side of the road, or for a van to draw up to deliver goods there. But if a driver departs from his usual side, he must exercise the utmost care. At night the rule ought to be adhered to as strictly

as possible. Where there are tramcars, it is sometimes impossible to observe the rule as to passing on the off side, and in Scotland this impossibility has been recognised. Foot passengers have a right to walk in the carriage way, though it would be very negligent for them to do so in some circumstances. A driver or cyclist can not excuse himself from the result of his negligence by saying that a foot passenger should have got out of the way. The rule for foot passengers on pavements is to keep to the right, the direct contrary to the rule for vehicles.

FEROCIOUS ANIMALS. The owner of a ferocious animal (e.g. a lion in captivity) is answerable for any damage or injury it may do, although he may have done his best to keep it in safety. He who keeps a ferocious animal, knowing it to be so, does it at his peril. But in the case of a dog or other domestic animal, it is necessary to prove that the owner knew of its ferocious disposition before damages can be recovered by a person who has been bitten by it. Such knowledge is called scienter. It is sometimes said that "every dog is entitled to a first bite," but this is not quite correct, as it is sufficient to prove that the owner knew the dog had evinced a savage disposition, though it had not bitten any other person before it bit the person suing. By statute scienter of a dog's ferocious disposition need not be proved, where injury has been done to sheep or cattle (including horses). If a person crossing a field over which there is a right of way, is attacked and injured by a ferocious bull, he would be entitled to bring an action for damages against the owner of the bull; but if there be no right of way, he would be a trespasser and, as such, disentitled to compensation.

DANGEROUS MACHINERY AND SUBSTANCES. It is the policy of the law to impose special duties in special cases. As Justice Blackburn said, Fletcher *v.* Rylands (L.R., 1866, i. Ex. 279), "the true rule of law is that the person who for his own purposes brings on his land and collects and keeps there anything likely to do mischief if it escapes, must keep it in at his peril, and, if he does not so, is *prima facie* answerable for all the damage which is the natural consequence of the escape." In this case the defendants constructed a reservoir on their own land adjoining land of the plaintiffs. There were certain old mine shafts on the land which were discovered and filled in unknown to the defendants. The water in the reservoir escaped through the shafts and injured plaintiff's colliery. Defendant was held liable, though defendants were not personally guilty of negligence. The defendant, however, is not liable for "an act of God," which could not have been prevented by any amount of foresight and pains and care reasonably to be expected. Nor is defendant liable for the consequences of an act due to the fault of the plaintiff, the wrongful act of a third party, or an act authorised by statute. It is to be presumed, of course, that the defendants had not contributed to it by a breach of duty. By section 86 of the Building Act of 1774, a man is not liable for damage caused by a fire which commenced in his house or on his land if it originated by accident and without negligence on the part of himself or his servants.

STEAM AND TRACTION ENGINES. One who runs a traction engine or a locomotive on a roadway does so at his peril. Should a spark be emitted from the engine and it damaged another person's property, the owner of the locomotive might be held liable. It used to be otherwise if the spark proceeded from the engine of a railway company running under statutory powers. In Rex *v.* Pease it was held that where the legislature has authorised a railway company to construct a railway alongside a public highway, it must be presumed to have contemplated the probability that the railway will be a nuisance to persons using the highway, and that such persons must submit to the inconvenience arising; and in the case of Vaughan *v.* Taff Vale Railway Company, the defendants were held not liable for damage caused by sparks from their engines setting fire to the adjoining property of the plaintiff, as they had adopted every precaution that science could suggest to prevent injury. In the case of Smith *v.* London and South Western Railway Company, however, the defendants' workmen left some cut grass lying for a fortnight in the hot weather. The grass caught fire from a spark from an engine, and spreading burnt down plaintiff's cottage. It was held that the defendants, being guilty of negligence in allowing the grass to remain so long in the hot weather, were liable. But when the defence depends on statutory powers, the statute must direct the thing to be done; it must not be merely a case of discretionary power, as where it was decided that the Metropolitan Asylum District Board could not successfully plead that a statute had given them power to erect a hospital which became a nuisance, so as to prevent an injunction issuing to restrain the Board from establishing the hospital. But though the defence that a nuisance was impliedly authorised by the statutory powers is still available in the case of most nuisances, it will shortly be abolished in respect of fires caused by cinders and sparks from railway engines. By the Railway Fires Act, 1905, which does not come into operation until the 1st January, 1908, it is provided that when after that date damage is caused to agricultural land or crops by fire from sparks or cinders emitted from a railway locomotive, the fact that the engine was used under statutory powers shall not affect the liability of the Railway Company.

CONSENT AND NECESSITY. No action is maintainable for damage arising from acts suffered by consent, if such acts were not likely nor intended to cause bodily harm. This would not apply to a surgical operation. A cricket match is lawful, and a football match is presumed not to be likely to result in injury, though a kicking match would. It is also believed that it would be an excusable act to pull down houses to prevent fire spreading.

DEATH OF ONE OF THE PARTIES IN TORT. The old rule of law was *actio personalis moritur cum persona* (a personal right of action ceases at death), but even in the old days it did not apply generally to contracts. It still applies, as we have seen, to contracts of personal service (master and servant), and it also applies with some exceptions in cases of tort. An ordinary action for breach of promise of marriage dies with the defendant, but it is otherwise if special damage has been caused to the property of the plaintiff. "The only cases," said Lord Justice Bowen, "in which, apart from questions of breach of contract, express or implied, a remedy for a wrongful act can be pursued against the estate of a deceased person, who has done the act, are those in which property, or the proceeds or value of property belonging to another, have been appropriated by the deceased person, and added to his own estate or moneys. In such cases the action, though arising out of a wrongful act, is in substance brought to recover property or its proceeds or value, and does not die with the person.'

Where an injury has been done to the goods and chattels of a person who afterwards dies, his executors or administrators may sue the wrong-doer. Similarly, if an injury has been done to his real property, the executors or administrators may sue the wrong-doer, but in this case the injury must have been committed within six months prior to the owner's death, and the action must be brought within one year after death. Should the wrong-doer die within six months after committing the wrong, his executors or administrators can be sued at any time within six months after their appointment.

By Lord Campbell's Act, 1846, "where a person's death is caused by the wrongful act, neglect or default of another, and the injured person, if he had lived, could have maintained an action, and recovered damages in respect thereof, the person who would have been liable in such case shall be liable to an action for damages notwithstanding the death of the injured person, and although the death shall have been caused under such circumstances as amount in law to a felony." The action is for the benefit of the wife, husband, parent (which includes grandparent and step-parent), and child (which includes grandchild and step-child) of the person whose death has been caused, and the jury must apportion the damages awarded amongst those for whose benefit the action is brought. The action must be brought

by the executor or administrator within one year after death, and only one action can be brought for the same cause of complaint. The persons for whose benefit the action may be brought can themselves bring the action in case the executor or administrator does not bring the action within six months after death.

PERSONAL RIGHTS.

For a people to be free the law must be supreme, all must stand equal before the law, and the people themselves must have the right to legislate through their representatives. Such is the foundation on which rest our personal rights and liberties.

RIGHT TO PERSONAL LIBERTY. The liberty of the subject is one of the fundamental principles of our law. One of the clauses of Magna Charta itself declares that right and justice must not be delayed or denied to any one. Of course the law ordains imprisonment for certain offences, and it is sometimes necessary to keep alleged criminals in safe custody until their trial. To prevent any serious abuses arising from this state of affairs, the *Habeas Corpus* Act was passed in 1679, providing for applications being made on behalf of prisoners for a writ of *Habeas Corpus*, which entitles them to be brought before a judge within two days. Later statutes have extended the *Habeas Corpus* remedy to non-criminal charges.

In practice, prisoners in custody are always brought before a magistrate as soon as possible after arrest. The magistrate enquires into the charge, and if satisfied that there is a *prima facie* case against him, commits the prisoner for trial. If the investigation is not complete in a single hearing, the accused may be remanded for not more than eight days, after which he may be again remanded. If the magistrate thinks there is not sufficient evidence against the accused, he orders him to be discharged.

In certain minor cases the magistrate has power to deal with the offender summarily, but if he commits him for trial, he may either admit the accused to bail or commit him in custody. Bail is never granted in murder cases, and in other cases it generally lies in the magistrate's discretion. The Bill of Rights, 1689, provided that the bail must not be excessive.

A constable may arrest any person without a warrant on reasonable suspicion that a felony has been committed, or is about to be committed, but he may not arrest a person without a warrant for a misdemeanour, except to prevent a breach of the peace, or where the misdemeanour is committed in his presence. As for arrest by private persons, they are bound to arrest anyone whom they see committing a felony, and they are also bound to assist a constable if called upon. There are other cases in which a private person may arrest an offender, but it is a risky proceeding, as they may find themselves landed in an action for damages if the arrest turns out unjustifiable.

HABEAS CORPUS ACT. The right of the citizen to his personal liberty is protected by two safeguards, (1) by the writ of *Habeas Corpus*, and (2) by an action for damages for false imprisonment. Where a person is detained on a criminal charge without being brought to trial, or where he is unlawfully detained by private individuals, any one may on his behalf apply to a judge of the High Court praying the judge to issue a writ of *Habeas Corpus* commanding the governor of the gaol or the person detaining the individual on whose behalf the request is made to bring the body of such individual before the Court in order that the Court may investigate the reason why he is kept in custody, and if there be no sufficient reason, the Court will order him to be set at liberty, or if he is a child will order him to be given up to his lawful guardians. This writ or order *must* be issued by the judge on good reason being shown, and if the judge in that case refuses to issue the writ, such judge will forfeit to the aggrieved person a sum of £500.

The following is an example of the Writ of *Habeas Corpus* ("That you have the body.")

> Edward, by the Grace of God, of the United Kingdom of Great Britain and Ireland, King, Defender of the Faith. To John Smith, keeper of our gaol of Bedford, greeting. We command you that you have the body of William Styles, detained in our prison under your custody, as it is said, together with the day and cause of his being taken and detained, by whatsoever name he may be called or known, in our Court before us, at the Royal Courts of Justice, London, immediately after the receipt of this writ, to undergo and receive all and singular such matters and things which our said Court shall then and there consider of him in this behalf; and have then there this writ. Witness (here follows the judge's name with the date of the writ).

SUSPENSION OF THE HABEAS CORPUS ACT. At various times of national peril the *Habeas Corpus* Act has been suspended by Parliament. The effect of the suspension is that a person who is detained in custody has no means of procuring a speedy trial, because he cannot demand that a writ of *Habeas Corpus* should be issued on his behalf. A person might therefore be unjustly detained on mere suspicion for a considerable period. Of course, on his release, he could bring an action for false imprisonment. The same thing could occur where a person was detained on reasonable grounds of suspicion, but against whom no legal proof of criminality is available. To prevent the bringing of these actions after the period of suspension has expired, Parliament, before the expiration of the period, passes an Act of Indemnity protecting all officials and others who have acted under the powers given to the Government during the period of suspension. The effect of this Act of Indemnity is to deprive all those who have been imprisoned of their right to bring actions for false imprisonment.

RIGHT OF SELF-DEFENCE. Every British subject has the right, in defending his person and property, to use such an amount of force as is both necessary and reasonable for the purpose of attaining his object. He must not inflict on the attacker an injury out of all due proportion to the harm he himself is suffering. So that if a bigger man than himself punches his head, he is not entitled to shoot the aggressor. If his life is in imminent peril he is entitled to kill the attacker, but if he can protect himself by merely maiming him or by threatening to fire he must choose the milder course. The right of self-defence should be employed sparingly. The proper place for the punishment of an aggressor is a legal tribunal, and the courts will not be so prone as the injured party to regard the counter attack as necessary.

A person who by killing his aggressor takes a course which is unreasonable or unnecessary will be liable to be convicted of manslaughter. Cases sometimes arise where persons are shipwrecked, and in order to save themselves from starvation they draw lots to kill and eat one of their number. Persons who do this are guilty of murder, and it is no defence to show that the victim consented to the course.

LIBERTY OF SPEECH. People in England have the right of holding any opinions they please, and on any subject under the sun. They have also, subject to certain limitations which will be mentioned, the right of airing those opinions for the benefit or otherwise of all who care to listen. Persons are not, however, permitted to shock the ears of their hearers with outrageously obscene and blasphemous utterances, nor again must they act in such a way as to be a nuisance to others, as by causing crowds to gather and obstruct public highways. So, too, they must not make statements concerning any person which would expose him to hatred, ridicule, or contempt, or which would cause him to be shunned or avoided, for that would be slander. Again, they must not use expressions inciting their hearers to commit a crime.

LIBERTY OF THE PRESS. Closely akin to the right of free speech is the liberty of the press. There is no particular magic in the words "liberty of the press." All that the phrase means is that a man is at liberty to write

what he pleases, provided that he does not break the law of the land or infringe the legal rights of other people; he must not, for example, write blasphemous or seditious or treasonable matter or commit a libel on others. Whether he has committed any of these offences is decided by a jury of his countrymen. To put it shortly, "liberty of the press" is simply the right of the private individual to write or say what he pleases, provided that a jury comes to the conclusion that by so writing or speaking he has not broken the law of the land or infringed the rights of others. The press in England has not always been free to discuss all matters at will. Indeed, a system of press censorship and licensing existed until the year 1695, and down to nearly the middle of the last century a great check was placed on any political comment by prosecutions for seditious libel. But all this was practically swept away by Lord Campbell's Libel Act, 1843, which allowed a defendant indicted for criminal libel to urge as a sufficient defence that the libel was true and published for the benefit of the public. Even now, however, newspapers, etc., must not publish libels on individuals (subject to the above defence) or matters which are obscene or grossly blasphemous. They are, however, allowed the greatest latitude in discussing affairs of public interest, such as the conduct of the Government.

RIGHT OF PUBLIC MEETING. The so-called right of public meeting is simply the right of private individuals to assemble and meet together in any place they think fit, provided that they are not trespassing on other people's property or obstructing the public highway. While there assembled they may say what they please, provided they do not break the law of the land or infringe the rights of others, e.g. as by slandering a person or by stirring up riots or tumults or by inciting people to the commission of crimes. And in this case, also, the test of their so doing is the verdict of a jury.

RELIGIOUS LIBERTY. As the law now stands persons are entitled to hold whatever religious opinions they choose, and to observe whatever form of religious worship they like, provided they do not, in such observance, act so as to be a nuisance to others, or commit some offence against the Criminal Law. Thus a man may be a Mormon if he chooses, but if he marries more than one wife he will be punished for bigamy. At one time those who were not members of the Established Church were subject to all sorts of disabilities, and even to penalties; but nearly all these have now been swept away; indeed, the only civil offices which are now by law confined exclusively to members of the Established Church are those of Sovereign and Lord Chancellor.

ENFORCEMENT OF PERSONAL RIGHTS. Mention has been made above of the *habeas corpus* procedure, by which that most sacred of rights, the right to personal liberty, is safeguarded. But all other legal rights have likewise their remedies. It is a legal maxim that for the infringement of every legal right there exists a legal remedy; and indeed if this were not so the rights would be worthless.

> Thus in the famous Aylesbury election case an elector was held entitled to bring a civil action against the returning officer who wrongfully rejected his vote, even though the acceptance of the vote would not have affected the result of the election.

Most legal rights are enforceable by an action for damages against the person or persons who infringe them. Sometimes a claim for an injunction is a more appropriate remedy, as the injunction would restrain the wrongdoer from a further invasion of the right under pain of imprisonment for contempt of court. Where there has been an infringement of a legal right of a public nature, and no effectual relief can be obtained by an action for damages, or by a claim for an injunction, the evil may frequently be remedied by the issuing of a *mandamus* from the King's Bench Division requiring in the king's name the person, corporation or court, to whom it is addressed, to do some particular thing. Further information as to the methods of enforcing legal rights will be found under "Procedure in the Courts," p. 477.

CHURCH LAW.

ESTABLISHMENT. The Church of England is often spoken of as the "Established Church," a phrase commonly used to express in a general way the legal position of the Church in relation to the State, as being in some sense the *National Church*. As such it enables the nation to recognize on special occasions its obligations, as a nation, to Almighty God, and it entitles every man in the kingdom, if so minded, to the ministrations of the clergy, each in his own parish.

The prevalent idea that the establishment of the Church of England gives it exceptional advantages seems illusory. It is true that a certain number of bishops sit in the House of Lords as spiritual peers, but on the other hand the bishops thus privileged are nominated and practically appointed by the Crown, whilst the clergy are precluded from sitting as members of the House of Commons. So far from having exceptional advantages, the Church of England by her connection with the State is greatly restricted in her liberty of action. Take, for instance, the provincial synods of the Church, known as the *Convocations* of Canterbury and York, which are entitled to meet in London and York respectively on the assembling of Parliament. Convocation can only be assembled by the King's Writ; when assembled, it cannot proceed to make new Canons without a royal license; and when new Canons have been agreed to by Convocation, in each province, they have no legal force until confirmed by the sovereign. And even then they require the sanction of Parliament, if in any respect they depart from established law and custom.

At one time, indeed, the Church of England was a privileged body compared with the other religious bodies, who were subject to pains and penalties and laboured under many disabilities. But that unhappy time has passed, and now it is difficult to see that the phrase "as by law established" does not apply to the dissenting bodies as well as to the Church of England. Acts of Parliament recognize and legalise their existence as organised religious bodies, protect their property and their worship, and give the same privileges to their ministers and places of worship as to the clergy and the parish churches. The same exemptions from service on juries or in the militia apply to all alike, whether clergy or ministers, who are not engaged in secular business other than that of schoolmaster; the same exemptions from the payment of rates apply to all places of worship.

Again, all religious bodies, without distinction, are liable to State control. The king is the supreme ruler in all matters, ecclesiastical as well as civil. And the civil courts take cognizance of all disputes relative to property and the rights of individuals, whether in connection with the Church of England or any other religious body.

THE CHURCH BUILDING. The freehold of the church building and that of the churchyard is vested in the incumbent, whether rector, vicar, or perpetual curate. It is the duty of the churchwardens to keep the building in good repair, and the churchyard in decent order. The ancient method of raising funds for this purpose was by a Church rate agreed upon by the parishioners at a vestry meeting. But as payment of a rate so made cannot be enforced since the passing of the Church Rates Abolition Act, 1868, the expense of keeping the fabric in repair is usually defrayed by voluntary subscriptions and church collections.

The law in regard to church ornaments, and what are described as Ritualistic practices is very abstruse, and is open to many interpretations, leading at times to strong divergence of opinion and serious disputes between members of the Church of England. Those especially concerned in these matters should refer to the case "Reid *v.* the Bishop of Lincoln," tried before the Archbishop of Canterbury, 1890, and the appeal on the same case heard by the Judicial Committee of the Privy Council in 1891.

Prefixed to the Order for Morning and Evening Prayer is a rubric, commonly called the "Ornaments Rubric." It reads—"And here it is to be noted that such Ornaments

of the Church and of the Ministers thereof, at all times of their ministration, shall be retained and be in use, as were in this Church of England, by the authority of Parliament, in the second year of the reign of King Edward the Sixth."

The word "ornaments," as here used, has not the modern meaning of articles for decorative purposes, but includes the articles used in the performance of Divine Service, such as the Communion Table, the Font, the Credence Table, the Surplice and other vestments worn by the officiating clergy. At different times various ornaments have been declared illegal, but there is great diversity of opinion as to the right interpretation of this famous rubric. According to decisions of the Court of Appeal in ecclesiastical cases, it appears that a cross is a legal decoration, but a crucifix (an image of Christ on the Cross) is not; that a cross may not be carried in procession; that images may be lawful if set up for the purpose of decoration only; and that a baldachino (or altar canopy) is illegal.

ALTERATIONS and ADDITIONS to the CHURCH FABRIC or FURNITURE. No alterations or additions may be made to the structure, furniture, and ornaments of a church without a faculty. A *faculty* is a licence made under the authority of the Bishop's Court. This rule applies to all alterations, however small, whether in the church or churchyard, but it is not enforced unless such alterations are of some importance.

An ornament in a church cannot be removed without a faculty even when, in the first instance, it has been illegally placed there. Where an ornament has been placed without legal authority in a church, a confirmatory faculty may sometimes be obtained for its retention. Faculties are occasionally granted on sanitary grounds for the removal of bodies buried in a church or churchyard; they are also granted for the sale of disused ornaments, as old church bells.

The opinion of the majority of the parishioners for or against any proposed alteration or addition is entitled to great weight, but the Court is not bound to respect and conform to the wishes of such a majority. The High Court of Justice has power to grant an injunction to restrain alterations in the fabric of churches unless and until a faculty is granted, and by the Public Worship Regulation Act, 1874, the archdeacon, a churchwarden, or any three parishioners may make a representation to the bishop in cases where an unauthorised alteration has been made in the fabric, ornaments, or furniture, and on such representation proceedings may be taken.

CHURCH PEWS. All pews in a church are *prima facie* at the disposal of the churchwardens, except the chief seat in the chancel, which by custom belongs to the rector, whether ecclesiastical or lay. But a faculty granted by the ordinary may give to persons inhabiting a particular house in the parish an exclusive right to sit in a particular pew. This right cannot be granted to a man and his heirs, but is one annexed to a house and passes with the house in the case of transfer. Saving these private rights the seats are at the disposal of the churchwardens, who can seat the worshippers at their (the churchwardens') discretion. If a man occupy a seat either by the direction or with the acquiescence of the churchwardens, he can claim and maintain the right to undisturbed possession against all comers other than the churchwardens themselves. They may at any time displace the occupant by revoking their leave to occupy, but in every case they should take care not to act unnecessarily or capriciously.

PEW RENTS. No pew rents can be legally charged in many churches, but in some, especially the newer ones, a charge for sittings may be made. The authority for such a charge is contained in various Church Building Acts. The duty of collecting and distributing the pew rents falls upon the churchwardens. The first schedule fixing the scale of rents has to be approved by the Ecclesiastical Commissioners, and no alteration in the scale must be made without their assent. Pew rents may be recovered by the churchwardens in the case of non-payment, and in the event of such rent being in arrear for a period of three months, the churchwardens may enter upon possession of the seat or pew and let it to another person.

CHURCHWARDENS. The mode of election of these officers is governed by the custom of the parish. In the majority of cases one is elected by the parishioners and the other appointed by the incumbent. If no recognised custom exist, then the joint consent of the incumbent and parishioners is required before an appointment can be made, and if they cannot agree, the incumbent is to choose one and the parishioners another. The election is annual, and should take place at Easter, but though chosen for one year only, the existing churchwardens may be re-elected. The persons elected are, on due summons, to attend a visitation of the Archdeacon, and before him take the oath of office, that they will serve the office faithfully. All parishioners are eligible, except aliens, Jews, minors, lunatics, and felons. It would appear that a woman is not ineligible, nor is a Roman Catholic. In many parishes there exists an immemorial custom to have but one churchwarden—a custom which has been recognised by the Courts. In the case, however, of a parish in which "custom" was pleaded as a reason for having no churchwarden, the custom was not upheld.

The powers and duties of these officers are many and various. The furniture and ornaments belonging to the church are in their care, and the fabric itself is in their special charge for them to maintain in good repair. It is their duty to see that everything required for the proper rendering of the service is provided and in proper order. They are responsible for maintaining order during the performance of Divine Service, and have the right to remove any disorderly person from the building. They have to arrange the distribution of seats in the church and to collect the alms during the reading of the offertory sentences. They have also to see that the churchyard is kept properly fenced and in suitable condition.

BRAWLING. By an Act passed in 1860, it is provided that summary proceedings before two justices of the peace may be taken against any person who shall be guilty of riotous, violent, or indecent behaviour in any cathedral, church, or chapel, whether during the celebration of Divine Service or at any other time, or in any churchyard or burial ground. Any offender under this section is made liable to a penalty of not more than £5 for every such offence, or to be committed to prison for any time not exceeding two months. Power to apprehend a brawler and to take him before the justices is given not only to any police constable but also to any churchwarden of the parish. It has been held that a clergyman who uses violent language in the pulpit is guilty of "brawling," and also if he preaches against individual members of the congregation. Another form of brawling is the publication by words during church time of any notices, if such publication is made by a private parishioner.

THE CLERGY.

HOLY ORDERS. There are in the Church officers of different degrees of dignity, such as archbishop, bishop, dean, archdeacon, rector, etc., but there are only three different orders—bishop, priest, and deacon. The canonical ages for admission into the three orders are—in the case of a deacon, twenty-three; of a priest, twenty-four; of a bishop, thirty. The rite of making a priest or deacon is called *ordination*, that of making a bishop *consecration*.

The following are the steps to be taken by anyone desiring to enter Holy Orders:—

(1) He must present to the bishop testimonials of good moral character and conduct from three beneficed clergymen; (2) He must publish in his parish church a notice (called a *Siquis*) of his intention to become a candidate for Holy Orders; (3) He must obtain a *title*, i.e. find some beneficed clergyman willing to accept him as a curate in his parish, and pay him a suitable stipend; for the bishop is forbidden by the canons (rules of the Church) to ordain any man unless he has such a title; (4) He must pass the bishop's examination.

It is only in recent years that it has been possible for a clergyman to relinquish orders. In 1870 the Clerical

Disabilities Act was passed with a view to allowing a priest or deacon to relieve himself from the disabilities attaching to him as a Clerk in Holy Orders. By this Act, it is provided that any clergyman may, after having resigned any preferment held by him, execute a deed of relinquishment. Six months after completing the necessary formalities, he becomes incapable of acting in any way as a minister of the Church of England, and is freed from all disabilities and disqualifications to which, as a Clerk in Holy Orders, he was subject.

DISABILITIES OF THE CLERGY. No clergyman of the Church of England can be a member of the House of Commons, nor is he eligible for election to the post of alderman or councillor of any borough outside the County of London, but he may be an alderman of a County Council or one of its members. The magistracy is also open to him. He cannot take, for farming purposes, any land exceeding 80 acres, unless he first obtains the written permission of his bishop. As to trading or dealing for gain or profit, he is absolutely withheld from doing so unless he is in partnership with at least six others. There is an exception to this rule if the business has devolved upon him as a bequest or by inheritance, a marriage settlement, or bankruptcy. He may also trade as a schoolmaster, may sell books to or through a publisher, and may be a director, manager, or partner in any life or fire insurance company, or in a benefit society. Disobedience to these rules involves liability to suspension, and in the case of a third offence, deprivation may be inflicted. The penalty for farming more than the specified number (80) of acres is 40s. per annum per acre.

PLURALITIES AND RESIDENCE. A Clergyman cannot hold more than one benefice, except with the licence of the Archbishop who may grant permission where the two churches of the benefices are within four miles of each other and the annual value of one does not exceed £200. Further, if the population of one benefice is more than 3,000, another cannot be held with it unless the population of the second is 500 or less according to the last census.

Every incumbent (rector, vicar, or perpetual curate) must reside within his benefice and in the house of residence (if any) belonging thereto, unless the bishop has granted him a licence of non-residence. But he is permitted to be absent for three months in the course of the year, such absence being either continuous or not. The rules affecting residence do not apply to assistant curates.

RESIGNATIONS AND PENSIONS. If an incumbent has held a benefice for at least seven years, he may apply to the bishop for release from his duties on the ground of incapacity from old age or permanent illness. The bishop may then appoint a commission consisting of five persons to enquire into and report upon the matter, the selection of such persons being made as prescribed by the Incumbents Resignation Act, 1871. The Commissioners are empowered to allow a pension to the retiring clergyman out of the revenues of the benefice, with the limitation that it must not exceed one-third of the net annual value of the benefice. Every pensioned clergyman remains subject to Church discipline, and his pension becomes forfeited if he is found guilty of any offence which would have resulted in deprivation of his benefice had he remained in occupation.

ECCLESIASTICAL JURISDICTION.

The chief objects in view in the exercise of ecclesiastical authority may be summed up as the due maintenance of discipline, doctrine, and ritual. The person who has jurisdiction in ecclesiastical affairs is called the *Ordinary*, and in most cases this is the Bishop. The punishments (theoretically at least) at his command are suspension, deprivation, and degradation. *Suspension* is when a clergyman is forbidden to perform any of the duties of his office for a certain time, and is mulcted of such a proportion of the profits of his benefice as is necessary to pay a clergyman in his place. *Deprivation* means ejectment from his benefice, and his suspension from the performance of all clerical functions at the discretion of the bishop. *Degradation* is often called "unfrocking," and means the reducing of a clergyman to the status of a layman. This extreme course can only be taken after the clergyman has been convicted under the Clergy Discipline Act, 1892.

ECCLESIASTICAL COURTS. The Church once claimed exclusive jurisdiction over its clerks, and in many cases over the laity also. Thus it claimed and exercised jurisdiction in matrimonial causes, and in the administration and the testamentary disposition of property. It also claimed the right to try laymen for offences against religion and morality. Now, however, it has lost nearly all its jurisdiction over the laity as well as the exclusive right to try its own clerks. But it still exercises its right to try and punish its clerks for ecclesiastical offences. The three principal courts for the trial of such offences are the Bishop's Court, the Archbishop's Court, and the Judicial Committee of the Privy Council.

The Bishop's Consistory Court is presided over by the bishop or a chancellor appointed by him, who is variously called the Official Principal or the Vicar General. The Archbishop's Court or Provincial Court, called in Canterbury the Court of Arches, and in York the Chancery Court, is presided over by an Official Principal, Dean of Arches or Chancellor. In Canterbury it corresponds to the Bishop's Court, with the additional jurisdiction of being a court of appeal from the Consistory Court. The Judicial Committee of the Privy Council hears appeals under the Clergy Discipline Acts. It consists of the Lord Chancellor, certain high judicial officers, and two privy councillors, with three bishops as assessors.

THE CLERGY DISCIPLINE ACT, 1892. Under this Act if a clergyman is convicted of treason, felony, or grave misdemeanour by a temporal court, or if he has been found to have committed adultery, or if a bastardy order, or an order for judicial separation has been made against him, the bishop must declare his preferment vacant, and he becomes incapable of holding preferment unless he is pardoned by the Crown. Further, if a clergyman is found by a temporal court to have committed any act constituting an ecclesiastical offence, or if it is alleged that he has been guilty of immoral conduct or an offence against the laws ecclesiastical, not being a question of doctrine or ritual, he may be prosecuted in the Consistory Court of the diocese, by any of his parishioners, or by his bishop, or by any person approved by the bishop. If the complaint appears to the bishop to be too vague or frivolous to justify proceedings, he may veto the prosecution. Should he sanction the trial, it takes place in the Consistory Court of the diocese.

The Chancellor presides at the trial and decides all questions of law, but if facts are to be determined, and either party desires it, five assessors must be chosen, of whom three must be clergymen and two laymen. Questions of fact can only be determined either by the unanimous decision of the assessors or by the decision of the Chancellor, and at least a majority of the assessors. If no such decision is arrived at, either party may insist on a new trial with fresh assessors. If found guilty, the accused may be sentenced to deprivation or suspension. Appeals on questions of law may be made to the Provincial Court or to the Privy Council at the option of the appellant, but on questions of fact leave to appeal must first be obtained by petition to the appellate court, and the leave will not be granted unless the court is satisfied that there is a *prima facie* case for appeal. In addition to the sentence of the Consistory Court, the bishop may depose the convicted clergyman from Holy Orders.

CHURCH DISCIPLINE ACT, 1840. The Clergy Discipline Act, 1892, does not apply to questions of ritual or doctrine; these questions are dealt with under the Act of 1840. Under this Act, where the clergyman is charged with any offence against the laws ecclesiastical, the bishop may issue a commission of five persons to make enquiry as to the grounds of the charge. The accused may attend the meetings of the commission and examine the witnesses. At the close of their proceedings the commissioners must transmit to the bishop (1) the depositions of the witnesses,

and (2) a report of the opinion of the majority as to whether or not there is sufficient *prima facie* ground for instituting proceedings. The accused is allowed to have a copy of the report and depositions.

If both parties agree in writing to the course, the bishop may forthwith proceed to pass sentence; otherwise, if the commission has reported that there is sufficient *prima facie* evidence, articles must be drawn up and filed, and a copy of them must be served on the accused. A fortnight after the filing, the bishop may command the accused to appear before him and make answer to the articles. If the accused admits the truth of the articles, the bishop may forthwith proceed to pass sentence; but if he does not make an unqualified admission of them, or if he does not appear, the bishop must hear the cause with the assistance of three assessors. If the decision is unfavourable to the accused, the bishop passes sentence. Whilst the case is under investigation, the bishop has power to inhibit the accused from performing the services of the church, and the Act of 1892 gives the bishop a similar power when a clergyman is accused before a temporal court of any criminal or ecclesiastical offence.

Before the filing of the articles, the bishop may, if he thinks fit, send the case to the Provincial Court for trial. With regard to appeals, if the case has been first heard in the Bishop's Court, the appeal is heard in the Provincial Court, but if tried in the first instance in the Provincial Court, the appeal must be heard by the Judicial Committee of the Privy Council.

PUBLIC WORSHIP REGULATION ACT, 1874. This Act provides an alternative form of procedure for offences against doctrine and ritual, to the procedure under the Church Discipline Act, 1840. It provides that if the archdeacon, a churchwarden, or any three of the parishioners of a clergyman be of opinion:—

> (1) That any unauthorised alteration has been made in the fabric, ornaments, or furniture of the Church within the preceding five years, or (2) That the incumbent has within the preceding twelve months made use of unlawful ornaments, or neglected to use the prescribed ornaments, or (3) That the incumbent had within the preceding twelve months failed to observe the directions as to services, rites and ceremonies contained in the Prayer Book, or has made any unlawful addition to, alteration of, or omission from such services, etc.,

he or they may make a representation to the bishop, who, if he is of opinion that proceedings should be taken, must transmit a copy of the representation to the accused, and must ask both the parties to state in writing if they are willing to submit to his directions without appeal. If both parties agree to this course, the bishop proceeds to try the case and pronounce judgment; but if they do not, the bishop must transmit the representation to the Archbishop, and the case must be tried in the Provincial Court. Appeals are heard by the Judicial Committee of the Privy Council. Where the bishop is the patron of the incumbent's benefice, or if he is unable through illness to act, the Archbishop acts in his place.

CHURCH PROPERTY.

TITHES. These form a considerable portion of the so-called endowments of the Church. Originally they were a voluntary payment, being the tenth part of the yearly produce of land and stock. As time went on the State made them compulsory, but they are now commuted into rent charges, which vary from year to year according to the average price of corn. Tithes were originally intended to be the stipend of the clergy of the parish, but at the Reformation about one-third of the tithe, then in the possession of monasteries, was seized by the Crown and *impropriated*, that is, handed over to certain laymen, who are called, in consequence, lay rectors.

There were two kinds of tithes, great and small; the great tithes being the tithes on corn, hay, and wood, and the small tithes on various other products. The incumbents of parishes entitled to the payment of the great tithes are called *rectors*, those who have charge of other parishes are called *vicars*.

The tithe rent charge may be redeemed, usually at about twenty-five times its average annual value. Since the Tithe Act, 1891, tithes are in all cases payable by the owner of the land and not by the tenant. Any contract to the contrary cannot be enforced.

THE ECCLESIASTICAL COMMISSIONERS were constituted by an Act of Parliament in 1836 a perpetual corporation, for the purpose more particularly of seeing that the revenues of the Church were better administered and more wisely distributed. One of their principal duties is the management and administration of episcopal and cathedral estates and revenues, the surplus revenues forming a fund which is applied to the endowment and augmentation of new and poor livings. As an example of the income at their disposal for this purpose, it may be mentioned that in 1905 it amounted to £250,000. By their benefactions they do a great and valuable work in promoting Church extension and Church building. The Development and Road Improvement Funds Act, 1909, provides for the payment to the Ecclesiastical Commissioners of compensation for glebe lands taken over under the Act, to be applied by them as money paid to them upon a sale under the provisions of the Ecclesiastical Leasing Act, of land belonging to a benefice.

QUEEN ANNE'S BOUNTY is the name given to a fund which dates from the reign of that queen. Prior to the Reformation, the Pope had exacted from the higher dignitaries of the church certain dues called tenths and first fruits. After the Reformation these dues became payable to the Crown until Queen Anne restored them to the Church. The clergy still continue to pay the dues, but instead of being paid to the Crown they go to form a fund, which is administered by Governors, for various purposes useful to the Church, chief among which are loans for vicarages, etc., and the augmentation of poor benefices.

PATRONAGE. The right to make presentations to ecclesiastical benefices is a right of property. The perpetual right of making a presentation is called an *advowson*. When a benefice becomes vacant, the patron has the right of nominating a successor. If the person nominated is a fit and proper person, the bishop is bound to *institute* him to the cure of souls, and to *induct* him to the profits of the benefice.

The Legislature has from time to time made various enactments with a view to preventing such abuses as might arise from an unfettered system of patronage. Thus, by the Benefices Act, 1898, transfers of rights of patronage must be registered, and no transfer may be made less than a year after the last institution or admission to a benefice. Again, rights of patronage must not be sold by auction, except in the case of an advowson being sold in conjunction with a manor or large estate. Agreements for the exercise of a right of patronage in favour of any particular person are invalid in law. The bishop may refuse to institute or induct a presentee to a living on the ground that not more than a year has elapsed since the last transfer of the right of patronage, or that the presentee is unfit; but an appeal lies from this refusal to a court consisting of the Archbishop and a Judge of the High Court. An advowson may be sold during a vacancy, but not the right of making the next presentation. Such a sale constitutes the offence of *simony*. Further, a clergyman would be guilty of this offence if he entered into any contract by which he might obtain ecclesiastical preferment for valuable consideration, as by the purchase of the next presentation for himself. He may, however, purchase the advowson itself.

REAL PROPERTY.

Property in English law was originally divided into two great classes, "Realty" and "Personalty." The division did not depend on the nature of the property itself, but on the procedure employed in its recovery if it fell into the hands of someone who was not its true owner. If, under

the old law, the *thing itself* (Latin: *Res*) could be recovered, it was "Realty"; but if only *damages* were recoverable, it was "Personalty." Freehold estates in land are realty; whereas leaseholds are only personalty or chattels; but they are frequently called "chattels real," because they affect land. For convenience sake, the old divisions are still adhered to, though the reason for them is fast disappearing. Thus by the present law the thing itself may in many cases be recovered even if the property is personalty.

ESTATES IN LAND.

1. FEE SIMPLE (Freehold). The greatest estate in land which a person can hold is the fee simple, and it arises where land is given "to a person and his heirs." In the strict eye of the law, all land in England is held either directly or indirectly from the Crown; but the owner of the fee simple may be looked upon for all practical intents and purposes as the absolute owner of the property. He is entitled to hold it for ever, for it is a legal maxim that "there can be no reversion on a fee simple." In certain cases, the absolute owner of the land grants to another person the fee simple in that land, subject to the reservation to himself of a certain rent. These grants are called grants in "fee farm." This method is chiefly employed as being somewhat equivalent to a building lease.

As the owner of a fee simple is practically the absolute owner of the property, he may use it almost exactly as he pleases. He may build upon it, or destroy buildings already on it, he may sell it, or any part of it, outright, or he may lease it for a term of years to someone else, and he may mortgage it, or dispose of it by will at his death. There is one thing, however, which he may not do. He may not use the property in such a way as to be a nuisance to his neighbours. Thus he may not deprive his neighbours of their rights to light in those cases where they have acquired such rights (see below: *Easements*), nor may he carry on an offensive trade or an occupation which will endanger his neighbours' health or prosperity, or seriously interfere with their personal comfort.

2. ESTATE TAIL. Where land is granted "to a person and the heirs of his body," he does not obtain the fee simple in the property. The property passes on the grantee's death to the heirs of his body (i.e. his actual descendants) in perpetuity, so long as such heirs exist; but on the failure of such heirs, the property will revert, after the death of the grantee, to the grantor and his heirs, who need not necessarily be "heirs of the body." Where, therefore, an estate is granted with such a limitation, it is called an "estate tail," and the property is said to be "entailed."

Estates tail are of two kinds, general and special. An estate limited "to the grantee and the heirs of his body" is an estate tail general, whereas an estate limited "to the grantee and the heirs of his body by a particular named wife," would be an estate tail special. Other examples of special tail, are estates "in tail male," where the land can only devolve on males who are descended from the male line, and estates "in tail female," where the land devolves on females who trace their descent from females.

When such estates were first created, the intention probably was that the property should be given to the grantee absolutely, subject to the condition that if ever the property passed out of the hands of the grantee's family, it should revert to the grantor and his heirs. But though such might be the original intention, the practical result of the law as it now stands is that the grantee is a sort of tenant for life of the property, though he may generally "waste" the property by felling timber or otherwise.

There is a way, however, in which the entail may generally be barred so that a tenant in tail in possession or entitled to the reversion can frequently convert the estate tail into a fee simple. Thus by the Fines and Recoveries Act, 1833, the tenant in tail has power to change the fee tail into a fee simple by executing a disentailing deed, which he must have enrolled with the Court within six months of its execution. Where the tenant in tail is not in actual possession he must obtain the consent of a person called "the protector of the settlement," who is usually the person who is in possession of the land. If in such a case the tenant bars the entail without the consent of the protector, his own issue are barred, but not the heirs of the original grantor, so that the new estate created instead of being a fee simple will be what is called "a base fee." But by the Real Property Limitation Act, 1874, if a person holds a base fee for twelve years, the estate then becomes a fee simple. Where a tenant in tail is a "tenant in tail after possibility of issue extinct," he loses a great many of his powers over the estate. Thus he may not bar the entail. An example of a tenant in tail after possibility of issue extinct is where an estate has been given to a man and the heirs of his body by a particular wife, and such wife dies without leaving any issue. Here such a man is a tenant in tail after possibility of issue extinct, because any issue he might have by any other wife would not be capable of inheriting.

3. ESTATE FOR LIFE. Another kind of freehold estate in land is an estate for life. Life estates are of two kinds: (1) estates to endure for the life of the grantee; (2) estates *pur autre vie*, which are to endure during the lifetime of someone else.

It should here be mentioned that where a person wishes to grant to another by deed an estate in fee simple, he must state in the deed that he is granting it to such a person *and his heirs* or to that person in *fee simple*. For if he merely grants it to such person without the additional words of limitation, the grantee would only take a life estate in the property. This rule, however, does not apply to a gift of the property by will, for if in a will words of limitation are not used, then the devisee will take the whole of the interest which the testator had power to dispose of. Sometimes an estate for life may be granted subject to a condition that it shall be terminated on the happening of an event which may never occur. Thus it is quite common to grant to a widow a life estate to terminate on her re-marriage.

Originally the powers and rights which a tenant for life could exercise over the property were not very great; but tenants for life have, in recent years, been given very extensive powers by a number of Acts known as the Settled Land Acts. Of course the grantor in creating an estate for life can grant in the terms of the deed any powers he likes to the tenant for life; but the powers given by the Settled Land Acts are additional powers given to all tenants for life, and no grantor is entitled to deprive a tenant for life of any of them.

The following are some of the principal powers given to tenants for life by the above Acts:—

(1) The power of selling the property or any part of it; but the tenant must not sell the mansion house without the consent of the trustees of the settlement.
(2) Power to exchange the property for other property.
(3) Power to grant leases of the property; but the building leases granted may not exceed ninety-nine years, or the mining leases sixty years, or ordinary leases twenty-one years, but if the locality is such that people won't accept leases on these terms, then the tenant for life may with the sanction of the Court grant leases for longer periods even in perpetuity.
(4) Power to cut timber ripe for cutting, provided he obtains the consent of the Court.
(5) Power to mortgage the property for certain specific purposes.

Before exercising any of these powers, the tenant for life must give a month's notice in writing to at least two of the trustees of the settlement and their solicitors. Moreover, tenants for life may only sell or exchange the property on the best terms that may reasonably be expected, for they are not allowed to exercise the powers given them by the Acts for their own personal benefit; they must have regard for the interests of other persons under the settlement. Whatever money the tenant for life may obtain from the exercise of these powers is called "capital money," and he must either pay it into Court or else hand it over to the trustees of the settlement. The

capital money is usually invested for the benefit of all the persons entitled under the settlement.

Apart from the Settled Land Acts, tenants for life were and are entitled to have the ordinary proper use and enjoyment of the property during their lives. They are entitled to the yearly produce of the fruits of the soil, but they may not destroy or "waste" the property by pulling down buildings or felling timber, or by opening mines on the property. They have even been held to be "wasting" the property if they have *improved* it by buildings or otherwise, in such a way as to alter the general character of the property.

4. ESTATE FOR A TERM OF YEARS (Leasehold). An estate for a definite period of time, or leasehold, is not strictly realty. The law, for historical reasons, regards such estates as personalty or chattels, but inasmuch as land is usually affected by leaseholds, they may be regarded as being in the nature of realty, and so they are called "chattels real." For the same historical reasons, the law does not regard a contract for the hire of land as conveying a legal estate in the land until the lessee has entered into possession. In one case, however, entry into possession is not necessary to complete the lessee's title. This case arises under the Statute of Uses, 1536, when the contract takes the form of a bargain and sale.

Tenancies for a term of years may be roughly divided into two kinds: (1) specific lettings; (2) general lettings.

A *specific letting* is a letting for a definite fixed time, and it therefore expires when that period of time has been accomplished. A *general letting* is also a letting for a definite period (e.g. a yearly tenancy), but when that period has been accomplished it does not cease, but continues until it has been terminated by the requisite amount of notice.

The requisite notice for a yearly tenancy is six months, expiring on the anniversary of the day on which the tenancy began, unless it be for a tenancy of agricultural land, in which case the notice has been fixed at one year by the Agricultural Holdings Act, 1883. Monthly and weekly tenancies are also general lettings, and can only be rightly determined by a month's or a week's notice respectively. The law further holds that even such a notice will not be valid unless it expires at the end of one of the definite periods of the tenancy. Thus where a tenant holds a weekly tenancy which has commenced on a Saturday morning, should he desire to terminate it, he should give a week's notice, expiring on a Friday night. He cannot leave on a Wednesday by giving a week's notice on the Tuesday or Wednesday of the previous week.

Specific lettings may be for any definite period of time, however long or short, but generally they are for a number of years, except in the case of hotels, where tenants frequently hire a room for one night only. There being no limit to the number of years for which a specific letting may be made, they are in practice sometimes made for a very long period indeed. Though a building lease is usually for ninety-nine years, it is sometimes granted for nine hundred and ninety-nine years. Such a long tenancy is practically equivalent to a freehold, and, indeed, a lease of over three hundred years, of which at least two hundred are unexpired, may be converted into a fee simple by the execution of a deed under the Conveyancing Acts, 1881 and 1882. The powers of a lessee are usually provided for in the terms of the lease; but in the absence of such terms, he may not alter the nature of the property or destroy it, though he may keep the yearly profit arising from its crops.

5. COPYHOLD TENURE. At the time of the Norman dominion in England, *villeins* used under the Feudal system to hold land at the will of their lords in return for the performance of certain services (see "Tenancies at Will," under *Landlord* and *Tenant*). As the *villeins* were merely tenants at will, their lords could turn them out at any moment, but in practice the lords did not often exercise their right, so that on the death of a *villein* tenant the property would generally pass to his family. Thus a custom gradually arose giving to the tenants a fixity of tenure, or a certain estate in the land, as long as they continued to perform the services required of them. The *amount* and the *kind* of these services were enrolled in the parchment rolls of the manor, and a *copy* of this entry was given to the tenant. This copy was in a sense the proof of the tenant's title to the land, and hence he came to be called a copyholder. The old manorial courts came to recognise this custom, and the Common Law Courts of the country have also finally recognised and enforced it.

Copyhold is, therefore, a customary tenure in which the copyholder is entitled to the property subject to the performance of certain duties. The rights and duties of copyholders vary according to the local custom of the particular manor to which they are attached. The owners can generally dispose of their property by will, and if they die intestate, it descends to the customary heir, who may or may not be the same as the heir at law.

> Thus, in those few places where the custom of *borough-english* still exists, the customary heir is the youngest son of the deceased and not the eldest son. Again, with the custom of *gavelkind*, all the sons of a deceased person are his customary heirs.

On the death of a copyholder intestate, and without heirs, the property *escheats*, not to the Crown but to the lord of the manor. So also the property escheats or is forfeited to the lord of the manor if the copyholder wrongfully refuses or neglects to perform the customary duties.

Copyholders frequently have power to convert their copyholds into freeholds. There are two ways in which this may be done: (1) by extinguishment; (2) by enfranchisement. Where the copyhold and the freehold of the same land are held by the same person, the copyhold as the lesser estate becomes merged in or extinguished by the freehold. Enfranchisement (or freeing the tenure from all customary duties) may take place either by agreement between the copyholder and his lord, or by virtue of the Copyhold Act, 1894.

6. TENANCY BY MORE THAN ONE PERSON. So far we have dealt with tenancies in *severalty*, as they are called, that is to say, tenancies which are legally held by one person only. The law uses the word "person" in a wider sense than that in which it is popularly employed. Thus a corporation or a company may, and generally does, consist of a number of separate individuals, though legally it is only one person. There are, however, cases in which several distinct legal persons are entitled to the concurrent ownership of property. There are four principal cases in which such a concurrent ownership arises.

(*a*) **Joint Tenancy.** Property is frequently granted to two or more persons as joint tenants. They do not then each own a particular part of the property, for if they did they would be tenants in severalty of their respective parts. Joint tenants are all equally entitled to the whole of the property during their lives. Each joint tenant has an equal right with the others to the possession of the property, and by law all must have an identical interest in it. Legally no joint tenancy may be created unless the interests of all the joint tenants come into existence at the same time and under the same deed or other instrument.

The great characteristic of joint tenancies is the right of survivorship. When a joint tenant dies, his interest in the property goes to the surviving joint tenants until one only is left, who then becomes the owner in severalty. A joint tenant may alienate his interest in his own lifetime, or he may insist on a partition of the estate. If either of these things is done, the right of survivorship is extinguished so far as his interest is concerned.

(*b*) **Tenancy in Common.** Like joint tenancies, tenancies in common are created by deed or some other instrument. Tenants in common, too, like joint tenants, are during their lives all entitled to the whole of the property; but their common interests in the whole need not be equal, nor need their interests arise at the same time or under the same instrument. There is no right of survivorship for tenancies in common. If a tenant in common dies, his interest passes to his devisee or heir.

(*c*) **Tenancy by Entireties.** The common law doctrine of marriage is that a husband and wife must be regarded as

one person. Where, therefore, property is granted to a husband and wife, as joint tenants, they could not in law, before the Married Women's Property Act, 1882, be regarded as joint tenants. They were therefore regarded as tenants by entireties so long as the marriage lasted. Neither of the tenants by entireties can dispose of the property or any part thereof without the concurrence of the other. Such a tenancy cannot be created now.

(*d*) **Tenancy in Coparcenary.** The heir at law of a person is usually his eldest son, but as there is no rule of primogeniture for females, if he only leaves daughters, they all take the property as coparceners, their estate being a species of tenancy in common. All coparceners have a common right to the whole of the property, but the interests they hold in it need not be equal. Thus, if a man dies leaving a daughter surviving, and also a couple of grand-daughters, the children of a deceased daughter, the grand-daughters would only take their deceased mother's share in coparcenary with their surviving aunt.

7. DESCENT OF ESTATES. Prior to the Land Transfer Act, 1897, the technical difference between realty and personalty was of greater importance than it is to-day, though in the case of an intestacy, realty still descends to the heir at law, and personalty to the next of kin. Before the Act, the realty of a deceased person vested immediately in his heir, whereas his personalty vested in his executors and administrators. The Act puts realty and personalty on the same footing in this respect, so that now on the death of an owner his property vests in his executors and administrators, who transfer it to whoever is entitled to obtain it.

The owner of land in fee simple is entitled to do exactly what he likes with it, so that he may dispose of it by his will as he pleases. If he dies intestate, that is, without making a valid will, for invalid wills are of no effect, the person entitled to the property is his heir at law.

The owner of entailed property, property in fee tail, cannot dispose of it by his will. On his death, therefore, the person entitled to his property is his heir of the body begotten, or if it is entailed in tail special by a particular wife, the person entitled is the heir of his body begotten by that particular wife. If he has no such heirs, the property reverts to the original grantor and his heirs.

On the death of a tenant for life, the person entitled to the property is the person designated as holding the succeeding estate in the settlement which created the life estate.

Descent in copyholds is regulated by the custom of the particular manor to which the copyhold is attached. And here should be mentioned a peculiar customary tenure to be found chiefly in the county of Kent. It is called *gavelkind*. The customary heir to gavelkind land is not, as is usual, the eldest son. All the sons of the deceased tenant are entitled to the gavelkind property equally; in default of sons, all the daughters take the property equally; and in default of sons or daughters, the brothers of the deceased tenant take equally. Another peculiar customary tenure is that of *Borough English* whereby the property descends to the youngest son instead of the eldest.

Where property is held in joint tenancy, and one of the joint tenants dies, the property goes to the surviving joint tenants, and not to the heir of the deceased tenant. On the death, however, of a tenant in common, his interest in the common estate passes to the person to whom he has devised or bequeathed it by his will, and if he dies intestate, it goes to his heir at law if it is realty, and to his next of kin if it is personalty or a chattel real.

On the death of a tenant in coparcenary, or of one of the several persons owning a common interest in gavelkind, the interest does not go to the survivors as in joint tenancy, but it devolves on the deceased person's heir at law or customary heir if he dies intestate, and on his devisee if he leaves a valid will disposing of it.

The owner of a chattel real, as a leasehold, can dispose of it in his will, though, of course, he may not dispose of a greater interest in the property than he himself possesses. If he dies intestate, his interest does not pass to his heir at law, because strictly speaking the property is not realty but merely a chattel. The person, therefore, who would be entitled to claim the interest from the deceased's administrator would be his next of kin under the Statute of Distributions. (The rules for finding the heirs at law and next of kin are dealt with later in this work. See p. 530.)

RIGHTS OVER PROPERTY.

1. UNDERLYING MINES AND MINERALS. Where a person owns the absolute fee simple in a property, he is nearly always entitled to not only the surface of the land but also to all mines and minerals lying beneath the surface. Sometimes, however, a grant in fee simple is made of the surface alone. In such case the purchaser would not be entitled to the mines and minerals underlying the surface. There are two kinds of mines which, however, do not belong to the owner of the fee simple, they are gold mines and silver mines, which strictly belong to the Crown, but the owner is usually entitled to work them on payment of a royalty.

A tenant in tail after possibility of issue extinct, is practically in the position of a tenant for life; but an ordinary tenant in tail with power to bar the entail is in much the same position as an owner in fee simple with regard to the working of the mines and minerals underlying the property; but he must not sell or give to other persons the right of working such mines and minerals before he has barred the entail, for then he would be parting with a portion of the entailed property to the prejudice of the heirs of his body.

Apart from the powers given to tenants for life by the Settled Land Acts, such tenants have the right to work all such mines and minerals on the property as were originally opened and worked before the commencement of their life estate; but they are not allowed to open fresh mines or quarries on the property, for the law would regard such an opening as "waste." The Settled Land Acts, 1882–1890, have given tenants for life additional powers, so that under the provisions of these Acts, a tenant for life may grant rights and privileges over the property which would otherwise be regarded as "waste"; and they may even grant mining leases of sixty years. With the consent of the Court, such mining leases may sometimes be extended indefinitely.

The powers of a lessee, owner of a chattel real, over the mines and quarries situate in and under the leasehold property, almost always depend on the terms of his lease. If he has taken a lease of the surface only, he would not be entitled to the underlying minerals. If he has acquired the right of working the minerals only without the use and occupation of the surface, he is entitled to use only so much of the surface as is absolutely necessary for the proper working of the mines and minerals. If his lease of the whole property is silent on the point, he is not entitled to open fresh mines, as that would be altering the nature of the property in such a way as to amount to "waste."

The Finance Act, 1910, imposes an annual tax at the rate of 1s. in the £ on the rental value of all rights to work minerals, and of all mineral wayleaves, excepting brick, clay, earth, sand, chalk, limestone and gravel.

2. EASEMENTS. The owners of land or other property frequently own rights over the property of others, such rights are called easements, and arise in one of three ways: (1) by express or implied grant of the owner of the property over which they are held; (2) by virtue of the doctrine of lost grant, whereby if the right is exercised for such a long period, "that the memory of man runs not to the contrary," the law infers that the right has been granted, and that the grant has been lost; (3) by virtue of the Prescription Act, 1832.

(*a*) **Easements of Light.** By the Prescription Act, where a person has enjoyed a right to the free and uninterrupted flow of light over his neighbour's land for a period of twenty years, unless he has obtained the consent in writing of the owner of such property to the use and enjoyment of the light, he obtains a perpetual right to enjoy

that light, so that he can by injunction restrain his neighbour from building on his land in such a way as to seriously interfere with his use of the light, or he may bring an action for damages. Where a person having acquired an easement of light fears that the building operations of his neighbour will seriously interfere with his rights, he should apply promptly for an injunction. If he calmly waits till the structure is finished, he will not find the courts very eager to order its demolition. Moreover, merely hanging up a notice, bearing the words "Ancient Lights," will be of little service.

The law on this subject has very recently been laid down in a decision of the House of Lords, the effect of which is that the neighbour may build in such a way as to interfere with the free access of light, provided he leaves a reasonable amount of light for the proper use and enjoyment of the premises, having regard to the nature of the premises and the purposes for which they are used. Rights of light can, however, only be acquired in respect of buildings, they do not attach to open ground. Where a person wishes to prevent a neighbour from acquiring a right of light over his property, he should put up a hoarding or in some other manner interrupt the light during a full year before the twenty years has expired, or he will lose the right to make an interruption under the Act.

Easements of light may be acquired by implied grant. Thus, where a man sells a house and keeps the land adjoining, he impliedly grants to the purchaser the same rights of light to the house as it enjoyed when both the house and the land belonged to the same owner. The seller, therefore, cannot build on the land which he retains, so as to obstruct the access of light to the house, unless in the contract of sale he expressly stipulated that he should be allowed so to build. But had he kept the house and sold the land adjoining, he could not have prevented the purchaser from building so as to obstruct the access of light to the house, unless he the seller had stipulated in the contract of sale that the purchaser should not so build.

(*b*) **Easement of Way.** What are commonly known as "rights of way" over the property of others are also provided for by the Prescription Act. The period of uninterrupted enjoyment, without the consent in writing of the owner, is in such cases forty years. A certain right of way may, however, be acquired by only twenty years' uninterrupted enjoyment, though the right would in that case be liable to be defeated. The owner of the land would not, however, be entitled to defeat a twenty years' title by merely proving the date prior to that period on which the enjoyment of the right was first exercised.

There are certain other rights of way, sometimes called "private rights" and sometimes "rights of way of necessity." They arise in consequence of the legal doctrine that "a man is not entitled to derogate from his own grant." So that if a person grants to another the right to work a quarry on his property, the law infers that he has also granted him a right of access to the quarry. So, too, where a tenant hires a room in a house, he has a right of free access to his room, and also a right to use the necessary conveniences nearest to his room.

(*c*) **Rights of Support.** Every owner of land has a natural common law right to have that land supported and kept in its place by his neighbour's land; so that the neighbour must not dig in his land in such a way that the adjoining property caves in for want of support. So also, where a person has a right to excavate for minerals on his own land or on that of another, he must not exercise his right in such a way as to endanger the neighbouring property. Similarly, where a person takes a flat or a house in a terrace, the adjoining houses or flats must not be destroyed in such a manner as to endanger his property.

(*d*) **Rights of Air and Water.** Rights to the free and uninterrupted flow of air over a neighbour's land cannot be acquired under the Prescription Act. Indeed it is very difficult to establish such a right at all, unless it depends on an express grant. If, however, the air passes through a distinct channel, as a ventilating shaft opening in the neighbour's land, a right to the free flow of air may be acquired by the doctrine of lost grant.

Persons may acquire a prescriptive right to the free and uninterrupted flow over their neighbour's land into theirs, of water flowing in a defined permanent channel, even if it is underground; so that a neighbour may not divert such a stream; but there can be no prescriptive right to water percolating through undefined channels.

Lastly, the law does not admit that there is such a thing as a prescriptive "right of view," so that a person must not complain if a neighbour spoils his view by interfering with the landscape.

3. RIGHTS OF COMMON. There are four principal rights of common, called sometimes *profits a prendre*, because they are rights of taking some of the profits of property which does not belong to the owner of the rights.

> They are:—(1) *the common of pasture* or the right of allowing one's sheep and cattle to graze on the common property; (2) *the common of piscary* or the right of angling for fish in the common waters; (3) *the common of turbary* or the right of taking turf or peat for fuel, sometimes called *firebote*; and (4) *the common of estovers* or the right to take timber or hay, etc., for the furnishing of the house with fuel and the cattle with fodder.

Commons were originally attached to all village communities. Each family owned its own plot of land, and there was in addition the common property which they were all entitled to participate in. They used it for grazing their sheep, cattle and horses, and for collecting *housebote*, i.e. fuel and such things as were necessary to keep their houses duly provided. With the advent, however, of the Norman rule in England, the freehold in commons gradually became vested in the lords of the manor of the various districts. They held it subject to whatever prescriptive rights the villagers may have obtained over it.

Of all the four rights of common, the common of pasture is the one most usually met with. Sometimes the number of cattle which may be allowed to pasture on the common land is regulated by custom, but generally it is the number *levant and couchant on the land*, which means the number which the land would be able to support in winter.

Rights of Common may be acquired by prescription. Such rights will become absolute where they have been enjoyed without interruption for sixty years, unless they have been exercised by the consent in writing of the owner of the land.

4. EMBLEMENTS. The right to emblements is the right to the yearly produce of the soil, as the right to reap and keep the crops which a tenant may have sown.

If a tenant for life dies between seed time and harvest, though his life estate terminates on his death, yet his executors and administrators are entitled to reap the crops at harvest; and for such purpose the law gives them a right of way of necessity, which will enable them to enter the land and take its yearly produce.

But if the tenant for life terminates the life estate by his own wilful deliberate act, he is not entitled to emblements. Thus, where a widow has a life estate to determine on her re-marriage. If she marries she forfeits the right to emblements.

Similarly in the case of a tenancy *par autre vie*, if the "other life" determines between seed time and harvest, the original tenant for life is entitled to emblements.

In the case of sub-tenants of a tenant for life, the Emblements Act, 1851, provides that if they hold the property at a rack-rent (i.e. a rent equal to the full annual value of the property), and the tenant for life dies between seed time and harvest, then they shall continue in their tenancy, paying to the new landlord the same rent as they paid to the old, until the end of the year, when the tenancy expires without notice. Thus they have plenty of time to collect the harvest and do not suffer by the death of the tenant for life.

5. FISHING RIGHTS. The public generally has the right of fishing in the sea and in such rivers as are tidal to the extent to which they are tidal, but there is no such right in the case of rivers, whether navigable or not, which

are not tidal. In these cases the right of fishing belongs to the owners of the bed of the rivers or to such persons as have been granted the right by them. The public has the right to use a highway only for the purpose of passing along it. A person has no right, therefore, to fish in a private fishery from a bridge or other public highway.

6. TITLE BY POSSESSION. It is a well-known saying, that "possession is nine points of the law." The meaning of this saying is that the mere possession of land confers a certain qualified title on the possessor. He can bring an action for trespass against anyone who wrongfully does an injury to his property, or who infringes his proprietory rights, for actual damage to the property is not needed to found an action for trespass. Where a person commits a trespass to land in the possession of another, it is no defence in law for him to show merely that the possessor is not the real owner. He must go further than that by also showing either that he himself is the true owner, or that the person on whose authority he acts is the true owner. He must rely on the strength of his own title, not on the weakness of the possessor's. If a person, therefore, has possession of a property, he has a good title as against everyone except the true owner. He may even acquire a good title against the true owner by continuing in the possession of the property during the period of limitation (see below) without paying rent or doing anything else which might be taken as a recognition that someone else has a better title than himself; provided that during the same period the true owner does not actively assert his right to the property by claiming rent or otherwise.

The periods fixed by the various Limitation Acts for the recovery of land are not the same as those for goods. Land being in the eyes of the law of more importance than goods or chattels, requires a longer period of limitation. It is generally twelve years, though in some cases it may be extended for a further period of six years. If, however, the land belongs to the Crown or to the Royal Duchy of Cornwall, the period of limitation set to an action for its recovery is sixty years.

The person who holds land for twelve years without acknowledging any other person's right to the land becomes its absolute owner, but he must have taken possession of the land in some lawful manner, and not by fraud or violence, for if he does so, no length of time will make him the owner of the land. Thus, if a person enters into possession with the consent of the owner, as for example under a tenancy, or if he enters into possession in pursuance of his lawful rights, as where a mortgagee enters into possession, then if the person entering does not acknowledge his landlord's right in the one case (as by paying him rent) or the mortgagor's right in the other case (as by accounting to him for the rents and profits), such person becomes the absolute owner of the land. The rights of the landlord or of the mortgagor are completely extinguished.

7. THE LAW OF BOUNDARIES AND FENCES. Questions frequently arise as to which of two owners of adjoining plots of land is the owner of the fence, hedge, wall, or ditch which separates them. If the fence is wholly on the ground of one of them, it clearly belongs to him, but it is often hard to say exactly where the boundary comes. The title deeds of property frequently do, and always ought to, show whether the fence is included in the property. If land is separated from the adjoining property by both a hedge and a ditch, in the absence of any direct evidence to the contrary, there is generally in law a presumption that they both belong to the same person.

Sometimes a wall or fence belongs to both the owners of the adjoining properties; and this is especially the case where their properties originally formed part of a single estate. Such a wall is called a party-wall, and it may be owned in severalty or in common. Thus it may be divided longitudinally into halves, each of the proprietors owning one-half, either absolutely or subject to an easement or support in favour of his neighbour, or they may both own the whole wall as tenants in common.

A person is not always bound to see that his land is properly fenced in; but if he owns animals, he is bound to prevent them straying off his land and doing damage to his neighbour's property. If, owing to his not keeping his land properly fenced, his cattle break into and damage his neighbour's land, he is liable to pay for the damage they do; but he is not so liable, in the absence of negligence, if he is driving his beasts along a highroad and, getting out of control, they escape into, and do damage to, someone else's property.

By the Quarries Fencing Act, 1887, the owners of quarries in unenclosed land, within fifty yards of a public highway, are bound to surround them with proper fencing to prevent accidents. Apart from this Act, the owner in possession of any land containing unfenced holes and other dangers will be liable if any person coming on lawful business (i.e. not a mere trespasser) sustains an injury in consequence of their unguarded condition. By the Barbed Wire Act, 1893, local authorities may require the owner of land adjoining a highway to remove barbed wire fences which are a nuisance to the highway.

8. OVERHANGING TREES, ETC. A person who owns the surface of a piece of property is *primâ facie* presumed in law to be entitled to the space above it as well as to the earth beneath it; so that if the branches of his neighbour's trees overhang his property, he may regard it as a trespass and take steps to remove it, by cutting down the offending portion or otherwise. He must not, however, himself commit a trespass by going into his neighbour's land for the purpose. Similarly, if the eaves of a neighbour's house overhang his property in such a way that the rain-water flows off on to his property, this would constitute a trespass and a nuisance. He should not, however, in this case take the law into his own hands. The best course for him to pursue is to bring an action for an injunction to restrain or remove the nuisance, and for any damages that may have been incurred thereby. If the fruit, etc., from a person's trees falls on to his neighbour's land, the neighbour is not entitled to keep it, he must give it up on the owner demanding it; and if he refuses to do so, an action for damages for conversion would lie against him.

THE TRANSFER OF LAND.

1. FORMALITIES PRIOR TO CONVEYANCE. The law has always regarded land as of much greater importance than goods; indeed, at one time an alien could not hold land in England, though this is no longer the case. Much more formality is, therefore, required in the case of a sale of land than is necessary for the sale of goods. In the case of a sale of goods, the ownership is usually transferred by simple delivery of the goods, whereas the ownership of land must be transferred by a deed, called a conveyance.

Before a conveyance of land is executed, there is usually an agreement to purchase and convey the property entered into between the parties. This agreement must be made for a valuable consideration, and it must be in writing and signed by the party to be charged. Therefore both parties should sign it.

Again, before the conveyance is executed, the purchaser has a right to inquire into the title of the vendor, to assure himself that the title is a good one. He can, therefore, demand an "abstract of title" from the vendor, which is a document setting forth all the deeds and wills affecting the title to the property for a number of years. The Vendor and Purchaser Act, 1874, provides that in the absence of any stipulation to the contrary in the agreement or contract of sale, the purchaser can demand that the abstract shall show all the dealings with the property for the previous forty years. In practice, however, a twenty years' title is usually sufficient to protect the purchaser's right.

To further protect him, the purchaser usually has a right to insist on the inclusion in the conveyance of certain "covenants of title," which will enable him to sue the vendor for damages if they are broken. These covenants need not always be expressly set forth; for by the Con-

veyancing Act, 1881, if the vendor expresses that he is conveying in the capacity of beneficial owner, he impliedly covenants :—

(1) That he has a right to convey the property.
(2) That the purchaser shall have the quiet and undisturbed enjoyment of the property conveyed.
(3) That the property is not subject to any mortgage or other charge, other than those which have been disclosed to the purchaser in the abstract of title.
(4) That the vendor will execute any further deeds and instruments, in addition to the conveyance, which may prove to be reasonably necessary for the further assuring to the purchaser of the land conveyed.
(5) That, if the property conveyed is leasehold, the lease is a valid one.

If, however, the vendor does not sell in the capacity of beneficial owner, but as a mortgagee or trustee, the only implied covenant that can be inferred against him is that there are no undisclosed mortgages or other encumbrances of his own creation. And if he sells in the capacity of a "settlor" (i.e. the creator of a settlement ; e.g. a marriage settlement), the only implied covenant against him is number (4) above.

2. THE CONVEYANCE OF LAND. There were several ways in which freehold land might be conveyed, but since the Real Property Act, 1845, the usual method is the conveyance by deed of grant. The deed must be "signed, sealed, and delivered" by the parties to the conveyance. The "seal" is frequently nothing more than a wafer stuck on to the deed ; and to effect "delivery," all a party need do is to touch the seal with one of his fingers, and say, "I deliver this as my act and deed." Witnesses are not absolutely necessary to attest the signatures of the parties, but it is generally better to have them. The deed must bear a stamp in accordance with the provisions of the Stamp Act, 1891. The value of the stamp will vary in accordance with the price or other consideration given for the property.

The deed itself is a very important and formal document, and under no circumstances can a layman be advised to draw it up. It is usually divided into several parts, setting forth :—

(1) The date of delivery, for a deed becomes effective only on "delivery ;" (2) the names and addresses of the respective parties ; (3) the consideration or sum paid for the purchase ; (4) the acknowledgment by the vendor of the receipt of the purchase money or other consideration ; (5) the capacity in which the vendor acts (e.g. as beneficial owner) ; (6) words importing that the property is conveyed to the purchaser ; (7) a description of the property ; (8) words setting forth the interest in the property which the purchaser thereafter shall hold (e.g. an estate in fee simple) ; (9) the express covenants which the respective parties bind themselves to perform.

If the property transferred is leasehold, it should also generally be conveyed by deed, but in this case the deed is called a "lease" or an "assignment of lease," according to the circumstances. No layman ought to try to draw up any lease or assignment without legal assistance. (For further remarks on Leases see *Landlord and Tenant*).

The mode of transferring copyhold property depends on the custom of the manor to which the particular copyhold is attached. It is usually by *surrender and admittance*, whereby the copyholder surrenders the property to the lord, who is bound to admit the purchaser to the property on the payment of a fine.

3. REGISTRATION OF TITLE. The Land Transfer Acts, 1875 and 1897, have been passed with a view to the simplification of the process of transferring land in England. The Acts have established registers in which particulars of the ownership of freehold and long leasehold property in England may, and in the County of London must, be entered. The Acts do not apply to copyholds. The leases which require registration are leases for forty years and upwards. The owner of property wishing to register his title to it should take his title deeds (it is generally better to employ a solicitor for the purpose) to the Land Registry. Particulars of the property and the ownership of it will there be entered in the register, his deeds will be stamped with a record of the registration, and he will be given a *land certificate*, which is a copy of the entry in the register. When once the property has been registered, all subsequent dealings with it must be registered. Generally, the person who is entitled to register the property is the person who is entitled to the possession thereof, though he may not be the absolute owner of the property in fee simple. Thus he may be a tenant for life or a mortgagee.

There are two kinds of title, the registration of which may be applied for : (1) absolute titles ; (2) possessory titles. The Registrar will generally allow the second of these forms of registration on the production by the owner of a conveyance of the property to him, or on a statutory declaration by the owner that he is the owner in possession. But the Registrar will not permit the registration of an absolute title until he has satisfied himself that the title is a good one. If he is not absolutely satisfied that the title is without defect, he may allow the registration of a qualified title, that is, a good title subject to certain express reservations. Again, there are a great many restrictions, cautions, and inhibitions which may be imposed by the Registrar with a view to making the registered title safe.

The great object the legislature had in view in passing the Land Transfer Acts was to ultimately do away with the necessity imposed on purchasers of making minute enquiries into the vendor's title. Whether or not this object has been attained is a matter on which opinions may differ. The Act of 1897 provides that a purchaser of land registered with an absolute title shall not require any further evidence than is contained in the register, *plus* a statutory declaration by the owner. If a qualified or a possessory title is registered, the purchaser may require additional evidence.

4. MORTMAIN. Where land is held by a corporation, it is said to be held in *mortmain* (literally "dead hand"). In feudal times such ownership was looked upon with great disfavour, because when land was held by individuals, the feudal lords obtained dues on the death or marriage of the tenants, whereas such dues could not be collected from a corporation, which cannot die or marry. Therefore, from the Statute of Mortmain in the reign of Edward I. to the latter part of the reign of Queen Victoria, many mortmain Acts were passed with a view to restricting the holding of land by corporations. Most of the law on the subject is now contained in the Mortmain and Charitable Uses Act, 1888. By this Act the Crown has power to give to a corporation a licence in mortmain to hold land subject to the terms and conditions contained in the licence.

If land is conveyed to a corporation which has no authority to hold it, the land is forfeited to the superior lord, if there is one, and if not, to the Crown. Authority to hold land may be given to a corporation either by the aforesaid licence from the Crown, or by an Act of Parliament. Nearly all important corporations established by Act of Parliament have been given by their incorporating Act the power to hold such land as is necessary for the purposes for which they were incorporated. By the Companies Acts, 1862, registered companies established for purposes of gain are empowered to hold land, but if they are formed for the purpose of promoting art, science, or any other object not involving the acquisition of gain, they cannot without the sanction of the Board of Trade hold more than two acres. If they wish to hold more, they must obtain the sanction of the Board of Trade.

The law relating to the holding of land by Charities and other similar institutions is contained in the Mortmain and Charitable Uses Acts, 1888 to 1892, which provide that land may be validly left by will for charitable uses, provided it is sold within a year of the death of the testator.

Where land is granted to a charitable use, it must generally be executed in the presence of two attesting witnesses. To be effective it must have been executed at least a year before the grantor's death, and it must be registered in the High Court within six months of its execution. The Acts, however, place certain semi-charitable institutions on a slightly different footing ; these include parks, schools, colleges, museums, etc.

MORTGAGES.

WHAT IS A MORTGAGE? A mortgage arises when a person transfers the general property in his land or goods to another as security for a loan. As a rule, the man who borrows the money—the mortgagor—does not hand over the possession of the land or goods to the man who lends—the mortgagee—but remains in possession himself. A mortgage, therefore, differs from a pledge, in which the possession of the property is always handed over to the pledgee. Moreover, there cannot be a pledge of land, but a mortgage may be either of land or goods. Mortgages of chattels are termed conditional bills of sale, and are treated of in another section of this book [see section on Bills of Sale]. It has been stated above that the mortgagor transfers the "general property" in the land or goods to the mortgagee. This term requires explanation, and the matter can best be made clear by a reference to the two forms of mortgage—*legal* and *equitable*.

A LEGAL MORTGAGE. A legal mortgage arises when a person who has himself the legal ownership of property transfers that ownership to the mortgagee as security for the loan. Legal ownership means that form of ownership recognised by the common law, as distinguished from equitable ownership, which was, at one time, recognised only by the Court of Equity or Chancery. A legal mortgage must be by *deed;* and the effect of the mortgage is that the mortgagee becomes the legal owner of the property subject to the mortgagor's right to redeem the land, i.e. to have it reconveyed to him, on payment off of the loan, with interest agreed upon, on the exact date fixed in the mortgage deed. This date is, by custom, usually six months after the date of the execution of the deed. Up to that time the mortgagor has a *right of redemption*. After that period has elapsed, he has *an equity of redemption*, i.e. a claim, formerly recognised only by the Court of Chancery, to get his property back by payment of loan and interest. According to the old doctrines of the common law, the mortgagor forfeited all his rights in the land if he did not pay off the loan on the exact day fixed in the deed; but the Court of Equity, looking to the intention rather than the form of the deed, allowed him to redeem at a later date, and since the Judicature Act, 1873, the rules of equity, where they conflict with those of common law, prevail in all the Courts. It is, however, still necessary to remember this old distinction between the views of common law and equity, for otherwise it is impossible to understand the meaning of an *equitable mortgage*.

AN EQUITABLE MORTGAGE. An equitable mortgage may be created in any one of three ways. (1) The mortgagor may have already conveyed property by way of legal mortgage to A. He is now desirous of borrowing further moneys on the same security from B. There can, however, be only one legal mortgage on any one piece of property, for, as has been stated, the legal ownership in the property is transferred to the mortgagee when a legal mortgage is executed. In the eyes of equity, notwithstanding, the mortgagor, even if the period fixed in the mortgage deed for redemption has passed, is looked upon as the equitable owner of the property, subject, of course, to the charge he has created. He can, therefore, mortgage the property to others, who thereby acquire equitable mortgages. (2) The mortgagor may not have executed a legal mortgage, and yet he may be only an equitable owner. For instance, land, or money, or goods may have been granted to trustees in trust for A. In this case, A has the equitable ownership only, and any mortgage by him of his property is an equitable mortgage. (3) A legal mortgage is a conveyance by the mortgagor of the legal estate in the property to the mortgagee, and a deed is required. If the mortgagor merely executes a memorandum in writing, charging his property with repayment of a loan, or if he deposits his title deeds, with or without a memorandum in writing, with the mortgagee, he creates only an equitable mortgage. If it is desired to raise money quickly, without the time and formality requisite for the preparation of a deed, such a mode of mortgaging one's property is very convenient. It will be shown later, however, that an equitable mortgage is, in many respects, not a really satisfactory security, and those who are about to lend money on mortgage should, if possible, obtain a legal mortgage.

FORM OF A MORTGAGE OF LAND. The form of a mortgage of land differs according to the nature of the property mortgaged, and according to whether the mortgage is legal or equitable. A legal mortgage of freehold is by deed and contains a covenant by the mortgagor to repay the money lent, with interest, on a fixed date, and in default of repayment on that day to continue to pay interest at the rate agreed, by equal half-yearly payments. Then in the same deed follows the conveyance of the land to the mortgagee, with a proviso that if the money with interest be paid off on the fixed date, the mortgagee shall reconvey the property to the mortgagor. A legal mortgage of copyhold is by *conditional surrender*, i.e. the mortgagor surrenders the copyhold to the mortgagee on the condition that if the mortgage is paid off on the date fixed, the surrender shall be void. This conditional surrender is entered on the rolls of the Manor Court. In the case of a mortgage of copyhold, it is usual also to have a separate deed, termed a *covenant to surrender*, executed before the conditional surrender. This is because a conditional surrender is not, technically, a deed, and therefore, but for the covenant to surrender, the mortgagee would not have the benefits which, as will be shown later, are conferred by Statute on mortgagees whose mortgages are by deed. A legal mortgage of leasehold is either by *assignment*, in which the lessee conveys the whole lease to the mortgagee, or by *sub-lease*, in which he conveys all the remainder of the lease, save one day, to the mortgagee. In one respect a sub-lease is more advantageous to the mortgagee than an assignment, for in a mortgage by sub-lease the mortgagee is not directly liable to the landlord of the mortgagor on the covenants in the lease, e.g. covenants to pay rent, to repair, and to insure. Equitable mortgages of freehold, copyhold, or leasehold may be by deed (i.e. when the mortgagor has not the legal estate), by mere memorandum, or by deposit of title deeds. If the land is registered in the County of London, the land certificate, and not the title deeds, should be deposited.

REMEDIES OF A MORTGAGEE OF LAND.

If a mortgagee is not repaid his loan with due interest thereon, he has certain remedies. The most important of these are: (1) he can take possession of the property; (2) he can foreclose; (3) he can sell the mortgaged property; (4) he can sue on the covenant, if the mortgage is by deed and contains, as would almost certainly be the case, a covenant to pay the debt; (5) He can appoint a receiver.

1. **TAKING POSSESSION.** A legal mortgagee has, in theory, a right to take possession of the property at once, unless the mortgage deed forbids him to do so; but as, after all, what the mortgagee wants is a security for his money and not the management of an estate, he would not, in practice, take possession unless his interest is in arrear, or he has not been repaid his capital after notice given to the mortgagor. An equitable mortgagee can only take possession with leave of the Court. A mortgagee taking possession is under certain disadvantages, for he must account for all rents and profits, must collect rents, and is liable for occupation rent for any house on the land he himself occupies, and he cannot charge for his time and trouble in managing the property. He should keep the premises in repair out of any surplus rents and profits there may be after paying his interest. Moreover, a mortgagee who goes into possession cannot quit without the consent of the mortgagor. If he does so, he may be liable for any damages that may ensue.

2. **FORECLOSURE.** At any time after the mortgagor has made default in paying off the mortgage debt, the mortgagee can apply to the Court of Chancery for a *foreclosure decree*. This decree orders an account to be taken before a Master (i.e. an official of the Court of Chancery), of the amount due to the mortgagee, and

directs that if the amount found due is not paid within six months of the taking of the account, the mortgagor is to be "foreclosed of his equity of redemption," or, in other words, the mortgagee is to become the absolute owner of the property. In foreclosure proceedings, the mortgagee coming to the Court must make parties to his action not only the mortgagor but also any mortgagees subsequent to himself, and he usually makes parties to the action any prior mortgagees, and offers to redeem them, i.e. to pay off their charges. Hence a well-known saying, "Redeem up, foreclose down," i.e. a person can redeem any mortgagee prior, and foreclose any mortgagee subsequent, to himself. The foreclosure must be asked for within twelve years since the mortgagor's last payment of interest or written acknowledgment of the mortgage debt. It should be noted that there is not much chance that the mortgagee, by foreclosure, will secure a property worth more than his debt and interest, for, if the mortgagor in the course of the foreclosure proceedings can find any one else to lend him the money, he can compel the mortgagee to transfer the mortgage to such person. Moreover, if there are mortgages, subsequent to the mortgagee applying for a foreclosure, they would presumably pay him off before the foreclosure became absolute, which takes place six months after the Master has made a Certificate of the result of the account. It is also specially provided by Statute, that any one interested in the mortgage money or in the equity of redemption may apply to the Court to direct a sale of the property instead of a foreclosure.

3. **SALE** A mortgagee can sell the mortgaged property (1) if there is an express agreement in the mortgage allowing him to do so; or (2) if the Court gives him leave to sell; or (3) if his mortgage is by deed, and three months have elapsed since a notice given by him for repayment of his principal, or the interest is two months in arrear, or there has been a breach by the mortgagor of some covenant in the mortgage deed other than a covenant to pay the principal debt and interest. In case (3) the power of sale is implied and is given by the Conveyancing Act, 1881. On a sale, the purchase money is used to pay off prior charges, if any, the costs of the sale, and the mortgage debt and interest of the seller. The surplus is held by the mortgagee who sells in trust for subsequent mortgagees and the mortgagor. The persons entitled to the surplus must take steps to recover it within six years of the sale, otherwise their claims will be barred.

4. **ACTION ON THE COVENANT.** If the mortgage does not contain an express covenant to pay the mortgage debt, a promise on the part of the mortgagor is nevertheless implied. But the action on this implied promise will be barred by the lapse of six years from the last payment of interest, or from any acknowledgment in writing of the debt. If there is a covenant to pay in the deed, an action can be brought upon it until twelve years have elapsed since the last payment of interest or written acknowledgment of the debt.

5. **APPOINTMENT OF RECEIVER.** The mortgagee, if his mortgage is by deed and if his power to sell has arisen (see above), has an implied power, by virtue of the Conveyancing Act, 1881, to appoint a receiver. Such receiver collects the rents and profits of the land, and thereout, after paying outgoings, interest on prior mortgages, if any, and his own commission, pays the interest due on the mortgage of the person appointing him, and holds the surplus for the benefit of the person entitled to the land subject to the mortgage. Although the receiver is appointed by the mortgagee, he is considered to be the agent of the mortgagor, and therefore the mortgagee is not responsible for his negligence. It will be seen, therefore, that it is more advantageous for a mortgagee, in this respect, to appoint a receiver than to go into possession himself.

CONVEYANCING ACT, 1881. This Act conferred numerous powers on mortgagees of land, whose mortgages are by deed. The powers are implied, and need not be set out in the mortgage deed. The right to sell and the right to appoint a receiver have been already referred to. The mortgagee was also given a power to insure the mortgaged property up to two-thirds of its value. By the same Act, a mortgagor in possession or a mortgagee in possession (whether the mortgage was by deed or not), unless the mortgage deed or agreement expressly excludes the power, can grant leases which will be binding on the mortgagee or mortgagor respectively. The Statute declares that an agricultural or occupation lease can be granted for a period not exceeding twenty-one years, and a building lease for a term not exceeding ninety-nine years, but not mining leases. The Conveyancing Act, 1881, also provides that, on the death of a mortgagee, his estate in freehold land is to go, as personalty, to his executor or administrator, who, if the mortgage debt is paid off, would be the proper person to reconvey the land to the mortgagor.

HOW MORTGAGEE MAY PURSUE HIS REMEDIES. A mortgagee may pursue all his remedies concurrently, i.e. he may sue on the covenant and foreclose for the balance, if any, left due; or sell the property and sue on the covenant if the land does not realise the amount of his loan. But if he forecloses and then sues on the covenant, the foreclosure is "re-opened," i.e. the mortgagor has once more the right to redeem the property by paying off the loan and interest. It follows, therefore, that if the mortgagee has foreclosed and has then sold the property, he cannot sue for any deficiency, for, having parted with the land, he cannot reconvey it to the mortgagor, and, therefore, the foreclosure cannot be re-opened.

PRIORITIES. If there are several mortgages on the same property, the question of priority arises. If the mortgages are on land, the general rule is that the mortgages rank in order of date, but that a legal mortgagee has priority if at the time of his mortgage he had no notice of any prior equitable mortgages. It has been stated above that there can only be one legal mortgage on any one estate. If, therefore, X mortgages his land to A by equitable mortgage, and then to B by legal mortgage, and B had no notice of A's mortgage when he lent his money, B has priority over A. As regards equitable mortgages on the same estate, they rank in order of date, subject to the possible operation of the doctrine of *tacking*.

TACKING. This doctrine is based upon the priority which is given to the holder of the legal estate. Put shortly, it is the right of a mortgagee who holds a legal mortgage, together with other charges on the same property, to tack them together and squeeze out any intermediate mortgages of whose charges he had no notice when he advanced his money. It may arise in two ways.

(1) A advances money to B, and gets a legal mortgage on B's land; afterwards B raises further sums by equitable mortgages from C and D, etc. B then raises another advance from A on the same security. If A had no knowledge of the charges of C and D when he made his further advance, he can tack his further advance to his legal mortgage, and claim to be paid off both before C and D. If, however, A knew of the prior charges of C and D when he made his second advance, he cannot tack even though his original mortgage was expressly declared to extend to any further advances.

(2) B borrows money from A by legal mortgage, and afterwards from C and D successively by equitable mortgages on the same land. If D, when he lent his money, did not know of C's charge, he can by buying up A's legal mortgage tack his equitable mortgage to it and get priority for both mortgages over C. It does not matter that D knew of C's charge when he acquired the legal mortgage, so long as he did not know of it when he made his original advance.

It will be shown later that an equitable mortgagee has a right to redeem any prior mortgage if he is prepared to pay off the capital sum and interest. Of course, in the case given, C might have gone to A before D did so, and redeemed A's mortgage, and then he would have been safe.

NEGLIGENCE OR FRAUD OF MORTGAGEE. It should be stated that a mortgagee may lose the priority he otherwise would enjoy if he is guilty of fraud or negligence.

Thus, if B deposits his title deeds with A by way of equitable mortgage, and A afterwards allows B to take

back the title deeds, and B deposits them with C as security for an allowance, C, if he did not know of A's charge at the time, will have priority over A.

A *legal* mortgagee, however, will not lose his priority merely on the ground of carelessness, but only on the ground of fraud or gross negligence.

Thus, where B executed a legal mortgage in favour of A, but made excuses for non-production of the title deeds (which are usually handed over to the legal mortgagee), and afterwards executed a mortgage in favour of C, and deposited the title deeds with C, it was held that A was not postponed to C.

EQUITY OF REDEMPTION. It has been stated above that, after the period for redemption fixed in the mortgage deed has elapsed, the mortgagor has left in him an "equity of redemption." It has been decided that an equity of redemption is an estate in the property and therefore can itself be mortgaged. If the mortgage is on real property, the equity of redemption, on the death of the mortgagee, will descend like real property. Any clause in the mortgage deed, or any contract made between the mortgagor and the mortgagee, which would have the effect of depriving the mortgagor of this equity of redemption, is void. Any attempt even to "clog" or fetter its exercise has been held to be void. Thus, where a publican mortgaged the lease of his public-house to a brewer, and agreed to buy beer only of that brewer during the continuance of the lease, it was held that, on payment off of the mortgage, his obligation to buy beer of that brewer came to an end. A mortgagor may, however, lawfully bind himself not to redeem for a certain period, say for five years. In this case, of course, the mortgagee cannot foreclose or sell during the same period so long as interest is paid. The equity of redemption can be exercised not only by the mortgagor, but also by any subsequent mortgagee on the same property, or by a purchaser of the equity of redemption, or, in fact, by any one interested in the equity of redemption. It may be well to add that any advantage secured to a mortgagee over and above his principal and interest is called a "collateral" advantage. Where a collateral advantage affects the value of the property mortgaged it cannot be enforced after the mortgage is paid off; but if it affects the mortgagor personally it can be enforced, provided it is not oppressive or unconscionable.

TIME FOR REDEMPTION. A mortgagor can redeem on the date fixed in the mortgage deed without giving notice of his intention to do so, but if he exercises his equity of redemption after that date has passed, he must give six months' notice or pay six months' interest in lieu of notice. This, however, does not apply where the mortgagee has demanded repayment or taken possession of the property; nor does it apply to an equitable mortgage by deposit of title deeds. In such cases the mortgagor can redeem without notice. If the mortgagee refuses to reconvey the property when the mortgagor offers to redeem, the mortgagor should bring an action in Chancery.

HOW IS EQUITY OF REDEMPTION LOST? The mortgagor will lose his equity of redemption if the mortgagee forecloses (see above); or if he sells (but in this case the mortgagor will be entitled to any surplus); or if the mortgagee enters into possession of the land and holds it for twelve years without acknowledging in writing the mortgagor's right to redeem; or if the mortgagor executes a second mortgage by deed and fraudulently conceals the first mortgage. Hence the statement "Once a mortgage always a mortgage" is not to be taken quite literally.

CONSOLIDATION. If a mortgagor mortgaged different properties by separate mortgages, and the period fixed in the different mortgages for repayment had elapsed, and the mortgages had all got into the hands of one person, that person was entitled to refuse to allow the mortgagor, or any subsequent assignee of the equity of redemption, to redeem one of the mortgages without redeeming the other or others at the same time. By the Conveyancing Act, 1881, sec. 17, this right of consolidation, as it is termed, was abolished, unless the mortgage deeds or one of them expressly excludes the operation of section 17.

REAL ESTATE CHARGES ACTS. By a series of Acts known by this name, if an owner of freehold, copyhold, or leasehold property, which is subject to a mortgage, dies, the person who gets the land takes it subject to the mortgage; i.e. he cannot call on the deceased person's executor or administrator to pay off the mortgage out of the general personal estate of the deceased.

MORTGAGES OF REGISTERED LAND. In Yorkshire, registered charges take priority according to date of registration, except in case of actual fraud, and the doctrine of tacking does not apply. In the County of London compulsory registration of certain interests in land applies, and, subject to any entry on the register to the contrary, registered charges rank according to the order in which they are entered on the register, and not according to the order in which they are created.

WILLS.

WHAT MAY BE LEFT BY WILL. A Will or Testament is the declaration by a person of his wishes with regard to the disposal of his property after death. A *Codicil* is a supplement to a Will. The person who makes a Will or Codicil is called a testator, or, if a woman, a testatrix. Originally, valid Wills could be made by word of mouth, but this can no longer be done, except in the case of soldiers' and sailors' Wills. With this exception, all Wills and Codicils must now be written or printed, signed by the testator, and attested by two witnesses.

A person can now dispose of by Will all the property to which he is entitled at the time of his death. But of course he cannot give away more than he is entitled to. Where, for instance, he possesses property which is mortgaged, and he disposes of it by his Will, the beneficiary will have to take it subject to the mortgage, unless the testator has provided for the clearing off of the mortgage in some other way, as by directing that it shall be paid off out of the residue of his personal estate.

In former times, property disposed of by Will was divided under two heads, *real* property and *personal* property. Until the Wills Act, 1837, the number of witnesses and other formalities to be observed in the execution of Wills varied according as the property was Realty or Personalty. Again, until the Land Transfer Act, 1897, real and personal property did not pass in the same way. Now, however, this distinction between Real and Personal property is not of great importance to laymen, though it still accounts for the use of certain technical expressions. Thus "real property" is *devised*, and goes to a *devisee*, whilst "personal property" is *bequeathed*, and goes to a *legatee*. *Gift* is a word which covers both devises and bequests, and the word *beneficiary* covers both devisees and legatees.

WHO CAN MAKE A VALID WILL. The law is that any adult person can make a valid Will, provided he is of sound mind, but that infants (persons under twenty-one years of age) cannot dispose of their property by Will. Soldiers, on actual military service, and seamen at sea may dispose of their goods by verbal declaration in the presence of witnesses.

Whether or not a married woman can make a valid Will depends on the date of her marriage. If she was married since the 31st December, 1882, she can make a Will disposing of her property as she likes. If she was married before that date she can validly dispose of by Will all the property which she has acquired since that date, and also such property as has been settled to her separate use or made her property by the Married Women's Property Act, 1870. But she cannot make a valid Will disposing of any other property, except by merely exercising a power of appointment, without the express permission of her husband. Furthermore, the husband in such cases can withdraw his permission at any time before the Will is proved. Again, if the wife in such a case survives her husband, she must re-execute the Will or it will become invalid.

Outlaws cannot make a valid Will. This is partly because they have no property to leave, their property having been forfeited by the Crown, and also because they have no legal rights whatever. Nor can the subjects of countries at war with Great Britain make valid Wills disposing of any of their property in this country.

With regard to idiots and other insane persons, they cannot generally make valid Wills whilst they are insane, but they can make them during a lucid interval. So, also, they can make valid Wills if the insanity is of such a nature that it does not prevent them properly transacting their business or controlling their general affairs. In other words, the Courts are always loth to upset a Will, nor will they do so merely because the testator happened to be eccentric, even if his eccentricity took such an abnormal form that it would be regarded by ordinary persons as insanity. If a person makes a Will whilst perfectly sane, it is not rendered invalid by his subsequently becoming insane.

N.B.—When a person executes a Will without approving of its contents, whether he has been induced to do so by the state of his mind, drunkenness, force, or undue influence the Will is invalid.

HOW A WILL IS MADE.

1. SIGNATURE. With the exception of certain soldiers and sailors' Wills, which will be dealt with later, all Wills must be in writing and signed by the testator at the foot or end. It is not absolutely necessary for him to sign it himself. It will be sufficient if someone else signs it in his presence and by his direction. But it is better that he should himself sign it unless he is too ill to do so. If he cannot sign his name he may make his mark. If the signature is not at the foot or end of the Will, the part that follows the signature will not be valid. The Will need not all be contained on a single sheet of paper; but if on several sheets it is highly desirable that they should be connected together in some way. No alterations must be made in a Will after signature, and those made before signature must be initialled by the testator and by both witnesses.

2. ATTESTATION. No Will will be valid unless the testator's signature is attested by two witnesses in his presence and in the presence of each other. The witnesses must sign their names to the Will. It is usual to insert between the testator's signature and the signatures of the witnesses a short clause to the effect that the latter have attested the testator's signature in his presence, and in the presence of each other. It is not absolutely necessary that this clause should be inserted, but its presence makes it very much easier for the executors to obtain probate of the Will. The witnesses should not be persons who in any way benefit by the Will, nor the wives or husbands of such persons. For though the Will will in all other respects be valid, the witnesses and their consorts will not be able to derive any benefit from it; but if a codicil is subsequently executed, and attested by other witnesses, the witnesses to the will are entitled to their gifts.

Any person who is competent to give evidence is a good witness to a will, even though such person be under age. Of course it is best to have witnesses of manifest understanding and of good credibility.

3. SOLDIERS' AND SAILORS' WILLS. Under the Wills Act, 1837, soldiers in actual military service and sailors actually at sea are not bound by the formalities which other testators have to observe. They may even, subject to the following exceptions, make Wills without writing, by merely informing witnesses of their testamentary wishes. Under the Navy and Marines (Wills) Acts, 1865 and 1897, which apply to petty officers, seamen, marines, and non-commissioned officers of marines belonging to the Royal Navy, the Wills of such persons to pass wages, prize-money and effects in the possession of the Admiralty must be written and executed in the ordinary way. The Acts further require that one of the witnesses shall be, if possible, a superior officer or chaplain, and where this is impossible, that he should be some responsible person, as a British Consul or the surgeon of a naval hospital. There is a somewhat similar provision in the Merchant Shipping Act, 1894, as to the disposal of a seaman's property in the possession of the Board of Trade, except that if the Will is made on board ship only one witness is required, but this one must be either the master or the first mate.

4. WILLS MADE ABROAD. Where land is disposed of by Will, the Will must be executed in accordance with the law of the place where the land is situated; but where goods are so disposed of, the Will is generally construed in accordance with the laws of the place where the testator is domiciled. A person is said to be domiciled in a particular country when he has made his *permanent* home there. Thus a person may acquire a foreign domicile whilst still remaining a British subject. It is frequently a difficult matter to ascertain a testator's domicile. To obviate these difficulties, Lord Kingsdown's Act was passed in 1861 (24 & 25 Vict., c. 114). By this Act, where a British subject makes in a foreign country a Will disposing of his personal property, it is to be considered a valid Will if executed either according to the law of that foreign country, or according to the law of the place where the testator was domiciled, or according to the law of that part of the British Empire from which he originally came.

5. HINTS ON WILL-MAKING. When a person desires to make his Will, he ought first to go to two or three of his friends and get their consent to act as executors. He is not bound to do so, but if their consent has previously been obtained they are less likely to renounce probate. He should then make a schedule of all his property. This will be useful to his solicitor or to himself in the preparation of the Will, and it will also be of great service to his executors after he is dead. Having done this, he should instruct a solicitor to prepare the Will. It would be very unwise of him to prepare it himself, but if he prefers to take the risk the following hints may be of service to him.

He should avoid all attempts at technical expressions and state his intention in the plainest and simplest language possible. He should not attempt to qualify the gifts in any way, and he should avoid the creation of any trust, as such creation requires technical skill of a high order.

The following directions should be carefully followed:—

(1) Begin with a declaration that it is your last Will, giving your full name and permanent address and date of the Will.

(2) Expressly revoke all previous Wills and Codicils, if any. [If this is not done they will remain in force so far as they are consistent with the later Will, and be a probable cause of litigation.]

(3) Appoint executors, two being the most convenient number.

(4) Direct the executors to immediately pay a certain sum out of the estate to the widow or some other suitable person so as to obviate pecuniary difficulties while the executors are winding up the estate.

(5) Set forth such gifts as you intend to make, stating clearly who the recipients are to be, and if the gifts are to be free from legacy duty, say so clearly.

(6) Lastly, designate the person to whom you desire to leave the residue of your property.

Having completed the Will, summon two persons who not only do not derive any benefit from the Will, but whose wives or husbands do not derive any benefit either.

You must then sign your name at the foot or end of the Will (and not anywhere else) in the presence of both the witnesses, who must then sign in your presence and in the presence of each other, a clause being inserted to this effect between your signature and theirs.

N.B.—If any words are scratched out, or inserted between the lines, or if there are any other alterations in the Will, both the testator and the witnesses must initial them.

6. SOME RULES OF CONSTRUCTION. Courts of law in construing a Will will interpret it according to the intention of the testator as expressed by the Will. Thus, if the Will says: "I leave my property in Kent to John Brown," when the testator has no property in Kent, evidence will

not be admitted to show that the word "Kent" has been inadvertently substituted for "Sussex." But where the Will says, "I leave my property to my friend Brown," and he has two friends named Brown, evidence will be admitted to enable the Court to draw an inference as to which Brown was meant. But evidence will not be admitted to explain what are called *patent* ambiguities, as where a blank has been left in place of the name of a beneficiary.

Wills are generally construed as speaking from the death of the testator, especially when the gifts are described in general terms. Thus, "I leave all my money at Lloyd's Bank to my son," will mean all the money the testator has at that Bank at the time of his death, not merely such money as he had there at the date of his Will. But where a contrary intention is expressed by the Will, the Courts are bound by the intention. Thus, "the land I *now* own in Somerset," would mean the land owned at the date of the Will.

Where a general gift made by Will has lapsed or become void, the gift goes to the person entitled to the residue of the estate. Gifts lapse when the beneficiary dies before the testator; but in the case of gifts to children, or other issue of the testator, the gifts would go to the person entitled to the dead child's property, provided that such child or other issue left issue living at the testator's death. And there is a similar exception where the testator has given property "in fee tail" to a person who dies before him. The property would then go to the person entitled to succeed under the entail.

As Wills, unlike deeds, are not infrequently drawn by persons without an exact knowledge of the effect of technical expressions, it is only right that they should not be construed with the same strictness as deeds. Therefore, when a testator makes a gift of certain lands to a person, without attaching to the gift "words of limitation," as they are called, that is to say, words indicating the nature of the estate which the testator means to pass (as whether it is to be the fee simple or merely an estate for life), the beneficiary will get the greatest estate in those lands that it is in the power of the testator to give.

7. IMPORTANCE OF TECHNICAL WORDS. Testators desiring to make a gift to a person would do well to add the word "absolutely," in case any litigation should afterwards ensue as to whether a trust has been created. A testator is advised to trust to the integrity of the beneficiary in disposing of the property, and not to express the hope, in his Will, that the property will be dealt with in a particular way, unless he wishes a trust to be created.

As for technical expressions he should eschew them, but it would be well for him to bear in mind that apparently every-day expressions often have in law a highly technical meaning. Thus "brother" includes a half-brother, but not a step-brother or brother-in-law, for these are not blood relations. Again, "children" means legitimate children only. So if a testator desires by his Will to confer a benefit on illegitimate children, he should be careful to specify them by name. As marriages with a deceased wife's sister and bigamous marriages are not legal, the children of such marriages are illegitimate. Again, a divorced wife would not come under the description "my wife." She is no longer the testator's wife, though she has the right to use his name. Questions do not now arise as to whether a gift "to my wife" would apply to a wife whom the testator has married after making his Will, for the marriage would revoke the Will.

As "worldly goods" does not include *real* property, unless a contrary intention appears on the face of the Will, it is better to say "All my property whatsoever," than "all my worldly goods."

The word "money" includes all the money in the possession of the testator at the time of his death, whether in the bank or in the house, and also all money to which he is actually entitled at the time of his death, but it does not include money due on notes of hand or other debts due to the testator. "Cash" is not in law such a comprehensive term as "money," but it includes Bank of England notes. The words "my family" only apply to the testator's children, not to his wife or grand-children. "Furniture" includes pictures and plate, but not wines or a library of books.

N.B.—There are hundreds of other technical expressions differing widely from the ordinary acceptation of the terms; but perhaps enough has been said to persuade an untrained person not to venture to prepare his own Will, or at any rate to convince him of the risk he runs in so venturing.

8. FORM OF A SIMPLE WILL. A Will need not assume any particular form. Any writing duly signed and attested by two witnesses is sufficient. But the following form of a very simple Will creating no trusts may prove of assistance to those unwise and reckless enough to attempt to write a Will without the assistance of a lawyer.

I, John Jones, of 103, Alpha Road, Whitechapel, make and execute this my last Will and Testament on the third day of April, 1905. I hereby revoke all my former Wills, Codicils and Testamentary Dispositions. I appoint my brother Alfred Jones and my brother-in-law James Smith executors of this my Will, and I give to each of them who shall accept the office the sum of fifty pounds for their trouble. I give to my dear wife Elizabeth Jones the sum of one hundred pounds for her immediate use, and I direct my executors to pay the same to her out of the first monies that come into their hands. I give to my said wife all the liquors, wines, fuel, house-keeping stores and provisions in my house at the time of my death. I give to each of my daughters, Mary Jones and Janet Jones the sum of two hundred pounds. I give to my son Robert Jones, the sum of three hundred pounds. I give to my old nurse and foster-mother, Sarah Jenkins, of 43, Purbeck Road, Fulham, the sum of thirty pounds free of legacy duty. I give to my sister Maria Smith, the wife of James Smith, the sum of fifty pounds. I give the residue of all my property whatsoever to my said dear wife Elizabeth Jones absolutely. In witness whereof I the above-named testator have hereunto set my hand the day and year first above written.

John Jones.

Signed by the testator as his last Will and Testament in the presence of us, who both being present at the same time, in his presence and in the presence of each other have hereunto subscribed our names as witnesses.

Caroline White,
Housemaid,
103, Alpha Road, Whitechapel.

Samuel Squeers,
Accountant,
7, Alpha Road, Whitechapel.

REVOCATION OF WILLS. A testator can always revoke a previous Will, sometimes even unconsciously. Thus, where a Will is made by a person who is single (whether bachelor, spinster, widow, or widower) if the person subsequently marries, the Will is automatically revoked.

Again, where a testator has bequeathed certain property to a person and has afterwards parted with the property before his death, the bequest becomes void. So where he parts with all the property disposed of by the Will, the whole Will becomes ineffectual.

But with the above exceptions no person can, in law, be presumed to have altered his intentions as expressed in his Will merely by the lapse of time or by any alteration in the circumstances of the testator between the date of his Will and the date of his death.

Where a testator having made a Will subsequently makes another Will or Codicil which is not consistent with it, but which does not expressly revoke it, the first Will is valid in so far as it is consistent with the later Will or Codicil, but the later Will is alone valid as to the parts where they are not consistent.

In addition to the above there are only three ways in which a testator may deliberately revoke a Will:

(1) He may make a subsequent Will or Codicil which expressly revokes the former Will. (2) He may execute some writing which declares the Will to be revoked. But such writing must be executed with all the formalities (two witnesses, etc.,) of a Will: or (3) He may burn, tear, or otherwise destroy the Will with the intention of revoking it.

These rules are strictly adhered to by the Courts when they come to consider whether or not a Will has been revoked. The testator cannot therefore revoke a Will by declaring to a number of witnesses that he considers it revoked. Nor can he cancel it by striking it through with a pen, or by writing the word "cancelled" across its face, or by crossing out his own signature and those of the witnesses. But where he completely obliterates the signature the Will will be invalid, as also will those parts of the Will be which have been so completely obliterated that the words cannot be read. If he "burns, tears, or otherwise destroys" the Will without intending to revoke it, it will still be valid.

REVIVAL OF WILLS. A Will which has been revoked is not revived by revoking the Will or other instrument by which it was revoked. Nor can a revoked Will be revived by destroying the subsequent Will which revoked it, or by mere implication in any other way. There are indeed only two ways in which a Will may be revived after it has been revoked. The first is by re-execution of the Will itself, and the second is by the due execution of a Codicil expressing the intention of reviving the Will.

The Codicil must be executed with all the formalities of a Will, and the intention of reviving the Will must be clearly expressed on the face of it. Merely describing it as a Codicil to the revoked Will would not be sufficient to revive the Will. Again, where a Will has been partially revoked and then wholly revoked, if a Codicil to revive it has subsequently been executed, the revival will not extend to the partial revocation unless the Codicil expressly declares that it shall extend to such revocation.

Where a testator revives a Will by re-execution, he should remember to put the date of the re-execution on the Will, and also to execute it in the presence of two attesting witnesses in the same way as he executed the original Will.

Sometimes a Will is invalid because it has not been duly executed. Again, as has been already seen, a perfectly valid Will becomes invalid on the subsequent marriage of the testator. These invalid Wills may also be rendered valid by re-execution or by a Codicil expressing the intention to revive them.

EXECUTORS & ADMINISTRATORS

WHO MAY BE APPOINTED. An *executor* is the person whom a testator appoints by his Will to wind up his estate and to distribute the assets in accordance with the terms of the Will. An important innovation was made by the Public Trustee Act, 1906, which came into operation on January 1st, 1908, and which is being used for the administration of many estates. This Act provides for the appointment by the Lord Chancellor of a Public Trustee, who may, if he thinks fit, act either alone or jointly with any person or body of persons, (*a*) in the administration of estates of small value; (*b*) as custodian trustee; (*c*) as an ordinary trustee; or (*d*) be appointed to be a judicial trustee; or (*e*) be appointed to be administrator of the property of a convict under the Forfeiture Act, 1870. The Act applies to executorships and administratorships as well as the execution of trusts under settlements and wills. Under the Act, trusts must not be accepted which involve the management or carrying on of a business. Where the deceased has left no Will there can be no executors and no probate. The property, if *realty*, will go to his heir-at-law, and if *personalty* to his next of kin. But as it is desirable that some one should wind up the estate and distribute it among those entitled to it, the Court will appoint a person called an *Administrator*, and grant him "Letters of Administration." If the testator has named no executor in his Will, no Probate will be granted, but an administrator will be appointed with a grant of "Letters of Administration with the Will annexed." He will be in practically the same position as an executor.

When an executor dies, the office is continued by the surviving executor; but when a sole or last executor dies, the executorship goes to that executor's executor. If he has not named an executor, the Court appoints an Administrator to carry on the work.

The general rule is that anyone may be appointed and act as an executor; but infants, lunatics, and bankrupts (where the testator has not been aware of the bankruptcy), cannot as a rule personally act as such whilst they are under disability. The Court may also relieve of his duties an executor resident abroad. The person whom the Court appoints as administrator is usually the husband, wife, or one of the next-of-kin of the deceased, or some person interested in the estate such as the residuary legatee. A creditor would not generally be appointed.

HOW APPOINTED AND REMUNERATED. Generally speaking, an executor can only be appointed by a Will or Codicil. He can be appointed either expressly or by implication. But if appointed by implication, the intention to appoint him must be gathered from the terms of the Will. There are two ways in which a person not appointed an executor by a Will may be appointed an executor. (1) The Will may give power to a surviving executor to appoint a new one in place of his deceased co-executor. (2) When a sole or last surviving executor dies, his executor becomes the executor of the original Will.

An Administrator is appointed by the Court, and his rights date from the appointment. A person desiring to be made an administrator should apply to the Court (The word "Court" here includes the Probate Registry at Somerset House and the various District Registries.) The Court will appoint the husband or wife of the deceased, in preference to others. If there is no husband or wife, one of the next-of-kin is generally appointed, preference being usually given to that one of the next-of-kin who is entitled to most of the property.

There is another kind of executor called an "executor *de son tort*." Thus if a person who is not an executor meddles with the deceased's property, as by demanding the payment of debts due to the estate, he will be regarded as an executor and incur the duties and liabilities of one. But he will not be so regarded if he merely provides out of the estate for the funeral of the deceased or for supplying the deceased's family with the necessaries of life.

Executors and Administrators are not entitled to any remuneration for their trouble or loss of time, unless the Will provides for their remuneration. But they are entitled to their reasonable out-of-pocket expenses incurred in the course of their duties. They can re-imburse themselves for the fees paid in obtaining Probate or Letters of Administration, before they pay taxes or debts, but not before they have paid the funeral expenses. No one can be compelled to act as a trustee, and if a person so appointed does not wish to act, he can disclaim the trust.

DUTIES OF THE EXECUTOR.

1. FIRST DUTIES. The property of a testator vests in his executors immediately after his death, and it is their duty to wind up the estate. First of all they must give the deceased a decent burial, according to his wealth and station, and pay the funeral expenses. They must next proceed to prove the Will, that is, obtain Probate.

2. HOW TO PROVE THE WILL. Probate cannot be taken out till a week after the testator's death; but it must be taken out within six months, or the executors will be liable to penalties. An executor may always renounce probate, that is to say, he may decline to act as executor, provided he do so before dealing with the testator's property.

There are two ways in which the Will may be proved—in common form and in solemn form. Where the Will is not likely to be disputed, it is simpler and cheaper to prove it in common form at Somerset House. Proving it in common form will not prevent it from being afterwards proved in solemn form in open Court, if it is found necessary to do so. To prove the Will in solemn form legal assistance is indispensable, but to do so in common form such assistance is not essential, though very desirable.

The following is the way an executor should proceed in order to prove the Will without employing a solicitor:—

(1) Obtain from a law stationer or from Somerset House the forms of affidavit for estate duty and also a form of

affidavit declaring that you are the executor of the Will and prepared to carry out your duties as such, and stating the value of the estate.

(2) Attach the executor's affidavit to the Will and take it with the other affidavits duly filled up, but not sworn, to a Registrar at Somerset House and swear them before him.

(3) When the affidavits have been sworn all the papers will be returned to you, together with a parchment form, which you must not fill up or meddle with.

(4) Take all these documents to the "Personal Application Department" in the same building and pay the fees.

(5) If the officials are satisfied that the Will is genuine they will proceed to have it engrossed, and when this is done you will obtain a document (not the original Will) from the seal office. This document is the *probate*.

If the deceased at the time of his death had a fixed place of abode in a place to which a District Registry is attached, the executor may find it more convenient to apply there instead of at Somerset House. The form of procedure at a District Registry is practically the same as at Somerset House.

3. COLLECTING AND PAYING DEBTS. After proving the Will, the executors should collect the deceased's property, calling in all debts due to the estate. But the Trustee Act, 1893, enables them to compound or compromise such debts or allow time for their payment. Then, if the testator is at all likely to have incurred debts, they should advertise for creditors in one London and two local papers. For if this is done, they are protected by the Law of Property Amendment Act (22 and 23 Vict., c. 35) from an action by a creditor, if they distribute the property a reasonable stated time (usually about six weeks) after the appearance of the advertisement.

Executors should pay the testator's debts in the following order, in cases where the estate is not likely to be large enough to pay them in full: first, the funeral expenses, then taxes, then rates, then Judgment debts, and lastly all other debts. The general rule is that all the debts of any one of the above classes are to be paid in full before the payment of any of the debts in the succeeding classes; and if there are not sufficient assets to pay the debts of a particular class in full, the creditors of that class usually take a percentage; but the executor has the right to give any creditor a preference over other creditors of the same class. This usually happens when the executor is himself a creditor, he then exercises his right to payment in full in priority to other creditors of the same class. This right is called the executor's right of retainer. Executors have also the right of paying a debt which is barred by the Statute of Limitations; but no executor is justified in paying any debt in priority to the debts of a preceding class.

4. FURTHER DUTIES OF EXECUTORS. Having buried the testator, proved the Will, paid the testator's debts, and called in the moneys owing to the estate, the executors' next duty is to distribute the assets among the beneficiaries according to the directions given in the Will.

As it sometimes happens that the testator has not left sufficient property to pay the legacies in full, after the payment of the debts, it is necessary to know what legacies have priority. And in order to see this it will be necessary to divide them into two classes, specific and general. A specific legacy is the gift of a certain specified thing, as "my gold watch," whereas a general legacy is one which can be satisfied out of any part of the personal estate, as "a legacy of £100."

Now, debts should first be paid out of the residuary personal estate and out of that part of the *real* property charged with the payment of debts; but if not enough is obtained from these sources, the executors must look to the gifts in the following order:—

Try to pay it out of that part of the property which goes in general legacies; (2) Then out of the specific legacies; (3) Then out of the devises, that is to say, gifts of *real* property; (4) After that out of property appointed under a general power of appointment; (5) And, last of all, out of the widow's paraphernalia—the jewels and personal ornaments given her by the Will.

Those entitled to property in any one of the above classes are entitled to their gifts in full if the property passing under the preceding classes is sufficient to pay the debts, but as between members of the same class their gifts abate rateably. After the debts have been paid in full, the executors should proceed to hand over the devises and bequests, or so much of them as remains after the payment of the debts. But the executors have a year's grace before they can be compelled to hand them over.

LAPSED AND VOID LEGACIES. Executors cannot always carry out the terms of a Will as they stand. As we have seen, the value of the gifts may have been considerably diminished by the time the debts have been paid in full. Again, gifts for certain purposes are void in law and must not be carried out. And, lastly, the testator may, in his life-time, have parted with the subject-matter of the gift so that it cannot be carried out.

Gifts that the law regards as void naturally fall into three classes, according as they are illegal, immoral, or contrary to public policy. All gifts for an illegal or criminal purpose are, of course, absolutely void. As to gifts relating to immorality, if given for an immoral purpose they are void; but not if given where the immorality is past. Thus, a gift "to anyone who will become the mistress of B," would be void as setting a premium on immorality; but a man may provide in his Will for a gift to his mistress, as the immorality would be past, and so far from being an encouragement to immorality, the gift, if substantial, would probably check it.

It is contrary to public policy that a person who attests the testator's signature should be a beneficiary under the Will. The attesting witness is often called upon to prove the due execution of the Will. Is it likely, then, that his evidence would be impartial if his pocket would suffer through the upsetting of the Will? So the law provides that if such a person attests the Will, the Will remains valid in other respects, but the gift to the attesting witness is void. It is also contrary to public policy that a foreigner should have a share in a British ship; such gifts are, therefore, void.

LETTERS OF ADMINISTRATION. When a person dies intestate or leaves a Will without having appointed any executors, it is the duty of the husband, wife, or one of the next-of-kin, or of some other person interested in the estate, as a creditor, to apply for Letters of Administration, or for Letters of Administration with the Will annexed. An Administrator with the Will annexed has practically the same duties as an executor—he must carry out the directions given in the Will. But an ordinary Administrator must distribute the property among those entitled to an intestate's estate.

The method of applying for Letters of Administration is very similar to that of applying for probate. The applicant must make an Affidavit stating that he is entitled and prepared to act, and setting forth the value of the estate to the best of his knowledge, information, and belief. He must also fill up an Inland Revenue Affidavit which he will get at Somerset House. He must give a bond to double the value of the estate with two sureties for the due performance of his duties. He must swear the Affidavit, and sign and seal the bond in the presence of the Registrar at Somerset House. He must then leave these documents at the Registry; and in due course he will receive a document called the "Letters of Administration," and this document is his authority to act.

His office dates from the grant, not as in the case of an executor from the date of the death, though before getting it he may provide for the funeral. Having obtained this authority, it is his duty to collect the property and pay the funeral expenses and debts, as in the case of an executor. He should then distribute the residue among those entitled to an intestate's estate. These will be shown in the next section, but, shortly, the *real* property goes to the heir-at-law, and the *personal* property is divided among the next-of-kin. For the distinction between the two kinds of property, see under *Law of Real Property*, p. 516.

POOR PERSONS DYING INTESTATE. By the Intestates Acts, 1873, and 1875, where the whole estate and effects of a poor person dying, without having made a will, do not exceed in value the sum of one hundred pounds, the widow or any of the children of such person, provided such widow or children reside at a distance exceeding 3 miles from the Registry of the Probate Court having jurisdiction in the matter, may apply to the registrar of the County Court within the district of which the intestate had his fixed place of abode at the time of his death. The Registrar will give the applicant assistance in filling up the usual papers required by the Court of Probate before the grant of Letters of Administration, will send these papers to the Court of Probate, and will in due course supply the applicant with the sealed letters of administration.

THE HEIR-AT-LAW AND THE NEXT-OF-KIN. To find the heir-at-law (who is entitled to the *real* property of the estate), the following rules should be remembered:

(1) Descent is traced from the last person entitled to the property otherwise than by inheritance. (2) If such person has no heirs, descent is traced from the last person entitled to the property. (3) The property descends to the issue of such person *ad infinitum*. (4) In default of issue it goes to his nearest lineal ancestor, and thence back to *his* descendants. (5) Males are preferred to females of the same degree. (6) Elder males are preferred to younger males of the same degree; but females of the same degree take equally. (7) Where the common ancestor is male, relatives of the half-blood inherit after relatives of the whole blood of the same degree; but where the common ancestor is female they inherit after the common ancestor. (8) Among ancestors the paternal line is preferred to the maternal.

As for the *personal* property:

(1) If a husband survives he takes it all. (2) If a wife and no descendants, she takes it all if the value is under £500; if over that value she takes £500 with interest at four per cent. and half the residue, the other half going to the next of kin. (3) If a wife and descendants, she takes a third and the descendants two-thirds. (4) If there is no wife or husband the property goes to the next of kin, and if there are none to the Crown, which is the *ultimus hæres*, the last or remotest heir to everyone. (5) Children take before grand-children, but the children of a deceased child and the children of deceased brothers and sisters are entitled to their parents' share. (6) In default of descendants the property will go to the father of the intestate. (7) Except for the father as above, there is no preference for the male over the female or the elder over the younger, they all take equally, if of the same degree. In other words, failing a husband, wife or descendants surviving, the property would be divided among the members of any one of the following classes on the failure of the class preceding it and to the exclusion of the class that follows it: (1) Father. (2) Mother, brothers, sisters and the children of deceased brothers and sisters (taking their parent's share). (3) Grandfathers and Grandmothers. (4) Uncles, aunts, nephews, nieces and great grand parents. (5) First cousins; and so forth.

HOTCHPOT. By the Statute of Distributions, 1670, it is provided that in case any child (other than the heir-at-law) of an intestate (1) shall have any estate by settlement from the said intestate; or (2) shall have had advanced to him, by the said intestate during his lifetime, a portion or advancement; then, instead of an equal division of the intestate's effects being made among his children, the administrator is to take the advancement or settlement into consideration, and must only give to such child a sum sufficient to make his total share equal to that of the other children. This is called bringing an advancement or settlement into *hotchpot*. Of course if the advancement obtained by the lucky child is greater than what he would get by bringing it into hotchpot, he need not bring it in; but in that case he would not be entitled to a share in the intestate's effects. But as regards the heir-at-law, the fact that he obtains land by descent or otherwise from the intestate does not bar him in any way from claiming an equal share with his brothers and sisters in the intestate's *personal* property.

Many wills and settlements contain a "Hotchpot clause" providing for the bringing of property into hotchpot under circumstances of a like nature.

LIABILITIES OF EXECUTORS AND ADMINISTRATORS. An executor is bound to pay the just debts of the testator before he distributes the property according to the instructions contained in the Will. He will, therefore, be liable, even after his year of office, for not paying the debts in priority to the legacies unless he has duly advertised for creditors according to the provisions of the Law of Property Amendment Act (22 and 23 Vict., c. 35). The protection afforded by this Act to executors does not prevent the creditors following the assets and suing the beneficiaries. Where the assets are not sufficient to pay the debts, the executors incur no personal liability for the deficiency. Executors should not carry on the testator's business except under the protection of the Court, for if they do so they must personally bear the loss if it does not pay, whereas if it does pay they reap no benefit.

Under the Trustee Act, 1893, executors are in the position of trustees for the purpose of carrying out their duties, they are, therefore, liable as trustees for breaches of their trust. They must not waste or squander the assets of the testator by selling property at a considerable undervaluation, or by providing for any unduly costly funeral. But the Judicial Trustees Act, 1897, gives the Court power to relieve them of personal liability where they have acted in good faith and with reasonable prudence in the discharge of their duties.

Generally speaking, executors must not make any payment they are not bound to make, though they may pay Statute-barred debts, and are not themselves bound to plead the Statute of Limitations. They are not responsible if the assets are lost or stolen, unless they have been guilty of some wilful default or neglect. These remarks about executors apply also to administrators. Where executors and administrators find it difficult to carry out their duties, they ought to pay the assets into Court and act as the Court directs them.

FURTHER LIABILITIES OF EXECUTORS AND ADMINISTRATORS. An executor is not generally responsible for the defaults of his co-executor unless he has contributed to them in some way. If he sees his co-executor commit a breach of trust, he must stop it at once, or he will be held personally liable. He must not wilfully and grossly neglect the discharge of his duties, and thus let his co-executor commit breaches of trust, for he would then be personally responsible.

Executors and administrators are bound to carry out the contracts entered into by the deceased; except, of course, contracts of a purely personal nature, as a contract to sing at a certain concert. They cannot, as a rule, be held responsible for the torts of the deceased; but where the deceased has committed some injury to property within six months of his death, his executors or administrators may be sued for damages within six months of the commencement of their term of office. Any damages that are recovered are looked upon not as judgment debts, but as simple contract debts, so they would not have to be paid until after the judgment debts.

Where the deceased has been killed in consequence of the wrongful act of another, under circumstances which would have enabled him to bring an action for damages if he had lived, the executors or administrators may bring the action, within a year of the death, on behalf of the wife, husband, parent, or child of the deceased.

NOTE.—When executors and administrators have fulfilled their duties they are generally given a formal release by the persons interested in the estate.

TRUSTS AND TRUSTEES.

CREATION OF A TRUST. Trusts may be created either expressly or by implication, and there is a third kind of trust known as a constructive trust, which is created by Courts of Equity to meet the justice of particular cases. A trustee is the person whose duty it is to carry out a trust. Trusts of personal property may be created by word of mouth; but by the Statute of Frauds trusts of land or of

interests in land must be created by writing, unless they are constructive trusts.

There is no particular form required by the law; but anyone desiring to create a trust without legal assistance should be careful to state clearly in writing who the trustees are to be, what property they are to deal with, how they are to deal with it, and for whose benefit they are to act.

VOID TRUSTS. Certain trusts are void in law. Thus the carrying out of a trust must not involve any breach of the law, nor tend to the promotion of immorality. Again, trusts which are not made for some valuable consideration—*voluntary* trusts as they are called—may be set aside under certain circumstances. Thus, trusts or settlements are by ancient statute (13 Eliz., c. 5) void as against creditors unless they are made *bona fide* for valuable consideration to persons having no notice of any intention to defraud the creditors.

Again, by the Bankruptcy Act, 1883, voluntary settlements are void against the trustee in Bankruptcy if made less than two years before the Bankruptcy, and even within ten years of the making, unless the parties claiming under it can prove that the settlor was solvent at the date of the settlement without the aid of the property comprised in the settlement, and that the settlor ceased to have any pecuniary interest in the property. (It should be noticed that a settlement made in consideration of marriage is not a *voluntary* settlement.) Lastly, superstitious trusts, as trusts for saying masses for the dead, are void in England.

CY PRÈS. As a gift to superstitious uses is illegal, so a gift for benevolent and philanthropic purposes is void for uncertainty. If, however, the donor indicates in a general way the charitable object of his gift, although the object specified cannot be carried out, the gift does not fail, but is applied *cy près*, i.e., "as nearly as possible" to give effect to the intention of the donor. *Cy près* is, therefore, an equitable doctrine by which the Courts of Chancery, where it is impossible to carry out exactly the terms of a trust, make an order whereby it is to be carried out as nearly as possible.

APPOINTMENT OF TRUSTEES. Trustees are usually appointed by the instrument which creates the trust; but where there has been an omission to appoint trustees, the Court will always appoint them. (It is the Chancery division which controls trust matters, therefore in this article the word Court means a Chancery Court.) The Court will also appoint trustees where those originally appointed have refused to act, or desire to be discharged, or have become unfit to act or incapable of acting. Again, the instrument which creates the trust may give to the trustees it appoints the power to appoint other trustees in certain cases, as for instance, a surviving trustee may be given power to appoint a person in the place of his deceased co-trustee.

A person appointed a trustee may refuse to accept the position; but he must refuse it before he takes up his duties or he will not be able to escape unless he can obtain a release, which frequently involves an application to the Court, the cost of which he is sometimes called upon to bear. There is no limit to the number of trustees that may be appointed, but in cases where the control and disposal of money is concerned, it is seldom safe to appoint only one. Two is the usual number. The Court will sometimes order the removal of a trustee if he becomes unfit or incapable, or if he remains out of the United Kingdom for more than a year. The Public Trustee whose office was inaugurated on January 1st, 1908, is dealt with on p. 528.

REMUNERATION OF TRUSTEES. The only remuneration which a trustee, other than a Judicial trustee, is entitled to receive, is such as has been expressly awarded to him by the instrument creating the trust. Even a solicitor trustee is not entitled to charge for the profits of non-contentious work done by him. Judicial trustees (see below) receive such remuneration as the Court which appoints them may see fit to order.

A trustee is entitled to the actual out-of-pocket expenses properly incurred by him in carrying out his duties. He is not only not entitled to any remuneration, he cannot even keep any profit that has been made through his skill and diligence whilst he has the control of the trust property. Though he cannot keep the profits, he may sometimes be called on to personally bear the losses. Indeed his office is one not lightly to be undertaken, the hardships it involves are numerous, and there are no compensating advantages. It is, therefore, very seldom that a person who is not a relation or great friend of the settlor and beneficiaries can be induced to undertake the position of trustee unless some provision for reasonable remuneration is made by the instrument creating the trust.

As an illustration of the rule that a trustee cannot derive any personal advantage from the property under his control, it may be said that he may not either directly or indirectly purchase the trust property from himself or from his co-trustees, even if the transaction is perfectly fair and above-board, and the price paid adequate or more than adequate, unless the settlement expressly allows it or the permission of the Court is obtained.

DUTIES OF TRUSTEES. It is the duty of trustees to carry out the directions given them by the instrument which creates the trust, and also any directions which may be given by the Court. Their first duty is to get control of all the property which is subject to the trust. This involves the calling in of all debts that may be owing. Unless expressly forbidden by the instrument creating the trust, they may, in dealing with the debtors, compound or allow time for the payment of debts, or abandon, submit to arbitration, or otherwise settle any debt, account, or claim relating to the trust if they think it expedient to do so. But a trustee must not shirk his duties by compounding or abandoning debts which an ordinary reasonable man would have sought to recover. In fact, he is generally expected to act as an ordinary prudent man would have acted under similar circumstances. Having called in the debts, he should proceed to invest the trust property in some authorised security (see below under *Investments*).

Where the trust is to be of long duration, it is generally the duty of trustees to convert such part of the trust property as is of a wasting nature, as property held on a short lease, and convert it into property of a more permanent character. And lastly, it is the duty of trustees to keep careful accounts and to give the beneficiaries full information of all their transactions.

DEATH OF A TRUSTEE. NEW TRUSTEES. When a trustee dies, his duties are performed by his surviving co-trustees, if there are any. On the death of a sole or last surviving trustee, the obligations imposed by the trust must be discharged by that trustee's executors, if he has appointed any, and if he has not, then by his administrator. It frequently happens that provisions are contained in trust deeds which give power to surviving trustees to appoint new trustees in the place of those who have died or become unfit to discharge their duties. And now, by the Trustee Act, 1893, even where there is no such provision in the instrument creating the trust, the surviving or continuing trustees may by writing appoint new trustees in the place of any who have died, or who have remained out of the United Kingdom for more than twelve months, or who desire to be discharged, or who have refused to carry out their duties, or who have become unfit or incapable of acting. It will thus be seen that, where it is desirable to appoint a new trustee, it is seldom necessary to secure the intervention of the Court. Where, however, it is expedient to obtain the assistance of the Court, proceedings are generally taken on what is called an "originating summons."

As has been seen above, a new trustee may be appointed in place of one desiring to be discharged. If, however, the other parties do not concur in the discharge, this person can only be relieved of his duties by making an application to the Court, and unless he gives good reason for wishing to be discharged, he will probably fail in his application and have also to bear the costs.

LIABILITIES OF TRUSTEES. A trustee is not liable for the wrongful acts of his co-trustees; but he must not be negligent and allow his co-trustees to do things which he ought to do himself, or he will be held liable. He is, indeed, expected to take the same amount of care of the trust property that he would, as a reasonably prudent man, take of his own property.

As a general rule, a mere majority of the trustees cannot give valid receipts or carry out any important transaction; it is necessary for them all to join. Is a trustee, then, liable for the wrongful acts of a co-trustee when he has only joined in the transaction as a matter of form? The answer is that he is not liable in such a case, unless the loss resulting to the trust property has been occasioned by his own wilful default.

A trustee is expected to make use of his own skill and judgment in carrying out a trust and not to employ anyone else to carry it out for him. He may, however, employ an agent in a proper case. Thus he may employ a solicitor or banker as his agent to receive or give a discharge for trust money, by permitting the agent to have the custody of the necessary documents. But he must not leave the money in the agent's control for longer than is absolutely necessary. The fact that he has acted on the advice of counsel or a solicitor will not excuse the trustee, if the act turns out to be a breach of trust.

A trustee is not liable for the loss of money *temporarily* left at a bank pending investment; but he must not leave it there longer than is necessary, nor may he invest it in other than authorised investments. Where a trustee is in doubt or difficulty as to how best to carry out his trust, he may apply by originating summons, on a written statement signed by counsel, to a judge in chambers, for advice.

INVESTMENTS. Where the instrument which creates a trust gives express directions as to how a trustee is to invest the property, he must carry out the directions given; but where he has not been so directed, the legislature has come to his aid by giving a list of investments in which he may safely place the property. The principal list is contained in section one of the Trustees Act, 1893, and comprises—

> (1) All the parliamentary stocks, public funds, and Government securities in the United Kingdom. (2) *Real* or heritable securities in Great Britain or Ireland (this means that trustees may invest on first mortgages; but they may not invest in the purchase of land). (3) Bank of England or Bank of Ireland stock. (4) India 3 °/₀ and India 3½ °/₀ stock. (5) Any security the interest on which is guaranteed by Parliament. (6) Metropolitan Board of Works' or London County Council's consolidated stock, or Metropolitan Police District debenture stock. (7) Debenture, guaranteed, or preference stock of such British or Irish Railways, incorporated by special Act of Parliament, as have paid at least 3 °/₀ annual dividend on their ordinary stock for ten years previously. (8) The stock of any Railway or Canal Company which is leased for a term of not less than 200 years to any such company as is mentioned in the last sub-section. (9) Debenture stock of Indian Railways guaranteed by the Secretary of State in Council. (10) Certain other specified Indian Railway stock. (11) Debenture, guaranteed, or preference stock of such water-supply companies, incorporated by Royal Charter or by special Act of Parliament, as have paid at least 5 °/₀ annual dividend for ten years previously. (12) Nominal or inscribed stock issued by the Municipal Corporations of towns with over 50,000 inhabitants at the last census, or nominal or inscribed stock issued by any County Council under the authority of an Act of Parliament or a Provisional Order. (13) Nominal or inscribed stock of such Water-Supply Commissioners, incorporated by Act of Parliament, as have compulsory power to levy rates over an area with a population of over 50,000; provided that the rates levied for each of the previous ten years have not exceeded 80 °/₀ of the full authorised rate. And (14) such other stocks, funds, and other securities as may be authorised for the investment of monies under the control of the Court.

In regard to mortgages, a trustee should lend money only on a first legal mortgage of freehold or copyhold land which is not of a wasting character (e.g. neither brick fields nor mines). He should never join with others, not being his co-trustees, in lending money on mortgage. Lastly, he should obtain a report on the value of the property from a competent surveyor acting independently of the owner, and should not advance more than two-thirds of the amount stated in the report.

It is impossible in the space at our command to give further particulars as to what investments a trustee may safely make; but, as has been already said, he can always apply by "originating summons" to a judge for advice whenever he is in doubt or difficulty.

FRAUDS AND BREACHES OF TRUST. By section 80 of the Larceny Act, 1861, which replaced the Fraudulent Trustees Act of 1857, if a trustee fraudulently converts and appropriates to his own use or benefit, or to the use or benefit of any other person, any trust property, or if he fraudulently disposes of or destroys such property, he is guilty of a misdemeanour and liable to seven years' penal servitude or to imprisonment, with or without hard labour, for two years. But no prosecution may be commenced under this section without the sanction of the Attorney-General, or without the consent of the judge before whom civil proceedings have been taken, if indeed they have been taken. So much for the Criminal Law.

But there are many breaches of trust which a trustee may commit without any intent to defraud. Under section three of the Judicial Trustees Act, 1896, a trustee will not be held liable for a breach of trust in cases where he has acted honestly and reasonably, and ought fairly to be excused. But except for such protection as is afforded by this Act, a trustee would be personally liable to a civil action for any breach of trust he may commit; for example, the making of an improper investment, and this even where he has acted with the concurrence of, and under pressure from, the beneficiaries. In all cases of breach of trust, except where the trustee has been guilty of fraud, or has misappropriated the property to his own use, or where he still retains the trust property, time runs in favour of the trustee. In other words he cannot after a certain period of time be sued for an innocent or honest breach of trust. The period is six years where the property is personal property, and twelve years where the property consists of land. Where a trustee has wrongfully disposed of trust property, the beneficiaries may recover the property from the person into whose hands the property has passed, unless such person has purchased it *bona fide* for value and without notice of the breach of trust.

Where a trustee has committed a breach of trust he is bound to make good the loss, and in some cases he will in addition have to pay interest, e.g. where he committed the breach for his own personal advantage he will be liable to pay three per cent. simple interest. Where he has traded or speculated with trust property he will be liable to pay five per cent. compound interest or to account for all the profits. Where a breach of trust not amounting to actual fraud has been committed, the trustees must bear an equal share of the loss. But where one of the trustees has been guilty of fraud and the others are innocent, or where he is the confidential solicitor of his co-trustees, he may have to bear the whole loss himself. When a breach of trust is committed with the *consent in writing*, or at the instigation or the request of a beneficiary, the Court may compel such beneficiary to surrender his share of the trust property to indemnify the trustee.

JUDICIAL TRUSTEES. The Judicial Trustees Act, 1896, gives the Court the power to appoint a person called a "judicial trustee" either to act as a sole trustee or to act jointly with any existing trustee. His office differs from that of an ordinary trustee in that he generally receives remuneration for his time and trouble. The Act makes it possible for any person creating or intending to create a trust, or for any trustee or beneficiary to a trust, to apply to the Court to appoint as a Judicial Trustee any fit and proper person nominated for the purpose in the application. In the absence of such nomination, or if the Court is not satisfied of the fitness of the person

so nominated, an official of the Court may be appointed. The judicial trustee, whether he be an official or not, is subject to the control and supervision of the Court, and once a year his accounts must be audited and reported on to the Court. The Public Trustee under the Act of 1906, is a Government official.

TERMINATION OF THE TRUST. When a trustee has done all required by the instrument creating the trust, he should present his accounts to the beneficiaries (indeed he should allow them to inspect his accounts at all times during the continuance of the trust), and then distribute the property among those who are entitled to it. Great care is necessary in doing this, for the trustee is held personally responsible if payment be made to a wrong person, but if he pays the fund to the beneficiary and some one else is really entitled, the trustee is not personally liable, e.g. if the beneficiary had mortgaged his rights and the mortgagee had not given notice of the mortgage to the trustee, the trustee would not be liable if he paid the money to the beneficiary. It is wise, therefore, to ask the persons to whom he hands over the property to give him an indemnity to protect him against a possible claim by some one else. It is possible that the individual entitled to the whole or part of the property may have gone abroad, and given a power of attorney to some person to receive monies on his behalf. If a trustee hands over the money to such a person in good faith he is protected, by section 23 of the Trustee Act, 1893, from liability if it should turn out that the giver of the power of attorney had died or revoked the power. Where, however, a trustee is in doubt as to whom to hand the money or other property, the best plan is to pay it into Court and leave it to the Court to dispose of it.

Trustees on relinquishing the trust should generally obtain a formal release from the beneficiaries, as this would protect them from possible actions for small breaches of trust during their term of office, as for instance, for a wrong investment.

SOLICITOR AND CLIENT.

SOLICITORS AND THEIR QUALIFICATIONS. In order to practice as a solicitor, a person must (1) serve a term of from three to five years, according whether he has passed certain examinations as articled clerk with a practising solicitor; (2) pass certain examinations; (3) be duly admitted and enrolled as a solicitor; (4) obtain a certificate to practise. A solicitor, though admitted, cannot practise unless he takes out from the Registrar of Solicitors an annual stamped certificate. The stamp duty varies in the case of London and Country certificates; the maximum duty is £9. (See under "Certificate" p. 683 and "Solicitors" p. 752.)

UNQUALIFIED PRACTITIONERS. By various Acts, persons who act as solicitors, when not duly admitted and enrolled and otherwise qualified to act, are guilty of contempt of court, cannot recover fees for any work done, and are liable to a penalty of £50 for every offence in an action brought by the Law Society with the sanction of the Attorney General. If a qualified solicitor wilfully and knowingly acts as agent for an unqualified person, he will be struck off the Rolls and cannot be re-admitted, and the unqualified person may be committed to prison for a term not exceeding one year. It has been held that these Statutes do not prevent a solicitor acting for a corporation at a fixed salary. Unqualified persons who pretend to be solicitors are liable to a penalty of £10. Thus a debt collector who demands payment of a debt in terms which would lead the person he addresses to suppose he is a solicitor, is liable to a penalty under this law. There are certain exemptions from these penalties, e.g. local authorities may appear before any court by their clerks or authorised officers. The rules stated above do not, speaking generally, prevent a person bringing or defending an action in person; but there are some cases where employment of a solicitor and counsel is necessary, e.g. an application for a writ of *habeas corpus* must generally be made by counsel.

SOLICITOR'S DUTY TO HIS CLIENT. A solicitor, when retained by a client, impliedly undertakes to exercise due diligence on his behalf, and, if he fails to show such diligence, he will be liable to an action for negligence. It is a question of fact in each particular case whether the solicitor has been guilty of negligence or not. Tindal, C. J., stated the general rule to be that a solicitor would be liable for the consequences of ignorance on his part of the rules of practice, or want of due care in preparation of a cause for trial, or mismanaging so much of the conduct of a cause as is usually allotted to his branch of the legal profession; but that a solicitor would not be answerable for an error in judgment on some new or difficult point of law, or on some point such as is usually entrusted to a barrister.

In regard to contentious business, i.e. actions brought in court, a solicitor would be liable—

(1) If he allowed his client to bring a case that had no chance of success, unless he warned him beforehand; (2) if he abandoned a cause without reasonable notice; (3) if he took proceedings in the wrong Court; (4) if he failed to give proper instructions to counsel; (5) if he did not prepare the case properly for trial, e.g. if he failed to subpœna witnesses; (6) if he compromised an action against the directions of his client.

In regard to non-contentious business, such as the drawing up of legal documents, advice on legal points, and so forth, a solicitor would be liable for any loss caused by ignorance of the ordinary law, e.g. if he advised trustees to invest trust money in unauthorised securities.

A solicitor is not always protected because he has acted under advice of counsel, for the case may not have been properly laid before counsel. A solicitor who is guilty of negligence cannot recover his costs from his client. Moreover, the client can, as has been stated, sue his solicitor for damages; but the action will be barred in six years, unless there has been fraud on the solicitor's part.

In the course of their business, solicitors often receive money from their clients. Such money should not be mixed by the solicitor with money of his own at his bank. If the money is retained after it ought to be paid over, the solicitor is liable to pay interest at five per cent. Sometimes a solicitor will be held to be a trustee of money entrusted to him by his client; but as a rule he holds such money as agent only, and an action against him for its recovery must be brought within six years from the receipt of the money, or from the last written acknowledgment by him in part payment. A solicitor, under various Acts, such as the Larceny Act, 1901, may be prosecuted and imprisoned for misappropriation of money entrusted to him by his client. He may also be struck off the Rolls for the same offence.

SOLICITOR'S COSTS. It is provided by Statute that a solicitor cannot sue for his costs unless he had a certificate to practise during the period within which the work was done. The amount of a solicitor's remuneration may either be fixed by special agreement or by the usual charges included in a signed bill of costs. By the Solicitor's Act, 1870, solicitors may make agreements in writing as to their remuneration for contentious business, but the agreement must be submitted to a Taxing Master for approval before anything can be received under it. By an Act of 1881, solicitors may also make written agreements as to their remuneration in conveyancing and other non-contentious business, but if the client afterwards objects that the agreement is not fair and reasonable, the Taxing Master may enquire into it and certify the Court, who can then reduce the amount or cancel the agreement.

A written agreement may provide that the solicitor shall be remunerated by a gross sum, a percentage (in the case of non-contentious business), or a salary. An agreement for payment only in the event of success in an action is void. If there is no special agreement, the solicitor's charges must, in contentious business, be made out according to a scale fixed by Rules of Court, and must, in non-contentious business, conform to the scale laid down in the Solicitor's Remuneration Order, made under the Solicitor's Remuneration Act, 1881. In contentious business, if the opponent is ordered to pay the costs of the action, the solicitor will

receive a great part of his bill from the opponent, but the balance, in any case, and all if the opponent is not ordered to pay costs, is payable by the client.

TAXATION OF BILL OF COSTS. An action cannot be brought by a solicitor for the recovery of his charges or disbursements until the expiration of one month after the delivery of a properly signed bill. The bill must show whom it is desired to charge, specify the items, and state when and where the work was done. Within a month of the delivery of the bill, the client may obtain an order of the Court for taxation as a matter of course. If no application to tax be made within the month, the bill may still be taxed, except after payment or after the solicitor has recovered a verdict for the amount claimed. But after twelve months, or after payment, the client can only obtain an order to tax on showing special circumstances, e.g. fraud or gross overcharge. If on taxation less than one-sixth is taxed off, the client has to pay the costs of the taxation; if one-sixth is taxed off, the solicitor has to pay such costs.

ACTION FOR COSTS. If a solicitor sues on his bill and succeeds, the judgment is for such amount as may be shown to be due after taxation by the Taxing Master. A solicitor may sometimes, on the ground of gross negligence or misconduct, be ordered by the Court to repay to his client costs which the latter has been compelled to pay to his opponent. A solicitor who, without good cause or reasonable notice to his client, declines to act further in an action for him, is not entitled to sue for his costs. Good cause for discontinuance would be the refusal of the client to provide the necessary funds for disbursements.

LAWYER'S LETTER (Demands for payment with costs). It sometimes happens that after a person has been dunned persistently by a tradesman anxious to secure the settlement of an account, he receives a letter from a solicitor demanding the payment of the debt *plus* a further sum to cover the solicitor's costs. The debtor should pay the debt, but he need not pay the solicitor's costs; these would have to be borne by the creditor who employed him. If, however, a writ or summons has been issued in the action, all costs properly incurred subsequent to the issue must be paid by the debtor.

SOLICITOR'S LIEN. A solicitor has a general lien on the papers of his client for all costs for the time being due to him. The lien entitles the solicitor to retain the papers till payment of his bill. The lien attaches to all deeds and papers which come into the solicitor's possession in the course of his employment in his professional character, but a solicitor has no lien on his client's will, and the lien does not extend beyond the client's interest; e.g. if a tenant for life of land leaves title deeds with his solicitor, the latter could not claim a lien as against those entitled to the land on the death of the tenant for life.

If a town agent of a country solicitor is in possession of papers of a client of the latter, he has a lien to the extent to which the client is indebted to the country solicitor, but no further. The solicitor must produce the documents over which he has a lien in certain cases, e.g. if the client receives a subpœna from a third party calling on him to produce the document in an action. A lien is discharged if the solicitor takes a security from his client for the amount due to him, or if he gives up possession of the papers to his client. A solicitor has also a particular lien on property recovered by him on behalf of his client, and the Court, by Statute, has power to order the solicitor's costs to be made a charge on and be raised and paid out of such property.

GIFTS BETWEEN SOLICITOR AND CLIENT. A solicitor is said to be in a "fiduciary position," i.e. one of trust, towards his client, and he must not take advantage of that influence over his client which his position naturally affords him. Thus when a solicitor buys property from his client, or sells his own property to his client, it is for the solicitor to show the transaction was for the client's advantage. In regard to gifts by a client to his solicitor the rule is more strict. The gift, unless of trifling importance, can be set aside and the money reclaimed by the client, or by his personal representatives after his death. The rule is the same in the case of gifts made by the client to the solicitor's wife. If, after the relationship of solicitor and client has ceased, the gift is confirmed, the gift will hold good. If a client leaves property to his solicitor by will, the solicitor can take the benefit if the will was drawn up by another solicitor; but if the solicitor who benefits draws up the will, that fact may give rise to a suspicion that undue influence was used and the will may be set aside on that ground.

LANDLORD AND TENANT.

VARIETIES OF TENANCY. The word "tenancy" is usually understood to mean the holding of a property for a certain limited period, subject, *inter alia*, to the payment of rent. There are various kinds of tenancy.

(*a*) **A tenancy at will** is a tenancy which either the landlord or the tenant may terminate at any moment without notice. They are not very common. Where a tenant enters into possession in pursuance of an invalid lease, he is in the position of a tenant at will until he pays rent.

(*b*) **A tenancy at sufferance** arises where a tenant continues in possession after the expiration of his tenancy. He cannot be regarded as a trespasser; but he is liable to be turned out by the landlord at any moment. If he retains possession after receiving from the landlord a proper notice, in writing, to quit, he is liable to be sued for double the yearly value of the property for the time he so remains in possession; and if he holds over after himself giving notice of his intention to quit, he may be sued for double rent.

(*c*) **A tenancy from year to year.** The law does not look with favour on tenancies at will; therefore when a tenant at will has paid rent or done anything else which may be fairly taken to show an intention to create a yearly tenancy, the tenancy becomes automatically a tenancy from year to year. Tenants ought, therefore, before entering into their tenancies, if they wish the tenancy to be for less than a year, to make the agreement quite clear with the landlord; for though if no term is specified the tenancy will in the first instance be a tenancy at will, the mere payment of rent will convert it into a yearly tenancy, but this does not apply to weekly tenants.

HOW A TENANCY IS CREATED. At Common Law leases could be created by word of mouth; but the Statute of Frauds, passed in the reign of Charles II., altered this by providing that all leases must be in writing, unless they were leases for a term not exceeding three years, and that at least two-thirds of the full rent is agreed to be paid.

Even this was not found sufficient to satisfy the legislature, for by the Real Property Act, 1845, it is provided that leases which previously had to be in writing must now be by deed. Therefore, if a tenancy of more than three years is created otherwise than by deed, the lease will be void and the tenancy will only be a tenancy at will, which may, however, be changed into a yearly tenancy by the payment of rent.

People often prefer to have an agreement instead of a more formal lease in the case of tenancies for less than three years; but, except for very short terms, it is generally better to have a lease stating clearly all the conditions under which the tenancy is held. By the Statute of Frauds, no action may be brought upon any contract for the sale of any interest in lands, tenements and hereditaments, unless the agreement upon which such action is brought, or some note or memorandum thereof, is in writing, signed by the party to be charged or his authorised agent.

COVENANTS. All leases contain a number of covenants or conditions which the landlord and tenant respectively bind themselves to observe. The very employment in

a lease of certain technical expressions implies the creation of certain covenants. Thus the use of the word "demise" implies a covenant on the part of the landlord that the tenant shall be entitled to the quiet and undisturbed enjoyment of the premises, unless there is any express covenant in the lease with a contrary effect.

There are in most leases what are called "usual covenants," being covenants on which the landlord can insist when there is nothing to the contrary in the agreement for the lease. They are four in number:—

(1) Tenant to pay rent. (2) Tenant to pay rates and taxes, except the landlord's property tax and tithe rent-charge. (3) Tenant to allow the landlord to enter the premises from time to time to see that they are in a proper state of repair. (4) Tenant to keep the premises in a proper state of repair throughout the tenancy, and to deliver them up in such a state at the end of the term.

In addition to the usual covenants there are a large number of special covenants to be found in all leases; for the respective landlords and tenants can always agree to whatever additional covenants they please. These additional covenants fall into two general classes—(1) personal covenants; (2) covenants "running with the land." The latter kind are binding on all those to whom the tenant assigns the property, whereas the former are, in general, only operative between the respective parties to the lease.

RENT. The principal duty of every tenant is to pay rent, whether there is a covenant to pay it or not; for if there is no agreement between the parties stipulating as to the exact sum payable, the tenant is bound to pay a reasonable sum for the use and occupation of the premises; unless, of course, there is an agreement that the tenant shall have the premises rent free, as might well happen if he is in the employment of the landlord and having the right to occupy the premises as part of his remuneration.

The amount of rent payable in any particular case is usually arranged for in the lease or agreement, which may also appoint times for the payment of the rent. But in the cases where there is no stipulation as to when the payment is to be made, the law presumes that it is due on the last day of the year of the tenancy, if the tenancy be for a year or more, and on the last day of the tenancy if it be for less than a year.

Though the rent becomes due on the morning of the day on which it ought to be paid, it cannot legally be considered in arrear until midnight on that day; so that the landlord would not be entitled to distrain till the next day. Where no place of payment is agreed upon, the rent is payable on the premises let; but where the tenant has expressly bound himself to pay rent he must seek out his landlord and pay him. The rent should be paid in cash or Bank of England notes, unless the landlord agrees to accept payment by cheque or otherwise.

VARIETIES OF RENT. There are several different kinds of rent mentioned in legal documents, and some explanation of their meaning may be of interest to the layman.

A **rack rent** is a rent equal to the full annual value of the property demised. A **royalty** is a term usually found in mining leases, and denotes a proportionate part of the profits of working the mine to be paid as rent. If a fixed minimum rent is reserved in such leases it is called a **dead rent.** In building leases it is customary to reserve a nominal rent to be paid while the buildings are in course of erection, such nominal rent is called a **peppercorn rent.** A **ground rent** is the rent paid to the owner of the freehold in the ground. **Net rent** is the rent payable to the landlord clear of all deductions. In feudal times, when land was granted in fee simple by a lord to his tenant, a small rent called a **quit rent** was frequently reserved to the lord, which would entitle the tenant to be quit or free from rendering the usual services to the lord. By the Conveyancing Act, 1881, quit rents, where they exist, may be compulsorily redeemed by the tenant.

DISTRESS. This is a very common remedy employed by landlords when rent is in arrear, as it saves them the expense of legal proceedings. The right to distrain is a right peculiar to the law of landlord and tenant, and it is one which enables a landlord, when the rent is in arrear, to seize a sufficient quantity of the tenant's goods to satisfy the debt. There are, however, certain of the tenant's goods which may not be distrained at all, and others which may only be distrained under certain circumstances. Thus the following things are absolutely privileged from distress:—

(1) Things in actual use at the time. (2) All fixtures except growing crops which are ripe for reaping. (3) Goods delivered to the tenant in the course of his trade, including agricultural machinery and live stock which is not the property of the tenant. (4) The property of the ambassador of a foreign power. (5) Wild animals. (6) Loose coin of the realm. (7) Perishable goods. (8) Property in the custody of the law. (9) Looms used in silk, cotton, and woollen manufactures. (10) Gas meters. (11) Railway rolling stock not belonging to the tenant. (12) The goods of a lodger, where the lodger has complied with the terms of the Lodger's Goods Protection Act (vide infra), and (12) The wearing apparel, bedding, and trade implements of the tenant if under £5 in value.

Whereas the above goods are absolutely privileged from distress, certain other goods are privileged only if there are other goods on the premises sufficient to satisfy the debt. They comprise sheep and beasts of the plough belonging to the tenant, and the tools and implements of the tenant's trade.

If the landlord distrains where no rent is due, the owner may sue him for double the value of the goods. The better remedy for the tenant is the action of replevin, for the tenant gets his goods back, or prevents their being taken away, and also recovers damages for any loss or inconvenience to which he may have been put in consequence of the distress. If any rent whatever is in arrear, and of which no tender has been made, the action cannot be brought, nor can it be brought to recover fixtures or to get damages for their seizure. The action must be brought within five days of the levying of the distress, or at any time before the goods have been sold.

If a tenant fraudulently and clandestinely removes goods after the rent is due, the landlord may follow them during the next thirty days, but he cannot recover them from a *bona-fide* purchaser for value without knowledge of their being distrainable. No distress may be legally levied at night (i.e. between sunset and sunrise), or on any Sunday, Christmas Day, Good Friday, or any day appointed for a public thanksgiving.

SCALE OF FEES FOR LEVYING DISTRESS.

(*a*) Where the rent demanded and due exceeds £20.

(1) Three per cent. on any sum exceeding £20 and not exceeding £50. Two and a half per cent. on any sum exceeding £50 and not exceeding £200; and one per cent. on any additional sum.

(2) For man in possession, 5s. per day, to provide his own board and lodging.

(3) For advertisements, the sum actually and properly paid.

(4) Auctioneer's commission—seven and a half per cent. on the sum realised not exceeding £100; five per cent. on the next £200; four per cent. on the next £200; three per cent. on any sum exceeding £500 and not exceeding £1,000; and two and a half per cent. on any sum exceeding £1,000.

(*b*) Where the rent demanded and due does not exceed £20.

For levying the distress—3s.; for man in possession, 4s. 6d. per day, to provide his own board. Expenses of advertisement (if any), 10s. Auctioneer's fees 1s. in the pound on the net proceeds of the sale.

RATES AND TAXES. Income tax on the annual value of the property is in the first instance usually paid by the tenant; but he is entitled to deduct the amount so paid from the rent, so that it eventually always falls on the landlord. Similarly the tithe rent charge must in all cases eventually be paid by the landlord. There are also certain other rates and taxes which the landlord will have to pay, unless there is a special agreement by which the tenant binds himself to pay them. They include the sewers rate for permanent improvements to the sewers, the land tax and the poor rates on property let for less than three months. Whenever the tenant is called upon to pay any of these rates or taxes he must do so, but, unless he has agreed to pay them, he may deduct the amount so paid from the rent.

There are, however, certain rates and taxes which, in the absence of any agreement to the contrary between the landlord and the tenant, must be borne by the tenant. They include the water rate, the county, borough, highway, and general district rates, poor rates on property let for more than three months (unless the tenant is merely a lodger), and the ordinary assessed taxes.

The owners of unoccupied houses are not liable for the payment of the poor rate; but if a tenant comes into possession after the levying of the rate he may be called upon to pay a proportionate part of it, according to the length of the period of his occupation.

REPAIRS. As a general rule, the landlord cannot be called upon to execute repairs unless he has agreed to execute them. As for the tenant, where there is no express agreement as to repairs, he is bound to use the premises in a tenantlike manner. Thus he must not do damage to the premises, and he can generally be compelled to do such repairs as are necessary to keep the premises wind and water tight; but unless he has agreed to do so, a yearly tenant cannot be called upon to execute any substantial repairs, though a tenant under a lease would in such a case be compelled to execute substantial repairs.

The Housing Town Planning Act of 1909, provides that in any contract made for letting for habitation a house or part of a house at a rent not exceeding

> *(a)* in the case of a house situate in the administrative county of London, £40; *(b)* in the case of a house situate in a borough or urban district with a population according to the last census for the time being of 50,000 or upwards, £26; *(c)* in the case of a house situate elsewhere, £16,

there shall be implied a condition that the house is at the commencement of the holding in all respects reasonably fit for human habitation, and that the condition aforesaid shall not be implied when a house or part of a house is let for a term of not less than three years, upon the terms that it be put by the lessee into a condition reasonably fit for occupation, and the lease is not determinable at the option of either party before the expiration of the term.

The last foregoing section shall as respects contracts to which that section applies, take effect as if the condition implied by that section included an undertaking that the house shall, during the holding, be kept by the landlord in all respects reasonably fit for human habitation. The landlord or the local authority, or any person authorized by him or them in writing, may at reasonable times of the day on giving 24 hours' notice in writing to the tenant or occupier, enter any house, premises, or building, to which the section applies, for the purpose of viewing the state and condition thereof.

ASSIGNMENT. The property which is subject to a lease frequently passes out of the hands of the original landlord or original tenant. Thus, when either of them dies, it generally passes to his executors and administrators. It can also pass during the lifetime of either party by assignment to someone else. In order that an assignment may be valid it must be made by deed; but where an assignee under an invalid assignment enters into possession and pays rent, a valid yearly tenancy is automatically created in his favour.

Generally where the original tenant has assigned his lease, he still remains liable to his landlord if the assignee makes default; this is because there is no privity of contract between the landlord and the assignee. The assignee, however, is liable only during the time he is in possession, and his liability ceases when he assigns to another. Of course the original tenant may have bound himself by the terms of the lease either not to assign at all or only to assign under certain conditions. Thus it is extremely common to find in leases a covenant to the effect that the tenant will not under-let or assign without the written consent of the landlord. The main difference between an underlease and an assignment is that the latter is for the whole of the remainder of the term, whereas the former would only be for part of the term.

Where tenants agree not to under-let or assign without the consent of the landlord, it is advisable that they should insist on the following additional words being added to the covenant: "but such consent is not to be unreasonably withheld in the case of a respectable and responsible person." If then the consent is unreasonably refused, the tenant may assign without incurring the forfeiture of the lease.

FIXTURES. There are two kinds of fixtures, landlord's fixtures and tenant's fixtures. The tenant's fixtures are those which a tenant is entitled to remove and take away with him on giving up the tenancy, unless, of course, they did not originally belong to him; whereas the fixtures he must leave behind, whether he has put them up himself or not, are called landlord's fixtures. The law with regard to fixtures has been changed considerably during recent years the principal effect of these changes being that many things may now be regarded as tenant's fixtures which were formerly landlord's fixtures.

(a) **Agricultural Fixtures.** By the Agricultural Holdings Acts, 1883 and 1900, and the Market Gardener's Compensation Act, 1895, if a tenant of any agricultural land or market garden affixes to the property any machinery, fencing, or other fixture, he may remove it at the end of the tenancy, unless the landlord agrees to take it at a valuation; but before removing it he must do two things: (1) He must pay all the rent due and fulfil all the other obligations of his tenancy. (2) He must give his landlord a calendar month's notice of his intention to remove the fixture.

(b) **Garden Fixtures.** Can a tenant, on giving up possession of the demised premises, take away with him rose bushes, trees, box-borders and other shrubs planted by himself? If he is a market gardener or nurseryman and has complied with the terms of the Agricultural Holdings Acts and the Market Gardener's Compensation Act he can. But if he is an ordinary tenant of a house and garden, however attached he may be to his horticultural embellishments, he cannot remove them without the consent of the landlord; for by law they have become the landlord's property, in consequence of the legal maxim, "*quicquid plantatur solo, solo cedit*" (Whatever has been firmly affixed to the ground becomes part of the ground). Nor can he demand compensation from the landlord for the improvements he has made to the property.

(c) **Trade Fixtures.** With regard to general *trade* fixtures, such as machinery, looms, etc., the rule is that they belong to (if he originally put them up) and are removable by the tenant, unless they are so affixed to the soil that they cannot be removed except by the destruction of the buildings in which they are placed.

(d) **Domestic Fixtures.** Lastly, with regard to those fixtures which the tenants have affixed to the property for their own convenience. The old rule was that everything attached to the property belonged to the landlord, but this has been altered slightly. The practical effect of the present rule, which is deduced from a large number of cases, is that the landlord may claim all buildings and other permanent improvements to the property; but the tenant may remove ornamental and purely domestic fixtures belonging to him, as such things as tapestries and gas brackets merely fixed in order that he may the more readily enjoy their use. But he is only entitled to them if they can be easily removed without material injury to the property.

TERMINATION OF THE TENANCY. A tenancy may come to an end in a number of ways. If it is for a definite fixed period it terminates naturally at the end of that period. But there are some cases in which it may be terminated before the fixed period is completed. The following are some of the principal instances:—

(a) **By surrender.** Where both parties agree to put an end to the tenancy before the completion of the term, the tenant must make a surrender to the landlord, which must in all cases be in writing and generally by deed.

(b) **By forfeiture.** Most leases give the landlord the

right to re-enter the premises and terminate the lease on the breach by the tenant of any one of the important covenants of the lease. Where such a right of re-entry is reserved to the landlord he may, nevertheless, waive the right; and he will be presumed by law to have waived it if he accepts the payment of rent after he has gained knowledge of the breach of the covenant.

(*c*) **By notice.** Where the tenancy is held for a definite fixed period of time, no notice is required to terminate it. Similarly, no notice is required to terminate a tenancy at will or at sufferance. But where the tenancy is a yearly tenancy, or a monthly or quarterly one, notice is required. For a yearly tenancy does not mean a tenancy for one year, but a continuing tenancy from year to year.

Where the parties have not come to any special agreement, the amount of notice proper for a yearly tenancy is half a year (except in the case of agricultural land, when it is a year), and for a quarterly, monthly, or weekly tenancy it is a quarter, or a month, or a week respectively.

The law further provides that a yearly, quarterly, monthly or weekly tenancy can only be properly determined at the *end* of the year, quarter, month, or week of the tenancy; so that the tenant must give his notice the requisite amount of months or weeks before the *end* of the period of the tenancy. Thus he cannot terminate a yearly tenancy at any time by merely giving six months' notice. A yearly tenancy commencing on the 1st of January can only be legally terminated on the 31st December, so that the half year's notice should be given by the 1st of July. The tenant may not, by giving the notice at the end of August, terminate it at the end of the following February.

N.B.—The half year's notice required to terminate a yearly tenancy does not necessarily mean six *calendar* months. The notice should be for at least half-a-year, that is. 183 days.

FORM OF NOTICE TO QUIT. Unless the lease or agreement requires the notice to quit to be in writing, it need not be so; but it is generally better to give it in writing as this will save possible disputes and litigation. If in writing the notice should be signed by the party giving it. There is no magic in the form of the notice, but the following forms may prove of service.

(*a*) **From the Landlord.**

To John Doe, Esq.

Sir,—I hereby give you notice to quit and deliver up to me, or to my authorised agents, on the 1st day of January next, the house and premises situate at 7 Alpha Road, Whitechapel, which you now hold of me as tenant.

RICHARD ROE.

Dated this 30th day of June, 1906.

(*b*) **From the Tenant.**

To Richard Roe, Esq.

Sir,—I hereby give you notice of my intention to quit and deliver up to you the house and premises situate at 7 Alpha Road, Whitechapel, on the 1st day of January next.

JOHN DOE.

Dated this 30th day of June, 1906.

RECOVERY OF THE PREMISES. When a tenancy has come to an end the landlord has a right to enter the property; but he ought never to do so by force. If, therefore, his right of entry is contested, he should take proceedings for the recovery of the property.

(*a*) **By action.** If the annual value of the property claimed or the rent payable is over £100, the proceedings must be taken in the High Court. But if neither the annual value of the property nor the rent payable exceeds that amount, then, by the County Courts Acts, 1888 and 1903, the action may be brought in the County Court of the district in which the property is situate. But if questions of title affecting lands of a greater total annual value than £100 are likely to be raised, the action may be removed into the High Court for trial.

Landlords usually prefer to bring the action in the County Court, as the expense is less than in the High Court; but if the action is improperly brought in the County Court, when either the reasonable annual value or the actual rent, including ground rent (if any), exceeds £100, the action will completely fail unless the defendant agrees to submit to the jurisdiction of the County Court. Appeals from the County Court are heard by the Divisional Court; but appeals are only permissible on questions of law, not on questions of fact.

(*b*) **By summary proceedings.** In certain cases it is not necessary that the proceedings should be brought either in the High Court or in the County Court. By the Small Tenements Recovery Act, 1838, which applies only to tenancies at will and to tenancies for seven years or less at an annual rent not exceeding £20, if the tenant on the termination of the tenancy refuses to deliver up possession after receiving from the landlord seven clear days' notice in writing of his intention to proceed under the Act, the landlord may apply to a Petty Sessional Court of the district in which the premises are situate for a warrant to empower its constables to forcibly enter the premises and give possession to the landlord.

Again, by the Distress for Rent Act, 1737, as amended by the Deserted Tenements Act, 1817, if a tenant of property let at a rent of fully three-fourths its yearly value, deserts the premises, leaving half a year's rent in arrear and no sufficient distrainable property, the landlord may apply to two or more local justices to view the premises and to affix thereto a notice. After a fortnight has passed, the magistrates must take a second view of the premises, and if no one has appeared to pay the rent due, and if there is not sufficient distrainable property on the premises, the magistrates have power to put the landlord into possession and declare the lease void.

FURNISHED HOUSES AND LODGINGS. Where a tenant takes a furnished house or lodging there is an implied warranty in law on the part of the landlord that the premises are reasonably fit for human occupation. So if by reason of bad drains or by reason of the premises being infested with bugs, the furnished property let is rendered unfit for habitation, the tenant is entitled to terminate the tenancy forthwith and without notice. If, however, the landlord has covenanted to keep the premises in a state of repair, he is entitled to notice of want of repair and an opportunity to put it right before the tenant is justified in leaving.

N.B.—This implied warranty as to fitness for human occupation only exists where the property is let *furnished*. If the property is let unfurnished, the tenant is not entitled to terminate the tenancy on finding the drains in a bad state, or the house unfit for occupation.

UNDER-TENANT AND LODGER. The goods of an under-tenant or lodger are protected from a distress levied on the immediate landlord if they observe the conditions of the *Distress Amendment Act*, 1908. By this Act if the superior landlord endeavours to distrain on the property of either under-tenant or lodger for rent due to the immediate landlord, such under-tenant or lodger:

(1) Must serve on the superior landlord or his bailiff a written declaration, setting forth that the property is his; stating what rent, if any, is due to his immediate landlord; and undertaking to pay to the superior landlord any rent so due, or to become due, until the arrears of rent due to the superior landlord have been paid off.
(2) Must annex to such declaration a correct inventory of the property.

This Act does not apply to goods belonging to the husband or wife of the tenant whose rent is in arrear, nor to goods comprised in any bill of sale, hire purchase agreement, or settlement made by such tenant. Nor does it apply to any under-tenant when the tenancy has been created in breach of any written agreement between the landlord and his immediate tenant, or where the under tenancy has been created contrary to the wish of the landlord in that behalf, expressed in writing and delivered at the premises within a reasonable time after the circumstances have come, or with due diligence would have come, to his knowledge.

Moreover "in cases where the rent of the immediate tenant of the superior landlord is in arrear it shall be lawful for such superior landlord to serve upon any under-tenant or lodger a notice (by registered post, addressed, whether by name or not, to such under-tenant or lodger upon the

premises) stating the amount of such arrears of rent, and requiring all future payments of rent, whether the same has already accrued due or not, by such under-tenant or lodger to be made direct to the superior landlord giving such notice until such arrears have been duly paid, and such notice shall operate to transfer to the superior landlord the right to recover, receive, and give a discharge for such rent."

N.B.—This Act shall not extend to Scotland, and shall only apply in Ireland to a rent issuing out of lands or tenements situate wholly within the boundaries of a municipality or a township having town commissioners.

LIABILITY OF THE LANDLORD OR THE TENANT TO THIRD PARTIES. *Prima facie*, the tenant is liable for injuries to third parties caused by the dangerous condition of the premises. There is a statutory duty imposed on the owner or the occupier to fence in or cover over all dangerous places or holes abutting on the highway, e.g. to keep in good repair the area railings and coal-cellar covers on the pavement. When, therefore, a passer-by is injured by reason of these things being in a dangerous condition, he has usually a right of action against the tenant and not against the landlord. The same is the case when the condition of the premises themselves is the cause of injury to other people or to their property. The landlord and not the tenant will, however, be liable (1) where he (the landlord) has agreed to keep the premises in repair, or (2) where he has let the premises in a dilapidated condition. Of course if the injured party is a trespasser he has no remedy whatever.

MASTER AND SERVANT.

CONTRACT OF SERVICE.

1. THE PARTIES. Generally speaking, anyone may be a master and anyone a servant; but this is a rule which requires some qualification:

(*a*) **Infants.** In the case of infants, the law will not permit them to be bound by contracts of service which are not for their benefit or in the nature of necessaries. But if a contract is on the whole for the benefit of an infant party, as a reasonable contract of apprenticeship would be, he will be bound by it. Although an infant party may avoid a contract which is not necessary or to his advantage, yet if he is prepared to carry it out he can make it binding on the other party.

(*b*) **Lunatics** are generally incapable of contracting; but if they have entered into a reasonably fair contract and the other party has performed his part of it without knowing of the lunacy, the lunatic would not be able to escape from the obligation incurred unless the parties could in some way be restored to their original position.

(*c*) **Married Women** can now, since the Married Women's Property Act, 1882, as amended by the Married Women's Property Act, 1893, be bound by all contracts entered into by them otherwise than as agents for someone else. Where they act as agents, the person who expressly or impliedly authorises them to enter into the contract would be liable. Where a husband and wife are living together and she keeps house for him, there is a *prima facie* presumption that she has authority to pledge his credit for the hire of such servants as may be reasonably necessary for people of their station in life; but such a presumption may be rebutted by proof that the wife has been forbidden to hire servants or that she has been given a sufficient allowance for that purpose.

(*d*) **Corporations** cannot as a rule be bound by contracts of service which are not made under the corporate seal; but there are exceptions to this rule. Thus the corporation would be bound by a simple contract for the performance of trifling matters or matters of daily occurrence, such as engaging a porter, or in cases which are urgent, especially if the other party has performed his part of the contract.

(*e*) **Partners** generally are not only bound by their own contracts, they are also bound by such contracts of their co-partners as are entered into for partnership purposes; therefore any partner has a right to dismiss a servant of the firm, engaged by another partner, unless the other partner authorises him to remain.

2. FORMALITIES. If a contract of service is by its terms incapable of being wholly performed by either party within a year from the date on which it was made, the Statute of Frauds requires that it shall be in writing, or, if not in writing, that at any rate there shall be a note or memorandum of it in writing, signed by the party against whom it is sought to be enforced, or by his authorised agent. Such a note or memorandum need not be in any particular form, nor need it contain all the terms and conditions of the contract of service, but it must contain the essential terms, such as the names of the parties, the salary to be paid, and the nature of the employment. It is not necessary that the note or memorandum should be intended as such, nor need it be made before the contract of service is entered into. The Statute does not say that if these formalities are not observed the contract will be illegal or void. It merely declares that in the absence of these formalities such a contract cannot be enforced in a court of law. Contracts of service which can be completed by either party within a year, even if they are not in fact completed within that time, are not affected by the Statute. They may therefore be made by word of mouth or in any other manner. Where in a contract for general service nothing is said about the time of its duration, there is a presumption in law that it is to endure for a year, unless there is a well known custom to the contrary, as in the case of domestic servants, clerks and others.

Whether or not a contract or agreement of service requires a stamp, depends mainly on the provisions of the Stamp Act, 1891. By this Act most agreements, or memoranda of agreements, for service require a sixpenny stamp, unless

(1) They are for the hire of any labourer, artificer, manufacturer, or menial servant, or (2) made between the master and mariners of any ship or vessel for wages on any voyage coastwise from port to port in the United Kingdom.

But the same Act provides that in the case of an instrument of apprenticeship, a stamp of two shillings and sixpence is required; unless the apprentice is a poor child apprenticed at the sole charge of any parish, township, or public charity, or pursuant to any Act for the regulation of parish apprentices. (See "Stamp Duties," p. 682.)

DUTIES OF THE MASTER.

1. FOOD, CLOTHING, AND MEDICINE. By the Offences against the Person Act, 1861, if a master is liable to provide necessary food, clothing, or lodging for a servant, and wilfully and without lawful excuse refuses or neglects to provide the same, so that the life of the servant is endangered, or his health permanently injured, the master is guilty of a misdemeanour, and liable on conviction to three years' penal servitude. If the servant died in such a case, the master would be guilty of manslaughter. The Conspiracy and Protection of Property Act, 1875, has a similar provision, but it goes further; for under it the master would be liable if the health of the servant is "seriously" injured, not necessarily "permanently." The proceedings taken under this last Act would be before a Court of Summary Jurisdiction, and the maximum punishment would be £20 fine or six months' hard labour. Neither Act compels masters to supply food for their servants. They merely make it an offence to fail to supply it in those cases where they are legally bound. A master is legally bound to supply an apprentice or servant of tender years with food and necessaries; but in other cases it entirely depends on the contract between the parties and the custom applying to the particular kind of service. With regard to medical attendance and medicine, the master is bound to supply it for an apprentice, but not for a servant, unless he sends for the doctor or medicine without the concurrence of the servant.

2. WAGES. Whether or not it is the duty of a master to pay wages to a servant generally depends on whether

there is a contract, express or implied, to pay them. If there has been no such contract, the mere fact that services have been performed will not entitle the servant to wages. Whether or not in any case such a contract may be implied from the circumstances, will be a question of fact for the jury to decide. There is no legal limit to the amount of wages which the parties may agree between them. Wages are payable during temporary illness.

By the Truck Acts, 1831 to 1896, in cases of contracts for the hire of "artificers," their wages must be paid in the current coin of the realm, and there must not be any restrictions as to the manner in which the wages are to be expended. Neither the whole nor any part of the wages may be paid in goods. These Acts do not apply to domestic or menial servants. The expression "artificer" includes labourers, servants in husbandry, journeymen, handicraftsmen, miners, and persons otherwise engaged in manual labour. By the Metalliferous Mines Regulation Act, 1872, the Payment of Wages in Public Houses Act, 1883, and the Coal Mines Regulation Act, 1887, wages must not be paid in public houses to miners or workmen.

3. CHARACTER. A master is not legally bound to give a character to a servant; but if he gives one it must be true. If a master makes a statement without malice in a character he is protected, in an action for libel, by the plea of privilege. And the plea of privilege will protect the master even where the words complained of are untrue, provided that the master wrote them without malice, reasonably believing that they were true. If the words are defamatory and were written maliciously, the plea of privilege is no defence.

By the Servants' Characters Act, 1792, criminal proceedings may be taken against persons personating the masters of servants and giving them false characters, and also against servants who give false characters or who, having been in service before, pretend that they have not been in service.

Moreover, civil proceedings may be taken against a master for damages for deceit if he knowingly gives a false character respecting a servant to a person about to employ that servant.

4. EMPLOYMENT OF WOMEN AND YOUNG PERSONS. By the *Shops Regulation Acts*, 1892 to 1904, no young person under the age of eighteen may be employed in or about a shop for more than seventy-four hours, including meal times, in any one week. Moreover, in all retail shops where female assistants are employed the employer must provide seats for the use of such assistants in the proportion of at least one seat to every three assistants.

By the *Dangerous Performances Acts*, 1879 and 1897, any person who causes any male person under the age of sixteen, or female under eighteen, to take part in any public performance, whereby in the opinion of a Court of Summary Jurisdiction the life or limbs of such young person may be endangered, shall be liable to a penalty not exceeding ten pounds. And if the young person actually has an accident causing bodily harm, the employer will be liable to proceedings for assault as well as having to pay compensation.

By the *Employment of Children Act*, 1903, power is given to local authorities to make bye-laws regulating the employment of children in any and all occupations. The same Act also provides that

(1) No child under eleven may be employed in street hawking. (2) No child under fourteen may be employed between the hours of 9 p.m. and 6 a.m., unless there is a bye-law permitting it. (3) No child under fourteen may be employed in any occupation likely to be injurious to his life, limb, health, or education.

By the *Prevention of Cruelty to Children Act*, 1904, penalties are imposed on those who employ children under sixteen to be trained as acrobats, etc., or children under eleven to perform in public. But petty sessional courts may grant licences for the above in cases where the child is over ten.

By the *Metalliferous Mines Regulation Act*, 1872, the Coal Mines Regulation Act, 1887, and the Mines (Prohibition of Child Labour Underground) Act, 1900, restrictions are placed on the employment of women and children in mines.

The *Factory and Workshop Act*, 1901, contains a large number of provisions regulating the employment of women, children under fourteen, and young persons under eighteen in such establishments. Thus they may not be employed in cleaning the dangerous parts of machinery in motion, nor indeed may a *child* be employed at all in the cleaning of machinery.

The hours also are fixed during which women, children, and young persons may be employed in textile and non-textile factories, in print works and bleaching and dyeing works, in women's workshops, in lace factories, in bake-houses, in laundries, and indeed in many other trades and employments. Meal times and holidays are likewise fixed and overtime and night work are provided for. In no case must the work continue after ten o'clock at night. Overtime is not allowed in textile factories, and the number of working hours must not exceed 56 per week.

An employer must not knowingly permit a woman or girl to be employed in a factory or workshop within four weeks after she has given birth to a child; and children and young persons must not be employed in certain trades injurious to health, as in the manufacture of white lead or the process of silvering mirrors.

DUTIES OF THE SERVANT.

1. TO BE HONEST AND OBEDIENT. A servant must act with honesty in his employment. He must not steal or embezzle his master's property, nor indeed may he receive any secret commission or secret profit on any transaction performed by him in the course of his duty. If he makes such a commission or profit he must hand it over to his master. In case of suspected theft by a servant, the master should not take it upon himself to search his or her boxes, but put the matter into the hands of the police or apply to a magistrate for a search warrant.

It is the duty of all servants to obey all lawful orders of their masters, the carrying out of which would come within the ordinary scope of the duties they have expressly or impliedly contracted to perform. But they must not obey orders which require them to perform some unlawful act. Where a servant commits an unlawful act, he will be personally responsible for it whether he has been ordered to do it or not; but if he did it in obedience to orders which he believed to be lawful, he can call upon the master to indemnify him for any damage he may sustain.

The servant must treat his master with the deference and respect due to his position; he must not be impertinent nor behave in an unseemly fashion.

2. TO SERVE WELL AND FAITHFULLY. It is the duty of a servant to continue in his master's service during the whole of the time he has contracted for. Where the contract does not express or imply any time for its duration, the law will infer that it is a yearly hiring, and as such it can only be properly determined at the end of the year of service, except where a custom exists regulating the termination of the service by notice, or where the master or servant is justified in terminating the contract (see below).

A servant must not abuse the confidence imposed on him by his master, and there is in law an implied term or condition in contracts of service whereby the servant or employee is forbidden to reveal trade secrets learnt by him in the course of his employment.

It is the duty of every servant to take care of the property of his master, and he will be held personally liable for any loss or damage to property entrusted to his keeping, occasioned through his own gross and culpable negligence. The master, however, is not entitled to deduct from the wages of a servant the cost of any article that has been accidentally broken by such servant. It should also be noted that the law expects a man employed in a certain capacity to display the skill that may reasonably be expected from a person in that capacity. Thus a driver will be expected to know how to drive, and a farrier to know how to shoe horses. But a groom will not be

expected to know how to drive a motor car unless he holds himself out as a qualified chauffeur.

3. **DUTIES OF THIRD PERSONS TO THE MASTER.** The master has an action against third persons who entice his servant away or induce the servant to break his contract with his master, or who harbours or continues to employ *after notice* his servant, even though the second master at the time of engaging the servant did not know that he was hiring another man's servant; and where the servant has been enticed away the master may sue for the earnings of his servant in the new employment instead of suing for damages.

The master may sue for personal injuries to his servant, but he has no right of action should the servant die. The same rule applies to cases where a maidservant has been seduced; the master can sue for the loss of her service during her illness and for the expenses to which he may have been put.

TERMINATION OF THE CONTRACT.

1. **WHEN CONTRACT UNCOMPLETED.** Generally speaking, a contract of service can only be rightfully terminated by the death of one of the parties, by mutual consent, or on completion. If a servant is employed to do any particular piece of work he must complete it, and if he wrongfully terminates the contract before completion he will generally not only have to pay damages to his master for wrongfully terminating the contract, but he may also have to go without payment for the part of the contract which he has performed.

> Thus in the leading case of Cutter *v.* Powell, a person was engaged as mate of a ship for the whole of a voyage from Jamaica to Liverpool. He was to be paid in a lump sum on the completion of the voyage; but, unfortunately, he died when about two-thirds of the voyage was accomplished. It was held that, inasmuch as it was an *entire* contract and one which could not be apportioned, his executors could not recover anything from his employers, even for the work he had done.

If, on the other hand, the employment is one which falls naturally into sections, arrears of wages can be recovered on all those sections which have been completed; but nothing can be recovered for work already done on an incomplete section, unless the servant has been prevented from completing the section or the remainder of the contract by the wrongful act of the master. The same rule applies in time contracts.

> Thus if a servant is engaged quarterly or monthly, he can always recover arrears on every completed quarter or month, as the case may be; but he cannot recover arrears on a quarter or month which is incomplete, unless he has been wrongfully dismissed.

If the master *wrongfully* prevents the servant completing the term, the servant may recover damages for the loss he has thereby sustained. The measure of damages in such a case is frequently regulated by custom.

2. **DISMISSAL WITHOUT NOTICE.** There are many circumstances under which a master may *rightfully* dismiss a servant without notice before the term is completed. Thus a master would be justified in discharging a servant who wilfully disobeyed, or refused to obey, a lawful order to do, or refrain from doing, anything which comes within the scope of his duties as servant. A mere casual neglect, brought about by forgetfulness, to obey a *general* order would not, however, as a rule, justify instant dismissal in the middle of the term; but a servant may be instantly dismissed for refusing to obey a *specific* lawful order. Thus where a servant asks for permission to go and see a friend who is about to emigrate, and on receiving a refusal of leave of absence, nevertheless goes, he may be instantly dismissed. Again, a master may rightfully dismiss a servant for gross misconduct or dishonesty. But whether the misconduct is in any case sufficiently gross to justify instant dismissal will depend largely on the nature of the employment.

> An unmarried female domestic servant may be dismissed for being with child; so, too, may a manservant be dismissed for seducing a fellow-servant. Indeed, a master can recover damages for loss of service from any person who seduces one of his female servants, if the consequent illness takes place whilst she is still in his service.

A servant may also be rightfully dismissed for conduct which might reasonably be calculated to cause serious injury to his master's business; or if he fails to give proper attention to his duties; or if he does not possess the skill reasonably necessary for a person in his position.

3. **DISMISSAL WITH NOTICE.** There is no rule of law as to the termination of a contract by notice. The parties may, of course, agree to any terms as to notice that they may think fit. Apart from such agreement, where notice can be rightfully claimed it depends on custom. The general rule is that where a contract has been terminated, without justification, before it is completed, the person injured may claim damages for the loss sustained by reason of the failure to complete it, which frequently would mean the payment of wages until the end of the term. But custom has modified this rule. Where a custom as to notice exists, a contract of service may be terminated by either party on giving the customary notice, or by the master, on the payment of wages in lieu of the customary notice.

In the case of domestic or menial servants, custom ordains that either party may terminate the contract at any time by giving a calendar month's notice. If the master chooses to discharge the servant without notice, he must, unless the dismissal is justifiable (see above), pay to the servant a calendar month's wages in addition to the wages up to the day of dismissal. The wages payable in such a case would be the actual money wages, and no allowance need be made for board and lodging. There is no corresponding right on the part of the servant which entitles him to terminate the contract by giving a month's wages in lieu of notice.

If the servant wrongfully departs without notice, the master may recover damages for the breach of the contract, up to the end of the term, and also the servant would be disentitled to any arrears of wages for work already done on the uncompleted contract. If the servant is not a domestic or menial servant, and it has been held that a tutor or governess is not such a servant, the question will arise as to whether there is any custom as to notice applicable to the particular case. If not, damages to the end of the term may be recovered for the wrongful breach of the contract. Weekly servants would never be entitled to more than a week's notice; but the mere fact that wages are paid weekly, monthly, or quarterly does not necessarily constitute the employee a weekly, monthly, or quarterly servant.

LIABILITY OF MASTER.

1. **FOR THE NEGLIGENCE OF HIS SERVANTS.** Masters are responsible for the injuries caused to other persons by the wrongful or negligent acts of their servants, if such servants are acting within the scope of their ordinary duties and within the general scope of their authority. In other words, masters are expected to employ competent servants. The above rule places the master in the same position as if he himself and not the servant had caused the injury. But it does not make the master liable in cases where he would not have been liable if he himself had been the negligent one. For it must be clearly understood that where a person is injured through the negligence of another, it does not necessarily follow that he would have any remedy.

Negligence alone is not a sufficient cause of action; there must also be a breach of a legal duty to take care. Again, in cases where there has been a breach of the legal duty to take care as well as negligence, the master may raise the plea of "contributory negligence," if indeed there has been any on the part of the plaintiff, and he can also plead "inevitable accident."

> The rule that makes the master liable does not exculpate the servant; the action may be brought against either of them.

2. **EMPLOYERS' LIABILITY ACT, 1880.** At common law a master owes a duty to his servants to employ reason-

ably competent fellow servants, and to provide reasonably safe machinery in his works. If he had done this, and an employee was nevertheless injured through the negligence of a fellow servant, such employee could not formerly recover damages from the master; because by reason of the doctrine of "common employment," a servant entering any employment was presumed by law to have contemplated risk of injury by the negligence of a fellow, and to have voluntarily incurred the risk.

This rule worked considerable hardship on the employee, so the Employer's Liability Act, 1880, was passed to modify it. The Act does not apply to domestic or menial servants, nor to seamen or marine apprentices; but it does apply to railway servants, labourers, servants in husbandry, journeymen, artificers, handicraftsmen, miners, and others *engaged in manual labour*. It has been held not to apply to a railway guard or to an omnibus driver or conductor.

The Act enables an injured employee to obtain redress from his employer if the injury is caused by reason of—

(1) Any defect in the condition of the ways, works, machinery, or plant; if such defect arose or remained undiscovered through the negligence of the employer or of some person entrusted by him to look after such matters.

(2) The negligence of a person superintending the work.

(3) The negligence of any person to whose directions the employee would be bound to conform.

(4) Anything done in obedience to defective rules, instructions, or bye-laws of the employer; unless they are bye-laws approved by the Board of Trade or other Government Department.

(5) The negligence of the person in charge of the signal, points, locomotive, or train, on any railway.

But even in these five cases the employee will not recover anything if he knew of the defect or negligence and voluntarily took the risk without complaint. The maximum amount of damages recoverable under the act would be a sum equal to the estimated earnings of a person in the employee's position during the three years preceding the injury. Actions under this Act must be brought in the County Court within six months of the injury; or if the employee is killed, then within a year of his death. No action may be brought if notice in writing giving particulars of the injury has not been given to the employer within six weeks of the injury, unless the judge thinks fit to excuse the want of notice. Lastly, an employee may deprive himself of his right under this Act by entering into a special contract with his employer.

3. THE WORKMEN'S COMPENSATION ACT, 1906. Radical changes in the law affecting a master's liability for injuries to his servants, were made by the Workmen's Compensation Acts of 1897 and 1900, which have been superseded by the Workmen's Compensation Act, 1906. The master is placed thereby virtually in the position of an insurer against accident; so that he will be liable to pay compensation for injuries to his workmen, by any accident arising out of, and in the course of, the employment, unless such injury does not disable the workmen for at least a week from earning full wages, or unless the injury is attributable to the serious and wilful misconduct of the workman in question. Even in this latter case compensation will have to be paid if the injury results in death or permanent disablement.

Under the Act of 1906, the term "workmen" includes, with certain definite exceptions, any person who works under a contract of service or apprenticeship with an employer, whether by way of manual labour, clerical work, or otherwise and whether the contract is express or implied. It does *not* include (1) a person employed otherwise than at manual labour whose remuneration exceeds £250 per annum; or (2) a person whose employment is of a casual nature and who is employed otherwise than for the purposes of the employer's trade or business; or (3) a member of a police force; or (4) an outworker; or (5) a member of the employer's family dwelling in his house; or (6) a person in the naval or military service of the Crown. Therefore, under this Act the term does apply to domestic servants and to merchant seamen, marine apprentices, railway guards and omnibus conductors.

An injured workman may not recover both damages under the Employer's Liability Act and compensation under the Workmen's Compensation Acts; but he may choose either remedy. Moreover, if he claims damages and the judge decides that he can only recover on a claim for compensation, the judge may award him the compensation.

Claims for compensation must be made within six months of the accident, or, if the workman dies, within six months of the death. In the latter case the claim is brought by the dependents of the dead employee.

Notice of the accident must be given as soon as practicable after the happening thereof, and before the workman has voluntarily left the employment. An employee cannot by agreement with his master deprive himself of any compensation which may be claimed under the Act, unless the Registrar of Friendly Societies approves the agreement after ascertaining the views of the employer and workmen concerned. The amount of the compensation must be settled by agreement or arbitration in the manner prescribed by the Acts, and is calculated on the employee's weekly earnings; but in no case may it exceed £300, in the case of death, or £1 per week, for disablement. Where the workman leaves no one depending on him, the compensation for his death does not exceed £10.

DISPUTES BETWEEN EMPLOYERS AND EMPLOYED.

MODES OF ADJUSTMENT. Disputes between masters and domestic servants generally arise over questions of dismissal without notice, or wages in lieu thereof. Such actions are usually brought in the County Court, which now, since the County Court Act, 1903, has jurisdiction to try cases in contract up to £100. If the amount in dispute exceeds that sum, action must be brought in the High Court.

Under the Employers and Workmen Act, 1875, disputes between employers and workmen arising out of the contract of service may be heard and determined in a court of summary jurisdiction, if the amount claimed and recoverable does not exceed £10. If it exceeds that amount, proceedings should be taken in the County Court or High Court, as the case may be. This Act applies to disputes between masters and their apprentices where the premium (if any) paid does not exceed £25; but it does not apply to domestic or menial servants. The word "workmen" used in the Act includes a labourer, servant in husbandry, journeyman artificer, handicraftsman, miner, or person otherwise engaged in manual labour.

By the Conspiracy and Protection of Property Act, 1875, an agreement or combination of two or more persons to do or procure to be done any act in contemplation or furtherance of a trade dispute between employers and workmen, will not be indictable as a conspiracy if such act committed by one person would not be punishable as a crime.

There is a further provision of this Act by which if a servant of a gas or water company wilfully and maliciously breaks his contract of service, knowing that the probable consequences will be to deprive the community of gas or water, he may be dealt with in a court of summary jurisdiction, and is liable to three months' hard labour. Similarly, *any* servant may be punished in like manner if he knows that the probable consequences of his breach of the contract would be to endanger human life or to cause serious injury to persons or property.

By the Conciliation Act, 1896, Conciliation Boards may be established, and registered with the Board of Trade, for the purpose of settling disputes between employers and workmen by conciliation or arbitration. Where differences exist or are apprehended, the Board of Trade has power to enquire into the circumstances and to take steps for bringing together the representatives of either party with a view to the amicable settlement of the dispute. Moreover, if either party desires it, the Board of Trade may appoint a Conciliation Board; and if both parties desire it, an arbitrator may be appointed.

HUSBAND AND WIFE.

BREACH OF PROMISE OF MARRIAGE. Either a man or woman can bring an action for breach of promise of marriage provided he or she has entered into a valid contract to marry. The offer must have been made by one of the parties and definitely accepted by the other, and the acceptance must have been within a reasonable time of the offer. Baron Bramwell laid it down that "to constitute a contract of marriage it must be mutual, and bind both parties. It was not enough that the defendant was willing and desirous to marry the lady unless she had bound herself to marry him. . . . . and if the jury thought there had been no such final assent until so long after the defendant's offer, that he might fairly be deemed to have retracted, and if she had held back, in fact, until then, she was too late . . . . A man was not to be bound for ever, and the lady to have him or not at any future time. It was not necessary that the mutual assent should be concurrent, but it must at all events be within a reasonable time."

It should be remembered that a promise to marry may be made without words. The conduct, demeanour, and behaviour of persons towards each other may constitute proof of the contract; but stronger evidence of the promise by the man would be required than of that by the woman, and the inference of a promise on his part will not, in an equal degree, be deduced from conduct only.

The action cannot be brought against a person under full age, though an infant may sue an adult. Nor will an action lie against one who has ratified a promise made during infancy. It would be otherwise if it were a new and independent promise quite apart from the one made during infancy, but this would require conclusive proof, as it is the policy of the legislature to protect infants as much as possible from the consequences of inexperience.

The damages which the law will allow a successful plaintiff to recover are much greater than those recoverable for most breaches of contract. They include what are known as "sentimental damages," such as compensation for wounded pride, injury to the affections and feelings. Loss of a home and a share in the defendant's wealth and position are also taken into consideration; and, where seduction is averred, a claim can be joined for special damages.

WHAT IS MARRIAGE? Marriage has been variously regarded as a contract, a status, and from the point of view of the Divorce Court as "the voluntary union for life of one man and one woman to the exclusion of all others." By marriage, husband and wife, in the eye of the law, are regarded as one person, hence marriage is sometimes regarded as a status in that the personality of the wife is merged in that of her husband, e.g. should the wife assist her husband in the perpetration of some minor crime she is regarded as acting under his coercion, and as we point out in the law of libel, a statement made orally or in writing by a husband to his wife, defamatory of X, is not libel or slander, as there is no publication. The policy of modern statutory enactment, however, is to look upon the wife, as regards her property and legal obligations, in the light of a *femme sole* or single woman.

MARRIAGE AS A CONTRACT. From the perusal of the rules laid down with regard to the completion and discharge of an ordinary contract, it will be at once apparent that marriage differs in many ways from the usual contractual relationship. In the first place it is entered into for life and cannot be rescinded at the will of either party; it partakes of the nature of a sacrament and can only be dissolved under circumstances and with formalities hereafter to be explained. Again, minors can legally enter into the bonds of matrimony at 14 years for males and 12 years for females; nor does the absence of the parents' consent void the marriage, though the parents may publicly forbid the banns, in which event the publication is void, and therefore the marriage will be void if it takes place and if both parties acted knowingly and wilfully with an intention to defeat the law. The clergyman usually makes enquiry as to the parents' assent as a matter of duty, but in the absence of dissent the assent of the parents may be presumed.

At one time it was a felony punishable by being burnt alive for Jews to marry Christians, nor could an Englishman marry a Welshwoman, but these disabilities are now removed, and the only incapacity for marriage lies with members of the Royal Family, who must obtain the consent of the King in Council before their marriage can be recognised. By the Act of Settlement (12 & 13 Will. III. c. 2.), if a member of the Royal Family marries a Roman Catholic he is thereby excluded from succeeding to the Throne.

MODES OF CELEBRATION OF MARRIAGE.

The Marriage Act, 1823, which does not apply to Scotland and Ireland, or to Jews and Quakers, or to marriages of the Royal Family, enacts: "that if any persons shall knowingly and wilfully intermarry in any other place than a church or such public chapel wherein banns may be lawfully published, unless by special licence . . . . or without due publication of banns or licence from a person or persons having authority to grant the same . . . . or shall knowingly and wilfully consent to acquiesce in the solemnization of such marriage by any person not being in holy orders, the marriages of such persons shall be null and void to all intents and purposes whatsoever." A marriage in the Church of England is a public ceremony in accordance with the rubric in the Book of Common Prayer and is preceded by the publication of banns, or the obtaining of the bishop's or the archbishop's licence, or certificate from a registrar, or special licence from the archbishop.

1. MARRIAGE IN CHURCH AFTER BANNS. The banns must be published in the parish where the parties about to be married reside, or where they have resided at least 15 days prior to such publication. The banns may be published on any three consecutive Sundays before the solemnization of the marriage, which must take place within three months of such publication, or republication will be necessary. If the parties reside in different parishes the banns must be published in both parishes. The names of the parties are entered in the banns book, and should the names of the parties be misstated to the knowledge of them both, the marriage is void, but is not void if one only of the parties knew of the misstatement. It is a good publication if a person enters himself in the name he is best known by, as in the case of authors and public entertainers. If one of the parties, as usually happens, puts up the banns for both, and knowingly misstates the name of the other party, then that other party adopts the fraud if he signs the register in the wrong name after hearing himself misdescribed in the marriage ceremony.

> Neither the rubric nor the Act requires a statement of occupation or condition, so that it is immaterial if a widow should be described as a spinster, but the parties must state their places of residence correctly.

In the case of a minor, the parent or guardian can publicly forbid the banns, and then the publication of the banns is void.

The marriage must be solemnized in one of the churches where the banns were published, and the clergyman of the other church must give a certificate of such publication to be delivered to the clergyman about to perform the ceremony.

2. IN CHURCH BY ORDINARY LICENCE. The ancient right of the bishops to grant licences for marriage is confirmed by a Statute of Henry VIII. Marriage by licence is a convenient alternative to the publication of banns. In London application should be made by one of the parties to be married at the Vicar General's Office at the Court of Faculties, or at the Bishop of London's Registry. In the country it is usual to apply to a clergyman, who is also a surrogate, and he will obtain the licence by return post from the Bishop's Registrar. The fee in London is £2 2s. 6d. inclusive of Stamp Duty, and varies in the country from £1 15s. to £2 12s. 6d., according to

the diocese. The licence is granted without previous notice, and is available as soon as issued, but one of the parties must declare on oath that there is no legal impediment to the marriage; and also that one of such parties has had his or her usual place of abode for the space of fifteen days immediately preceding the issuing of the licence within the boundary of the parish church in which the marriage is to be solemnized.

3. **MARRIAGE BY SPECIAL LICENCE.** A special licence can be obtained at an average cost of £29 8s. by approval of the Archbishop of Canterbury, and is available at any time or place without residential qualification.

4. **MARRIAGE BY THE REGISTRAR.** The Registrar of Marriages in any district will grant certificates or licences to marry twenty-one days after the time of entry of notice. The full names, condition, rank, age, and address of the parties is required. A declaration must also be made that they have resided for not less than seven days within the district of the Superintendent Registrar, or if the parties dwell in different districts notice must be given to the Superintendent Registrar of each district. The fee for entry of the notice is 1s., and for issue of the certificate 1s. The fee for performing the marriage ceremony is 5s. 0d.

In the case of a licence, fifteen days previous residence is necessary on the part of one of the parties only, and the licence, with its accompanying certificate, is granted on the expiration of one whole day next after the day of entry of such notice of the marriage, and need not be suspended in the office of the registrar, as is the case when a certificate is applied for. The cost of a licence is £1 10s., and besides small fees for entries and certificate of notice, 10s. stamp duty. The fee for performing the marriage ceremony is 10s.

5. **IN CHURCH BY REGISTRAR'S CERTIFICATE.** By permission of the minister of the church, the marriage can be solemnized by a clergyman of the Church of England, the registrar's certificate, which takes the place of banns, being handed to the officiating minister. But a marriage by licence of the Registrar cannot be solemnized according to the Church of England.

6. **IN ANY REGISTERED BUILDING WITH THE REGISTRAR'S CERTIFICATE.** The parties can be married in a registered place of worship according to Nonconformist rites by permission of the minister or one of the trustees or other person in authority in either of two ways:

(1) In the presence of the Registrar. If the presence of the Registrar is desired, the certificate or licence is handed to him, and he is entitled to a fee of ten shillings for marriage by licence, and five shillings for marriage by certificate.

(2) The Marriage Act, 1898, provides for the presence of an "authorised person" at the ceremony, instead of the Registrar if the parties do not specially desire his attendance. The "authorised person" is a person certified as having been duly authorised by the trustees of the building to attend marriages in that capacity. It is under this provision that marriage can now be legally solemnized by a Nonconformist minister.

7. **OF MEMBERS OF THE SOCIETY OF FRIENDS.** After notice has been given in the manner already described, the parties may be married in a Friends' Meeting House, and the registering officer of the Society must register the marriage as soon as possible after its celebration. The presence of the registrar is not necessary, and the provisions of the Marriage Act, 1898, do not apply (See 10 and 11 Vict. c. 58).

8. **OF JEWS.** Parties of the Jewish persuasion can be married in a Synagogue or in a private dwelling house, and at any hour of the day, provided notice is given as prescribed. The provisions of the Marriage Act, 1898, do not apply, the presence of the registrar not being required. The marriage must be registered by the Secretary of the Synagogue to which the husband belongs.

9. **OF BRITISH SUBJECTS ABROAD.** British subjects can be married at an embassy, legation, or consulate on complying with the provisions of the Foreign Marriage Act, 1892, with regard to residential qualification, payment of fees and notice. The presence of the Marriage Officer authorised by the Act is necessary, but a religious ceremony may be dispensed with, though the marriage can be celebrated in accordance with the creed of the parties.

10. **ON MAN OF WAR.** The Foreign Marriage Act, 1892, also provides for the solemnization of marriage before the commanding officers of any of His Majesty's ships on a foreign station.

11. **TIME OF SOLEMNIZATION OF MARRIAGES.** With the exception of Jewish marriages, all marriages in England must be celebrated between the hours of eight in the forenoon and three in the afternoon.

12. **MARRIAGES WITH FOREIGNERS.** The legality of a marriage usually depends on whether it was celebrated in accordance with the law of the husband's domicile, so that girls marrying foreigners, even in England, should be careful to ascertain beforehand from the consul of the country to which the particular foreigner belongs whether all the requirements of the foreign law have been fulfilled; as otherwise they may find that the husband may repudiate the marriage when he returns home. Many unfortunate English girls are trapped and ruined in this way.

PROCEEDINGS IN DIVORCE COURT.

Before the Matrimonial Causes Act, 1857, divorces were of two kinds: (1) from "bed and board," *a mensâ et thoro*, as it was called, and which was really a judicial separation granted by the Ecclesiastical Courts. (2) A dissolution of marriage, termed a divorce, *a vinculo matrimonii*, which could only be obtained by the tedious and costly method of an Act of Parliament. The consequence was that only persons of affluence could obtain a divorce in the true sense, and so the Divorce Act was passed to place a Court for the trial of matrimonial causes within the reach of all. A Royal Commission to consider the Divorce Laws was appointed in the Spring of 1910.

The most important work carried on in reference to matrimonial suits in the Probate and Divorce Division of the High Court is with regard to decrees for Divorce, Judicial Separation, Nullity of Marriage, and Restitution of Conjugal Rights. Other work of the Court deals with the custody, access, maintenance, and education of the children of suitors. Also the allotment of alimony, the settlement of property and application of damages.

1. **DIVORCE.** The following are the grounds on which persons may apply to the Court for dissolution of marriage: The husband may present a petition on account of his wife's adultery. The wife may present a petition on any of the following grounds:

That since the celebration of the marriage, her husband has been guilty (1) of incestuous adultery, that is, adultery by the husband with a woman with whom, if his wife were dead, he could not lawfully contract marriage, by reason of her being within the prohibited degrees of consanguinity, or (2) of bigamy with adultery, or (3) of certain criminal offences, or (4) of adultery and cruelty, or (5) of adultery with desertion, without reasonable excuse, for two years and upwards.

On the pronouncement of a decree absolute (the nature of which is explained below), the parties are at liberty to marry again. A clergyman of the Church of England and Ireland cannot be compelled to solemnize the marriage of any person whose former marriage may have been dissolved on the ground of his or her adultery. Divorced wives may keep their married names if they wish.

2. **JUDICIAL SEPARATION.** This is the modern form of the old separation granted by the Ecclesiastical Courts, already mentioned under the name of *divorce à mensâ et thoro*. A decree of judicial separation does not entitle either party to marry any one else. A decree is granted to either husband or wife on the ground of adultery, or cruelty, or desertion without cause for two years or upwards.

(a) WHAT IS CRUELTY? Legal cruelty, as defined

by Lord Justice Lopes in Russell *v.* Russell, is such that "there must be danger to life, limb, or health, bodily or mental, or a reasonable apprehension of it." The surrounding circumstances are always taken into account, and in certain cases the following have been deemed acts of cruelty: Insanity of the husband, drunkenness, threats, enforcing the wife's prostitution, communication of a venereal or of a cutaneous disease, and insults and violent temper causing mental anguish.

(*b*) WHAT IS DESERTION? A wife who can prove desertion and adultery is entitled to a dissolution of marriage, but if she can only prove desertion a judicial separation is her remedy. To constitute desertion the wife must show that her husband has wilfully absented himself from her society and in spite of her wish, she not being a consenting party. It is not desertion for a husband to leave his wife to follow some occupation or calling, e.g. if he goes long voyages as a sailor, or if his position as a soldier calls him abroad. But it would be otherwise if at the end of his duty he wilfully stayed away from his country and his wife.

If a wife is obliged to leave the home owing to her husband's misconduct, she may nevertheless make out a case of desertion against him if he continues his improper conduct so that she cannot live with him.

A wife who deserted her husband before he had committed adultery, but which she subsequently proved against him, was successful in obtaining a judicial separation.

3. **SEPARATION ORDER.** Under the Summary Jurisdiction (Married Women) Act, 1895 and the Licensing Act, 1902, Courts of Summary Jurisdiction have power to make in favour of a married woman an order equivalent to a judicial separation:—

(1) On the conviction of a husband for aggravated assault on his wife; or (2) on the conviction of a husband upon indictment for an assault on the wife involving a fine of over £5 or over two months' imprisonment; or (3) on the desertion of a wife by her husband; or (4) after the husband's persistent cruelty; or (5) after his wilful neglect to maintain her, causing her to live apart from him; or (6) where the husband is a habitual drunkard.

As to the reality of the desertion, this is a question of fact for the justices. If the conduct of the husband be such that the wife is compelled to leave him, it is nevertheless held to be desertion on his part. Before the order would be granted for wilful neglect to maintain the wife, some evidence must be given that the husband has means to maintain her or that he has refused work. A habitual drunkard is a person, who, not being amenable to any jurisdiction in lunacy, is, by reason of habitual intemperate drinking of intoxicating liquor, at times dangerous to himself or to others, or incapable of managing himself or his affairs.

4. **NULLITY OF MARRIAGE.** Suits for nullity may be brought on four grounds:—

(1) **Impotence.** The incapacity must have arisen before the marriage, and have continued permanently. (2) **Absence of Consent.** This arises where there has been duress or fraud in obtaining consent, or from the insanity of one of the parties at the time of the marriage, and who, on regaining his or her reason, may have the marriage set aside. (3) **Breach of Statute.** Cases under this head arise where persons marry within the prohibited degrees of consanguinity, or by a party to a divorce suit marrying after the *decree nisi* but before the *decree absolute*, or some breach of the Marriage Acts. (4) **Bigamy.** To obtain relief, the complaining party of the second marriage must prove the validity of the first.

5. **RESTITUTION OF CONJUGAL RIGHTS.** Where one of the parties has withdrawn from cohabitation without lawful cause, the other may petition for the "restitution of conjugal rights." If the Court grants a decree and the respondent disobeys it, the petitioner can then obtain a decree of judical separation on the ground of desertion.

6. **PETITION IN FORMA PAUPERIS.** A poor person who can show to the satisfaction of the Court that he or she has neither means nor credit will be allowed to sue *in formâ pauperis*, that is, without the payment of fees. Counsel's opinion should first be obtained through a solicitor to satisfy the Court that petitioner has a good ground to sue. This is annexed to an affidavit stating that petitioner is not worth £25, exclusive of wearing apparel, after payment of his debts.

7. **CUSTODY OF THE CHILDREN.** In all divorce proceedings the Court may make an order, before or after the decree, relating to the custody, access, maintenance, and education of the children of the marriage. The jurisdiction of the Court lasts until the children attain the age of 21 years, and, in its discretion, it may give them the protection of the Court of Chancery. Pending a suit, the father usually has the custody of his children, but the order may be varied in favour of the mother if they are very young and her health suffers in consequence of their absence from her.

8. **ABSOLUTE BARS TO DIVORCE.** Bars to divorce are either Absolute or Discretionary. Absolute bars include (1) ADULTERY NOT PROVED (2) CONNIVANCE, which means that the petitioner actually knew that adultery was going on and took no means to stop it. There is no connivance where the injured party discovers past adultery and takes no notice of the matter or lets it go unpunished; but otherwise, if the adultery is allowed to continue with his or her knowledge. (3) CONDONATION. Adultery is said to be condoned, when, with a full knowledge of all the adulterous connection, the guilty party is forgiven. If a condition is attached that the adultery shall not be repeated, the condonation comes to an end on the breaking of the condition.

> Lord Justice Lopes laid it down in Bernstein *v.* Bernstein, p. 1893, p. 303, that condonation "means the complete forgiveness and blotting out of a conjugal offence, followed by cohabitation, the whole being done with full knowledge of all the circumstances of the particular offence forgiven . . . . *it does not operate as a forgiveness of other unknown adulteries.*"

(4) COLLUSION. This occurs where the petitioner and respondent or co-respondent arrange between themselves that no obstacle shall be placed in the way of petitioner's suit, so that the whole of the facts are not placed before the Court, as where the respondent for a money consideration promises not to disclose anything adverse to the petitioner's case. Another instance is where the parties arrange that one of them shall commit adultery, or appear to commit adultery, in order to present a false case to the Court, or the arranging of evidence for this purpose.

9. **DISCRETIONARY BARS TO DIVORCE.** The following bars to a divorce suit are called "discretionary," because when proved the Court may, in its discretion, dismiss the petition: adultery or cruelty of the petitioner, desertion without reasonable excuses before the adultery complained of, wilful neglect or misconduct conducing to adultery, and unreasonable delay in presenting the petition.

10. **THE DECREE NISI AND THE DECREE ABSOLUTE.** When the petitioner has proved his case, the Court grants a *decree nisi*. That is, a dissolution of the marriage provisional upon his or her good conduct for a period, usually six months, to be fixed by the Court, and also that no person in the meantime shows that the decree was obtained by collusion or the withholding of any material fact. At any time during the cause or before the *decree absolute* any person may give information to the King's Proctor of any fact material to the case. The Attorney-General is then consulted as to what steps should be taken in the matter. On good cause being shown, the *decree nisi* may be reversed, or further enquiry may be required. Otherwise, at the end of the six months, or other period, the decree is made *absolute*. Between the *decree nisi* and the *decree absolute* the marriage is not actually dissolved, and any adultery by the parties in the meantime is matter for the cognisance of the Court. Neither party is entitled to marry during the period before the decree is made absolute. If either does so, the decree will be rescinded and the party doing so is guilty of bigamy.

11. **COSTS IN A DIVORCE SUIT.** The question of costs is in the absolute discretion of the Court, an order being made after all the circumstances of the case have

been considered. To enable a wife who is without separate estate to place her case fully before the Court, she is always entitled to costs provided by the husband up to an amount fixed by the registrar, and this whether she is innocent or guilty. The co-respondent is never condemned in costs if he did not know the respondent was a married woman, but he will not escape if the circumstances were such as ought to have aroused his suspicions and caused him to make enquiries. Otherwise, on the adultery being proved, the co-respondent may be ordered to pay the whole or part of the costs.

12. EFFECT OF THE DECREE UPON SETTLED PROPERTY. After pronouncement of the decree absolute, the Court can by Statutory power inquire into the existence of any *ante-nuptial* or *post-nuptial* Settlement made on the parties to the divorce, and may make such orders as it deems fit, with regard to the application of the whole or a portion of the settled property, either for the benefit of the children of the marriage, or of the parents. In a decree for judicial separation the Court has not the power to vary a settlement, but it can make a settlement of the wife's property if she is in the wrong, and can order the payment of alimony.

13. ALIMONY. On the commencement of divorce proceedings, it is usual for the wife to apply for an order on her husband for maintenance during and after the suit. The former is called *alimony pendente lite*, and continues until the *decree absolute*, the latter *permanent alimony*. An order will not be made where the husband has little or no means, and if he is destitute and his wife has means, he may apply for an order on her.

WIFE'S RIGHTS IN RESPECT TO PROPERTY.

1. WIFE'S RIGHTS IN HER OWN PROPERTY. The practical effect of the Married Women's Property Act, 1882, has been to place a woman married after the passing of the Act as regards her own property in the position of a *femme sole* or unmarried woman. That is to say, any real or personal property belonging to her at the time the Act came into operation—January 1, 1883—or acquired after that date, is her own to hold and dispose of in any manner she likes. A woman married prior to the commencement of the Act is in the same position as she was before as regards property belonging to her at the time of her marriage or acquired prior to the commencement of the Act; but as regards property acquired after January 1, 1883, she is in the position of a *femme sole*. All these provisions include any wages, earnings, money, and property gained by her in the course of any employment, trade, or occupation in which she is engaged, or by the exercise of any literary, artistic, or scientific skill. An Act of 1893 provides that any contract entered into by a married woman binds her separate estate acquired after the making of the contract, although she possessed none at the time the contract was made.

2. WIFE'S RIGHTS IN HUSBAND'S PROPERTY. (*a*) Dower. At Common Law, a wife was entitled on her husband's death to an estate for life in one-third of his lands, provided the estate of the husband is a legal estate of inheritance, and that the husband has been solely seized at any time during coverture. Further, that issue of the wife by the husband might by possibility have inherited, actual birth of issue not being necessary. By the Dower Act, 3 and 4 Will. IV., c. 105, the right of the wife to dower is extended to equitable estates and estates to which the husband had only a right of action. Provision is also made for dower to be barred by the husband.

(*b*) Personal Estate. Under the Intestates' Estate Act, 1890, the real and personal estates of a husband dying intestate after the 1st of September, 1890, leaving a widow, but no issue, shall, if it does not exceed £500 in net value, belong to her absolutely. If it exceeds that amount, it is subject to a charge in her favour of £500, with interest at four per cent. from the date of death until the money is paid to her. If there are issue of the marriage, the share of the wife is reduced to one-third, the other two-thirds being divided amongst the issue.

HUSBAND'S RIGHTS IN WIFE'S PROPERTY.

1. REAL ESTATE. At Common Law, the husband on marriage became entitled to the rents and profits derived from his wife's lands and acquired a freehold estate therein during coverture. Since the passing of the Married Women's Property Act, 1882, a married woman is capable of holding and disposing of real property as if she were a *femme sole*, and every woman married after the Act is to hold as her separate property all her property which belongs to her at the time of marriage or devolves on her subsequently. Every woman married before the Act is to hold as her separate property, all property to which her title shall accrue after the Act.

2. PERSONAL CHATTELS. At Common Law, the husband acquired an absolute property in the chattels, personal or movable goods, belonging to his wife. He could dispose of them during his life or by his will, and if he died intestate his wife had no claim to them.

3. CHOSES IN ACTION. These were of two kinds: (1) Legal Choses in Action. The husband had a right to receive payment of any debts due to his wife, and he could sue on them in the joint names of himself and wife. If they accrued after the marriage he could sue either in their joint names or in his name alone; but if the wife died and left outstanding debts due to her, they belonged to her personal estate, and before her husband could recover them he had to take out letters of administration to her effects. (2) Equitable Choses in Action. Legacies, money in the funds, personal property vested in trustees, and other equitable choses in action were recoverable only in the Court of Chancery, and the husband was not allowed to bring an action with regard to them unless he settled a proportion—usually one half—on his wife and children. This provision made by the Court was called the *Wife's Equity for a Settlement*.

4. AFTER WIFE'S DEATH. At Common Law the husband was entitled to a life estate, called *curtesy*, in the freehold lands of his wife, of which she had been solely seized in possession, provided he survived her and that issue of the marriage had been born alive during the marriage and capable of inheriting. We have seen how the Married Women's Property Act, 1882, has affected the position of the husband with regard to his wife's estate, but on the death of his wife intestate the husband is entitled to the whole of her effects, including any personal property to which she had acquired a title under the Act of 1882, and is still entitled to *curtesy* in her freehold lands of inheritance. For Deceased Wife's Sister Act, 1907, see page 568B.

MARRIAGE SETTLEMENT (Provision in). The wife being subject to the influence of the husband, has sometimes lost the whole of her property in an effort to pay his creditors; consequently, in order that she may continue through life to enjoy the benefit of income settled upon her at marriage unrestrained by any interference on the part of her husband, it is usual to insert a clause in the settlement called a restraint upon anticipation. Not only does this provision protect the wife from the influence of her husband, but it is also a safeguard against extravagance on her own part, for she is deprived of the power of selling, mortgaging, or charging her property in any way.

GIFTS BETWEEN HUSBAND AND WIFE. Husband and wife could not make valid gifts at Common Law, but were subsequently allowed to do so owing to the more favourable way in which they were regarded in equity. Eventually the Conveyancing Act, 1881, gave husband and wife power to convey real property and things in action to each other, and now by the Married Women's Property Act, 1882, a wife may give to and receive from her husband property of every description. If necessary evidence should be forthcoming that there has actually been a gift between them, and this mostly occurs when the gift has never left the possession of the donor and the donee has subsequently died, or where a thing has been delivered for the convenience of one of the parties. The uncorroborated word of the donee would no doubt be accepted in such a case, though the Court would closely

examine the evidence before it was accepted, and make a searching enquiry into all the circumstances of the case. Where money is deposited or stock is purchased and allowed to remain in the name of one of the parties, there is a presumption that a gift is intended, but this may be rebutted, as for instance, where a wife who had paid money into her husband's banking account showed after his death that it was merely paid in for her convenience, and she was held entitled to recover the sum from his executors as her separate property.

HUSBAND'S LIABILITY FOR WIFE'S CONTRACTS AND TORTS. (1) ANTE-NUPTIAL. Prior to the Married Women's Property Act, 1870, the husband was jointly liable with his wife for debts owing by her at the time of the marriage. A further Act of 1874, the provisions of which under this head have been re-enacted by the Act of 1882, provides that the husband is only liable for his wife's debts contracted before marriage to the extent of the assets he receives with her. And this is the extent of his liability as regards any tort committed by his wife before marriage. (2) AFTER MARRIAGE. It is a principle of law that a wife can only pledge her husband's credit in so far as she is acting as his agent for the purpose. The liability of the husband for the debts of his wife in this respect vary according to whether they are cohabiting or not. If husband and wife are living together, and the wife is in the habit of ordering goods for which the husband pays, he will be considered as holding her out as his agent to pledge his credit, and will be bound to pay debts incurred by her. If, however, he warns the tradesmen not to supply her with goods, or if he gives her a sufficient allowance with which to pay the bills, he will not be liable. If they are living apart owing to his misconduct, the wife can pledge his credit for the supply of necessaries to herself.

In respect of torts committed by the wife after marriage, the husband is liable, *e.g.* if the wife publishes a libel upon a person, the injured party may sue the wife alone, or the husband and wife jointly, or the husband alone.

PARENT AND CHILD.

PARENTAL POSITION. The parents of a child are said to be its natural guardians, that is to say they have the right to control it until such time as the child attains the age of twenty-one or marries, if the ceremony takes place before that age is reached. The primary right as guardian resides in the father, and he may by his will appoint a testamentary guardian for his children. Should he do so, this delegated guardianship will override the rights of the mother. If, however, no such guardian is appointed, the mother, who during the father's lifetime is not strictly entitled to any power over the child, but only, as Blackstone said, "to reverence and respect," takes the father's place as regards the guardianship of her children. She may, however, be removed should her conduct, in the opinion of the Court, unfit her to act as guardian, and a substitute may be appointed in her place.

CUSTODY OF CHILDREN. Apart from Statute, a father is entitled to the custody of his infant children as against all persons, not excluding their mother, but various Acts of Parliament have modified this absolute right on his part, and by the provisions of the Divorce Acts, The Infants' Custody Act, 1873, and the Guardianship of Infants Act, 1866, the Court is empowered to grant the custody and control of a child to its mother when it is clearly of opinion that it is for the interests of the child that this should be done.

INFRINGEMENT OF RIGHT OF CUSTODY. If the right of the father, mother, or properly appointed guardian to the custody of a child is infringed, two remedies are open to the person alleging a legal right to the control of the child: (1) A writ of *habeas corpus* may be sued out calling upon the person detaining the child to produce it, and the Court will decide who is entitled to the custody, or (2) application may be made to the Court of Chancery, either by a writ of *habeas corpus* or by petition. The Court of Chancery has also under its general and statutory jurisdiction wide powers to interfere with the control and custody of children, more especially so when they are wards of the Court, and in deciding questions relating to them will have regard entirely to the interests of the children. The right to the custody of the children of parents between whom proceedings for divorce, judicial separation, or restitution of conjugal rights are pending, is provided for by the various Divorce Acts, and under these the Court is empowered to make such orders as it may deem just and proper for the custody, maintenance, and education of the children.

ILLEGITIMATE CHILDREN. Children born out of lawful wedlock stand in a different position in many respects from those lawfully begotten. For instance, the mother of a bastard child is entitled to its care and custody while it is of tender years, and if a pauper until it is sixteen, or if a female until married. During this period, if the mother is unmarried, or a widow, she must maintain the child as part of her family, the liability in case of her own marriage devolving upon her husband. If the father of an illegitimate child obtains the custody of it by force or fraud, the Courts may deprive him of its possession upon *habeas corpus*, but apart from these circumstances they will not do so, particularly if it appears that it is in the child's interest to be with its father. Upon the death of the mother, the putative father will usually be entitled to the custody of the child. The obligation of the father for the support of his illegitimate children is not a direct obligation to the latter, but he is compelled to afford relief to the mother until the child is thirteen years old, a period which is occasionally extended to sixteen years. Even if the father pays a lump sum to the mother for the support of the child, and in satisfaction of all claims upon him, he can still be sued, by means of an affiliation summons in a court of summary jurisdiction, for the weekly payments for the child's maintenance. The maximum amount is five shillings per week. If a father expressly or impliedly contracts to support his illegitimate children, the contract will be enforceable at law. The domicile of origin of an illegitimate child follows the domicile of its mother at the time of its birth, and a subsequent change in the domicile of the mother will alter the domicile of the child.

MAINTENANCE OF CHILDREN. The duty of a father to maintain his children until such time as they can support themselves is a natural one, and unless the neglect to do so would bring the case within the criminal law, there is no legal obligation upon him. A number of statutes, however, deal with the subject. First of these was the Poor Law Act of 43 Elizabeth, c. 2, which cast upon parents "of sufficient ability" the duty of maintaining their children under a penalty, and this was extended by a later Act to the case of a man's stepchildren. The Act of 57 and 58 Vict., c. 41, imposes on parents the duty of providing adequate food, clothing, medical aid, and lodging for children in their custody until the boys attain 14 years and the girls 16. The liability on the parents under the first statute ceases when the children attain the age of sixteen, unless they are from infirmity incapable of supporting themselves; but if the parents retain the children in their custody, they are liable for their maintenance until they come of age.

LIABILITY OF PARENTS FOR NECESSARIES. The law on this point is well summed up by Lord Abinger in the case of Mortimore *v.* Wright, 6 M & W, 482, where he says: "In point of law, a father who gives no authority, and enters into no contract, is no more liable for goods supplied to his son than a brother or an uncle or a mere stranger would be . . . . if a father does any specific act from which it may reasonably be inferred that he has authorized his son to contract a debt, he may be liable in

respect of a debt so contracted, but the mere moral obligation on the father to maintain his child affords no inference of a legal promise to pay his debts."

LIABILITY FOR TORTS. A father will be liable for torts committed by his child only in those cases where (1) he has authorized the tort, (2) has ratified it after it was done, or (3) he has employed his child and the tort was committed by the child in the course of that employment.

EDUCATION OF CHILDREN.

1. SECULAR. Originally a moral obligation only, this important duty on the part of a child's parents is now regulated by the various Elementary Education Acts, and in the terms of the Act of 1876 "it shall be the duty of the parent of every child to cause such child to receive efficient elementary education in reading, writing, and arithmetic." Non-compliance with this provision exposes the parents to the penalties provided by the Act. The child whose education is not provided for at home must remain at school from the age of five to fourteen, unless he fulfils the conditions for earlier release from compulsory attendance. (See under *Education Law.*) Apart from this elementary instruction there is no obligation upon a parent to provide his child with an education suitable to his rank; but the case is otherwise where a child is under the care of guardians, for they are compelled to educate their wards in a proper manner, according to their condition in life. The Court of Chancery exercises control over the education of its wards, and though as a rule it will leave the decision of the question to the guardians of the child, it may, if it think fit, decline to be guided by their wishes.

2. RELIGIOUS. The law allows to parents a perfectly free hand with regard to the religious education of their children, and they are at liberty to inculcate in them the principles of any faith they like, or to leave them without religious instruction at all. Where, however, the parents have a religious belief of their own, and particularly in cases where the father and mother are adherents of different faiths, questions of difficulty occur for the decision of the Court. The guiding principle is that the father has the right to choose his children's religion. Upon his death, he cannot indeed by will direct that his children are to be brought up in a particular belief, but he may secure the accomplishment of the same object by appointing as guardian an adherent of the views he wishes the children to be taught. If the father dies without giving any instructions as to the matter, or without appointing a suitable guardian, the Court will presume that the children are to be brought up in his own faith, but if he has forfeited and abandoned openly his right of control over the religious education of his children, and the latter have been reared in a different faith from his own, the Court in deciding the question will be guided only by the spiritual interests of the children. In such cases the Court may, if necessary, examine each child as to his beliefs, and if he is of an age to have intelligent views on the subject, it will take these into consideration.

3. RIGHT TO INFLICT CHASTISEMENT. For the benefit of his child, and in order to inculcate habits of order and obedience, a parent is entitled to apply a moderate amount of physical correction to his children, provided they are under age and the punishment inflicted is a reasonable one. Any excess or cruelty on his part will be severely dealt with by the Courts, and should the death of the child result from excessive punishment, the parent would run the risk of being tried for murder. The reasonableness of the punishment inflicted would be a question for the Court, after considering all the circumstances of the case, and would vary with the sex, age, and condition of health of the child.

RIGHTS OF PARENTS OVER CHILDREN'S PROPERTY.

1. REAL PROPERTY. The father, as the natural guardian of his child, will usually control and manage real property belonging to the latter, but he does not enjoy any personal benefit from such management. He is regarded as entering upon the land in the capacity of a bailiff, and must account for the profits when the child comes of age. Should a child possessed of real estate die intestate and without children during the lifetime of his father, the latter will inherit the property. With regard to real estate, a mother entering upon the infant's land would be in the same position as a father; but in case of the death of the child in the circumstances mentioned above, she would only inherit the property in the absence of any paternal heirs.

2. PERSONAL PROPERTY. Generally speaking, a parent has no rights in his children's personal property, the latter belonging to the child, unless it has been made over to guardians for him, and a parent who holds possession of such property will be in the position of a trustee, and subject to the rules ordinarily applicable to that relationship. Some doubt exists as to the rights of parents to money earned by their children, but it is clear that a father cannot claim their earnings after the child is sixteen years old. Before that age he may be entitled to do so, as he is bound to maintain them; and the same rule would apply to the case of a widowed mother with children of a similar age. When a child dies, whatever his or her age, if unmarried and intestate, the father takes the whole of its property. The rights of a mother in such a case are provided for by the Statute of Distributions, and are of a somewhat complicated character. (See *Executors and Administrators.*)

REGISTRATION OF BIRTH. In view of the important consequences which may ensue from a person being unable to state accurately the date and place of his birth, the law casts upon parents the obligation of registering the birth of their children, and imposes penalties for non-compliance with this provision. Personal notification of the birth must be made to the Registrar within forty-two days by the father or mother of the child, or if not by them, then by the occupier of the house where the birth occurred, a person present at the birth, or a person having charge of the child, and the register must be signed in the Registrar's presence by the person giving the notification. If the birth is not registered within three months, additional formalities and fees are imposed, and after twelve months a birth can only be registered by the Registrar General's express authority.

LEGITIMACY OF CHILD. According to English law, legitimacy on the part of a child can only be acquired by its birth in lawful wedlock. The law presumes that the child of a married woman is legitimate. This presumption, however, is not what is called a presumption "juris et de jure," that is to say, one which cannot be rebutted, but it is a presumption of fact rebuttable by the production of clear evidence to the effect that it was impossible on physical grounds, or because of lack of access to the mother, that the husband could be father of the child. Evidence which merely raises doubts on the point will not be sufficient for this, and the onus of proof is upon the person contesting the legitimacy. The lawgivers of England have steadily, from the earliest times, refused to recognize the practice in vogue in many countries of the legitimation of a child born before wedlock by the subsequent marriage of its parents, as far at least as succession on an intestacy to real property in this country is concerned. As regards personal property, however, the rule is not so absolute, the law recognizing the effect of the subsequent marriage to legitimise the children or not according as the laws of the country in which the parents have their domicile of origin sanction or forbid the practice.

LIABILITY FOR MAINTENANCE OF PARENT. Children are not bound by law to support their parents, except under the obligation imposed by the Act of 43 Elizabeth, which provides that the children of every poor, old, blind, and impotent person, being of sufficient ability, shall at their own charges relieve and maintain every such poor person. This obligation, however, does not arise until an order has

been made upon the children by the justices, until which time there is nothing to prevent a millionaire son leaving his parents to starve, nor would he commit any legal offence in doing so. The failure of a child to support his parents is, except under the Act of Elizabeth, not punishable; but parents who fail to support and maintain children under their charge render themselves liable to a prosecution, whether an order for the support of the children has been made against them by the justices under the Poor Law or not.

HOTELS, RESTAURANTS AND BOARDING-HOUSES.

DEFINITIONS. Hotels are for the most part *Inns* in the legal sense of the word, an "Inn" being defined as "a house, the owner of which holds out that he will receive all travellers and sojourners who are willing to pay a price adequate to the sort of accommodation provided." It differs from an alehouse or tavern, which is a mere drinking or refreshment house. Again, a fully-licensed public-house need not, necessarily, be an inn. Further, an inn must be distinguished from a boarding-house. The keeper of the latter receives his boarders by special agreement, making such bargain with them as he chooses. Coffee-houses and Restaurants also have been held not to be "Inns."

> The importance of these distinctions will be appreciated when the duties and responsibilities of an innkeeper are compared with those of the proprietors of boarding establishments, taverns, and restaurants.

INNKEEPER'S DUTY TO HIS GUESTS. The keeper of an inn, as distinguished from the keepers of the other establishments mentioned above, and apart from his duties as a licence holder, is bound by law to receive and afford proper entertainment to every one who offers himself as a guest, if there be sufficient room for him in the inn and no good reason for refusing him, as there would be if he were in such a condition or to conduct himself in such a manner as to be offensive to the other guests. The innkeeper must, also, if he has room, put up the guest's horse and take in his luggage, if the latter is of such a kind as is usually taken in by innkeepers. But the guest must conform to the general rules and regulations of the hotel. He cannot compel the landlord to give him any particular room, nor indeed, if all the rooms are full, can he insist on being allowed to sleep on a sofa in the coffee room. The intending guest must also tender pre-payment if required by the landlord to do so. Should the guest have cause to complain of neglect or non-fulfilment of duty on the part of the innkeeper, proceedings should be taken against the person who is, in point of fact, the keeper of the inn, even though the inn may be in the charge of a fully licensed manager whose name is written over the door. The innkeeper's liability in this respect is criminal as well as civil.

INNKEEPER'S RESPONSIBILITY FOR HIS GUEST'S PROPERTY. Apart altogether from his duties as a licence-holder, an innkeeper—in the strict legal sense of the term—is to a certain extent the assurer of his guest's property. His position in this respect was at common law an extremely unpleasant one; but it has been somewhat improved by statute.

(*a*) At Common Law. The innkeeper is responsible for any loss or damage that may happen to the goods of his guest, whether he has been guilty of negligence or not. But this only happens where the relationship of an innkeeper and guest exists. Thus an innkeeper would not be liable, apart from negligence, for loss or damage to goods that had been left at his inn to wait till called for. However, to establish the legal relationship of innkeeper and guest, it is not necessary for the latter to be staying the night. Thus, if a traveller goes to an hotel for breakfast and is allowed the use of a bedroom to wash in, he would be able to sue the proprietor for the loss of his overcoat. The only defence that would be open to the innkeeper in such an action at common law would be that the loss or damage was caused by the Act of God, or of the King's enemies, or of the guest himself.

(*b*) By Statute. But by the Innkeeper's Liability Act, 1863, the innkeeper's common law liability has, in certain circumstances, been limited to £30, but only if he exhibits in a conspicuous part of the hall or entrance of the inn a complete copy, printed in plain type, of section 1 of the Act.

INNKEEPER'S LIABILITY ACT (Sec. 1), 1863. "No innkeeper shall, after the passing of this Act, be liable to make good to any guest of such innkeeper any loss of or injury to goods or property brought to his inn, not being a horse or other live animal, or any gear appertaining thereto, or any carriage, to a greater amount than the sum of thirty pounds, except in the following cases (that is to say):—

> (1) Where such goods or property shall have been stolen, lost, or injured through the wilful act, default, or neglect of such innkeeper or any servant in his employ.
>
> (2) Where such goods or property shall have been deposited expressly for safe custody with such innkeeper.

Provided always that in the case of such deposit it shall be lawful for such innkeeper, if he think fit, to require as a condition of the liability, that such goods or property shall be deposited in a box or other receptacle, fastened and sealed by the person depositing the same."

RESPONSIBILITY OF A BOARDING-HOUSE KEEPER. The proprietor of a boarding establishment is in a much better position than the innkeeper. He is not an assurer of his guest's property. He would not be responsible unless the loss or damage were occasioned by his own gross negligence or wilful wrong-doing. For instance, if he wilfully engaged as servant a notorious ex-convict with predilections towards theft, and that servant walked off with the property of a guest, the proprietor would, undoubtedly, be liable. He is not, however, bound to take active steps to protect his guest's property. He is not bound to keep his guest's goods continually guarded.

INNKEEPER'S LIEN. The keeper of an inn has one great advantage over the proprietors of boarding-houses and restaurants, inasmuch as he has a *lien* on the property of his guest until his charges have been paid. This lien gives him the power of detaining his guest's luggage or goods until his account has been settled, but it does not extend to the person of the guest, nor to the clothes on his back, nor to the goods in his hands, nor, indeed, to such goods as have been sent by a third party for the convenience of the guest.

> Thus in the case of Broadwood and others *v.* Granara, the plaintiffs lent a grand piano to a professional pianist staying as a guest at the defendant's hotel. The defendant knew that the piano belonged to the plaintiffs, yet he sought to detain it, his bill not having been paid. It was, however, held that he could not do so.

But if the guest has brought the property with him to the hotel, the landlord has a right to detain it, even if it does in fact belong to some one else. Moreover, the *lien* or right of detention is not lost if the guest leaves temporarily meaning to return. If, however, the guest departs with his goods, but without paying his bill, and afterwards comes to the hotel with his goods, on a second visit, the landlord cannot claim to exercise his right of detention in respect of the bill for the first visit.

RIGHT OF SALE. At Common Law the innkeeper had no right to sell his guest's goods to defray his expenses; but this has been altered by the Innkeeper's Act, 1878, which provides that:—

> "The landlord, proprietor, keeper, or manager of any hotel, inn, or licensed public-house shall, in addition to his ordinary lien, have the right absolutely to sell and dispose by public auction of any goods, chattels, carriages, horses, wares, or merchandise, which may have been deposited with him, or left in the house he keeps, or in the coach-house, stable-yard or other premises appurtenant or belonging thereunto, where the person depositing or leaving such goods, chattels, carriages, horses, wares, or merchandise shall be or become indebted to the said innkeeper, either for any board or lodging, or for the keep and expenses

of any horse or other animals left with or standing at livery in the stables or fields occupied by such innkeeper."

But this power of sale is not absolute; before he can exercise it, the landlord has to fulfil the following conditions: (1) He cannot sell until the said goods, etc., have been in his custody six weeks without the debt being paid or satisfied. (2) The debt for the payment of which a sale is made shall not be any other or greater debt than the debt for which the goods or other articles could have been retained by the innkeeper under his *lien*. (3) At least one month before the sale the landlord must insert in one London and in one local newspaper a notice of the intended sale, with a description of the goods and the name of the owner, if known. If the innkeeper finds, after paying the debt with costs and expenses, that there is anything left over from the proceeds of the sale, he must, on demand, hand over such surplus to the owner or depositor of the goods.

PROPRIETOR'S DUTY IN THE INTERESTS OF PUBLIC HEALTH. Under the Public Health Act, 1875, any person who knowingly lets for hire any house, room, or part of a house, in which any person has been suffering from any dangerous disorder, without having such house, room, or part of a house, and all the articles therein liable to retain infection, disinfected to the satisfaction of a legally qualified medical practitioner, as testified by a certificate signed by him, shall be liable to a penalty not exceeding £20. There is a similar provision in the Public Health (London) Act, 1891. It should be noted that these provisions apply equally to innkeepers, boarding-house proprietors, restaurateurs, publicans, and others.

BILLETING TROOPS. Billeting, only legal when exercised in conformity with certain Acts of Parliament, is now rarely resorted to except when His Majesty's forces are actually moving. Under the Army Act the Secretary of State for War is empowered to issue statements specifying the routes over which troops will march, the forces to be moved and the number of officers, soldiers, and horses requiring quarters. On production of this statement (or "route" as it is called) by the commanding officer, the constable in charge at any place mentioned in the route must billet the forces on the occupiers of victualling houses in that place. The term "victualling houses" used in the Act includes all inns, hotels, livery stables, alehouses, the houses of retail sellers of wine, *to be drunk on the premises*, and all houses of persons selling brandy, spirits, strong waters, cider, or metheglin by retail. The keepers of victualling houses, as thus defined, are bound to receive all officers, soldiers, and their horses, and to furnish the officers with lodging and attendance, the men with lodging, attendance, and food, and the horses with stable room and forage. Where the keeper of the victualling house has not sufficient accommodation in his own house, he may provide such accommodation in the immediate neighbourhood as may be approved by the constable issuing the billets. If the keeper of the victualling house attempts to shirk his liability by refusing to take in the officers, troops, or horses billeted on him, or by bribing the constable or any of the officers or men, he is liable on summary conviction to a fine of not less than forty shillings, or more than £5.

The charges for billeting soldiers must not exceed the following amounts:—

Lodging and attendance for each soldier where hot meal is furnished	4d. per night.
Hot meal as specified in the Army Act . .	1/3½ each.
Breakfast ,, ,, ,, . .	1½d. each.
Where no hot meal furnished, lodgings and attendance, candles and vinegar, salt and use of fire and necessary utensils for dressing and eating his meat	4d. per day.
Ten pounds oats, twelve pounds hay and eight pounds straw per day for each horse	1/9 per day.
Lodging and attendance for officer . . .	2/ per night.

NOTE.—An officer pays for his food.

INTOXICATING LIQUORS NOT TO BE SOLD WITHOUT A LICENCE. Any person selling or exposing for sale by retail any intoxicating liquor without being duly licenced to sell the same, or at any place where he is not authorised by his licence to sell the same, is, under the Licensing Act, 1872, liable to a penalty of £50 or to imprisonment (with or without hard labour) for one month; and, in addition, if the court thinks fit, all intoxicating liquor found in his possession may be forfeited. In the case of a second or subsequent offence, the penalties and imprisonment are substantially increased, and the offender may be disqualified for a number of years from holding a licence.

DUTIES OF LICENCE HOLDERS.

1. DISORDERLY CONDUCT. Thus far we have dealt with those duties of hotel proprietors and others which are quite unconnected with their licences. There are, however, a considerable number of duties which devolve upon them as licence-holders. One of these duties is to take steps to prevent drunkenness on the premises. The licence holder must not permit any one to behave in a violent, quarrelsome, or riotous manner, nor may he sell any intoxicating liquor to any drunken person. He must not allow women of questionable character to remain longer on the premises than is necessary for the purpose of obtaining reasonable refreshment, nor may he permit his premises to be used as a house of ill fame.

He can refuse to admit to his premises any person who is drunken, violent, quarrelsome, or disorderly, and, indeed, any person whose presence would subject him to penalties under the Licensing Acts. If such person refuses or fails to quit the premises, when requested to do so, it is the duty of the licence-holder, or his servants, to call a constable to expel him. It is also his duty to refuse to serve or to supply with intoxicating liquor any person on "the black list" within three years after the date of his conviction; but as a person cannot be put on the "black list" without his own consent, this provision is a dead letter.

2. SALE OF DRINK TO CHILDREN. The Legislature has recently taken steps to prevent children and young persons succumbing to the temptations of public-houses. Thus, under the Licensing Act, 1872, every holder of a licence who sells or allows any person to sell, to be consumed on the premises, any description of spirits to any person apparently under the age of sixteen years, shall be liable to a penalty not exceeding twenty shillings for the first offence, and not exceeding forty shillings for the second and any subsequent offence. Again, under the Intoxicating Liquors (Sale to Children) Act, 1901, every holder of a licence who knowingly sells or delivers or allows any person to sell or deliver, save at the residence or working place of the purchaser, any description of intoxicating liquor to any person under the age of fourteen years, for consumption by any person on or off the premises, is liable to a penalty of forty shillings for the first offence, and £5 for a subsequent offence, unless the liquor is sold or delivered in corked and sealed vessels in quantities not less than one reputed pint for consumption off the premises.

The term "corked" used in the Act means closed with a plug or stopper, whether made of cork or wood or glass or some other material. The expression "sealed" means secured with any substance without the destruction of which the cork, plug or stopper cannot be withdrawn.

By the Children's Act, 1908, all children under the age of 14 are excluded from public-house bars.

3. CLOSING HOURS. There are in the Licensing Acts stringent regulations with regard to the times when the sale of intoxicating liquors may be carried on. The principal Act dealing with the subject is the Licensing Act, 1874. The times at which premises licensed for the sale of intoxicating liquors by retail shall be closed are as follows:—

(1) If the premises are within the Metropolitan district.

On Sunday: All day, except from 1 p.m. till 3 p.m., and from 6 p.m. till 11 p.m.

On Saturday night: midnight.

Other days: From half an hour after midnight till 5 a.m.

(2) If the premises are situate beyond the Metropolitan district, but in the Metropolitan *police* district, or in any

town or "populous place" with a population of over one thousand.

On Sunday: All day, except from 12.30 p.m. till 2.30 p.m., and from 6 p.m. till 10 p.m.

On Saturday night: 11 p.m.

On other days: from 11 p.m. till 6 a.m.

(3) If the premises are situated elsewhere.

On Sunday: All day except from 12.30 p.m. till 2.30 p.m., and from 6 p.m. till 10 p.m.

On Saturday night: 10 p.m.

On other days from 10 p.m. till 6 a.m.

Except where Christmas Day immediately precedes or succeeds Sunday, Christmas Day and Good Friday are looked upon as Sundays, and Christmas Eve and the Thursday before Good Friday as Saturday. It is the duty of the licence holder and his servants, during these hours, to keep his premises closed, to refrain from selling or exposing for sale any intoxicating liquor, and to prevent any such liquor being consumed on the premises, even when actually sold before closing time. The penalty for the first offence is a sum not exceeding £10, and for a subsequent offence £20. But the law as to the sale of drink after closing hours does not apply if the liquor be supplied to a *bona fide* traveller, or to persons lodging in the house, or (in the case of a Railway Station) to persons arriving at or departing from such station by rail.

A *bona fide* traveller is defined by the Act to be one who has lodged during the preceding night at a place at least three miles distant (by road, not as the crow flies) from the place where he demands to be supplied with the liquor. In the case of persons arriving at or departing from a railway station, the distance which they have travelled or are about to travel is immaterial.

4. GAMING AND BETTING ON LICENSED PREMISES. Under the Licensing Act, 1872, if any licensed person (1) suffers any gaming or any unlawful game to be carried on on his premises, or (2) opens, keeps, or uses, or suffers his house to be opened, kept, or used in contravention of the Betting Act, 1853, he shall be liable to a penalty not exceeding £10 for the first offence and £20 for any subsequent offence.

The expression "gaming" means the playing at any game for money or money's worth. Therefore, a licensed person may be convicted for allowing his own private friends to play cards for money on his licensed premises. Again, the playing of dominoes for money, or of skittles or "shove-halfpenny" for beer is equally illegal.

An "unlawful game" is one which has been declared by statute to be unlawful. At Common Law no game is in itself unlawful. The unlawful games now are: Ace of Hearts, Pharoah, Basset, Hazard, Passage, Roulet, every game of dice (except Backgammon), and every game of cards which is not a game of mere skill; and, in fact, all other games of mere chance, of which Baccarat is certainly one.

The Betting Act, 1853, forbids that any house, office, room, or other place shall be opened, kept, or used for the purpose of any person betting with other persons resorting thereto; it forbids the exhibiting or publishing of any placard, hand bill, or advertisement announcing that any house, office, room, or other place is opened, kept, or used for the purpose of making bets or wagers; and it also forbids any person, on behalf of the owner of any such place, inviting other persons to resort thereto for the purpose of making bets or wagers.

5. SALE TO BE BY STANDARD MEASURE. The retailer of intoxicating liquor selling it in quantities of half a pint or more, except when it is being sold by the cask or bottle, is bound by law to sell it in measures marked according to the Imperial Standards. The penalty for the first offence is a fine not exceeding £10, and for a second or any subsequent offence £20.

6. INTERNAL COMMUNICATION between licensed premises and houses of public resort. Under the Licensing Act, 1872, every person who makes or uses, or allows to be made or used, any internal communication between any licensed premises and any unlicensed premises which are used for public entertainment or resort, or as a refreshment house, shall be liable to a penalty not exceeding £10 for every day during which such communication remains open, and, in addition to the penalty, if the person convicted is the holder of a licence, he will forfeit his licence.

7 HARBOURING THIEVES. Licence-holders must take care not to harbour thieves on their premises, for under the Prevention of Crimes Act, 1871, every person who occupies or keeps any lodging-house, beer-house, public-house, or other house or place where intoxicating liquors are sold, or any place of public entertainment or public resort, and knowingly lodges or harbours thieves or reputed thieves, or knowingly permits them to meet therein, or knowingly allows the deposit of goods therein, having reasonable cause for believing them to be stolen, shall be guilty of an offence, and be liable to a penalty not exceeding £10, or in default four months' imprisonment, with or without hard labour. He will also be liable to have his licence forfeited.

8. HARBOURING OR BRIBING CONSTABLES. Constables on duty are forbidden to enter licensed premises or to obtain refreshment there unless they do so for the purpose of keeping or restoring order, or in the execution of their duty. If any licensed person knowingly harbours any such constable, or knowingly suffers him to remain on the premises, or supplies him with any liquor or refreshment, whether by way of gift or sale (except by the authority of a superior officer of the constable), the said licensed person commits an offence, and is liable for the first offence to a penalty not exceeding £10, and for a subsequent offence to a penalty not exceeding £20.

9. NAMES OF LICENSED PERSONS TO BE AFFIXED TO PREMISES. Every licensed person must cause his name with the word "licensed" following it to be painted or fixed on his licensed premises, in a conspicuous place, and in such form and manner as the licensing justices may direct. He must also add words sufficient to explain the kind of license he holds. Thus, if he is licensed to sell intoxicating liquors, it must be stated clearly whether the liquor is to be consumed on or off the premises.

LAW RELATING TO CLUBS.

REGISTRATION OF CLUBS. By the Licensing Act, 1902, the secretary of every club which occupies a house, or part of a house, or other premises which are habitually used for the purposes of a club, and in which any intoxicating liquor is supplied to members or their guests, must cause the club to be registered annually in the following manner. Every January the secretary must furnish to the clerk to the justices a return signed by himself giving the following particulars of the Club:—

(1) The name and objects of the club; (2) the address of the club; (3) the name of the secretary; (4) the number of members; and (5) the rules of the club relating to:—

(*a*) The election of members and the admission of temporary and honorary members and guests.

(*b*) The terms of subscription and entrance fee, if any.

(*c*) The cessation of membership.

(*d*) The hours of opening and closing.

(*e*) The mode of altering the rules.

The secretary must at the same time also furnish the clerk to the justices with a signed statement to the effect that there is kept upon the club premises a register of the names and addresses of the club members and a record of the latest payment of their subscriptions. In the case of a new club about to be opened, the secretary must not wait till the following January, but must furnish the return before it is opened.

The fee payable by the secretary on each return is five shillings; and any person may inspect the register on payment of a fee not exceeding one shilling. Police officers and inland revenue officers may inspect it without fee.

PENALTY FOR FALSE RETURNS. The secretary (or, if there is no secretary, the proprietor or any other person performing the duties of secretary) must take care to make

his returns accurate and complete. If he omits to make any return required by the Act he is liable on summary conviction to a fine not exceeding £20, and in case of a second or subsequent offence, to imprisonment with or without hard labour, for a term not exceeding one month, or to a fine not exceeding £50, or to both the imprisonment and the fine. Moreover if the secretary knowingly makes a return which is false in any material particular, he is liable on summary conviction to imprisonment with or without hard labour, for a term not exceeding three months, or to a fine not exceeding £50, or to both.

STRIKING A CLUB OFF THE REGISTER. Where a club has been duly registered, a Court of Summary Jurisdiction has power, on the written complaint of any person, to make an order directing the club to be struck off the register on all or any of the following grounds:—

(1) That the club has ceased to exist, or that the number of its members is less than twenty-five.

(2) That it is not conducted *bonâ fide* as a club, or that it is kept or habitually used for any unlawful purpose.

(3) That there is frequent drunkenness on the club premises.

(4) That illegal sales of intoxicating liquor have taken place on the club premises.

(5) That persons who are not members are habitually admitted to the club merely for the purpose of obtaining intoxicating liquor.

(6) That persons are habitually admitted as members without an interval of at least forty-eight hours between their nomination and admission.

(7) That the supply of intoxicating liquor to the club is not under the control of the members or the committee appointed by the members.

VARIETIES OF CLUBS. Ordinary clubs are of two kinds, proprietary clubs and members' clubs. The members of a "Members'" Club are co-owners therein; not so the members of a proprietary club, who are merely the paying guests (or *licensees* as they are legally called) of the proprietors. Both kinds of clubs may be incorporated in the same manner as an ordinary company under the Companies Acts, and if the profits of the club are to be devoted to promoting the objects of the club and not for the purpose of paying dividends to shareholders the word "Limited" may be dispensed with, and the words "Club," "Association," or "Society" may be used instead of "Company." As for Working Men's Clubs formed for the purpose of social intercourse, mutual helpfulness, moral improvement, or rational recreation, these are treated as Friendly Societies under the Friendly Societies Act, 1896, and are subject to the laws regulating such societies. (Refer to "Friendly Societies" in *Index*.)

EXPULSION OF MEMBERS. Nearly every club is constituted, regulated and governed by rules, which provide for the admission of members, the subscriptions payable, the conduct of the club, and the provisions for the retirement or expulsion of members. No person should be expelled from a club, otherwise than in accordance with the rules, unless a majority of the club has passed a resolution requiring his expulsion. Even then every opportunity should be given to the offender to answer the charges brought against him; and he should on no account be expelled on trivial grounds. Otherwise, the members who have brought about his expulsion may be called upon to defend in an action for damages for wrongful expulsion.

SUPPLY OF INTOXICATING LIQUORS. Where liquor is sold to members of a proprietary club a licence for its sale is required. But this is not the case in a members' club, the members of which are regarded in law not as retail purchasers of the liquor, but as co-owners of all the club's stock of liquors. But, as has been seen above, a club may be struck off the register if it is not conducted in a *bonâ fide* manner, but merely as a place where intoxicating liquor may be had at all times and without a licence.

By the Licensing Act, 1902, it is provided that intoxicating liquor must not be supplied in a club for consumption off the premises, except to a member on the premises, under penalty of £10. A member is therefore entitled to purchase intoxicating drink at his club and to carry it away for consumption at home.

Of course the supply or sale of intoxicating liquor in an *unregistered* club is attended by serious consequences, the offender being liable on summary conviction to imprisonment with or without hard labour, for a term not exceeding a month, or to a fine not exceeding £50, or to both fine and imprisonment

LAW RELATING TO GAME.

The Game Laws are a series of Statutes which have been passed from time to time for the purpose of modifying the old rule of the Common Law which did not recognize any property in wild animals and birds until they had been reduced into possession by being taken or reclaimed, although it recognized the exclusive right of the owner of land to reduce the animals and birds upon it into possession. The Statutes passed have not had the effect of giving the landlord property in the animals and birds on his land whilst they are still *ferae naturae* (in their wild state), and his property in them is still dependent upon their reduction into his possession. Hence a person who unlawfully takes game on the land of another cannot be indicted for larceny, but can only be prosecuted for an offence against the game laws. At the same time the law recognises his exclusive right to kill animals upon his land by imposing penalties upon trespassers in pursuit of game. The Acts also restrict the killing of game by the landlord or any one else during certain seasons of the year, and forbids the destruction of game by improper means and by unlicensed persons.

DEFINITION OF GAME. It is not an easy matter to give a definition of game which will prove satisfactory, for not only does the definition vary in England, Scotland, and Ireland, but it also varies in the Acts relating to different offences in connection with game. It may be convenient to state in a concise way what animals and birds constitute game under the various Acts in force for England and Wales, without attempting to deal with the law applicable in Scotland and Ireland, for which a fuller treatise than the present should be consulted. Briefly put, as defined in the Night Poaching Act of 1828 and the Game Act of 1831, game includes hares, pheasants, partridges, grouse, heath or moor game, black game, and bustards. The Poaching Prevention Act, 1862, includes, in addition to the above, woodcocks, snipe, and rabbits, and the eggs of pheasants, partridges, grouse, and black or moor game. The Game Licence Act, 1860, requires a licence to be obtained for killing the birds and beasts defined as game in the Game Act, 1831, and extends the definition by including deer, woodcock, snipe, quail, landrail, and rabbits.

CLOSE TIME. The sportsman, though possessed of every requisite qualification in the way of licence or permission to shoot, is not entitled to kill or take game at all times. Firstly, he may not do so either upon Sundays throughout the year, or upon Christmas Day, under a penalty of £5; and, secondly, the law has set apart certain periods of the year when game is not to be taken. These latter provisions, so far as relate to England and Wales, are contained in the Game Act, 1831, and, slightly abbreviated, are as follows:—

> And if any person whatsoever shall kill or take any partridge between the 1st day of February and the 1st day of September in any year, or any pheasant between the 1st day of February and the 1st day of October in any year, or any black game (except in the county of Somerset or Devon, or in the New Forest in the county of Southampton) between the 10th day of December in any year and the 20th day of August in the succeeding year, or in the excepted district between the 10th day of December and the 1st day of September; or any grouse between the 10th day of December and the 12th day of August; or any bustard between March 1st and September 1st, every such person shall, on conviction, pay for every head of game so taken such sum of money, not exceeding one pound, as to the justices seems meet, together with the costs of the conviction.

There is no close time for hares except Sunday and Christmas Day, and rabbits may be killed all the year round. Hares, however, under the terms of the Hares Preservation Act, 1892, may not be sold in March, April, May, June, or July. Rabbits and hares may not be killed on moorlands and unenclosed lands between March 31st and December 11th. This does not apply to arable lands.

CLOSE TIME FOR WILD BIRDS. The various Wild Birds Protection Acts contain provisions for the purpose of preventing the slaughter or sale of birds between March 1st and August 1st. The original Act of 1880 contains the names of a large number of birds in a schedule attached to it, and if the offence is committed in relation to a bird, the name of which appears in the schedule, a penalty not exceeding £1 is imposed. In the case of any other wild bird, the offender on a first offence is to be reprimanded and discharged on payment of costs, and for every subsequent offence he is to forfeit 5s. for every bird and costs. An owner or occupier of land, or a person authorized by the owner or occupier, is not affected by this provision so far as it relates to birds not included in the schedule.

Upon the application of a County Council, or the Council of a County Borough, the Secretary of State may extend or vary the time during which the killing of wild birds is prohibited, and may also, on a proper representation being made, extend the provisions of the Act to any bird not mentioned in the Schedule, and may further restrict as regards time, place, and species, the taking of wild birds' eggs, under a penalty of a sum not exceeding £1 for every egg taken.

SHOOTING RIGHTS OF LANDLORD AND OCCUPIER. If a landlord who has let his land to a tenant desires to reserve the right to kill the game upon the land, he must expressly reserve it to himself in the deed creating the tenancy. If this has been done, he is entitled to take proceedings against the occupier or any person claiming permission from him if they destroy the game on the land. Although the shooting may be reserved by the landlord, the Ground Game Act, 1880, gives to the occupier of land, and persons authorized by him, the right to shoot hares and rabbits upon the land, concurrently with the right of the landlord.

NIGHT POACHING. A series of Acts of Parliament, commencing with the Night Poaching Act of 1829, have constituted a number of offences in connection with the unauthorized taking of game. These may be summarized as follows:—

1. It is an offence (punishable on summary conviction by a fine, and if committed three times, a misdemeanour, punishable by seven years' penal servitude) for any person by night (i.e. from the expiration of the first hour after sunset until the beginning of the last hour before sunrise) to take or destroy any game (see definition under Game Act above) or rabbits in any land open or enclosed, or on any public road, highway, or path, or the sides thereof, or at the openings, outlets, or gates from any such land into any such public road, highway, or path.

2. It is an offence similarly punishable to enter or be in any of the above mentioned places with any gun, net, engine, or other instrument for the purpose of taking or destroying game. The owner or occupier of the land, or a person in the possession of a right of free warren, or free chase, or the lord of the manor, or the gamekeeper or the servants of the persons mentioned, or anybody assisting them is entitled to arrest a person committing the above mentioned offences. Violent resistance by a poacher using a weapon of offence is a misdemeanour punishable with seven years' penal servitude.

3. It is a misdemeanour punishable with fourteen years' penal servitude for three or more persons at night to enter or be in any land as above described for the purpose of taking or destroying game or rabbits, if any of them is armed with any gun, cross-bow, firearm, bludgeon, or other offensive weapon. The arrest in this case may be made by any one.

4. It is a misdemeanour unlawfully and wilfully at night to take or kill any hare or rabbit in any warren or ground lawfully used for keeping or breeding hares or rabbits, whether the same be enclosed or not. The punishment for a first offence is three months hard labour, for a second offence six months, and in default of sureties not to offend again, to twelve months additional. For the third offence the punishment may be seven years' penal servitude. If committed by day, this is an offence punishable on summary conviction with a fine of £5. Setting or using a snare or engine for taking hares or rabbits in such a place *at any time* is an offence punishable in the same way as that last mentioned.

TRESPASS BY DAY IN PURSUIT OF GAME OR RABBITS. Any person committing a trespass by entering or being in the day time upon any land in search or pursuit of game, or woodcocks, snipes, quails, landrails, or conies, is liable on summary conviction to a fine not exceeding £2. If five or more persons together commit the offence, they are each liable to a fine of £5.

If any person is found on any land in search or pursuit of game, etc., he may be directed by the owner of the shooting, the occupier of the land, or their gamekeepers or servants, to quit the land, and also to give his Christian name, surname, and place of abode. If he fails to comply with this direction and request he may be arrested and brought before a justice of the peace, who may impose a penalty of £5 and costs. If the offender cannot be brought before the magistrate within twelve hours of arrest he must be discharged, but may be proceeded against upon a summons or warrant. Where any persons to the number of five or more are upon land for the purpose of committing the offence mentioned above, any of them being armed with a gun, and any of them by violence, intimidation, or menace prevents or attempts to prevent any authorized person from requiring them to quit the land or to give their names and addresses, every person so offending and every person aiding or abetting such offender is liable to a penalty of £5.

TAKING EGGS. If any person, not having the right of killing the game on any land, nor having permission from the person having such right, wilfully takes out of the nest, or destroys in the nest upon such land the eggs of any bird of game, or of any swan, wild duck, teal, or widgeon, or knowingly has such eggs in his possession, he is liable to a penalty of 5s. for each egg.

USE OF TRAPS. To protect his land and game an owner or occupier may adopt reasonable and innocent means, but it is an offence punishable with five years' penal servitude to set spring guns or mantraps or similar engines calculated to kill or injure.

USE OF POISON. The Game Act, 1831, prohibits, under a penalty of £10, the putting of any poison on any ground where game usually resort, or on a highway. Any person, including the proprietor of the game or the occupier of the ground, may be proceeded against for the offence.

LICENCES. The licences which must be taken out before game can be killed or sold are regulated, not by the Game Laws, but by the Revenue Laws. [Refer to "Game and Gun Licences" in *Index*.]

FISHING RIGHTS AND PENALTIES.

WHERE THE PUBLIC MAY FISH. The right of fishing in the territorial seas (that is, within three miles of the shore), in creeks, in arms of the sea, and in tidal rivers belongs in general to the Crown as owner of the soil covered with water. In ancient times the Crown occasionally made grants of the exclusive right to fish in certain waters; but by Magna Charta the further making of such grants to the exclusion of the public was declared illegal. Therefore in nearly every tidal river, and in the sea generally, the public has a right to fish. In non-tidal rivers and

lakes the right to fish generally belongs to the owners of the land on each side thereof. Where the land is leased, the right passes to the tenant unless the fishing rights have been leased separately, or are expressly reserved. If the right is leased separately from the land it must be by deed, or the lease will not be binding. In many cases, public highways and bridges pass over private rivers. The public have no right to fish therefrom.

PENALTIES. For the protection of fish and fisheries a large number of Acts have been passed by the legislature, many of them being local Acts which have application to certain rivers only (as the Thames, the Severn, and the Medway), whilst others, as the Salmon Acts and the Freshwater Fish Acts apply to the whole country. These Acts provide for a close time for freshwater fish (Refer to *Close Times* in *Index*), and provide for the infliction on offenders of a fine not exceeding £2 (£5 on a subsequent conviction), and forfeiture of all the fish caught and of the tackle used in catching it.

By the Larceny Act, 1861, the unlawful or wilful taking or destroying of any fish in any water running through or situate in any land adjoining or belonging to the dwelling house of any person being the owner of such water, or having a right of fishery therein, constitutes a misdemeanour punishable by two years imprisonment with or without hard labour if committed at night-time, or to a penalty of £5 if done in the day-time. The taking or destroying of fish on private property other than as above, involves a fine of £5 over and above the value of the fish if done at night, and £2 if done by day.

If the owner of any private fishery or his servant finds an unauthorised person fishing in the private waters he is entitled to seize his tackle; but if this is done, in the case of an unauthorised angler fishing by day-time, then the angler will not have to submit to the further penalty. The stealing or dredging for Oysters in Oyster Fisheries is a felony punishable with penal servitude for five years.

By the Malicious Injuries to Property Act, 1861, whosoever unlawfully and maliciously cuts through, breaks down, or otherwise destroys the dam, floodgate, or sluice of any fishpond, or of any private fishery, with intent thereby to take or destroy any of the fish; or who unlawfully and maliciously puts any lime or other noxious material in any such place with intent to destroy fish, is guilty of a misdemeanour and liable to seven years' penal servitude.

FISHERY BOARDS. Various Acts provide for the establishment of Boards of Conservators having jurisdiction over various rivers with powers to make bye-laws regulating the modes of fishing in such places. Such bye-laws provide for the methods to be employed in the catching of fish, the instruments and tackle to be used, the size of the mesh in nets, and the return to the water of fish below a certain minimum size. Penalties not exceeding £5 and the forfeiture of the tackle may be imposed for the breach of these bye-laws.

LAW RELATING TO DOGS.

Every owner of a dog over the age of six months, with certain exceptions mentioned below, is required by Act of Parliament to obtain from the Commissioners of Inland Revenue a licence authorizing him to keep it, and in default of obtaining such licence, or having such licence and refusing to produce it for inspection when called upon to do so by a proper authority, he renders himself liable to a fine of £5. The duty payable in respect of each dog kept is 7s. 6d. The licence cannot be transferred to any person to whom the dog is transferred.

DURATION OF LICENCE. The prescribed licence (which may be obtained from the Post Office) commences to run on the day upon which it is granted, and expires upon the 31st day of December following. A dog owner, who when visited by an excise officer has no licence in his possession, cannot escape the penalty imposed by taking out a licence later in the day, because the licence only operates from the hour at which it was granted.

DOGS EXCEPTED FROM PAYMENT OF DUTY. No licence is necessary in the case of a dog kept and used solely by a blind person for his or her guidance, and, consequently, such person cannot be rendered liable to any penalty for not having a licence. Dogs which are kept and solely used for the purpose of tending sheep or cattle on a farm or in the exercise or occupation of a shepherd may, to the number of two, be exempted from duty. But a certificate of exemption cannot be granted by the Commissioners of Inland Revenue until the applicant has obtained the consent of a Petty Sessional Court (Dogs Act, 1906). Upon very large sheep farms a further exemption may be obtained for additional dogs according to the number of sheep kept, provided that in no circumstances can exemption be obtained for more than eight dogs on the farm.

LIABILITY OF OWNER FOR ACTS OF DOG. The most important question with regard to dogs, and that which most frequently brings their doings before a court of justice, is concerned with the responsibility attaching to an owner for acts committed by his pet. The rule of law applicable to such a case used to be summarized in popular form by saying that a dog was allowed one bite. This statement, though not entirely accurate, gives a rough idea of the principles upon which the Courts have acted. In order to make an owner liable for the assault committed by a dog upon a person, the law demands that there shall be some evidence of what is called *scienter* on the part of its master, that is to say, it must be proved that he was aware that the dog had a disposition to bite people, although it may not actually have bitten any one.

But such previous knowledge is not required in the case of an attack upon cattle. By the Dogs Act, 1906, it is enacted that the owner of a dog shall be liable in damages for injury done to any cattle by that dog, whether he was aware of the mischievous propensity of the dog or not. And the expression "cattle" in the Act includes horses, mules, asses, sheep, goats, and swine.

DAMAGE TO DOGS. A person is entitled to kill a dog in self defence, and in certain circumstances in defence of his property. Thus, a landowner may kill a dog which is actually chasing sheep or rabbits in a warren, if the act is necessary for the safety of his property, but not otherwise; and a dog in pursuit of game may also be shot by the owner of the game, but not if the bird or animal pursued is out of danger. "All dogs will be shot" is therefore a threatening notice that requires considerable limitation in practice.

DOGS, STRAY AND LOOSE. The Board of Agriculture may prescribe the wearing by dogs, while in a highway or place of public resort, of a collar with the name and address of the owner inscribed on it. Where a police officer has reason to believe that any dog found in a highway or place of public resort is a stray dog, he may seize the dog and retain it until the owner has claimed it and paid all expenses incurred by reason of its detention. But the owner, if known, is entitled to a notice that the dog has been so seized and will be liable to be sold or destroyed if not claimed within seven clear days after the service of the notice.

RAILWAY COMPANIES AND DOGS. Questions of some nicety occasionally arise between Railway Companies and dog owners, particularly when dogs are sent from one place to another unaccompanied by their masters. At Common Law Railway Companies are not common carriers of dogs, which means that unless disposed to do so they could not be compelled to carry them, and if they did so they would not be liable for loss or injury, unless such injury arose from the negligence or misconduct of the company's servants. By Statute, however, a railway company is bound to carry dogs if it has facilities for doing so. The law, nevertheless, does not impose on the company the obligation of an insurer with regard to the animals, and as a consequence the company will only be liable to the owner when a dog is killed or injured as a

result of the negligence or default of the servants of the company.

The latter is, in addition, permitted to make conditions limiting the liability it is prepared to assume; but in order to make them binding upon the public it is necessary, first, that the conditions should be reasonable; and, secondly, there must be a memorandum of the contract between the parties, signed by the consignor of the dog or an agent acting for him. A very usual form of such condition is one which limits the liability of the company to a small fixed sum in respect of the dog, unless the full value of the dog is declared and a certain percentage paid upon the excess value over the sum fixed. If the railway company's officials are so unwary as to allow the dog to be despatched without the condition being signed, the owner can recover the whole amount of his loss, whether he has paid an additional percentage or not.

LAW RELATING TO HORSES.

There is no doubt that the horse has provided more employment for lawyers than any other quadruped. The majority of the questions which come before the Court arise in connection with the sale of horses, and usually arise from the disparity between the dealer's description and the purchaser's experience of the horse's merits.

SALE OF HORSES. The regulations governing the contract for the sale of a horse are comprised in the Sale of Goods Act, 1893, and may be briefly summarized as follows: If the value of the horse is under £10 and the sale is completed at the time, the contract may be made verbally. If the horse is of the value of £10 or upwards, then to make the contract binding the buyer must either actually receive and accept it; give something in earnest to bind the bargain or in part payment of the price; or the parties to be charged under the contract must either themselves, or by their agents, make and sign some note or memorandum in writing.

Where the vendor of a horse has done all that has to be done between himself and the purchaser, and the contract is for an immediate sale, the property in the animal at once vests in the vendee, the consequence being that if the horse is destroyed or injured without the fault of the vendor, the loss falls upon the purchaser.

WARRANTIES ON THE SALE OF A HORSE. A common incident in a contract for the sale of a horse is the giving of a warranty by the vendor as to its health, character, age, and the like; and it is in connection with such warranties that questions of some difficulty frequently arise. In law, there is an implied condition on the part of the seller that he has a right to sell the goods he is offering for sale; but in the case of a horse there is, in default of arrangement between the parties, no other warranty implied. It may be stated as a wise general principle that it is inadvisable for the seller of a horse to make any warranty regarding it at all if he can avoid doing so. This is not an easy matter as a rule, because a prudent purchaser will do his best to extract from the vendor a definite warranty, the breach of which will give him a cause of action. Perhaps the most satisfactory arrangement is for the vendor to refrain from giving a warranty and for the purchaser to have the horse examined by a veterinary surgeon before he agrees to accept him. Of course, if the purchaser can secure a warranty with the animal it is so much the better for him, for as a learned authority says: "A man should have a much more perfect knowledge of horses than falls to the lot of the most of men, and a perfect knowledge of the vendor too, who ventures to buy a horse without a warranty." A vendor who desires to protect himself should definitely profess not to warrant, and should not be betrayed, in his desire to bring about a bargain, into making statements which may be construed into a warranty. A verbal warranty will be good unless the contract is reduced to writing, but if this is done, nothing which is not found in the contract will be held to be a part of it.

WARRANTY OF SOUNDNESS AND FREEDOM FROM VICE. This is the most common form of warranty on the sale of a horse, and many hundreds of cases have been decided on the questions of what constitutes unsoundness and vice respectively. A minute examination of these decisions is impossible in a limited space, but the principle upon which the Courts have proceeded is admirably summed up by Baron Parke in an old case. With regard to unsoundness, he says:

> "The rule as to unsoundness is that if at the time of the sale the horse has any disease which either actually does diminish the natural usefulness of the animal, so as to make him less capable of work of any description, or which in its ordinary progress will diminish the natural usefulness of the animal; or if the horse has either from disease or accident undergone any alteration of structure that either actually does at the time, or in its ordinary effects, will diminish the natural usefulness of the horse, such a horse is unsound."

The same learned judge in discussing the question of vice in a horse said that vice might either be shown in the temper of the animal (e.g. biting or kicking), or might be a habit decidedly injurious to its health (e.g. crib biting) and tending to impair its usefulness. Whether a particular horse is sound and free from vice is a question for the decision of the jury under the direction of the judge. (See "Warranty" under *Sale*.)

HIRING OF HORSES. In connection with the hiring of horses certain liabilities are incurred:—

(*a*) **Liability of Owner to Hirer.** If a person hires a horse from its owner, the latter impliedly warrants that it is fit for the purpose for which it is required, e.g. a horse hired to make a particular journey is warranted by the owner to be fit and competent to undertake it.

(*b*) **Liability of Hirer to Owner.** The general principle may be stated as follows: A hirer of a horse who treats the animal and manages it as a man of ordinary prudence would treat and manage his own horse will not be responsible for any damage which the horse may suffer. If, however, a person who hires a horse for a particular purpose uses it without the owner's consent for some other purpose, and injury to the horse ensues, he will be liable; and the same applies if he hires it for a particular time and keeps it beyond that period and the horse is injured. If a horse is stolen when in the hirer's possession, and owing to his negligence, he will be liable for its value to the owner. The latter, however, must bear the loss occasioned by any accident to the horse while it is being properly used by the hirer.

(*c*) **Liability of Owner to Third Parties.** Cases of difficulty frequently arise as to the incidence of liability when injury is done to third parties by a horse or horse and carriage let by its owner to some one else. In such cases it is always a question for the jury whether the driver of the carriage is acting as the servant of the hirer or of the owner. If, for instance, the owner of a carriage hires horses from a jobmaster, who also provides a driver, the jobmaster would be liable for any accidents resulting from the driver's negligence, because he is the jobmaster's servant; but if the driver were the servant of the hirer, then the hirer would be liable.

BORROWING HORSES. The contract of borrowing being usually entered into for the exclusive benefit of the borrower, an extraordinary degree of care is exacted from him by the law, and, consequently, he is responsible if injury results from a very slight amount of negligence on his part. The contract is personal to the borrower, and so he is not permitted to allow any one else to use the thing lent. If loss ensue when the thing lent is being used in the way contemplated when the loan was made, the owner must bear the loss; but if the borrower uses it in a different way, he is responsible. If a borrowed horse dies of disease, the borrower is not liable.

STOLEN HORSES. Horse stealing is a felony punishable by penal servitude for a period not exceeding 14 years. As a general rule, the purchaser of stolen goods acquires a good title to them if they were purchased in market overt, but in the case of a stolen horse a somewhat stricter practice prevails. A *bona fide* purchaser for value of a

stolen horse sold at a fair or in market overt will not acquire property in the horse unless certain statutory formalities have been complied with. The horse must be exposed in open market for one hour between 10 a.m. and sunset, and an accurate description of the vendor, buyer, horse, and terms of the contract must be entered in the book of the bookkeeper of the market. Even if these formalities are complied with, the owner is not divested of his right of possession, and upon proof that the horse has been stolen, he can recover it within six months by proceedings before a magistrate, and after tendering to the person in whose possession it is the price he paid for it in market overt. If the horse has been sold not in market overt, the owner may resume possession of it wherever he finds it.

ILL-TREATING HORSES. The offence of killing, maiming, or wounding a horse, if maliciously committed, constitutes a felony punishable by not more than 14 years' penal servitude. The administering of poisonous drugs to a horse by unqualified persons without the knowledge or consent of the owner is an offence punishable by fine or imprisonment. By the Cruelty to Animals Act, 1849, any person cruelly beating, ill-treating, over-driving, over-riding, abusing, or torturing a horse or other animal, is liable to a fine not exceeding £5 or imprisonment.

SLAUGHTERING HORSES. It is provided by the Act last mentioned that a horse brought to a knacker's yard to be slaughtered must be killed within three days, and in the meantime must be provided with sufficient food and water under a penalty of £5. Any person keeping or using or acting in the management of such yard who uses such a horse, or allows it to be used for any work, or any person found using it, or in possession of it while being worked, is liable to a penalty of 40s. a day.

N.B.—No person licensed to slaughter horses is permitted to be a dealer.

MOTOR CARS AND MOTOR CYCLES.

The law relating to motor cars and motor cycles is governed by the Motor Car Acts, 1896 and 1903. The latter Act is of peculiar interest to motorists, and expires at the end of 1909, unless renewed by Parliament.

SPEED LIMITS. Any person driving a motor car to the public danger is liable for the first offence to a fine not exceeding £20, and for a subsequent offence to a fine not exceeding £50, or to imprisonment not exceeding three months. If a person so driving refuses to give his name and address, or gives a false name and address, he is liable to the same punishment.

In no case must the speed on a highway exceed 20 miles an hour, and in certain specified places 10 miles an hour. The penalty for a first offence is a fine not exceeding £20, and for a subsequent offence not exceeding £50. A person cannot on the evidence of one witness be convicted for exceeding 20 miles an hour. At the time of committing the offence, or within twenty-one days afterwards, the offender must be notified that it is intended to prosecute him, otherwise he cannot be convicted.

DUTY IN CASE OF ACCIDENT. If a motor car causes an accident to any person, or to any horse or vehicle, the driver of the motor car must stop, and, if required, give his name and address, and the name and address of the owner. Failure to do this involves for the first offence a penalty not exceeding £10, for a second offence a fine not exceeding £20, and for a subsequent offence a fine not exceeding £20 or a month's imprisonment.

REGISTRATION OF MOTOR CARS AND MOTOR CYCLES. Every car must be registered, and must bear a mark indicating its number and the County Council with which it is registered. The fee for registration is £1, but in the case of motor cycles it is five shillings. The penalty for using a car without being registered, or using a car the mark on which is obscured or defaced, is for a first offence a fine not exceeding £20, and for a subsequent offence a penalty not exceeding £50 or three months' imprisonment. It is a good defence to prove that the defendant has taken all steps reasonably practicable to prevent the mark being obscured.

LICENCE OF DRIVERS. Every person driving a motor car must have a licence, the fee for which is five shillings. The licence is good for twelve months, and must be produced by the driver when demanded by a police constable, otherwise the driver is liable to a fine not exceeding £5. No person under the age of seventeen years can obtain a licence, but in the case of motor cycles the age limit is fourteen years.

Any person who, without being licensed, drives a motor car, is liable to a fine not exceeding £20 for a first offence, and for a subsequent offence to a penalty not exceeding £50 or three months' imprisonment.

For any offence for which the punishment may be three months' imprisonment, a driver may have his licence suspended for such time as the Court thinks fit, and if the driver does not hold a licence, may declare him disqualified for obtaining a licence. The same rule applies to any offence in connection with the driving of a motor car, except where it is a first or second offence in exceeding the speed limits. If any person applies for or obtains a licence during the period of his disqualification, he is liable for the first offence to a fine not exceeding £20, and for a subsequent offence to a penalty not exceeding £50 or three months' imprisonment. Any person whose licence has been suspended must within a reasonable time produce his licence to have that fact indorsed on it, otherwise he shall be liable to the penalties mentioned in the preceding paragraph.

REGULATIONS AS TO LIGHTS, BELLS AND HORNS. During the period between one hour after sunset and one hour before sunrise, the person in charge of a motor car must carry attached thereto lamps so constructed and placed as to exhibit lights in accordance with the regulations of the Local Government Board. Moreover, all motor cars must carry bells or other instruments capable of giving audible and sufficient warning of their approach. The penalty is a fine not exceeding £10.

FORGERY OF IDENTIFICATION MARK OR OF LICENCE. For the first offence a fine not exceeding £20, and for a subsequent offence a penalty not exceeding £50 or three months' imprisonment.

APPEALS. A person who has been fined more than twenty shillings, or who has been declared disqualified for obtaining a licence, may appeal against the conviction to the Court of Quarter Sessions.

EXCISE DUTIES. A person employed to drive a motor car is a "male servant," and the employer is liable to an annual duty of ten shillings in respect of such driver.

For rates of duty on Motor Cars, see page 681.

TAXES, DUTIES AND LICENCES.

1.—DEATH DUTIES.

In dealing with these duties, it should be remembered that the same property does not pay both succession duty and legacy duty. The succession duty was created to meet cases where legacy duty could not be levied. In some cases it is a very difficult question as to when succession duty is payable. Estate duty is payable when property passes on the death of a person, but where under a settlement of property estate duty has been once paid, that duty cannot be again levied until the property comes into the hands of a person who is competent to dispose of it as he pleases, a power which a person taking under the settlement does not possess. A special duty called "settlement" duty is charged on estates which escape death duties during the continuance of a settlement. By the Finance Act, 1909-10 this duty has been raised from 1 to 2 per cent.

This duty, since 1894, is leviable on both real and personal property, and so far as personal property is concerned, it takes the place of the old probate duty. It is levied on all property in which some person's interest ceases on that person's death, or on the death of some other person. In the case of a person domiciled in this country, all his personal property, wherever situate, is liable to estate duty, but his realty and leaseholds situated abroad are not liable to the duty. Where a person is domiciled abroad, all his realty and personalty in this country is liable to estate duty.

PROPERTY LIABLE TO ESTATE DUTY. The property of the deceased which is liable to duty consists of (1) property of which he had full power to dispose, and (2) property over which he had no power of disposition, of which the best example is settled estates. In order to prevent evasions of estate duty, gifts made by the deceased within three years before his death will be liable to the duty. This period was extended from one to three years by the Finance Act, 1909-10, but the new rule does not apply to gifts made before April 30th, 1909. Gifts made for public or charitable purposes, in consideration of marriage, or which are proved to the satisfaction of the Commissioners to have been part of the normal expenditure of the deceased to be exempted, also those of less than £100 in value. In the case of gifts made more than three years before death, they will also be liable to duty if the giver retained any interest or benefit out of the property given.

EXEMPTIONS FROM ESTATE DUTY. In the case of settled property, if the duty has once been paid, then no further estate duty is payable until the property comes into the hands of a person who is competent to dispose of it. Suppose A, by his will, settles property on B for life, then to C for his life, and then on the death of C the whole property is to go to D. Here estate duty will be paid on A's death, and will not again be payable until D's death. There is also exemption from estate duty in the following cases:—

(1) Where the deceased held the property as trustee.
(2) Property which has been sold by the deceased for a full money consideration.
(3) Property of common seamen, soldiers, and marines dying in the King's service.
(4) Estates under £100.
(5) Advowsons and church patronage.
(6) Annuities not exceeding £25 purchased by the deceased, and payable on his death to some other person.
(7) Pensions payable by the Indian Government to the widows and children of persons in the Civil Service of India.
(8) Property settled by a husband on his wife, or *vice versa*, which reverts to the donor for his or her life, on the death of the person to whom the property was given.
(9) Pictures, prints, books, manuscripts, works of art or scientific collections as appear to the Treasury to be of national, scientific, or historic interest, and to be given or bequeathed for national purposes, or to any university, or to any county council or municipal corporation. This exemption holds good only so long as the property remains unsold, or until it comes into the hands of a person competent to dispose of it.

VALUATION FOR PURPOSE OF DUTY. The value at which the property is valued is its market value; but in the case of agricultural property, the value is not to exceed twenty-five years' purchase. From this value may be deducted a reasonable amount for funeral expenses, and if the personal property is situate abroad, the expenses of administering it, or realising it up to five per cent., may be deducted. Again, if duty on the property has been paid in a foreign country, such duty may be deducted.

RATE OF DUTY. The rate at which estate duty is charged is a rate increasing according to the *aggregate* value of the whole estate, and is as follows. Where the principal value of the estate exceeds

£100	and does not exceed	£500	the rate is	1 per cent
£500	„ „	£1,000		2 „
£1,000	„ „	£5,000		3 „
£5,000	„ „	£10,000		4 „
£10,000	„ „	£20,000		5 „
£20,000	and does not exceed	£40,000	the rate is	6 per cent
£40,000	„ „	£70,000		7 „
£70,000	„ „	£100,000		8 „
£100,000	„ „	£150,000		9 „
£150,000	„ „	£200,000		10 „
£200,000	„ „	£400,000		11 „
£400,000	„ „	£600,000		12 „
£600,000	„ „	£800,000		13 „
£800,000	„ „	£1,000,000		14 „
£1,000,000				15 „

PAYMENT BY TRANSFER OF LAND. By the Finance Act, 1909, estate, succession or settlement estate duty on land may be paid wholly or partly by land upon agreement with the Commissioners. No stamp duty will be payable on any conveyance or transfer of land to the Commissioners in this way. The Commissioners may hold any property so transferred to them and deal with it in such manner as Parliament may hereafter determine.

BY WHOM THE DUTY IS PAYABLE. In regard to personal property, the duty must be paid by the legal personal representative, i.e. by the executor, where there is a will, or if the deceased has died intestate, by his administrator. The executor may pay duty on any property which by the will is under his control, and as all freehold property now comes into the hands of the legal personal representative (i.e. the executor or the administrator), the duty on freeholds may be paid by him. The legal personal representative may also pay duty on property not under his control where the persons responsible for payment of the duty ask him to do so. The duty on the personal estate is payable out of the residuary personal estate, but in the case of lands left by will, though the duty may be paid out of the residuary personal estate as a matter of convenience, yet the amount so paid is recoverable out of the lands.

The legal personal representative of the deceased has to pay the duty for which he is accountable when he has delivered his accounts with the affidavit to the Inland Revenue Authorities, or at the expiration of six months from the death of the deceased, whichever happens first. Until the duty is paid interest at the rate of three per cent. will be charged on the amount of the duty. In the case of real property, the duty may be paid in eight equal yearly instalments, or sixteen half-yearly instalments, with interest at three per cent. per annum from the date at which the first instalment is due. And the first instalment is due at the expiration of twelve months from the death.

In cases where the legal personal representative is not responsible for payment of the duty, e.g. where the property is not personal property of which the deceased had power to dispose, the persons responsible for payment of the duty are the persons to whom the beneficial interest in the property passes; or trustees of such property, or others who have an interest in or who manage the property; but a person who has purchased the property for value will not be responsible for the duty.

PROPERTY LIABLE TO LEGACY DUTY. This duty is only leviable on property coming to a legatee claiming under a will, or on the share of the personal property which goes to the next of kin where the deceased has died intestate. Legacy duty is also payable on a *donatio mortis causa*, i.e. a gift made by the deceased in contemplation of his death. Legacy duty is payable only in regard to personal property, and not even on all kinds of personal property. The personal property which is subject to legacy duty comprises the following:—

(1) Money, chattels, investments, and the like.
(2) Real property, which at the time of death is regarded by equity as personal property, e.g. real property belonging to a partnership in which the deceased had an interest.
(3) Money directed to be applied in the purchase of real property, until such purchase is actually made.

PROPERTY NOT LIABLE TO LEGACY DUTY. In the two following cases, personal property will not pay legacy duty, but will be subject to succession duty: (1) Lease-

holds, (2) Moneys arising from a sale of the real property where the sale is ordered by the will, or moneys charged by will upon real estate, but only where the testator died on or after 1st July, 1888.

RATE OF LEGACY DUTY. The duty is a percentage on the value of the legacy given under the will, or on the amount coming to the next-of-kin in case the deceased died intestate. The percentage depends on the relationship existing between the deceased and the person who takes as his legatee or as his next-of-kin.

(1)	Where the legatee or the next of kin is a lineal ancestor or descendant of the deceased	1 per cent.
(2)	Where the legatee or the next of kin is a brother or a sister, or a descendant of a brother or sister	5 „ „
(3)	Uncles and aunts of the deceased, or their descendants	10 „ „
(4)	Great-uncles and great-aunts of the deceased, and their descendants ..	10 „ „
(5)	All other persons	10 „ „

Where a legatee has before the testator's death married a person whose relationship to the deceased is nearer than his or her own, the rate is reduced to that which the person of such nearer relationship would have been charged had he or she been the legatee.

EXEMPTIONS. In the following cases no legacy duty is payable:—

(1) Legacies for the benefit of the Royal Family.

(2) Legacies of books, prints, and other specific articles, given to a public body for preservation and not for sale.

(3) Specific legacies (e.g. a horse, a ring, a chair, and the like, but not money) under the value of £20.

(4) Where the value of the personalty does not amount to £100.

(5) Plate, furniture, pictures, and the like, not yielding income, given to different persons in succession, are not liable to duty until they come into the hands of a person who has power to dispose of them.

(6) Legacies to lineal ancestors or descendants, if the property is such that it is liable for estate duty. Nor is legacy duty payable in respect of settled property which has paid estate duty since the date of the settlement.

(7) Where the net value of the real and personal property of the deceased (exclusive of property settled otherwise than by will) does not exceed £1,000, if the property is such that it is liable for estate duty.

NOTE.—The Legacy and Succession Duty of 1 per cent. payable by lineal heirs under earlier Acts, but which was since repealed, has been restored by the Finance Act, 1909—10, and is now also payable by the husband or the wife of the deceased. Exemptions are granted when the principal value of the property chargeable with duty does not exceed £15,000, on legacies not exceeding £1000, or £2000 in the case of a widow or child under 21 years of age.

DUTY, WHEN PAYABLE. The duty is due at death, but is payable on the value of the gift at the time when the duty is paid; thus, a legacy of shares in a company which are worth £4 per share on the death of the testator, if they rise, say to £5 per share at the time the duty is actually paid, such duty will be paid on the increased value. Where the legatee is absolutely and immediately entitled to the legacy, the duty is paid by the executors prior to paying the legatee, and is deducted from the legacy.

MISCELLANEOUS POINTS. The executor is primarily liable for the duty, except in the cases where a legacy is settled on certain persons in succession, so that the legacy passes out of the control of the executor. In these and in some other cases the legacy duty is paid by the trustees to whom the legacy is transferred.

It should be remembered that personal property, devolving under a will, will be liable to legacy duty if it comes to the person receiving it as an act of bounty on the part of the testator. Thus, if a testator by his will releases a debt due to him, such debtor is liable to legacy duty on the amount of the debt.

Where through mistake the proper amount of duty has not been paid, the executor must pay the proper amount with interest, and will receive in return the amount originally paid as duty. If too much duty has been paid, the Revenue Authorities will repay the difference between the amount paid and the amount actually due.

PROPERTY LIABLE TO SUCCESSION DUTY. This is a duty payable by a person who gratuitously acquires property by reason of the death of another person. Such property includes real and leasehold property situate in the United Kingdom, and personal property which is not subject to legacy duty.

RATE OF SUCCESSION DUTY, same as for Legacy Duty.

EXEMPTIONS. No succession duty is payable under the following circumstances:—

(1) Where the whole value of the property does not exceed £100.

(2) Where the net value of the property does not exceed £1,000, and the estate duty or the legacy duty has been paid.

(3) Policies of life insurance.

(4) Where legacy duty has been paid.

(See also note on Legacy and Succession Duty of 1 per cent.)

2. LAND TAX.

ITS NATURE AND INCIDENCE. The Land Tax in its present form dates from 1689. It was imposed in place of a number of ancient taxes which have become obsolete. It is levied on manors, houses, land, quarries, mines, ironworks, parks, woods, fishings, tithes, tolls, annuities, etc.

In the case of houses let to tenants, the tenant pays the tax in the first instance; but he is entitled to deduct the amount so paid from his rent, unless he has, by the terms of his lease or agreement, agreed to bear the charge himself, or unless he has agreed to pay "all rates and taxes" without excepting the land-tax. The tenant should remember to deduct the tax from the very next payment of his rent; for he will not be entitled to deduct it from any rent other than the current rent. If the tenant by paying a premium gets the property at less than a rack-rent (i.e. a rent equal to the full annual value of the property), he will have to bear a portion of the tax with his landlord. Where there is a dispute between the landlord and tenant as to the amount of the deduction, or as to the share of the tax to be borne by each, the matter should be referred to the Land Tax Commissioners. The Finance Act, 1896, provides that the tax shall be at a rate not exceeding one shilling in the pound on the annual value of the property. There exist certain exemptions from the payment of Land Tax: Thus by the Finance Act, 1898, persons whose incomes do not exceed £160 are exempt from the whole of the tax, and those whose incomes do not exceed £400 are exempt to the extent of one-half. Again, Crown property, universities, and certain schools, hospitals, and charities are also exempt from the payment of land tax.

REDEMPTION OF LAND TAX. Several Acts provide for the redemption of the Land Tax by the owner of the property which is subject to the tax. Tenants holding at a rack-rent and tenants holding under the Crown, may not redeem the tax, but all other persons who have a legal estate or interest in the property may contract for its redemption.

LAND VALUES DUTIES.

1. INCREMENT VALUE. The Finance Act, 1909-10, imposes an increment value duty on land. Increment value is defined as the amount by which the site value of the land on the occasion on which increment value duty is to be collected as ascertained in accordance with the Act, exceeds the original site value of the land as ascertained in accordance with the general provisions of the same Act as to valuation. The duty is levied at the rate of one pound for every complete five pounds on increase in the site value of land accruing after April 30th, 1909. It is payable whenever land is sold or let on lease for more than 14 years, and whenever the property changes hands

upon the death of the owner. Increment values on land held by Corporations, which is not liable to death duties must be paid every fifteen years beginning from 1914.

EXEMPTIONS.—Agricultural Land while that land has no higher value than its market value at the time for agricultural purposes only. Small houses or properties, owners, occupations, or holders of 50 years' leases, where the annual value of the house does not exceed in London £40, in a borough or urban district with a population of 50,000 or upwards, £26; in the case of a house situated elsewhere, £16.

Agricultural land occupied and cultivated by the owner where the total amount together with any other land belonging to the same owner does not exceed 50 acres, and the total value does not exceed £75 per acre; Recreation grounds held by any body, corporate or incorporate, without any view of profit; Crown lands; Flats and separate tenements.

On the first occasion of the collection of increment duty, a reduction of the increment value by an amount equal to 10 per cent. of the original site value of the land will be allowed, and on any subsequent occasion a reduction by an amount equal to 10 per cent. of the last site value, but these reductions not to amount to more than 25 per cent. of the site value in any period of five years.

2. **REVERSION DUTY** is a duty payable by the lessor on the determination of a lease of land in the form of a tax of £1 for every £10 on the increased value of the land accruing to the lessor at the time of the determination over and above its value at the time of the original grant of the lease, subject to the deduction of any part of the total value, which is attributable to any works executed or expenditure of a capital nature incurred by the lessor during the term of the lease, and of all compensation payable by such lessor at the termination of the lease.

EXEMPTIONS.—Reversions purchased before April 30th, 1909, under leases which determine within 40 years of that date. Leases of agricultural land; Leases not exceeding 21 years; When a fresh lease is granted before the expiration of the original lease, by agreement between the lessor and lessee, which extends at least 21 years beyond the date on which the original lease will have expired. An allowance of 2½ per cent. of duty for each unexpired year is made up to 50 per cent. of the whole duty. Allowance is also made where Increment Value duty has been paid for the same benefit.

3. **DUTY ON UNDEVELOPED LAND.** The Finance Act, 1909-10, imposes a tax of one halfpenny in the £ on the site value of undeveloped land payable by the owner of any land which has not been developed by the erection of dwelling-houses or of buildings for the purpose of any business, trade, or industry other than agriculture but including glass houses or greenhouses, or is not otherwise used bona fide for any business, trade or industry other than agriculture.

EXEMPTIONS.—Where the site value of the land does not exceed £50 an acre, (in the case of agricultural land of which the site value exceeds £50 an acre, duty is only charged on the amount by which the site value of the land exceeds the value of the land for agricultural purposes); Public parks, gardens or open spaces; Woodlands, parks, gardens, or open spaces to which the inhabitants of the locality have reasonable access, where in the opinion of the Commissioners that access is of public benefit; Land which is kept free of buildings in pursuance of a definite scheme of development with the approval of the Commissioners; Land used as recreation grounds under not less than a five years' agreement; Land not exceeding one acre with dwelling-house, and garden up to five acres with dwelling-house when the site value of grounds and house does not exceed twenty times its annual value. Agricultural land held under lease or agreement before April 30th, 1909, until tenancy ends; Agricultural land occupied and cultivated by the owner, if total value of all land owned by him does not exceed £500.

4. **MINERAL RIGHTS DUTY.** By the Finance Bill, 1909-10, an annual tax of one shilling in the £ is charged on the rental value of all rights to work Minerals and of all Mineral Way-leaves, excepting Common Clay, Common Brick Clay, Common Brick Earth, Sand, Chalk, Limestone and Gravel.

3. INCOME TAX.

ITS ORIGIN AND NATURE. This tax was first imposed in 1798, and affects a much larger number of persons than any other direct tax. The Act of Parliament which instituted the tax was entitled "An Act for granting to his Majesty an aid and contribution to the prosecution of the war." Thus it is clear that it was the intention of that Parliament that the new levy was to be regarded as a War Tax and not as a permanent source of revenue. Even now the tax depends for its continued existence upon an annual statute. Failing the passing of a new Act in any year, the Income Tax payer would escape for that year. From 1798 to 1816 (with the exception of one year) the tax was levied annually, but in that year it ceased and was not re-imposed until 1842. At that time Parliament did not regard it as a War Tax, but for the purpose of making up the revenue necessary to meet the expenditure of the government on reforms, which were initiated with a view to benefiting the commerce and manufactures of the kingdom. In 1853 a more comprehensive view of the financial question involved was taken, and Parliament imposed the tax for seven years, the rate during this period to be decreased from 7d. to 5d. in the £, and then to cease altogether. But in 1854 war with Russia broke out and the tax was doubled, so that when 1860 came (the year in which it was proposed to abolish the tax) a charge of 10d. in the £ was made. Since that year the tax has been annually levied, the rates and incidence varying from time to time. The Finance Act, 1909-10, makes important changes, raising the rate on unearned incomes and on earned incomes of over £3,000 to 1s. 2d. in the £, imposing a super Tax on incomes exceeding £5,000, and granting abatement to parents with incomes not exceeding £500 in respect of each child under 16 years of age.

THE INCIDENCE OF THE TAX. For the purposes of the Income Tax Acts and various kinds of profits are classified under Schedules, and these Schedules are distinguished one from the other by the letters, A, B, C, D, and E. What is commonly known as "Property Tax" is really Income Tax, levied under the authority of the Income Tax Acts on incomes arising from lands and houses, and assessed in accordance with the provisions of Schedule, A and B.

SCHEDULE A.—LANDS AND HOUSES.—A LANDLORD'S TAX. Under this Schedule the *owner* of land or houses is taxed. Ownership, irrespective of occupation, is the test of liability, so far as this part of the Act is concerned. The occupier of the property unless the annual value is less than £10) is liable to pay the tax in the first instance; but if the occupier is not the owner, then the tax can be recovered from the owner by the occupier, who is authorised by law to deduct the amount paid as tax from the next rent which falls due to the owner. The basis of the assessment for the purposes of this Schedule is the gross annual value, but deductions are allowed from this value to the extent of one-sixth in the case of tenements and houses, and to the extent of one-eighth in the case of lands. Owners can obtain entire relief from the payment of this tax if the taxable property (land or tenements) is untenanted. Further, it is permitted to grant to an owner an abatement in respect of tax, if he has for any period abated a portion of the rent. Crown property, landed property in the occupation of servants of the Crown for the purposes of the Crown, buildings used as Courts of Justice, property held in trust for charitable purposes, hospitals, public schools, almshouses, literary and scientific institutions, public libraries, University buildings, and property belonging to registered Trade Unions are not taxable under the provisions of this Schedule.

SCHEDULE B.—OCCUPATION OF LANDS.—AN OCCUPIER'S TAX. For the Tax under Schedule A, the landlord is eventually liable, although in the first instance it is paid by the occupier, but the tax levied under this Schedule (B) is an occupier's tax, and is a charge made upon any profits accruing to him and arising out of his occupation of the land. Thus the same person, if he own as well as

occupy a farm, will be liable to pay tax in connection with that farm under this Schedule as well as under Schedule A. The profits made by a nurseryman or market gardener are assessed in the ordinary way on the actual profits made, and in the case of farms, the tax *may* be assessed in the same way, provided the farmer gives notice to the Surveyor of Taxes on or before the 5th of June. Else the gross annual value of the land is ascertained, and one-third of that value is regarded as the amount of profit, and upon this the tax is levied. If the occupier's profits fall below one-third of the annual value, he can appeal (for the method, see *Appeals* below) and pay only on the profits actually realised.

SCHEDULE C.—INTEREST, DIVIDENDS, ETC. Under this Schedule, Income Tax is claimed upon all profits arising from interest, dividends, annuities and shares of annuities payable to any person, body corporation, company, or society out of any public revenue. This includes any sum payable out of the revenue of any colonial or foreign government. The mode of assessing and collecting this tax differs from that under the other Schedules. Instead of being collected from the taxpayer, it is deducted from the amount payable by the person or body whose duty it is to pay the interest, dividend or annuity. That person or body pays to the Exchequer the amount so deducted.

Take the common instance of Consols, interest on which is paid (quarterly) by the Bank of England. The ordinary holder of consols is never paid a full year's interest, but always less the tax, except when the half-yearly dividend does not amount to 50s. Many a small holder pays this tax unnecessarily, for if his income is below £160, he can obtain repayment of the amount deducted by the Bank of England, and in any case he should reckon the amount of tax paid on his dividends, and deduct it from the amount payable on the total income.

SCHEDULE D.—SALARIES, WAGES, AND ALL OTHER PROFITS. This Schedule is most comprehensive in its terms and effect. The amount upon which tax is leviable is ascertained in the first instance by a return made by the taxpayer. This return has to be made annually, and default in so doing renders the defaulter liable to a penalty of £20 and treble the duty chargeable, or to be surcharged. In the case of ordinary trades and professions, the average profits for the last three years form the basis of the assessment; if the business is new, then the average yearly profit since its commencement, or the calculated profit for the year. Mining profits are based on a five-yearly average. Allowance can be claimed for repairs of premises, bad debts actually written off, cost of renewing tools, and diminished value of plant, and for the rent of premises in which the business is carried on, but if the person making the return lives on the premises then at most only two-thirds of the rent would be allowed.

SCHEDULE E.—SALARIES OF PUBLIC SERVANTS. This tax is deducted from salaries, pensions, or annuities payable in respect of all public offices or employments. It includes the salaries paid to Civil Servants, Army and Navy Officials, Officials of Limited Companies, Municipal and other public officers.

EXEMPTIONS AND ABATEMENTS. Charities pay no income tax. All persons whose income does not exceed £160 are entirely exempted from payment, and persons whose income does exceed £160 but not £700 are entitled to abatement: amount of tax on £160 when income less than £400; £150 when less than £500; £120 when less than £600; £70 when less than £700. In 1907 distinction was first made between earned and unearned incomes, an abatement of 3d. in the £ being allowed on all earned incomes up to £2,000 (rate 9d. in the £), 1s. in the £ being the rate on earned incomes between £2,000 and £3,000. By the Finance Act, 1909-10, these rates remain unchanged and a special allowance equal to the amount of the income tax upon £10 is allowed to income tax payers whose income does not exceed £500, in respect of every child under the age of sixteen. In certain cases special deductions are made to owners of lands or houses on account of expenditure for keeping up the property.

SUPER TAX. The Finance Act, 1909-10, imposes a Super Tax of 6d. in the £ on persons whose total incomes exceeds £5,000 for every £1 of income above £3,000.

INCOME OF HUSBAND AND WIFE. For the purpose of this tax, and despite the effect of the Married Women's Property Act, the profits of any married woman living with her husband are deemed the profits of the husband. (This involves a great hardship. Suppose the wife's income is £360 and the husband's £380. Their joint income exceeds £700, and no abatement is allowed. Had they been assessed separately, the wife would pay income tax on £360 less £160, that is, £200, and the husband similarly would pay tax on £220. In that case the two would pay tax on £420 instead of £740). There is an exception to the general rule when the total joint income of husband and wife does not exceed £500 per annum.

Then if the Income Tax Authorities are satisfied that "such total income includes profits of the wife from any business carried on or exercised by means of her own personal labour, and that the rest of the total income, or any part thereof, arises or accrues from profits of a business carried on or exercised by means of the husband's own personal labour, and unconnected with the business of the wife, they shall deal with such claim as if it were a claim in respect of the said profits of the wife, and a separate claim on the part of the husband in respect of the rest of the total income, but they shall deal with any income of the husband arising or accruing from the business of his wife or from any source connected therewith as if it were part of the income of the wife. In this section 'business' means any profession, trade, employment, orvocation, or any office or employment of profit."

N.B.—The same rule applies to a wife's pension granted in respect of past services as to profits from business carried on by her own personal labour. The concession was first granted in 1907.

INSURANCE PREMIUMS. In computing Tax under Schedules D and E, premiums of life insurance or deferred annuities are deducted, whether the insurance be on the life of the taxpayer or his wife. But a deduction cannot be made on this account for a sum greater than one-sixth of the income.

SPECIAL COMMISSIONERS These officials are appointed by the Treasury, and if a taxpayer so desire, he may claim that his profits under Schedule D be assessed by the Special Commissioners instead of by the General Commissioners. Appeals from assessments may also be heard by them, if the appellant wishes. These facilities enable assessments to be made and appeals heard without the necessity for revealing trade accounts, etc., to persons resident in the locality, and who might possibly use the information thus obtained to the detriment of the taxpayer.

ENFORCEMENT OF PAYMENT. Rigorous measures can be taken to enforce payment. If the collector meets with a refusal to pay, distraint and sale may follow. Such a distraint takes priority of the landlord's rent. If distraint reveals the fact that there are not sufficient goods to meet the claim, then the General Commissioners can commit the defaulter to prison until bail is obtained or security to pay not only the tax but the cost incurred by his apprehension.

APPEALS. Any person who thinks his assessment is too high may appeal. He must first give ten days' notice of objection in writing to the Surveyor of Taxes within the time limited for hearing appeals. He is then entitled to appeal either to the District or Special Commissioners (if assessed by the latter to them only) against the assessment. The Commissioners fix a day for hearing appeals, notice of which is given to the appellant. At the hearing of the appeal, the surveyor and assessor may attend and give reasons in support of the assessment. Until recently no lawyer could appear before the Commissioners on behalf of any party, but the prohibition has been removed by a recent Act (61 & 62 Vict., c. 10, Sec. 16). The decision of the Commissioners on appeal is final, and no alteration can be made except by the High Court, when a "case upon a point of law" has been stated by the Commissioners and heard and determined by such High Court.

TO CLAIM REPAYMENT OF INCOME TAX. Over-paid tax, whether paid direct by the taxpayer or by way of deduction from his rents, interest, or annuity, can be recovered if the claim for recovery is made within three years. Forms upon which claims for repayment must be made are supplied (on application by post) by the Secretary to the Inland Revenue Commissioners, whose official address is Somerset House, London, W.C.

4. HOUSE DUTY.

ON WHAT PROPERTY IS IT LEVIED. This charge is known by the names House Tax, House Duty, and Inhabited House Duty. The last name indicates the nature of the property in respect of which this Duty is chargeable. All inhabited dwelling houses of an annual value of £20 and upwards are taxable. In calculating the annual value, every coach house, dairy, stable, laundry, and out-house, as well as yards, gardens, and pleasure grounds are included. The general test as to whether or not a house is liable to this tax is the answer to the question, Does anyone sleep on the premises? If the reply is in the affirmative, then the tax may be levied, but if in the negative, no tax is payable. This is the general rule, which is subject, however, to the exceptions stated hereafter. Shops attached to a dwelling house, or communicating with the dwelling house, are included in the valuation. The same rule applies to premises used for any business, such as Banking, Insurance, or that of an Auctioneer and Estate Agent.

WHO PAYS THE TAX? Liability to pay this tax falls upon the occupier and not the owner. It is restricted to properties in Great Britain. The tax is payable on January 1st of each year, and the demand for payment is usually made at the same time as that for the payment of the Income or Property Tax on the same house.

If a dwelling house is inhabited by two or more families, the landlord is regarded as the occupier, even although he may not live in the house. Should he reside out of the district, then the tax is collected from the residents, who are by law entitled to deduct the amount paid from the next payment of their rent. This must be regarded as special case, for in no other case is the resident entitled to deduct the amount paid from the rent unless it is specially provided in the tenancy agreement that such deduction may be made.

HOUSES NOT ASSESSABLE. (*a*) Royal palaces and houses belonging to the Monarch or any of the Royal Family. (*b*) Buildings used as Government Offices. (*c*) Hospitals, unless entirely maintained by the fees of patients. (*d*) Charity Schools, but not such as are partly maintained by fees. If, however, any premises are used *solely* for the purposes of education (no person sleeping on such premises), then the tax is not payable. (*e*) Dwelling houses of a less annual value than £20. (*f*) Houses used solely for business or trade purposes, provided that no person sleeps on the premises other than a mere caretaker. (*g*) Unoccupied dwelling houses.

N.B.—Of course places of public worship are exempt, not being inhabited houses.

THE DUTY PAYABLE. The rate of duty varies with the annual value of the house as well as with the use to which the house is put, as is shown by the following table, which sets out the existing statutory scale.

Kind of House.	Annual Value.	Rate.
Farm-houses, public-houses, coffee-houses, lodging-houses, warehouses and shops.	£20 and not exceeding £40 ..	2d. in the £
	exceeding £40 but not £60	4d. „ „
	exceeding £60 ..	6d. „ „
Ordinary dwelling-houses.	£20 and not exceeding £40 ..	3d. in the £
	exceeding £40 but not £60	6d. „ „
	exceeding £60 ..	9d. „ „

5. CUSTOMS DUTIES.

CUSTOMS—WHAT ARE THEY? "Customs" is the name given to those charges and duties which become payable to the Government of the country in connection with the exportation and importation of goods. The amount of these charges varies considerably from year to year, and not only the amount but to some extent also the articles which become chargeable. At the beginning of the 19th century our customs tariff included 1500 articles, a century later only between 20 and 30. The customs duty is now levied only on imported articles, and these fall into two classess: (1) articles which cannot be produced in this country, (2) articles which are produced here, but upon the manufacture of which excise duties are imposed. The following imported articles are dutiable: Beer, chicory, cocoa, coffee, currants, dried plums, figs, prunes, molasses, raisins, spirits, sugar, tea, tobacco, and wine. (Refer to "Customs Tariff" in *Index*.)

COLLECTION OF CUSTOMS. It is illegal to land or ship any goods except at certain specified places and within certain specified hours. This must be carried out under official supervision. The usual places for lading and landing are the wharves, quays, and docks authorized by the Commissioners of Customs. There are other places which have prescriptive rights or have been specially authorized by Act of Parliament. The powers of the Custom House officers in the matter of search (both as to vessels and houses) are very drastic. Any "Customs" officer in uniform has the right to enter upon and search a vessel at any time, but with regard to houses he must obtain a warrant from a justice of the peace or an authority from the High Court before making a search. Vehicles of any kind may be stopped and searched by any officer, provided he has reasonable cause for suspicion that the articles in the vehicle have not been "customed."

PENALTIES. Offences against the Customs Laws are dealt with by the ordinary magistrates. They decide upon the amount of the penalty to be paid by an offender, and the length of the term of imprisonment he is to undergo in default of payment or distress. In "Customs" cases the magistrates' powers respecting imprisonment are extended beyond those which they possess in ordinary cases, for where the penalty exceeds £50, the magistrates may sentence to imprisonment for a period not exceeding six months, the limit in ordinary cases being three months. In very serious cases, another process is adopted, and the High Court passes judgment. The High Court has the power to imprison until the penalty is paid, or during the pleasure of the Crown.

GOODS IN BOND. "Goods in Bond" or "Bonded Goods," are those deposited in approved warehouses until the "Customs" duties thereon are paid. The payment of duties on goods thus bonded is not enforced on landing, but only before the goods are taken "out of bond" for home consumption. If taken out of the warehouse and re-exported, then the duty is not payable. All these bonded warehouses are under supervision at all times, such supervision being exercised by the Custom House officers. Before "bonding" was permitted, difficulties and delay occurred in connection with the repayment of duty on articles which were re-exported. This repayment of duty was known as "draw back." Even now "draw back" is paid, but mainly in cases where a dutiable raw material has paid duty on importation into the United Kingdom and that same material in a manufactured state is exported. (Refer to "Customs Tariff of United Kingdom" in *Index*.)

6. EXCISE LICENCES.

MALE SERVANT. Every person who employs male servants must obtain a licence, paying for such licence 15s. for each servant employed. The licence is annual and expires on December 31st of each year. The term "servant" in this connection applies only to what may

be described as a personal servant, not to a workman or a labourer employed in any handicraft or trade. But if a farm labourer is employed daily to drive a pony carriage, then a licence is necessary. It is also necessary in the case of a tradesman who employs a man to attend to a vehicle solely used for the purposes of pleasure. A gardener employed at a weekly wage, and who works for his employer a number of hours each day (in the particular case decided the number was "seven"), but is at liberty to work for others, cannot be employed without a licence, but a gardener's labourer is not a servant. Trade servants, including those engaged in hotels and refreshment houses, game watchers and persons not residing in employer's house engaged for a portion only of each day, are not servants in this sense.

It is the duty of any person liable to a duty to deliver a declaration to the Inland Revenue Authorities in the month of January each year. The penalty for neglecting to deliver or refusing to deliver such declaration is £20, and for employing a male servant without a proper licence, or employing more male servants than authorized by the licence, is also £20.

ARMORIAL BEARINGS. The general regulations and penalties affecting the use of Armorial Bearings are the same as those which apply in the case of "Male Servants." The licence must be taken out annually, and the duty payable is £1 1s., but if used on any carriage the amount is increased to £2 2s. Any person wearing or using armorial bearings, even as an ornament, is bound to take out a licence. The wearing of a signet ring with a lion rampant engraved thereon renders the wearer liable to duty, so is the user of note-paper with a similar device printed on his note-paper.

Certain persons are exempted from making declarations, or taking out licences, either for the employment of male servants or the use of armorial bearings. These are:—

(1) Members of the Royal Family. (2) Sheriffs and Mayors of Corporations serving an annual office therein in respect of any servants or carriages kept for the purposes of office during the year of service. (3) Persons wearing by right of office any arms or insignia of members of the Royal Family, or of any corporation or royal burgh in respect of the use of any such arms or insignia. (4) Any person ordinarily resident in Ireland, who is representative peer on the part of Ireland or a member of the House of Commons, and not residing in Great Britain longer than forty days before and forty days after such session.

CARRIAGES AND MOTORS. For every carriage, if such carriage has four or more wheels, and shall be fitted to be drawn by two or more horses or mules, a licence must be taken out by the owner, the cost of such licence being £2 2s. If a four-wheeled carriage is fitted to be drawn by one horse only, then the cost of the licence is £1 1s. This amount is reduced to 15s. if the one-horse carriage has less than four wheels. The cost of the licence for all kinds of hackney carriages is 15s. The statutory definition of a "hackney carriage" is one standing or plying for hire, and includes any carriage let for hire by a coach-maker or other person whose trade or business it is to sell carriages or let them for hire. A wagon, cart, or other vehicle constructed and used solely for conveyance of goods of trade or husbandry, and whereon the Christian name and surname and address of the owner is painted in letters of not less than one inch in length, does not require to be licensed; nor do any carriages which are kept but not used at any time within the year. But if a tradesman uses his trade vehicle for the purpose of giving his friends or his family pleasurable jaunts, and not solely for the purposes of his trade, he will be required to take out a licence. Moreover, the vehicle must be solely *constructed or adapted* for trade purposes. It is not enough that it is in fact used solely for such purposes if it is constructed or adapted for other purposes also. Therefore a wardrobe dealer cannot avoid the duty if he conveys goods in a governess cart; even if he has his name and address properly painted thereon, and does not use it for pleasure or for any purpose other than in the legitimate exercise of his calling. By the Finance Act of 1910, the rate of duties on motor cars is reckoned upon the horse power instead of upon the weight of the vehicles, and the number of their wheels. (See "Excise Licenses, page 681).

KEEPING DOGS. No person, with the exceptions given below, is entitled to keep dogs unless he has obtained an annual licence for each dog. The cost of such licence is 7s. 6d. These licences are issued by the Inland Revenue Department, who use as their agents for the purposes of issue the postmasters at the various post offices. A register of the persons licensed, and the number of dogs in respect whereof they are licensed, is kept, and is open to the inspection of police constables and justices of the peace. All dog licences expire on December 31st, irrespective of the date of issue. No rebate is allowed if the licence is operative for less than a year. The licence does not apply to a particular dog, it is the owner who is licensed to keep a dog, and he cannot transfer the licence to another person, even if that other person should become the owner of the dog.

In the following cases no licence is required:—

(1) Dogs under six months old. (2) Hound puppies under twelve months old not entered in or used with a pack of hounds. (3) One dog kept and used solely by a blind person for his guidance. (4) Dogs kept and used solely for the purpose of tending sheep or cattle. This last exemption is only allowed on a certificate issued by the Inland Revenue, and is limited to two dogs unless the farmer owns over 400 sheep, in which case a third dog is allowed; a fourth if the sheep amount to 1,000; and an additional dog up to eight dogs for every 500 above 1,000.

PENALTIES. A person keeping a dog without a licence, or keeping more dogs than he is licensed to keep, or refusing to produce a licence on the demand of an Excise officer or constable, renders himself liable to a penalty not exceeding £5, or to imprisonment in default of distress. The magistrates have power to mitigate the penalty, and in the case of a first offence the amount imposed may be less than one-fourth of the full penalty. The person in whose possession the dog is, or on whose premises it is found, is deemed the owner, unless he can prove the contrary. (Refer to "Excise Licences" in *Index.*)

GAME AND GUN LICENCES.

1. **WHAT IS GAME?** Two forms of licence are granted in respect of game, the one is a licence to kill and the other to deal. The statutory definitions of game includes hares, pheasants, partridges, grouse, heath or moor game, black game, bustards, deer, woodcock, snipe, quail, landrail, and rabbits.

2. **LICENCE TO KILL GAME.** By an Act passed in 1860, it is made unlawful for any person to kill or take game unless he has a licence to do so. It should be noted that this does not apply only to the shooting of game, but also to killing or capturing it by any method. Licences may be obtained from the local officers of the Inland Revenue Department.

The cost of the licence if taken out after July 31st and before Nov. 1st, to expire on July 31st following, is £3: If taken out after July 31st to expire Oct. 31st, £2: if taken out after Oct. 31st to expire July 31st, £2. Game-keepers' licences are annual, expiring on July 31st, and are issued at £2. For a short period of fourteen days, a licence may be obtained for £1.

Beaters and other assistants are not required to hold a licence, nor are persons who are authorized to kill hares under the Hares Act, 1842. The same Act exempts from the necessity for a licence any person coursing hares with greyhounds or hunting them with beagles. Taking hares or rabbits is permitted by an Act of 1880 to the tenant of lands or persons acting under his direction or permission. The penalty for killing or taking game without a licence is £5. The possession of a game licence gives no authority to trespass in pursuit of game, or to kill or take game if the licencee is not otherwise entitled to kill or take; nor may he use a gun without a gun licence.

3. **LICENCE TO DEAL IN GAME.** Before any person can deal in game, he must possess two licences (one granted by the Local Authority, District or Town Council) and the other by the Inland Revenue Authorities. The latter is granted only on production of the former and costs £2. No person can obtain a licence unless he is a householder,

shopkeeper or stallkeeper within the district. Only a licencee can deal in hares, pheasants, grouse, partridges, and black game whether alive or dead, or whether killed in a foreign country or at home. The licencee must have a board fixed up on the licensed premises with the words "Licensed to Deal in Game" inscribed thereon, or incur a penalty of £10. For selling game without an excise licence the penalty is £20, and for buying game except from a licensed dealer the penalty is £1 per head of the game bought.

4. GUN LICENCE. An Act passed in 1870 provides that every person using or carrying a gun, except in a house or the curtilage thereof, is liable to a penalty of £10 unless he possesses a licence issued by the officers of the Inland Revenue. The cost of such licence is ten shillings, and it expires on the 31st July next following the date of issue. Rifles, pistols, revolvers, and air guns fall within the same provision. A licence is not required by any person in the Naval, Military, or Police Service, provided the weapon is neither used nor carried except in the performance of duty or when on target practice. Other exemptions are—Gunsmiths and their servants, common carriers (where carrying a gun in the course of their ordinary business), persons holding game certificates and occupiers of land who use the weapon only for the purpose of killing vermin or scaring birds. [Refer to "Excise Licences" in *Index*].

TOBACCO LICENCE.

1. LICENCE FOR MANUFACTURING TOBACCO. The manufacture and sale of tobacco and snuff is permitted by a licence granted by the Inland Revenue authority. The licence gives permission to manufacture tobacco in specified premises which must be open at all times to the excise officers, and no manufactured tobacco can be removed from the premises without their permission. The amount of the licence duty varies with the amount of tobacco manufactured upon the particular premises for which the licence is granted. The following table shows the scale of duty which is at present in force:—

	£	*s.*	*d.*
Not exceeding 20,000 lbs.	5	5	0
Exceeding 20,000 lbs. and not exceeding 40,000 lbs.	10	10	0
Exceeding 40,000 lbs. and not exceeding 60,000 lbs.	15	15	0
Exceeding 60,000 lbs. and not exceeding 80,000 lbs.	21	0	0
Exceeding 80,000 lbs. and not exceeding 100,000 lbs.	26	5	0
Exceeding 100,000 lbs.	31	10	0

2. LICENCE FOR SELLING TOBACCO. No person is permitted to sell tobacco in any form (including snuff, cigars, cigarettes), unless the place of sale is licensed. The only exceptions are sale in bond and in a customs warehouse. A traveller for a licence holder may solicit orders, but no other person can legally solicit orders for tobacco unless duly licensed. The licencee must notify by a sign over his doorway the fact that he possesses a licence, and he must permit entrance to excise officers. The cost of a licence is 5s. 3d.

LICENCES RELATING TO INTOXICANTS.

The licences granted in connection with the manufacture and sale of intoxicating liquors are many and various. To give a detailed list would occupy much space, hence we can here only deal with the more important.

1. BREWING OF BEER FOR SALE. No person may brew beer without a licence under a penalty of £100 and forfeiture of all brewing plant and materials which may be found in his possession. For cost of license, see page 681.

2. HOME BREWED BEER. Beer may be brewed for private consumption by persons who have obtained a licence, the cost of such licence being 4s. if the annual value of the premises in which the brewing is done exceeds £8 but does not exceed £10. Should such annual value exceed £10 but not exceed £15, then the cost of the licence is 9s. If above £15 the cost of the licence is only 4s.; but a duty is charged upon all beer brewed in premises above the annual value of £15, and this duty is payable in addition to the cost of the licence (see table of "Excise Duties" p. 682). Persons who brew beer for home consumption must apply to the Inland Revenue Office for a form upon which must be entered the quantities of the materials intended to be used. This must be done before beginning to brew.

3. SALE OF INTOXICATING LIQUORS.—"ON" AND "OFF" LICENCES. A retailer's "on" license authorizes sale by retail of the liquor to which the license extends for consumption on or off the premises. A retailer's "off" license authorises the sale by retail of the liquor to which the license extends "off" the premises only.

In nearly every case the licencee has to obtain a certificate from the Justices before he can take out an excise licence. The cost of a full licence varies considerably and increases with the annual value of the premises. For cost of licenses, see Excise Tables, page 681.

4. PENALTIES. The penalties for selling or exposing for sale by retail any intoxicating liquor without being duly licensed are extremely severe. And even if the person possesses a licence and he sells or exposes for sale in a place not authorized by his licence (say in a tent in a field), he is penalized. For a first offence the penalty may be £50 or imprisonment with or without hard labour for a month; for a second offence a sum not exceeding £100 or three months' imprisonment; for a third or subsequent offence a penalty of like amount, or six months' imprisonment.

In addition to the above-named punishments, all intoxicating liquor found in the possession of the offender and the vessel containing such liquor may be forfeited on a second or any subsequent conviction.

N.B.—Licences are necessary in many instances before a particular trade or calling can be entered upon. For the cost of each licence see table of "Excise Licences," p. 681.

7. STAMP DUTIES.

STAMP DUTIES are taxes levied on deeds and other written instruments by means of affixing stamps to the paper or parchment, or by having the paper or parchment impressed with stamps of the proper value. Unstamped documents, which are required by law to be stamped, are in some cases void, e.g. policy of sea insurance, and in any case cannot be given in evidence in any lawsuit regarding a matter to which the documents refer, and in which, had they been stamped, they could have been given in evidence. Provision, however, is made for the admission of unstamped documents in evidence on payment of the unpaid stamp duty, and the penalty for not having had it stamped, with a further sum of £1; but this provision only applies to such documents as may legally be stamped after the execution thereof.

Further, apart from lawsuits, in many cases an unstamped or insufficiently stamped document may be stamped after the execution thereof on payment of the unpaid duty and a penalty of £10, and in cases where the unpaid duty exceeds £10, there must be paid, as a further penalty, interest on the duty at five per cent. per annum. But the amount of interest must not exceed the amount of the unpaid duty.

The following documents cannot be stamped after execution: Inland bills of exchange (but foreign bills may be stamped after execution), bills of lading, policies of marine insurance executed in the United Kingdom, and proxies. There are two cases in which a policy of marine insurance may be stamped after execution: (1) Where a mutual policy already bears an impressed stamp, and an additional stamp is required for an increase in the amount insured, provided that at the time when the additional stamp is required the impressed stamp covered the amount originally insured. (2) A policy executed out of the United Kingdom, but which is enforceable in the

United Kingdom may be stamped within ten days after it has been received in the United Kingdom, on payment of the duty only.

ADHESIVE STAMPS. Adhesive stamps may be used on the following instruments, but in all other cases an impressed stamp is necessary:—

(1) Agreements liable only to a duty of 6d. (2) Bills of Exchange payable on demand, and foreign bills of exchange. (3) Bills of Lading. (4) Certified copies or extracts from registers of births, etc. (5) Charter-parties. (6) Cheques. (7) Contract notes liable to the duty of one shilling. (8) Contract notes where the amount is less than £100. (9) Delivery orders. (10) Dock Warrants. (11) Leases of dwelling-houses or parts thereof for a period not exceeding a year, where the rent does not exceed £10 a year. (12) Leases of furnished houses or apartments for a period less than a year. (13) Letters of renunciation. (14) Notarial Acts. (15) Policies of insurance where the duty is one penny, but not policies of marine or of life insurance. (16) Protests of bills of exchange and promissory notes. (17) Proxies where the duty is one penny only. (18) Receipts. (19) Voting papers where the duty is one penny only. (20) Warrants for goods.

CANCELLATION OF STAMPS. The person required by law to cancel an adhesive stamp must do so by writing his name or initials across it with the true date of his so doing. In the case of impressed stamps, the person selling the document containing the document, will cancel it in like manner.

SPOILED OR MIS-USED STAMPS. An allowance is made for these in certain cases. When a person has an unused stamp which he does not want, the Commissioners of Inland Revenue repurchase it from him. (See table of "Stamp Duties" p. 682.)

SOME RECENT ACTS OF PARLIAMENT.

1. LABOUR EXCHANGES.

By the Labour Exchanges Act, 1909, a system of Labour Exchanges has been inaugurated throughout the country. Each of these exchanges is intended to form a reliable intelligence bureau for those seeking employment. The entire system is under the control of the Board of Trade, and its organisation is such that the Board of Trade is enabled to collect and distribute information as to employers requiring workpeople, and workpeople seeking employment. For the purpose of the effective working of these exchanges, the whole country is divided into ten divisions, each with a clearing house presided over by a divisional chief, and all co-ordinated with the central clearing house in London. In towns of 100,000 inhabitants and upwards, 30 or 40 first class exchanges are being established; in towns of between 50,000 and 100,000, there will be 45 second class exchanges, and a number of sub-offices in smaller towns. A joint advisory committee is to be established in every principal centre, on which workmen and employers will meet in equal numbers under the chairmanship of a permanent official. By the authority of the committee loans towards travelling expenses may be made to workmen travelling to posts procured for them through the exchanges. The system of Labour Exchanges was inaugurated in 1910.

2. SMALL HOLDINGS AND ALLOTMENTS.

SMALL HOLDINGS. By the Small Holdings and Allotments Act, 1908, County Councils are empowered to provide "small holdings" (i.e., agricultural holdings which exceed one acre and either do not exceed fifty acres, or, if they do exceed that area, are of an annual value not exceeding fifty pounds) for persons who desire to buy or lease them for cultivation. For this purpose County Councils may buy or lease land, and, if necessary, they can acquire it compulsorily, and adapt it for small holdings. The Council can then apportion the total cost of the land and its adaptation among the several holdings as it seems just, and can then offer for sale, or letting, one or more small holdings:

(*a*) To a number of persons working on a co-operative system approved by the council; or (*b*) with the consent of the Board of Agriculture and Fisheries, to any association formed for the purpose of creating or promoting the creation of small holdings, and so constituted that the division of profits amongst the members of the association is prohibited or restricted.

On completion of purchase the purchasers must pay at least one-fifth of the purchase-money. A portion representing not more than one fourth of the purchase-money may, if the Council think fit, be secured by a redeemable perpetual rent-charge. The residue (if any) of the purchase-money is to be secured by a charge on the holding, and is repayable either by half-yearly instalments of principal and interest within such term not exceeding fifty years as may be agreed, or, if the purchaser so required, by a terminable annuity payable by equal half-yearly instalments. The purchaser can discharge his instalments, or redeem the annuity, at any time, if he so desires. Where the tenant of a small holding has agreed with his landlord for the purchase of the holding the County Council may, if they think fit, advance to the tenant, on the security of the holding, an amount not exceeding four-fifths of the purchase-money.

ALLOTMENTS. The Act also gives power to Borough Urban District, or Parish Councils, and in certain cases to County Councils, where they are of opinion that there is a demand for allotments (i.e., field gardens not exceeding five acres) for the labouring population in the district, and that such allotments cannot be obtained at a reasonable rent by voluntary agreement, to provide such allotments. For this purpose the Councils are empowered to take land on lease or purchase, either voluntary or compulsory. The rents of the allotments are to be fixed at an amount not less than such as may reasonably be expected to ensure the Council from loss (excluding loss incurred in unsuccessful attempts to acquire land for allotments). In no case can the Council require more than one quarter's rent to be paid in advance. Allotments must not be sublet.

3. TERRITORIAL AND RESERVE FORCES.

TERRITORIAL AND RESERVE FORCES ACT, 1907. This Act entirely re-organised the reserve forces of the country. It established "county associations" for the purpose of advising and assisting the Army Council, particularly in organising and maintaining units of the territorial force, in recruiting for that force, in providing facilities for rifle ranges and manœuvre areas, in arranging with employers of labour as to holidays for training, in establishing cadet battalions and rifle clubs, in providing horses for the peace requirements of the Territorial force and accommodation for the safe custody of arms and equipment, in the payment of separation and other allowances to the families of men of the Territorial Force when embodied or called out on actual military service, and in the care of reservists and discharged soldiers. It provided for the raising and maintenance of a force called the "Territorial Force," in place of the volunteers and yeomanry and it established a "Special Reserve," which took the place of the old militia.

COUNTY ASSOCIATIONS. These associations are constituted in accordance with schemes made by the Army Council (see p. 441), which have been laid before both Houses of Parliament. The necessary expenditure incurred by County Associations in the discharge of their duties are paid by the Army Council out of money voted by Parliament for army services. The members of these associations are exempted from pecuniary liability for any act done by them in their capacity as members in carrying out the provisions of the Act.

TERRITORIAL FORCE. Men who enlist in this force are appointed to serve in such corps, or unit of a corps, as they may select. They are enlisted to serve for such period as may be prescribed, not exceeding four years reckoned from the date of attestation. But a man may

be re-engaged at the end of his term for a period not exceeding a further four years. Men in this force, except when a proclamation ordering the army reserve to be called out on permanent service is in force, are entitled to be discharged before the end of their term of service if they

(1) Give their commanding officer three months' notice in writing; (2) pay to their county association a prescribed sum not exceeding £5; and (3) deliver up in good order, or pay the value of, such arms, clothing and appointments, being public property, as may have been issued to them.

These conditions of discharge may be relaxed or dispensed with if the County Association thinks fit. It need hardly be said that any member of the force can be discharged by his commanding officer for misconduct, disobedience or neglect of duty; but men so discharged are entitled to appeal to the Army Council. Where the time at which a member of the force would otherwise be entitled to be discharged occurs while a proclamation ordering the Army Reserve to be called out on permanent service is in force he may be required to prolong his service for such further period, not exceeding twelve months, as the competent military authority may order. Members of the force are liable to serve in any part of the United Kingdom, but they cannot be ordered to go out of the Kingdom unless they have voluntarily offered to do so.

In addition to a preliminary training during their first year of service, members of the force must, under liability to forfeit a sum of money not exceeding £5, unless they get a dispensation from their commanding officer

(1) Be trained for not less than eight or more than fifteen or in the case of the mounted branch eighteen, days in each year; and (2) attend the number of drills and fulfil the other conditions relating to training prescribed for their arm or branch of the service.

N.B.—Members of the force are exempt from serving on juries.

ARMY RESERVE. The Act extended the power of enlisting men in the first class of the army reserve to the enlistment of men who had not previously served in the regular forces. Such men are called "special reservists." The Act further provides for the transfer of the Militia to this Reserve Force. A special reservist, if he consents in writing to be so called out, is liable to be called out on permanent active service without the issue of the proclamation mentioned in the Reserve Forces Act 1882. The acceptance of a Commission as officer in either the Territorial or Reserve Forces does not vacate the seat of any member returned to serve in Parliament.

4. THE CHILDREN'S CHARTER (Act 1908).

Reference to the rights and duties of parents towards their children are dealt with under the heading "Parent and Child," (pp. 546–8). This article deals with what has been called "The Children's Charter," an Act which affects all (not merely parents) who have dealings with children, and which generally consolidates and amends the law with respect to "*children*" (i.e., persons under fourteen years of age) and "*young persons*" (i.e., persons between the ages of fourteen and sixteen).

INFANT LIFE PROTECTION. Where a person other than a relative or legal guardian or properly conducted religious or charitable home, school, hospital, &c., undertakes, for reward, the nursing and maintenance for more than 48 hours of one or more infants under the age of seven years, apart from their parents, or having no parents, he or she must give notice in writing to the local authority. The "local authority" for the City is the Common Council, for the rest of London the County Council, and for elsewhere the Poor Law Guardians. The notice must state the name, sex, date, and place of birth of the infant, and the names and addresses of the recipient and of the person from whom the child is received. Similar notices have to be given when the recipient changes his or her address, or if the child dies, or is removed. Moreover, in the case of the death of such an infant the recipient must give notice in writing to the Coroner within twenty-four hours. If the notices are sent by post they must be in a registered cover. Persons who offend against this portion of the Act are liable to imprisonment for not more than six months, or to a fine not exceeding £25, and they are also liable to forfeit the whole or any part of any lump sum they may have received for maintaining the infant. Furthermore, the number of children so received for maintenance must not exceed the number allowed by the local authority, and the children must not be kept in any premises which are overcrowded, dangerous, or insanitary; or by any person who by reason of negligence, ignorance, inebriety, immorality, criminal conduct, or other similar cause, is unfit to have care of them.

PREVENTION OF CRUELTY. If any person having charge of a child or young person wilfully assaults, ill-treats, neglects, abandons, or exposes it in a manner likely to cause it unnecessary suffering, injury to its health, or mental derangement, he is guilty of a misdemeanour and liable to a fine not exceeding £100 and to imprisonment for not more than two years. But if it is proved that the person convicted would be pecuniarily interested in the child's death, the fine may be increased to £200, or the offender may be sent to penal servitude for a term not exceeding five years. Persons who, going to bed under the influence of drink, over-lie and kill by suffocation an infant under three years of age may be sentenced for "neglect" under this part of the Act. It is also an offence punishable with fine and imprisonment to allow children or young persons to beg, whether or not the begging is cloaked by any pretence of singing, playing, performing, or offering anything for sale; or to allow children between the ages of four and sixteen to reside in or frequent houses of ill-fame; or to allow girls under sixteen to consort with persons of known immoral character. Provision is made by the Act for removing children and young persons, in respect of whom such offences have been committed, to "places of safety," which means any workhouse, police station, hospital, surgery, or other suitable place, the occupier of which is willing temporarily to receive them.

JUVENILE SMOKING. Any person who sells to a person apparently under the age of sixteen any cigarettes, cigarette paper or cigars, "whether for his own use or not," or tobacco for his own use is liable to a fine of £2 for the first offence, £5 for the second, and £10 for the third or subsequent offence. Constables and Park Keepers may seize the cigarettes, &c., found on young persons (other than those engaged in the tobacco business) and may search boys but not girls.

REFORMATORY AND INDUSTRIAL SCHOOLS. Where a youthful offender who, in the opinion of the court is between twelve and sixteen years of age, is convicted of an offence ordinarily punishable with penal servitude or imprisonment, the court may in lieu of the ordinary sentence order him to be sent to a certified reformatory school; and in a similar case if the child be under twelve he may be sent to a certified industrial school. Children under fourteen may also be sent to certified industrial schools if they are found begging, or destitute, or in the care of persons who by reason of their criminal or immoral or drunken habits are unfit to have care of them. Young persons may not be kept in a reformatory after they are nineteen, or in an industrial school after they are sixteen, but in the latter case they remain under the supervision of the Managers of the school until they are eighteen.

JUVENILE COURTS. A court of summary jurisdiction when hearing charges against children or young persons, or when hearing applications for orders or licences relating to such persons where their attendance is necessary, must, unless the child is charged jointly with an adult, sit in a special juvenile court; and persons other than newspaper representatives and those directly concerned in the case are to be excluded from such courts.

TREATMENT OF JUVENILE OFFENDERS. Sentence of death in the case of young children and young persons is abolished. Those found guilty will henceforward be ordered to be detained during His Majesty's pleasure. Special places for the detention of youthful offenders are

set aside by the Home Secretary, and those convicted of murder, manslaughter, or wounding may be sent there. In less serious cases the court may deal with the case:—

(*a*) By dismissing the charge; or
(*b*) By discharging the offender on his entering into a recognisance; or
(*c*) By so discharging the offender and placing him under the supervision of a probation officer; or
(*d*) By committing the offender to the care of a relative or other fit person; or
(*e*) By sending the offender to an industrial school; or
(*f*) By sending the offender to a reformatory school; or
(*g*) By ordering the offender to be whipped; or
(*h*) By ordering the offender to pay a fine, damages, or costs; or
(*i*) By ordering the parent or guardian of the offender to pay a fine, damages, or costs; or
(*j*) By ordering the parent or guardian of the offender to give security for his good behaviour; or
(*k*) By committing the offender to custody in a place of detention provided under this part of this Act; or
(*l*) Where the offender is a young person, by sentencing him to imprisonment; or
(*m*) By dealing with the case in any other manner in which it may be legally dealt with.

5. OLD AGE PENSIONS.

THE OLD AGE PENSIONS ACT, 1908. By this Act Parliament and the nation for the first time recognise that it is a duty imposed on all good citizens to support the aged without subjecting them to the disabilities of paupers. It provides for the payment of weekly pensions to persons who have attained the age of seventy and who have satisfied the pension authorities that for the previous twenty years they have been British subjects having their residence in the United Kingdom, and that their means as calculated under the Act do not exceed £31 10s. 0d. per annum. But such persons are disqualified if

(*a*) Since the 1st of January, 1908, they have been in receipt of poor relief, other than medical or surgical relief (including home comforts and food), supplied on the recommendation of a medical officer, or (*b*) if before becoming entitled to the pension they have habitually failed to work according to their abilty for themselves and their dependants, or (*c*) for a period of ten years after their release in cases where they have been imprisoned without the option of a fine.

In calculating the means of a person account is taken of

(*a*) The income he or she may reasonably expect to receive in cash during the year (excluding sums received as pension under the Act), (*b*) the yearly advantage accruing to him or her from the use or enjoyment of property, (*c*) the yearly income which might be expected from the profitable investment of property, not so invested and (*d*) the yearly value of any benefit or privilege enjoyed by such person.

In calculating the means of a married couple living together the means of each is taken at half the total means of both. The pensions granted under this Act are inalienable, even in bankruptcy, and any assignment of them is void. Intending claimants of Old Age Pensions can obtain information from their local Post Office, and it is through the Post Office that the pensions are paid by the Treasury. All claims are considered by local pension committees, but persons aggrieved by their decisions may appeal to the central pension authority (that is, the Local Government Board) whose decision is final. Those who knowingly make false representations for the purpose of obtaining or continuing an old age pension are liable on summary conviction to six months' imprisonment with hard labour.

It should be noted that where an Englishwoman marries an alien, she becomes an alien in law, and as such she is disqualified from receiving a pension; even if she be a widow (unless by re-marrying a British subject, she becomes again a British subject).

The amount of the weekly pension depends on the yearly means of the pensioner, being

5s.	when the yearly income does not exceed					£21	0	0
4s.	,,	,,	,,	,,	,,	£23	12	6
3s.	,,	,,	,,	,,	,,	£26	5	0
2s.	,,	,,	,,	,,	,,	£28	17	6
1s.	,,	,,	,,	,,	,,	£31	0	0

For Land Values and Income Tax under Finance Act, 1910. [Refer to *Index*.]

SUPPLEMENTARY.

CHANGE OF NAME. A divorced woman has a right to retain the name of her husband should she desire to do so. And generally, any person is entitled to call himself by any name he pleases, and he need not adopt any formality in making a change. Of course he must not adopt another person's name as a cloak to fraud or even make use of his own name in such a way that other persons are thereby defrauded. But the mere fact that a person claims to be the only person in the world bearing a particular name will not of itself entitle him to restrain any one else from adopting that name.

Though no formality need necessarily be observed in changing one's name, it is usually desirable to do some public act, as confusion might arise. The most usual way of changing one's name is to execute a deed poll (stamp duty 10s.), and to publicly advertise the change of name. Another and more costly way is to apply for a Royal Licence to adopt a particular name. If the licence is applied for in consequence of the fact that the terms of some Will or Settlement require the applicant to adopt the name, the stamp duty is £50; but if the Licence is applied for merely voluntarily, then the duty is only £10.

DECEASED WIFE'S SISTER. The Colonial Marriages (Deceased Wife's Sister) Act, 1906, renders valid for all purposes whatever marriages with a deceased wife's sister performed in any part of the British Empire, where such marriages are legal and between parties domiciled therein. And by the Deceased Wife's Sister Act, 1907, marriage with a deceased wife's sister is rendered legal in the United Kingdom. It shall not be lawful for a man to marry the sister of his divorced wife, or of his wife by whom he has been divorced, during the lifetime of such wife.

COMMON CARRIER. A common carrier is a person who is engaged in carrying goods as his regular business, and who undertakes to carry for any one who wishes to employ him; but the term does not include a person or company that conveys passengers only. He is bound to take any goods brought to him by any person, provided he has room, and that they are of a class which he undertakes to carry, and are not of such a nature as to subject him to unusual risks. He must charge a reasonable rate, and must not impose unreasonable conditions. For his liabilities, &c., refer to "Common Carrier" in *Index*. Persons who for hire undertake the removal of furniture from one house to another are under the same general liability as a common carrier, and are therefore liable for any loss, breakage or damage occurring in the course of removal, unless a special contract be entered into by both parties relieving the furniture remover of his liability or setting a limit to his pecuniary risk.

JUSTICES OF THE PEACE ACT, 1906. This Act abolishes the qualification by estate previously required for county justices, and allows persons who reside within seven miles of a county to be appointed justices for that county if they are qualified in other respects. The Act also allows solicitors to be appointed county justices providing neither they nor their partners practise directly or indirectly before the justices of that county or of any borough within the county. The Chairman of a County Council or Mayor of a borough is by the Act *ex officio* a justice of the peace. With regard to women, when holding one of these offices, see p. 452.

UNIFORM. It is illegal for any person, other than a soldier, except when taking part in a performance at a theatre, music-hall, or circus to wear a military uniform, under a penalty of £5. And any person, other than a soldier or sailor, who wears a naval or military uniform, or the semblance of one, so as "to be likely to bring contempt" upon such uniform is liable to a fine of £10 or a month's imprisonment.

LIGHTS ON VEHICLES. It is compulsory for vehicles to carry a white light on the off side at night, and if the load projects more than six feet to the rear a red light must also be displayed in the rear.

PART IV.

COMMERCIAL LAW.

NEGOTIABLE INSTRUMENTS.

NEGOTIABILITY. A negotiable instrument is such that whoever takes it in good faith, and gives value for it, becomes its absolute owner, and can enforce payment of it, provided the instrument was in such a condition that the true owner could, by simple delivery, transfer the ownership of it. Such instruments are exactly on the footing of coined money. If money is stolen by a thief, and the thief subsequently parts with the money to a person who takes the money not knowing that it was stolen, and gives value for it, such person becomes the absolute owner of the money, and the person from whom the money was stolen cannot recover it from him. Among the most familiar examples of negotiable instruments are bills of exchange, cheques, promissory notes, bank-notes, exchequer bills, dividend warrants, East India bonds, and in some cases foreign bonds. But if a foreign bond shows on the face of it that the transferee is not by mere delivery to become the owner until some further act is done, e.g., a railroad bond which states that the transferee does not become the owner of the bond until his name is registered on the Company's books, such bond is not negotiable. And it must be remembered with regard to bills of exchange, cheques, promissory notes and bonds, that in order to be negotiable they must be in such a condition that the true owner could by simple delivery transfer the ownership of them. For example, the ownership of a bill of exchange, payable to bearer, can without further formality be transferred by simple delivery. Such a bill, if stolen, and transferred by the thief to a person who takes it in good faith and who gives value for it, becomes the absolute property of that person. He can enforce payment of it, though the thief from whom he took it had no title to it, and could not enforce payment of it. But a bill or a cheque payable to order is not in a negotiable condition until it has been indorsed by the person to whom it is payable, and until it is indorsed, the ownership of it cannot be transferred by simple delivery. Hence, if a bill or cheque payable to order is obtained by fraud, and the person so obtaining it transfers it without indorsing it to a person who takes it in good faith and who gives value for it, such transferee has no title to the bill or the cheque, and cannot enforce payment of it.

LOST BANK NOTES. The same remarks apply to bank-notes. It may, therefore, be asked what is the object of stopping payment of cheques or bank-notes which have been lost or stolen, since in either case a bona fide holder for value can enforce payment of them. The reason for stopping payment is merely to trace through whose hands such cheque or bank-note has passed. In one case bank-notes, the numbers of which were known, had been stolen. The numbers were advertised. Eventually the notes came into the hands of a person who took them in exchange for gold. He knew of these numbers. In fact the numbers were suspended in his office at the time, but he had forgotten all about the matter. It was held that the bank could not refuse payment of them, because he had taken the notes in good faith and had given value for them.

WHEN NOT NEGOTIABLE. It should be remembered that the above considerations only apply so long as these instruments are in a negotiable condition. The negotiability of a bill of exchange is destroyed when it is over-due and dishonoured, or when it has been restrictively indorsed, or when it has been discharged. (See below under *Indorsement*). The negotiability of a cheque is destroyed by writing across the face of it the words "not negotiable." When, therefore, a person takes any of these instruments in these circumstances, he can have no better title to them than the person who gave it to him had; and if the transferor could not enforce payment, neither can the transferee. The above explanation shows what is implied by the words "negotiable" and "not negotiable." With this preface, the more familiar examples of negotiable instruments, viz., bills of exchange, cheques and promissory notes, will now be dealt with in some detail.

1. BILLS OF EXCHANGE.

A bill of exchange is an order in writing addressed by one person to another, in favour of a specified person or of bearer, for payment of a sum certain in money at a certain time. The order must be unconditional. The time of payment must be either on demand or at a fixed or determinable future time. The sum of money must be certain, and the order must not require any other act to be done in addition to the payment of money. For example, "a bill for such sum as W. Jones shall find to be a fair price for goods sold by J. Smith to R. Brown on July 25th, 1904," is not a bill of exchange, because the sum of money to be paid is not in express terms mentioned on the face of the instrument. So again, a bill for say £100 payable "on the marriage of X," or a bill for say £100 payable "on the arrival of the ship 'Teutonic' at Southampton," is not a bill of exchange, because not only is the time of the event incapable of being determined, but the event itself is uncertain. The marriage may never take place, or the ship may never arrive in port. But a bill say for £100 payable "on the death of X," is a good bill of exchange, for though the time of the death is uncertain, yet the event itself must take place. A bill may be made payable either at home or abroad.

AN INLAND BILL OF EXCHANGE is a bill drawn and payable within the British Isles, or drawn within the British Isles, upon some person resident therein. All other bills are foreign. The following is an example of an inland bill;

"LONDON, *June 24th*, 1904.

£200.

Two months after date pay to Mr. W. Jones, or order, the sum of two hundred pounds, value received.

JOHN BROWN.

To MR. JAMES ROBERTS,
BELFAST."

Here John Brown is called the "drawer," James Roberts the "drawee," and W. Jones the "payee." As soon as the "drawee" writes across the face of the bill his signature with or without the word "accepted," he is called the "acceptor." By so doing he signifies that he has agreed to the order of the drawer; but he is not liable on the bill until he has done so and has delivered the bill to the person who is entitled to it. As the bill is payable to order, the payee must write his signature on the back of the bill before he can obtain payment of it, or transfer it to a third party. When he writes his name on the back the payee is called the "indorser," and if he writes on the back of the bill the name of the person to whom he transfers it, and expresses it to be payable, such person is called the "indorsee." Such indorsee may in turn become an indorser. All persons thus affixing their signature to a bill are called "parties to the bill," and are each liable to the holder in due course, that is to the person who takes the bill from any one in good faith, and who gives value for it,

It will, therefore, be easily understood that the more signatures are attached to a bill, the greater is the holder's security. For if the acceptor is unable to meet the bill, the holder can call upon the drawer to pay it, and failing the drawer, he can demand payment from each of the indorsers, according to the priority of their indorsements, but notice of dishonour must be promptly given to the drawer and all the indorsers. (See "Dishonour" below.)

Where the amount expressed in words on the bill differs from the amount expressed in figures, the amount expressed in words will be taken as the real amount for which the bill is drawn. This also applies to cheques. A bill is not invalid by reason only of its not being dated, being ante-dated, post-dated or dated on a Sunday. The words "for value received" are unnecessary, as it is always presumed that value has been given, until the contrary is proved.

Bills may be drawn payable "at sight" or "on demand" or "so many days after sight," or "on a specified day," or "so many days or months after date." The payee may be the drawer himself; and the bill may be made payable to bearer or to order. As has been already explained, in the case of a bill payable to bearer, no indorsement is necessary to make the bill negotiable, though for the sake of security it is wise to obtain the payee's indorsement. In the case of a bill payable to order, the property in the bill cannot be transferred until the payee has indorsed it.

A FOREIGN BILL OF EXCHANGE is usually drawn in three copies or sets, exactly similar, but each is expressed to be payable only in case that each of the other two has not been paid. This is done to lessen the danger of being lost in transmission. The "First of Exchange" only need be drawn on stamped paper.

The following is an example of a foreign bill:

"LONDON, *July 25th*, 1904.

£100.

At sixty days after sight of this first of exchange (second and third unpaid) pay to the order of J. Brown, the sum of one hundred pounds, value received, and place the same to account as advised.

WILLIAM SMITH.

To MR. ROBT. HARVEY,
MELBOURNE."

RIGHTS AND LIABILITIES. A bill of exchange is a good payment for a debt unless and until it has been dishonoured, when the debt revives. The creditor, however, is not bound to accept payment by cheque or other bill of exchange, he can demand payment in legal tender (i.e. coin or Bank of England notes), and he is not bound to give change. But it must be remembered that where a creditor has been paid by a bill, and then transfers the bill to a third party, the bill being subsequently dishonoured, he (the creditor) cannot sue for the debt until he takes up the bill, or gets it back into his possession.

No person can be made liable on a bill of exchange unless he has affixed his signature to it and has capacity to contract; e.g. an infant cannot be made liable on a bill of exchange, even if he has given the bill in payment for necessaries, though he can be sued for the price of the necessaries. A lunatic or a drunken person who accepts a bill of exchange cannot be sued by a person who was aware of the lunacy or drunkenness, but he could be sued by a holder in due course, that is a person who gave value for it, and who was unaware that the bill was accepted by the acceptor when in a state of intoxication or lunacy. Again, where a person signs as servant or agent of another, he is not personally liable thereon, provided he acts within the scope of his authority, and makes it clear on the face of the bill that he is signing merely in his capacity as servant or agent of that other. He should, however, be careful to insert the name of his principal, for the mere addition to his own name of words describing himself as an agent does not exempt him from personal liability.

Where a bill is given for an illegal consideration, e.g. in payment of a bet, the person who took the bill in payment of the bet cannot enforce payment from the person who gave it to him in payment; but a holder in due course could, because he was not aware that the bill was founded on an illegal consideration, and because he gave value for it. Where the drawer has given no consideration (value) to the acceptor, he cannot sue the acceptor; but a holder in due course can enforce payment of it. The liability of all parties to the bill exists for six years from the maturity of the bill, during which period they may be sued by a holder in due course. The special features of bills of exchange will now be dealt with.

ACCEPTANCE of a bill of exchange signifies that the drawee agrees to the order of the drawer. It must be written on the bill and signed by the drawee, who must perform his promise by the payment of money only. The drawee may accept the bill before it has been signed by the drawer, but the bill is not a bill really until the drawer puts his name to it. And when a bill has been accepted without a drawer's name to it, the date of the bill is reckoned from the time when he puts his name to it. A bill may also be accepted when it is over due or after being dishonoured.

Acceptances are either general or qualified. A general acceptance agrees without any qualification to the order of the drawer. A qualified acceptance states in express terms some variation of the drawer's order. For example, the acceptor may agree to pay part only of the sum for which the bill is drawn, or to pay it at a particular place only, or may vary the time at which the bill shall be paid, or may make payment depend on some condition being fulfilled. A holder may refuse to take a qualified acceptance, and may then treat the bill as dishonoured by non-acceptance. If a holder takes a qualified acceptance without the permission of the drawer or an indorser, such drawer or indorser will be no longer liable on the bill.

ACCEPTOR, that is, the person who agrees to the order of the drawer. Until he accepts and delivers the bill to the party entitled to it, he is not liable on the bill. So that if the bill is stolen from his desk and gets into circulation, he cannot be made to pay it. An acceptor cannot turn round and say to a holder in due course that the drawer had no right to draw, or that the drawer's signature is a forgery, for he is presumed to know his signature. The acceptor is the person primarily liable on the bill.

An acceptor is not liable for any fraudulent alterations that may be made after acceptance. In one case, a bill for £500 was presented for acceptance, with a stamp to cover an amount of £3,500, and the drawer had designedly left spaces to insert this larger amount. The acceptor could easily have seen this, but he wrote his acceptance and handed the bill to the drawer, who fraudulently turned it into a bill for £3,500. Subsequently the drawer discounted the bill, and got cash for it. It was held that the discounter could only recover £500 from the acceptor.

DAYS OF GRACE. A bill must be paid when it falls due. The time when it falls due is determined by *the law of the country in which the bill is payable.* In this country, to determine the day on which the bill falls due, three days, called "days of grace," are added to the time mentioned on the bill as the date for payment, and the bill is due and payable on the last day of grace. If the last day of grace falls on Sunday, Christmas Day, Good Friday, or a public fast day or thanksgiving day, the bill is due on the preceding business day. When the last day of grace is a bank holiday; or when the last day of grace is a Sunday, and the second day of grace is a bank holiday; the bill is due and is payable on the succeeding business day. The term month in a bill means a calendar month.

DISCHARGE OF A BILL. A bill is discharged by payment; or when the acceptor is or becomes the holder of it in due course, at or after the time when payment is due, or when the holder of a bill at or after payment is due; renounces his right of payment against the acceptor, either in writing or by delivering up the bill to the acceptor.

For example, if the holder of a bill of exchange, say for £100, gave a receipt for that amount to the acceptor that receipt would not free the acceptor from his liability on the bill. In order to free the acceptor from liability on the bill, the bill must be given up to the acceptor; or the holder must at or after its maturity expressly state in writing that the acceptor is free from liability on the bill. Again,

suppose B lends A £500 and A gives B a promissory note for that amount. Subsequently B, in order to relieve A from liability, gives him a receipt for that amount. A is still liable on the note, and should B die, his executors could sue A on the note for £500. The proper course would have been for B to have given back the note to A.

When the holder intentionally cancels a bill, and the cancellation is apparent on the face of it, the bill is discharged. Material alterations, e.g. of the date, sum payable, time and place of payment, without the assent of all parties liable on the bill, will discharge it except as against the party who has himself made the alteration, and subsequent indorsers. But if the alteration is not apparent, the bill is not discharged, for the holder in due course can enforce payment of it according to its original tenor.

DISHONOUR. A bill is said to be dishonoured when the drawee refuses to accept it on its being presented for acceptance, or having accepted, refuses to pay it when it falls due. When a bill is dishonoured by non-acceptance, the holder cannot sue the drawee, but he can at once sue the drawer and any indorser, provided he gives within a reasonable time notice of dishonour to the drawer and the indorsers. If notice of dishonour is not given, the drawer and the indorsers will not be liable on the bill. The notice must be sent off to reach the party receiving the notice on the day after the dishonour, where such person receiving the notice resides in the same place as the person giving the notice. Where they reside in different places, the notice must be sent off on the day after the dishonour of the bill, and if there is no convenient post, then by the next post thereafter.

The same rules apply to dishonour by non-payment. But of course if a bill is dishonoured by non-payment, the holder can sue the acceptor as well as the drawer and the indorsers. Notice of dishonour need not be given to the acceptor.

Delay in giving notice of dishonour is excused where the delay is caused by circumstances beyond the control of the party giving notice, and not imputable to his default, misconduct or negligence. When the cause of delay ceases to operate, the notice must be given with reasonable diligence.

DRAWEE, that is, the person upon whom a bill of exchange is drawn. He must be named or indicated on the bill with reasonable certainty, e.g. the bill may be addressed to a particular place or house, and the person living there may accept it. The only person who can sue the drawee for non-acceptance is the drawer, and he cannot sue unless the drawee has agreed to accept, which agreement may be express, or understood by the usual course of business between the parties.

FORGERY. A forged or unauthorised signature is wholly inoperative, and no right to retain the bill or to enforce payment of it against any party to the bill can be acquired through that signature, unless the party against whom it is sought to retain or enforce payment of the bill is precluded from setting up the forgery or want of authority. An unauthorised signature not amounting to forgery may be ratified, and the party whose signature in the first place was unauthorised, may render himself liable on the bill. A few examples will make this clear:—

(1) A bill payable to the order of John Smith gets into the possession of another, who forges Smith's indorsement and hands the bill over to Brown, who takes it in good faith and gives value for it. Brown acquires no title to the bill, and cannot compel the acceptor to pay it.

(2) A clerk forges his employer's name as a drawer to a bill of exchange, gets D to accept it, and then indorses it over to C, who takes it in good faith and gives value for it. Here C can compel the acceptor to pay the bill, because the acceptor is precluded from denying the drawer's signature, as he is presumed to know that signature. Of course, if the acceptor is unable to pay, the supposed drawer is in no way liable because his signature had been forged, though, had it not been forged, he would have been liable to pay it, in case the acceptor was unable to meet the bill.

(3) A bill is payable to C's order. His clerk forges his indorsement, and transfers the bill to D, who takes it in good faith and gives value for it. D then presents the bill to the drawee for acceptance. The drawee accepts the bill and makes it payable at his bankers. The bankers pay D. The bankers must bear the loss, they cannot debit the acceptor with this payment. Hence bankers as a rule make a special agreement with their customers, to the effect that if they pay bills, accepted by their customers, the customers will in such cases bear the loss.

HOLDER IN DUE COURSE is the person who has taken a bill complete and regular on the face of it before the bill was overdue, and without notice of its having been dishonoured. He must have taken the bill in good faith and for value, and he must be unaware at the time the bill was negotiated to him of any defect in the title of the person who negotiated it to him. That is, he must not be aware that the person who negotiated the bill to him obtained it or the acceptance thereof by fraud, duress, force or fear or other unlawful means, or for an illegal consideration.

Any person who derives his title to a bill through a holder in due course, and is not himself a party to any fraud or illegality affecting it, has all the rights of a holder in due course, and may enforce payment against all parties liable on the bill.

When a bill payable after sight is negotiated the holder must either present the bill for acceptance or negotiate it within a reasonable time. If this is not done, the drawer and all indorsers prior to that holder are discharged. When accepted, the holder must present it for payment on the day it falls due, otherwise the drawer and the indorsers will be discharged from all liability on the bill.

A holder in due course holds the bill free from any defects of title of prior parties. He is the absolute owner of the bill, and can enforce payment of it, and if he obtains payment of the bill, the person who pays him in due course gets a valid discharge for the bill.

INDORSEE is the person to whom a bill of exchange is assigned, by the holder writing above his signature a direction to pay the bill to, or to the order of, such person. Upon delivery of the bill to the indorsee he becomes the owner of it.

INDORSEMENT is the signature on the back of a bill, whereby the person so signing and delivering the bill transfers to another the property in it. An indorsement may be in blank, or special, or restrictive, or it may be conditional.

(1) **An indorsement in blank** consists of the simple signature of the person to whom the bill is payable. It specifies no indorsee, and a bill so indorsed becomes payable to bearer. The holder may convert a blank indorsement into a special indorsement by writing above the indorser's signature a direction to pay the bill to himself, or to his order, or to some other person.

(2) **A special indorsement** specifies the person to whom or to whose order a bill is payable, e.g. Pay J. Day or order, W. Brown. In this case the bill is assigned by W. Brown to J. Day, and before the latter can assign the bill he must indorse it with his signature.

(3) **A restrictive indorsement** is one which prohibits further negotiation of the bill, or which expresses that it is a mere authority to deal with the bill as thereby directed, and that it does not transfer the ownership of the bill. For example, a bill is payable to D or his order. Before D can negotiate the bill he must write his signature on the back, and if he wishes to restrictively indorse it, he must prefix some such words as "Pay X only," or "Pay X for the account of Z," or "Pay X or order for collection." When a bill is restrictively indorsed it ceases to be transferable, unless the indorsement authorises transfer. If the restrictive indorsement authorises transfer, the bill has nevertheless ceased to be a negotiable instrument. All subsequent indorsees take the bill with the same rights and subject to the same liabilities as the first indorsee under the restrictive indorsement. A holder cannot get a better title to the bill than the person from whom he took it had.

(4) **A conditional indorsement.** Where a bill is indorsed conditionally, the condition may be disregarded by the payer, and payment by him to the indorsee is valid whether the condition has been fulfilled or not. Though of course, as between the indorser and the indorsee, the condition is binding.

When the holder of a bill payable to his order transfers it for value without indorsing it, the transferee gets no better title than the transferor had in the bill. In fact, the bill is not in a negotiable condition until the holder has indorsed it, and accordingly, if the holder had obtained the bill by fraud, and transferred it for value without indorsing it, the transferee would have no title to the bill and could not enforce payment of it. The transferee could compel the transferor to indorse the bill, and if this were done before the transferee discovered that the bill was tainted with fraud, the transferee could then enforce payment of the bill. The indorsement must not be partial. A partial indorsement is one which purports to transfer to the indorsee a part only of the amount payable. Where in a bill payable to order the payee or indorsee is wrongly designated or his name is mis-spelt, he may indorse the bill as therein described, adding, if he thinks fit, his proper signature. This of course applies to cheques (which see).

ISSUING A BILL. Every contract on a bill, whether it be the drawer's, acceptor's, or indorser's, is incomplete and may be revoked until the bill has been delivered, that is, until its possession has been transferred from one person to another. Suppose a bill is sent to the drawee for acceptance, and he writes his acceptance on it, but that before the drawee returns the bill he hears that the drawer has failed —then in this case the drawee can cancel his acceptance and return the bill dishonoured to the holder.

LOST BILLS. When a bill is lost before it is overdue, the holder may compel the drawer to give him another bill of the same tenor. He must, however, give to the drawer security to indemnify him in case the lost bill shall be found again.

PRESENTMENT is the bringing of a bill to the drawee for his acceptance, or if he has already accepted it, presenting it for payment at the proper place.

Where a bill is payable after sight presentment for acceptance as soon as possible is of importance in order to fix the maturity of it. It is well in every case to obtain acceptance of a bill as soon as possible in order to make the drawee liable. When a bill is duly presented and is not accepted within twenty-four hours, the person presenting it must treat it as dishonoured by non-acceptance. It must be left with the drawee if required, who at the end of the twenty-four hours must re-deliver it to the holder.

Presentment for payment must be made at the place where the bill is payable at the time when it falls due, otherwise the drawer and indorsers will be discharged from liability. Even though there is good reason to believe that the bill will be dishonoured, it must be presented for payment in order to charge the drawer and indorsers, and even then notice must be sent to them that the bill is dishonoured.

Presentment for payment is not necessary where a bill has been dishonoured by non-acceptance. Presentment for payment is excused, where, after the exercise of reasonable diligence, it cannot be effected, and in various other cases.

NOTING or **PROTEST** is a declaration attested by a notary public that a bill has not been accepted or has not been paid. Inland bills need not be noted, but if a foreign bill is not noted, the drawer and the indorsers are no longer liable on the bill. The noting must be made on the day of its dishonour, but it may be protested for better security against the drawer and indorsers at a future date, provided it has been noted by a notary at the due date.

A bill must be protested at the place where it is dishonoured; but when a bill is presented by post and returned dishonoured by post, it may be protested at the place to which it is returned, and on the day of its return, if received during business hours, and if not received during business hours, then on the next business day. When a bill payable at the address of some person other than the drawee has been dishonoured by non-acceptance, it must be protested at the place where it is expressed to be payable, and no further presentment to the drawee is necessary.

A protest must contain a copy of the bill, and must be signed by the notary making it, and must specify the person at whose request the bill is protested, the place and date of protest, the reason for protesting the bill, the demand for acceptance and payment made by the notary, the answer given, if any, or the fact that the drawee or acceptor could not be found.

Where the services of a notary cannot be obtained, protest may be made by any respectable householder in the presence of two witnesses. The following is the form to be used in such cases:—

> "Know all men that I, A. B. (householder), of in the county of in the United Kingdom, at the request of C. D., there being no notary public available, did on the day of 19 at demand payment (or acceptance) of the bill of exchange hereunder written, from E. F., to which demand he made answer (state answer, if any), wherefore I now, in the presence of G. H. and J. K., do protest the said bill of exchange.
>
> (Signed) A. B.
>
> G. H. } *Witnesses*
> J. K. }
>
> Here follows a copy of the bill.

Where a bill is lost or destroyed, or is wrongfully detained from the person entitled to hold it, protest may be made on a copy or written particulars thereof.

The stamp on a protest may be adhesive, to be cancelled by the notary. Where the duty on a bill does not exceed one shilling, the stamp on the protest must be of the same value as the stamp on the bill. In any other case the stamp on a protest is one shilling.

STAMPS. The stamp may be adhesive on a bill drawn on demand. In all other cases the bill must be written on paper bearing an impressed stamp, excepting bills drawn abroad. (See below.)

INLAND BILLS must be stamped as follows:—

When payable on demand, or on presentation, or at sight, or within three days after sight, or when	s.	d.
the amount does not exceed £5	0	1
Exceeds £5 and does not exceed £10	0	2
„ £10 „ „ „ £25	0	3
„ £25 „ „ „ £50	0	6
„ £50 „ „ „ £75	0	9
„ £75 „ „ „ £100	1	0
For every £100, and also for any fractional part of £100 of such amount or value	1	0

FOREIGN BILLS must be stamped as follows:—

(*a*) A bill drawn in the United Kingdom and payable abroad is stamped as an inland bill.

(*b*) The same scale of stamping applies to bills drawn abroad payable in the United Kingdom.

(*c*) A bill drawn abroad and payable abroad, if in any way negotiated in the United Kingdom, must be stamped on the same scale as an inland bill, except that where the amount exceeds £50 and does not exceed £100 a 6d. stamp only is required. And when the amount exceeds £100 a 6d. stamp must be affixed for every £100 or fractional part of £100.

N.B.—In cases (*b*) and (*c*) the duties are to be denoted by adhesive stamps. Bills drawn abroad on demand require a penny postage and inland revenue stamp. In other cases the *ad valorem* duties must be denoted by adhesive "Foreign Bill Stamps" of sufficient amount.

The penalty for dealing with bills which are not stamped, or which are improperly stamped, or for neglecting the requirements as to cancelling stamps is £10. [Refer to "Cancellation of Stamps" in *Index*.]

2. CHEQUES.

NATURE OF A CHEQUE. A cheque is a bill of exchange drawn on a banker payable on demand. The relation between a banker and his customer is that of debtor and creditor. The customer lends his money to the banker,

who undertakes to discharge the debt, by honouring the cheques of his customer, to the extent of the funds lent to the banker. Consequently if a banker refuses to honour the cheques of his customer, when the customer has sufficient funds in the bank to meet them, the banker commits a breach of contract, and the customer may sue him for damages, but the holder of a cheque may not.

PAYMENT OF CHEQUES. The authority of a banker to pay a cheque drawn on him by his customer is revoked by countermand of payment or by notice of the customer's death. A banker also must not pay cheques drawn on him by his customer if he has received notice of an act of bankruptcy, or has had a garnishee order served upon him, forbidding him to honour cheques drawn by the customer on his funds in the bank.

A cheque should be presented for payment within a reasonable time. But the drawer is liable on the cheque for six years from its date. If, however, through delay in presenting the cheque the drawer has suffered actual damage, e.g. by failure of the bank, he is no longer liable on the cheque; but the holder can prove as a creditor for the amount of the cheque in the bankruptcy or winding up of the bank.

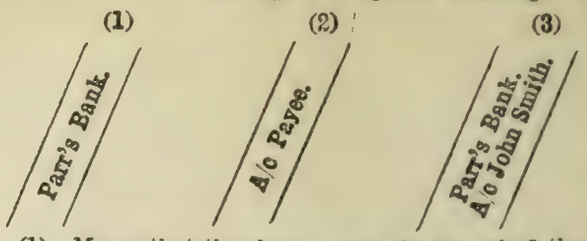
Care should be taken in filling up a cheque, for if the drawer *negligently* writes it in such a way that the amount can be altered, and the bank pays such altered amount, the loss will not fall on the bank but upon the drawer. The mere fact, however, of leaving spaces which could be utilised for forgery would not constitute such negligence as to render the drawer responsible.

Cheques are either payable to "bearer" or "order." If neither of these words is written on the face of the cheque, it is held payable to order. A cheque payable to bearer need not be indorsed by the payee, but a cheque payable to order must be indorsed by the payee before it can be cashed. A cheque payable to bearer may be altered to order either by the drawer of the cheque or the payee, but a cheque payable to order cannot be altered to bearer except by the drawer of the cheque, who must sign his name or initials to the alteration.

HOW TO ENDORSE A CHEQUE. The payee should write his name exactly as it is written on the face of the cheque, omitting, of course, Mr., Esquire, or other title. Where the name is incorrectly spelled or incorrectly given, the endorsement should agree exactly with the name as given, the usual signature being written underneath. If the cheque be payable to Mr. Smith (without the mention of his first name or initials) he should endorse his usual signature. If payable to Mrs. Smith it should be endorsed Ellen Smith, or whatever the usual signature may be. If made out to Mrs. John Smith, she ought to endorse it as Ellen Smith, wife of John Smith.

Firms and companies doing regular business with a bank will of course ask their banker how they wish cheques endorsed. But the following directions may be found useful. If a cheque be payable to Messrs. Smith it should be endorsed Smith and Son, or John and James Smith, or in some such way, so as to show that it is endorsed on behalf of a firm of that name. In the case of a limited company, say *Harrod's Stores*, the endorsement should be made by a person appointed by the Board of Directors, and he should endorse as follows: per pro. or p.p. Harrod's Stores, Ltd., writing underneath his name and position, e.g. John Jones, Secretary. (See "per procuration" in *Commercial Dictionary*.)

CROSSED CHEQUES. For the purpose of tracing cheques and seeing that they do not come into the hands of the wrong party, it is usual to cross them. The crossing is done by drawing two parallel transverse lines, with or without the words "and Co." across the face of the cheque, when the crossing is said to be "general." Cheques so crossed can be paid only through a bank, and if paid across the counter by a banker, such banker will have to bear the loss if payment has been made to the wrong party. Sometimes a cheque is crossed "specially," and this is done by (1) inserting the name of the bank, through which payment is to be made, in the crossing; or by (2) inserting there the name of the person to whose account the payment is to be made; or by (3) inserting both the name of the bank and the name of the person to whose account it is to be credited. Examples of special crossing:—



(1) Means that the cheque can only be cashed through Parr's Bank.

(2) Means that only the payee can get cash for the cheque, and only from the bank where he has an account.

(3) Specifies not only the account to which the cheque is to be paid, but the bank where such account is kept.

The crossing of a cheque does not affect its negotiability, and if a crossed cheque has been stolen after being endorsed, the person who takes it from the thief in good faith and gives value for it can enforce payment of it, even though the cheque has been stopped. The loss will fall upon the payee. In order to destroy the negotiability of a cheque, the words, "not negotiable" must form part of the crossing. Whoever then takes the cheque can have no better title to it than the person who gave it to him had.

A cheque must bear a penny stamp. Bankers prefer that cheques drawn on them should be written on forms supplied by the bank, but there is nothing to prevent a cheque being written on an ordinary piece of paper, provided that the stamp is affixed.

Should a cheque be inadvertently crossed, and it is desired to cancel the crossing, the drawer alone can do this, by writing on the face of the cheque the words "pay cash" and adding his signature thereto.

NOT NEGOTIABLE. A crossed cheque with these words forming part of the crossing is no longer a negotiable instrument, that is, it is no longer on the footing of coined money. It is a peculiarity of coined money that whoever takes it in good faith and gives value for it becomes the absolute owner of the money. The same is true of negotiable instruments. But when a cheque bears the words "not negotiable," then the person taking it must be on his guard. He can have no better title to it than the person transferring it to him had. For example, a person comes dishonestly by a cheque marked "not negotiable" and gets his grocer to cash it. The grocer, even though he takes it innocently and gives value for it, is not entitled to the cheque, and cannot compel the drawer of the cheque or the drawer's banker to pay it. These words, then, provide an absolute safeguard to the danger of having crossed cheques lost or stolen.

A POST-DATED CHEQUE is merely an ordinary bill of exchange, *not* payable on demand, and therefore should not be negotiated before the date mentioned on it, otherwise a penalty may be incurred if it is insufficiently stamped as an ordinary bill of exchange.

FORGED SIGNATURES. If a banker pays a cheque upon which the drawer's signature has been forged, the banker himself must bear the loss, for the banker is presumed to know his customer's signature. But if the endorsement of the payee is forged, the banker will not be liable if he pays the cheque, for he cannot be expected to know the endorser's signature. The loss will fall either on the drawer or the payee, according to the circumstances of the case.

LOST CHEQUES. In sending cheques through the post, the loss will fall on the drawer, if such cheque is lost in transmission, unless the drawer of the cheque has been authorised by the payee to send the cheque through the post, either by express permission or by the usual course of dealing between the parties. The payee can compel the drawer to give him a fresh cheque upon the payee undertaking to indemnify him against loss and giving security if required. The drawer should stop payment of the

original cheque, but this will be of no avail if the cheque should get into the hands of a *bona fide* holder for value, unless the lost cheque had been marked "not negotiable."

STALE CHEQUE. A cheque which has been in circulation for an unreasonable length of time is overdue, and a banker would refuse to cash a cheque which is six months old, though the drawer is liable on it for six years. Where the receiving banker and the paying banker reside in the same town, the cheque should be presented for payment before the closing hour of the bank on the day after it has been received. Where they reside in different places, the receiving banker should post it to the paying banker not later than two days after he received it. In all cases cheques should be cashed as speedily as possible.

BACKING A CHEQUE. Sometimes a person to oblige a friend writes his name on the back of a cheque belonging to his friend. By so doing he guarantees the cheque will be met on presentation, and, therefore, it is unwise to back a cheque, because if the cheque is not honoured, the person lending his name may have to meet it.

N.B.—A cheque may be drawn for any amount from 1d. upwards.

3. PROMISSORY NOTES.

A promissory note is an unconditional promise in writing made by one person to another, signed by the maker, engaging to pay on demand or at a fixed or determinable future time, a sum certain in money to, or to the order of, a specified person or to bearer. A bank-note is a promissory note issued by a banker, payable to bearer on demand, but there is this difference between a bank-note and a promissory note, that a bank-note may be re-issued after payment.

If made payable to the maker's order it does not become a promissory note until it is indorsed by the maker. The following is an example of a promissory note:—

"LONDON, 27*th July*, 1904.

£60.

On demand, I promise to pay Mr. John Brown or order the sum of sixty pounds, value received.

JAMES GREEN."

Here James Green is the maker and John Brown is the payee.

The note, of course, might be made payable not on demand, but at any time after date, and might be made payable to bearer. Where a note runs "I promise to pay," and is signed by two or more makers, each is liable for the whole amount, in case the others make default in payment.

Where a note payable on demand has been indorsed, it must be presented within a reasonable time for payment, otherwise the indorser will not be liable if it is not paid. Where a promissory note is made payable at a particular place, it must be presented for payment at that place, in order to render the maker liable. In any other case presentment for payment is not necessary in order to render the maker liable.

A promissory note is negotiable in the same manner as a bill of exchange or a cheque. Its negotiability may be destroyed by making it payable to a particular person only. The maker is the person primarily liable, and if he does not pay, notice of dishonour must be given to prior indorsers, each of whom then becomes liable according to the priority of his indorsement. But an indorser is not liable until the note has been presented to the maker for payment and payment has been refused. An instrument which purports to be a promissory note, and yet is invalid, may be good evidence of an agreement between the parties.

Promissory notes must bear a stamp according to their amount. The duty is the same as that for a bill of exchange. See "Stamps" under *Bills of Exchange*.

N.B. An I.O.U. is not a negotiable instrument, and does not require a stamp.

SALE.

In treating of this subject, we shall first deal with Contracts of Sale in general, and then with contracts relating to the Sale of Goods in particular.

1. CONTRACTS OF SALE.

In making a contract of sale, there must be an offer on the one side and an acceptance of that offer on the part of the other. The acceptance must correspond exactly to the offer, for if it is wider or narrower, there is no contract. Suppose A offers to sell B a horse for £50. B, in reply, says that he will take the horse provided that it is warranted sound and free from vice, or that he will give £45 for it. Here B has not accepted A's offer. He has merely made a counter-offer, and unless and until A accepts the counter-offer, there is no contract between the parties. The price must be mentioned, except perhaps in the case of the sale of goods, where, in the absence of any mention of the price, the law presumes a reasonable price. If the contract is in writing, the parties must be described, usually but not necessarily by name, else there is no contract.

WITHDRAWAL OF OFFER AND ACCEPTANCE. An offer can be revoked at any time before it is accepted, but after it has been accepted it cannot be withdrawn, without the consent of the other party. This principle, coupled with the fact that the law will not, as a rule, enforce a gratuitous promise, gives rise to a very peculiar position, with regard to the case of a person who offers to sell something and agrees that the offer shall remain open until a certain time, for in spite of such an agreement, the offerer can at any time withdraw his offer before it has been accepted.

For example, A on August 10th writes to B offering to sell to B the pictures in his house for £1,000, the offer to remain open until October 1st. In such a case, the law allows A to withdraw his offer at any time before October 1st, unless in the meantime B has accepted the offer, or has given A some consideration or value for keeping it open. It is not quite settled whether A must formally withdraw his offer, or whether selling the pictures without giving notice to B would be a sufficient revocation of the offer. It would be safer for him to inform B of the withdrawal.

Similarly, an applicant for shares in a company may at any time before the letters of allotment have been posted to him, withdraw his proposal to take up the shares.

On the other hand, an acceptance once communicated to the offerer cannot be withdrawn. It must be communicated by words or conduct, and the acceptance is communicated when it is made in the manner indicated or requested by the offerer; e.g., A writes through the post to B, offering to sell to him his house for £2,000. Here A, by his mode of making the offer, indicates that he expects an answer through the post, though, of course, B can give the answer by word of mouth. If B, therefore, writes a letter accepting the offer and posts it, the moment the letter is dropped in the pillar-box it is communicated to A, and B cannot withdraw his acceptance, without A's consent. Suppose B had changed his mind after he had posted his acceptance, and then sent a telegram to A withdrawing the acceptance, and the wire reached A before the letter. This would make no difference. B would still be bound to pay the purchase-money, and could not get out of his contract unless A consented. But if, after posting the original offer, A changed his mind, he could revoke the offer at any time up to the moment when B posted his acceptance, provided B received the revocation before posting his acceptance.

FORM OF THE CONTRACT. A contract of sale (i.e. an agreement to sell and to buy) may be made in writing or by word of mouth, or by conduct:

1. When the contract must be in writing. As regards agreements to sell certain kinds of property, the law requires that such agreements must be in writing, or that some note or memorandum thereof should be made in writing. This is for the purpose of preventing fraud, and also that there may be evidence as to what the terms of the contract really

are. Thus by the Statute of Frauds a contract for the sale of land or of interests in land (e.g. a house or a lease) will not be enforced by the Courts, unless such contract is in writing, or some note in writing is made thereof and signed by the party against whom it is sought to enforce the contract, or by his agent. If the agreement is made by word of mouth, neither party could compel the other to carry it out, unless there has been a part performance of the contract. What is a part performance of the contract is sometimes difficult to determine, but generally speaking, letting the purchaser into possession is sufficient. Strange to say, the payment of the purchase-money would not of itself be a part performance of the verbal agreement sufficient to make it enforceable.

Again, by the Sale of Goods Act, 1893, no contract for the sale of goods of the value of £10 or upwards is enforceable, unless the buyer accept part of the goods so sold, and actually receive the same, or give something in earnest to bind the bargain or in part payment, or unless "some note or memorandum in writing of the contract be made and signed by the party against whom it is sought to enforce the contract, or by his agent." Hence it will be seen that in the case of contracts for the sale of land, or of interests in land, or of goods to the value of £10 or upwards, there should, as a rule, be made some note in writing of the contract.

2 What the Memorandum must contain. The note or memorandum in writing must sufficiently describe or identify the property to be sold. The price or consideration for the property must always be mentioned, except in the case of the sale of goods, where if the price is not mentioned, a reasonable price will be presumed. The parties, i.e. the intending seller and the intending buyer, must be described, usually by inserting their names. Finally, in order to be able to compel a party to carry out the contract, the note must be signed by him or his agent. The following will serve as an example. Brown wishes to buy Robinson's house, and makes him an offer in writing after this fashion.

"LONDON, *August 10th*, 1904.

"Dear Sir,

"I offer you £1,000 for your freehold house, No. 319 Grosvenor Square, W.

"Faithfully yours,
"J. BROWN.

"W. ROBINSON, ESQ."

In this example all the conditions of a sufficient memorandum are satisfied—the price, the description, or identification of the property, and the names of the parties. Even if Robinson's name did not appear in the letter itself, but the letter was contained in an envelope addressed to him, that would be sufficient, for the envelope and the letter would be regarded as one document. If, now, Robinson accepts Brown's offer the contract is complete. He may accept verbally or in writing. If he accepts by letter signed by himself or his agent, each party can compel the other to carry out the contract, because each has put his signature to it. But if Robinson accepts verbally, Brown could not compel him to carry out the contract because his signature has not been obtained, and the law requires that the agreement must bear the signature of the party against whom it is sought to enforce the contract. Though Brown, in that case, could not force Robinson to sell the house, Robinson could compel Brown to buy it, because Brown has affixed his signature to the note.

3. When Letters serve as a Memorandum of Agreement. It may be mentioned that a contract of sale (agreement to sell) may be gathered from a series of letters in a correspondence between the parties, provided that they are so connected as to indicate, without the necessity of bringing in extraneous evidence, a clear offer on one side, and a definite acceptance of that offer on the other.

Where an agreement is contained in correspondence and requires a stamp, the letters containing it should be fastened together and taken to Somerset House to be stamped; but by the Stamp Act, 1891, certain agreements do not require to be stamped. They include (1) Agreements or memoranda the matter whereof is not of the value of £5; and (2) Agreements or memoranda relating to the sale of any goods, wares, or merchandise.

2. SALE OF GOODS.

The term "contract of sale" includes both actual sales and agreements to sell, between which there are several differences. An agreement to sell is a contract pure and simple, and it deals with something that has yet to be carried out. A sale is a contract and something else besides, for it acts as a conveyance of the property from the seller to the buyer. Where goods have been sold and the buyer does not pay up, the seller may sue for the price; but where an agreement to sell is broken, by the buyer refusing to take the goods, the seller cannot sue for the price, all that he can obtain is damages for breach of contract. If an agreement to sell is broken by the seller, the only remedy that the buyer has is to sue for damages. He cannot claim the goods, for they still belong to the seller, to do what he likes with them. But if there has been an actual sale, and the seller fails to deliver the goods, not only can the buyer obtain damages from him for breach of contract, but in some cases he can actually claim the goods. Lastly, if there is an agreement to sell, and the goods are destroyed before the actual sale is accomplished, the loss as a rule falls on the seller; whereas, if there has been a sale, and the goods are destroyed while in the possession of the seller and before they come into the possession of the buyer, the loss falls on the buyer, for they are his property.

FORMALITIES TO BE OBSERVED. As has been already stated, all contracts for the sale of goods of the value of £10 or upwards must be in writing, unless the buyer has accepted part of the goods so sold and actually received the same, or given something in earnest to bind the bargain or in part payment. This, of course, refers only to agreements to sell, and not to actual sales.

The word "accept" in this connection is not used in its ordinary meaning. It does not mean that the buyer has accepted the goods definitely in fulfilment of the contract, but merely that he has done some act which recognises the agreement that he had previously entered into. For example, Brown verbally orders Robinson to make him a motor car according to a certain pattern for the price of £500. Robinson makes the car and delivers it to Brown, who examines it, makes a trial run on it, and then returns it to Robinson, saying that it is not up to the required standard. Here Brown, by examining and testing it, shows that there had been an agreement between him and Robinson for the sale of a motor car, and in that sense he has accepted it, though of course he has not accepted it in the sense that the contract has been performed to his satisfaction. This recognition by Brown of the agreement between him and Robinson is all that the law requires, and obviates the necessity of a written agreement. Hence, although not in writing, the contract is enforceable, and Robinson can sue Brown for the price, but if Brown can show that the car was not according to instructions, he cannot be compelled to pay.

SUBJECT-MATTER OF THE CONTRACT. Where there is a contract for the sale of specific goods which, unknown to the seller, have perished at the time of the sale, the contract is void. The same thing happens where there is an agreement to sell specific goods, and subsequently the goods, without any fault on the part of the seller or buyer, perish before the risk passes to the buyer.

THE PRICE. The price in a contract of sale may be fixed by the contract, or may be left to be fixed in a manner thereby agreed, or may be determined by the course of dealing between the parties, and in other cases a reasonable price must be paid. Again, the price may be left for a third party to fix, and if such third party does not make a valuation, the agreement ceases to have any force. If such third party is prevented from making a valuation by the fault of the seller or the buyer, the party in fault will be liable to pay damages to the other.

CAPACITY TO CONTRACT. An infant cannot contract, neither can a person who is incapably drunk or who is a

lunatic. But if necessaries are supplied to these persons they must pay a reasonable price for them.

A husband is in some cases liable for necessaries supplied to his wife. If, when they are living together, he in any way allows tradesmen and others to regard her as his agent for the supply of necessaries, he will be liable. If, however, they sue him they must prove that he did either by his conduct or by his express authority hold her out as his agent. In order that the husband should not be liable, he ought to warn the tradespeople with whom his wife deals, but this is not absolutely necessary, unless he has previously allowed her to pledge his credit at their shops. Advertising the warning in the papers is of little or no use, for how can it be proved that the tradespeople have seen the advertisement. If husband and wife are living apart owing to the husband's misconduct, and he does not make proper provision for her, he will be liable for the price of necessaries supplied to her. If the husband and wife are living together, the Court will usually presume that she had authority from her husband to pledge his credit for the purpose of supplying the ordinary household necessaries. In order to escape liability in such a case the husband must prove either that he had expressly forbidden her to pledge his credit, or that he has provided her with an ample allowance for the purpose.

RIGHTS OF THE BUYER.

The buyer is entitled to have the goods delivered to him, and to have any conditions or warranties made in respect of the goods properly observed.

1. DELIVERY OF THE GOODS. *Delivery* means transfer of the possession, though it does not necessarily require the actual handing over of the goods. If a man sells the grain in his warehouse, there is delivery of the grain if the key of the warehouse is handed to the buyer, so as to enable him to have access to the place where the grain is stored. Unless the contract says so, it is no part of the duty of the seller to send or carry the goods to the buyer, but he must give the buyer proper facilities for obtaining possession of the goods, and in that case the place of delivery is the seller's place of business, and if he has no place of business, his residence. Where the goods are at the time of the sale in the possession of a third party, there is no delivery unless and until such third person acknowledges to the buyer that he holds the goods for him.

Where the goods are sent through a carrier, the seller ought to make terms with the carrier on behalf of the buyer, otherwise if the goods are lost or damaged in transit, the buyer may refuse to regard delivery to the carrier as delivery to himself, or he may take the damaged goods and sue the seller for damages. If the goods are sent by sea, it is the duty of the seller to give notice to the buyer so as to enable him to insure them, otherwise the goods are at the seller's risk during the voyage.

2. ACCEPTANCE OF GOODS. Except where trade usage or the course of dealing between the parties allows it, a buyer is not bound to accept a quantity of goods greater or less than he ordered, but if he accepts at all, he must pay the contract price. The same is the case where the seller delivers to the buyer the goods he contracted to sell, mixed with other goods. The buyer may accept the goods that are in accordance with what he ordered, and reject the rest, or he may reject the whole.

Unless it has been so agreed, a buyer is not bound to take delivery by instalments. The buyer is not bound to return rejected goods, but he must inform the seller that he has rejected them. But if he wrongfully refuses to take delivery, he is liable to the seller for any loss that may ensue, and for a reasonable sum of money for his taking care of the goods. Where the buyer has not had an opportunity of examining the goods before delivery, he is not deemed to have accepted them unless and until he has had a reasonable opportunity of examining them to see if they are in accordance with what he ordered.

The term "accept" is here used in its ordinary meaning, viz., that the buyer takes the goods in fulfilment of the contract. The buyer is deemed to have accepted the goods when he intimates this fact to the seller, or when he does any act which shows that he regards himself and not the seller as the owner of the goods, e.g., if he uses the goods or sells them, or transfers them to another. If after the lapse of a reasonable time he retains the goods without intimating that he has rejected them, he will be deemed to have accepted them.

3. CAVEAT EMPTOR. Formerly a seller was under no liability if the goods were not what they pretended to be, unless he had been guilty of fraud or deceit, or unless he had expressly warranted that the goods were of a suitable quality and reasonably fit for the purposes for which they were intended. There was no implied warranty of this nature, and this is still the law, except where it has been altered by statute. These alterations will be dealt with subsequently. Apart from these statutory exceptions, the maxim is *caveat emptor*, "the purchaser must be on his guard," for it is no part of the business of the Courts to make bargains for a man. The seller is not bound to disclose secret faults. His place is to stand by and let the purchaser find out for himself. If, however, the seller does anything to conceal these defects, or makes a false representation, either knowingly or unknowingly, concerning the goods, the contract may be rescinded in some cases, and in others an action for damages may be brought against the seller.

4. CONDITIONS AND WARRANTIES. Before dealing with the warranties and conditions which the law says that a seller shall be understood to make regarding the goods he sells, it will be advisable to distinguish between a warranty and a condition.

A CONDITION is something on which the contract depends, and which, if broken or not fulfilled, will entitle the party not in fault to repudiate the contract, though if he likes he can go on with the contract and sue the other party as for a breach of warranty.

A WARRANTY, on the other hand, does not go to the root of the contract; it merely entitles the person injured by its breach to obtain damages, and does not permit him to repudiate the contract. A warranty is merely a promise, express or implied, that in case there is a failure to perform the terms of the contract, the party injured by such failure shall be entitled to compensation. Whether a representation amounts to a condition or a warranty is a question of fact to be determined by what the parties really intended it to be, indeed, a stipulation may be a condition though called a warranty in the contract, and *vice versâ*. An example or two will make the distinction clear.

> A offers to sell his horse to B for £100. B replies that he will take it provided that A warrants the horse sound and free from vice, but if A cannot do so he will not buy the horse. A gives the required warranty, and B buys the horse. The warranty is the condition on which B bought the horse, and if the horse turns out unsound, the condition which goes to the root of the contract is broken. B can repudiate the contract and compel A to take back the horse and return the purchase-money. If B likes, he can keep the horse and sue A for damages, which may take the shape of a reduction in the price. Suppose, in the example already quoted, B had agreed to buy the horse, without stating that he made it a condition of his buying the horse that the animal should be sound, but in the course of the bargaining he asked and obtained a warranty from A. This is a warranty pure and simple, and if the horse proved unsound, B could only sue for damages. He would not be entitled to demand his money back and to return the horse.

As has been said, the law now implies that in the cases to be mentioned, the seller, without saying a word on the matter, undertakes that certain things shall be guaranteed. The seller undertakes that he has a right to sell the goods, and that the buyer shall have quiet possession of them. Where goods are sold by description, the goods must correspond with the description. Where they are sold by sample, the bulk must correspond in quality with the sample, and the buyer must be allowed to compare the bulk with the sample. The goods must be free from any defect, rendering them unmerchantable, which would not be apparent on examination of the sample. Where the buyer relies on the seller's skill or knowledge, and the goods

are of a description which it is the seller's business to supply, the goods must be fit for the particular purpose for which the buyer requires them. Where goods are bought by description from a seller who deals in that class of goods, the goods must be of a merchantable quality; but if the buyer has examined the goods, there shall be no implied condition as to defects which such examination ought to have revealed.

RIGHTS OF THE SELLER.

1. SELLER'S REMEDIES WHEN UNPAID. The seller has a personal remedy against the buyer for the price. When the buyer wrongfully neglects or refuses to pay, the unpaid seller can sue for the price of the goods, even though the goods have not been delivered to the buyer, if the time for payment was fixed in the contract, without anything being said as to the time for delivery. But the refusal to pay the price must be wrongful; for it is obvious that should circumstances, such as bankruptcy, render the seller unable to deliver the goods, he could not recover the price. When the buyer wrongfully neglects or refuses to take delivery of the goods, the seller may sue him for damages for non-acceptance, and may charge him a reasonable sum for taking care of the goods. Apart from these remedies, an unpaid seller has certain rights against the goods themselves, notwithstanding that the ownership of the goods may have passed to the buyer.

(1) While in possession of the goods he has a lien on the goods, or right to retain them for the price.

(2) After he has parted with the possession of the goods, he has, in case of the insolvency of the buyer, a right of stopping the goods in transit.

(3) In certain cases he has a right of re-sale.

2. SELLER'S LIEN. An unpaid seller who is in possession of goods can keep them until he is paid, if the goods have been sold without any stipulation as to credit; or if the goods have been sold on credit but the time of credit has expired; or, if the buyer becomes insolvent. A buyer is insolvent when he ceases to pay his debts in the ordinary course of business or cannot pay his debts as they become due, or has committed an act of bankruptcy.

The unpaid seller loses his lien when he delivers the goods to a carrier for the purpose of transmitting the goods to the buyer, unless he reserves his right of disposal of the goods. When the buyer or his agent lawfully obtains possession of the goods, the seller loses his right of detaining them.

The seller's lien is defeated if the buyer transfers a document of title to the goods to a *bona fide* purchaser for value: e.g., a bill of lading is sent to the buyer, who transfers the bill of lading to a *bona fide* purchaser for value, while they are still in the seller's possession. Such purchaser is entitled to the goods, and the seller cannot retain them.

3. STOPPAGE IN TRANSITU. When the buyer becomes insolvent, the unpaid seller who has parted with the possession of the goods has the right of stopping them *in transitu*, that is, he may resume possession of the goods as long as they are in course of transit between himself and the buyer, and may keep them until he is paid. The great difficulty is to determine when the transit is at an end. The law on the subject is summed up in a few words. "When the goods have arrived at their destination, and have been delivered to the purchaser or his agent, or where the carrier holds them not merely as carrier but as agent for the buyer, as when he warehouses them, the transit is at an end." Where, by the terms of the contract, the goods are to be despatched to a particular destination and no other, the buyer may not intercept the goods on their way thither, so as to put an end to the transit, and defeat the seller's right of stoppage *in transitu*; but in other cases he may. Observe also:—

(1) That delivery of goods on board a ship chartered by the buyer puts an end to the transit only if the buyer has complete control of the ship, so that the master and crew are his servants and bound to carry out his instructions.

(2) That delivery of goods to a carrier for the sole purpose of their being carried to their destination does not put an end to the transit, even though the carrier be named and paid by the buyer.

(3) When the carrier wrongfully refuses to deliver the goods to the buyer the transit is at an end, and in that case the seller can no longer exercise his right of stoppage *in transitu* and resume possession of the goods.

Stoppage is effected by the seller or his agent taking actual possession of the goods, or by giving notice to the carrier or other person who has the immediate custody of the goods, not to deliver them. Notice to a ship-owner is notice to the captain of the ship on which the goods are, only if the ship-owner has sent the notice to the captain, and the captain has received such notice. The carrier to whom such notice is given must re-deliver the goods to or according to the directions of the seller, at the seller's expense.

The right of stoppage is defeated if before the goods reach their destination the buyer transfers a document of title to the goods (e.g., a bill of lading) to a *bona fide* purchaser for value. Such purchaser is entitled to obtain possession of the goods, and the seller cannot resume possession of them.

When the seller stops the goods he does not regain the ownership of them, nor is the sale rescinded. He merely recovers the right to hold possession until he is paid. If, however, the goods are perishable, he can re-sell them.

4. RIGHT OF RE-SALE. Where an unpaid seller, who has exercised his right of lien or his right of stoppage *in transitu*, re-sells the goods, the buyer acquires a good title to them, and the original buyer can not claim them from him. Though it must be remembered that the unpaid seller had really no right to sell them, and for so doing may have to pay damages to the original buyer.

An unpaid seller can exercise his power of re-sale in three cases:—

(1) Where the goods are perishable.

(2) Where the seller gives notice to the buyer of his intention to re-sell, and the buyer does not within a reasonable time pay or tender the price.

(3) Where in the contract the seller expressly reserves to himself the right to re-sell in case the buyer makes default.

TRANSFER OF THE OWNERSHIP OF THE GOODS. Where goods are damaged or destroyed, the loss falls upon the owner. It is therefore a matter of great importance to determine when the ownership of the goods passes to the buyer. The rule is that the ownership passes at such time as the parties intended that it should pass. In the absence of any express stipulation in regard to this matter, the following rules determine when the ownership passes to the buyer.

(1) Where the contract is for the sale of specified goods in a deliverable condition, the ownership passes to the buyer at the moment the contract is made, even though the time of delivery or of payment is postponed. For example, A orders a particular piano worth £50 from B. B agrees to sell it. A is now the owner of that piano, though B can keep it until he is paid, unless they have otherwise agreed. If the piano while in B's care should be accidentally injured or destroyed through no fault of B's, the loss will fall on A, for he will be compelled to pay the purchase-money.

(2) Where there is a contract for the sale of specified goods, and the seller has to do something to them before they are fit for delivery, the ownership does not pass to the buyer until such thing be done, and the buyer has been told that it is done: e.g., a man buys cloth from a tailor, and asks the tailor to make it into a suit of clothes. The ownership of the suit does not pass to the buyer until it has been made, and until the buyer has word that the suit is ready for him. If, therefore, the suit were destroyed in the meantime, the loss would fall on the tailor. The same is the case where the goods have to be measured, weighed, or tested for the purpose of ascertaining the price.

(3) Goods "on sale or return," of which a very common example is newspapers and magazines supplied to a news-agent, who, if he cannot sell them, returns them to the publisher. The ownership of these goods passes to the buyer if he accepts them, or if he does something which shows that he has accepted them, or if he does not return them within a reasonable time, or at the time agreed upon for returning them.

TRANSFER OF TITLE. Where goods are sold by a person other than the real owner or his agent, the buyer cannot as a rule acquire a better title to the goods than the

seller had. A thief *steals* a watch or other article and sells it; the buyer has in this case no right to the watch. If, however, the thief had sold the watch *in market overt* to a *bona fide* purchaser, the buyer would have a good title to it, until the thief had been prosecuted and convicted, in which case the watch would have to be returned to the true owner; but if the thief were not convicted, the buyer could retain the watch.

By "market overt" is meant any place which is by law or usage set apart as a public market for the sale of goods commonly sold there, e.g., a market overt for the sale of cattle would not necessarily be a market overt for the sale of watches. The term also includes any shop in the City of London, on week-days between sunrise and sunset, shop meaning that part of the building to which the public have free access for the purpose of buying goods usually sold there. It should be noticed that the protection afforded to a *bonâ-fide* purchaser in a market overt does not apply in the case of the sale of a *horse* unless certain statutory formalities have been observed.

In certain cases, however, a purchaser in good faith can obtain a good title from a person who is not the lawful owner, or who is not the agent of the lawful owner. (1) For example, A obtains from B goods by means of *a false pretence*, and before B tries to recover them A sells them to a person who does not know that they have been obtained by fraud. Such purchaser acquires an absolute title to the goods and cannot be deprived of them. (2) Again, where the seller is allowed to remain in possession of the goods, and sells or pledges them to another, that other, if he takes them in good faith, and without notice of the previous sale, acquires a good title, and the original buyer cannot deprive him of these goods. (3) Similarly, where the buyer with the consent of the seller obtains possession of the goods, even though the ownership has not passed to such buyer, and then sells or pledges them, the person to whom he sells or pledges the goods has a good title to the goods.

SALES BY AUCTION. When goods are put up for sale by auction in lots, each lot is the subject of a separate contract. The sale is complete by the fall of the hammer. Before that happens, any bidder may retract his bid, but not afterwards. Unless the seller notifies that he reserves the right to bid at the auction, he cannot do so, for such bidding will be regarded as a fraud upon the buyer.

DEBT.

A DEBT is a sum certain in money owed by one person to another. Debts are divided into simple contract debts, specialty debts, and judgment debts.

(1) **Simple Contract Debt** is a debt due under a simple contract, i.e., a contract made by word of mouth, or by conduct, or by a simple writing. Such for example are debts due for goods supplied in the ordinary way by a tradesman to his customers, or a debt due on a dishonoured bill of exchange and the like.

(2) **Specialty Debts.** These are debts due upon a bond or other instrument under seal. Mortgage debts and debts due under a Bill of Sale are also of this class.

(3) **Judgment Debts.** Debts due under the judgment of a court of record like the High Court, or the various county courts, are called judgment debts. If, for example, an action is brought against a man for libel or other wrong committed by him, the damages and costs which he may be ordered to pay will constitute a judgment debt, and the man himself will be "a judgment debtor."

A JUDGMENT DEBTOR. He can be called upon to make immediate payment by the judgment creditor, who can at once enforce the judgment against the debtor by levying an execution against the debtor's lands or goods, that is, he can seize them unless the court has allowed a stay of execution, or has given the debtor time to pay. If the debtor has no property to satisfy the judgment, but afterwards acquires property, such property may at any time be seized under the judgment. A judgment debtor is not allowed to dispute his liability for a judgment debt.

DUTY OF A DEBTOR. A debtor must be always ready and willing to pay his creditor; he is even bound to seek out his creditor for that purpose. The payment must be in legal tender, otherwise the creditor is entitled to refuse it. The creditor need not make any demand for payment before suing the debtor.

ASSIGNMENT OF DEBT. If a creditor wishes to assign the debt, he must do so in writing, and notice in writing of such assignment must be sent to the debtor. If notice is not sent to the debtor, then if he pays the original creditor, the assignee of the creditor has no claim upon the debtor. Further, the assignee of a debt takes it subject to the equities, that is, whatever defence the debtor may have to the claim if it had been brought by the original creditor, will be equally good against the assignee of such creditor. For example, Jones owes Brown £500, but Jones has done work for Brown to the value of £150. If, now, Brown sued Jones for £500, Jones would be entitled to set-off the £150 against Brown's claim, and had Brown transferred the debt of £500 to Robinson, Jones could set-off his claim of £150 for work done, so that Robinson is only entitled to £350, though he may have given Brown full value for the assignment of the debt of £500.

WHEN INTEREST MAY BE CHARGED ON DEBTS. As a general rule, unless there is an agreement express or implied to pay interest, nothing more than the sum due can be recovered. A promise to pay interest is implied in cases where banks lend money, or where interest has been paid by the debtor in similar previous transactions. The law holds that even in the absence of any promise, express or implied, to pay interest, interest can be recovered where the debt is due under an instrument in writing, e.g., a bill of exchange or a cheque. So, too, the creditor will be entitled to interest if he in writing demands payment of the debt, with notice that in case the debt is not paid, interest at the current rate will be charged from the date of the demand. Sums due under a judgment of the High Court bear interest at the rate of four per cent. per annum; but county court judgments do not carry interest.

EXPENSE OF COLLECTING A DEBT. If a creditor employs an agent or a solicitor to collect a debt for him, he is not entitled to charge the debtor with the expenses of collection. This extra payment is, however, frequently charged, especially in cases where solicitors are employed to collect debts. In such a case, the debtor should tender the exact amount of the debt, and should refuse to pay the extra charge, for if a creditor chooses to go to the expense of collecting debts in this way, that is his affair. Of course, if the debtor delays payment, and the creditor has to bring an action to recover the amount of the debt, he (the debtor) may have to pay the creditor's costs of the action.

DISCHARGE OF DEBT. It frequently happens that a debtor asks his creditor to take a smaller sum than is owing, and give him a full discharge from the debt. If the creditor accepts this smaller sum in full discharge, there is nothing to prevent him from suing for the balance, for it must be remembered that a man cannot discharge his debt by paying a smaller sum. He is legally bound to pay the whole sum, and he cannot discharge his obligation by doing something less than he was bound to do. In such a case, the law holds that the debtor has given the creditor no consideration for being let off the balance, and therefore the creditor is not bound by his promise to let him off. But the law does not look to the *adequacy* of the consideration, and therefore if a debtor paid a debt of say, £20 by giving his creditor £15 in gold, and in addition a lead pencil, or a tom-tit, or an old hat, that would be good enough to discharge the debtor completely. The law also says, that if the debtor in the above case had given his creditor a cheque, say for £15 or a bill of exchange or bank notes (other than Bank of England notes) for that amount, and the creditor agreed to accept this payment in full discharge of the debt, then the debtor is under no further liability, the reason being that the creditor agreed to take *something different* from what he was legally entitled to demand, viz., gold or notes of the Bank of England.

LIMITATION OF ACTIONS FOR DEBT. Actions to recover simple contract debts must be brought within six years from the time when they became due, or within six years of the last payment of any part of the principal or

interest, or within six years of the last acknowledgment in writing of the debt, which acknowledgment must *unconditionally* import a promise to pay. So if the debtor says "it is my intention to pay *when I am in a position to do so*;" the promise being conditional will cause it to be invalid as an acknowledgment. In the case of specialty debts, the time limit is twenty years. In actions for the recovery of money charged on land, or for the recovery of the land itself, the period of limitation is twelve years. If the action is not brought within these periods, the creditor cannot afterwards sue for the debt. The debt becomes what is known as statute-barred; but a debt which has become statute-barred may be revived so as to enable the creditor to sue for it, provided that the debtor acknowledges in writing that he owes the debt. The acknowledgment must be signed by the debtor, and must contain a promise to repay the debt, or be so worded that a promise to repay can be gathered from it. Again, it must be remembered that the debt itself is not extinguished by lapse of time, but only the creditor's right to sue for it. Hence if, at any time, there should come into the hands of the creditor any money belonging to the debtor, the creditor may pay himself out of that money.

Where a debtor is out of the country so that an action cannot easily be brought against him, it may be asked, when does the time begin to run for barring the debt. If the debtor left the country before the debt became legally due, the time does not begin to run until he returns. But if after the debt had become due, or after he had paid any part of it, or had acknowledged it in writing, the debtor left the country, the time begins to run from the moment the debt could have been legally demanded, or from the date of the acknowledgment, or the last payment, and should the debtor remain away for the statutory period (six, twelve or twenty years as the case may be) the debt becomes barred, and the creditor cannot sue the debtor on his return. In such a case, while the debtor is away, the creditor ought to begin proceedings by taking out a writ against the debtor, before the statutory period expires. For though the writ cannot be served on the debtor, it can be renewed every year, and in this way the debt may be kept alive until the debtor's return, when he can be served with the writ.

WHERE TO SUE FOR A DEBT. If the debt is less than £20, the creditor *must* bring his action in the county court. Where the debt is between £20 and £100, the creditor *ought* to bring his action in the county court, unless he is certain that the debtor has no defence to the claim, in which case he may bring it in the High Court, and obtain summary judgment against the debtor, a more expeditious way than the process of the county court. Where the debt exceeds £100, proceedings *must* first be instituted in the High Court, though in some cases the High Court will remit the action for hearing in the county court. [Refer to "County Court" in *Index*.]

ATTACHMENT OF DEBTOR'S ASSETS. Any person who has obtained a judgment or order for the payment of money may get the Court to serve what is called a "Garnishee Order," by which are attached any debts due to the judgment debtor or any money standing to his credit at a bank. [Refer in *Index* to "Garnishee Order" and "Attachment of Debts."]

PUNISHMENT OF DEBTORS. Since 1870, imprisonment for debt has been abolished, but in certain cases debtors are still liable to be imprisoned. In the case of a judgment debt, where it is shown to the satisfaction of the court that the debtor has, or has had, since the date of judgment, the means to pay and has neglected or refused to pay, he may be imprisoned for six weeks, on the ground that he has been guilty of contempt of court in disobeying its order to pay when he had the means to pay. If the judgment debt is ordered to be paid by instalments, then the debtor may be imprisoned every time he makes default in the payment of any instalment. Imprisonment does not extinguish the debt, for the creditor may seize any property of the debtor in satisfaction of the debt. In the following cases, if the debtor fails to pay, he may be imprisoned for a period not exceeding a year, but he cannot be imprisoned a second time for the same debt:—

(1) Failing to pay a penalty, other than a penalty due on a contract.

(2) Failing to pay a sum which he has been ordered to pay, on being convicted in a court of summary jurisdiction.

(3) Where a trustee fails to pay money in his possession, when ordered by the court to do so.

(4) Where a solicitor fails to pay costs which he has been ordered by the court to pay, on account of his misconduct.

(5) Where a bankrupt fails to pay to his creditors any portion of his income or earnings which the court has ordered him to pay.

In all cases where a debtor has been imprisoned for failing to obey the order of the court, he can obtain his freedom by paying the debt.

A fraudulent debtor is under the bankruptcy laws liable to imprisonment for two years with or without hard labour, if with intent to defraud he does any of the following acts:—

(1) Failing to yield up to the trustee in bankruptcy the whole of his property and all his books and documents relating to it.

(2) Destroying his books or making false entries in them.

(3) Obtaining credit on false pretences.

(4) Concealing or removing property to the value of £10 or more, or omitting something material in his statement of affairs.

It is a crime punishable with a year's imprisonment for *any person* (1) to obtain credit on false pretences or by any other fraud, (2) to make any gift or transfer of his property with intent to defraud a creditor, (3) to conceal, or remove with intent to defraud his creditors, any of his property within two months before or after the date of any unsatisfied judgment against him.

BANKRUPTCY.

The law of bankruptcy affords relief to insolvent debtors, who by surrendering their property for the benefit of their creditors, are in return relieved from liability in regard to their debts. Creditors are protected against one another, for one creditor is prevented from obtaining undue advantage over his fellow-creditors, either by making a secret arrangement with the debtor, or by his own fraud. While the debtor is protected against his creditors he is prevented from taking improper advantage of them, and is punished if he is guilty of fraud. The administration of the bankrupt's estate, until the trustee is appointed, is carried out under the supervision of an "official receiver" appointed by the Board of Trade.

Only those who are capable of making a binding contract can be made bankrupt, and in order that bankruptcy proceedings may be commenced, there must be a sufficient debt due to the petitioning creditor or creditors, an act of bankruptcy committed by the debtor, and a proper petitioning creditor. If the Court is not satisfied with the proof of these matters, or is satisfied that for any other reason no order ought to be made, the petition will be dismissed.

MODE OF PROCEDURE IN BANKRUPTCY. Proceedings in bankruptcy are commenced by a creditor, or by the debtor himself presenting a petition to the Court, which on being satisfied as to the matters alleged in the petition, issues a "receiving order." The official receiver thereby becomes the receiver or protector of the property until a trustee has been appointed by the creditors. Within seven days of the receiving order being made, the debtor must furnish to the official receiver his statement of affairs, and after he has furnished his statement of affairs, the debtor must attend for public examination, on which occasion he must answer questions on oath. The official receiver makes a report on the debtor's statement of his affairs, and to a great extent the debtor's discharge depends on the nature of this report. At the public examination the Registrar inquires into the facts alleged by the creditors, and into the debtor's statement of his affairs, and whether he has been guilty of misconduct in conducting his affairs.

Within fourteen days after the receiving order, a general

meeting of the creditors is held, and this meeting decides whether the debtor shall be adjudged bankrupt, or whether a composition or an arrangement shall be accepted from him. If the debtor is adjudged bankrupt, the creditors then appoint a trustee to wind up the bankrupt's estate, or failing them, the Board of Trade appoints a trustee. On the appointment of the trustee, the property of the bankrupt passes to him, and it is his duty to realise the property and to divide the proceeds amongst the creditors.

At any time after he has been adjudged bankrupt, but not until his public examination has been concluded, the bankrupt may apply for his discharge. In dealing with the application, the Court pays special attention to the report of the official receiver, and on taking into account the whole facts of the case, may grant, refuse or suspend the discharge, or may grant it conditionally. The Court will, as a rule, grant the discharge, provided that a good dividend has been paid, that the bankrupt shows that his accounts have been properly kept, that he has not been recklessly extravagant, or indulged in rash or hazardous speculation, or been guilty of misdemeanour in his business. But until he does get his discharge he labours under certain disabilities, one of which is that any person being an undischarged bankrupt who obtains credit for £20 or upwards, without disclosing the fact that he is an undischarged bankrupt, is guilty of a criminal offence, and is liable to imprisonment.

In London, bankruptcy business is administered by the High Court; in the provinces by the local County Courts. The registrars of these courts hear petitions and issue receiving orders, hold public examinations of debtors, approve schemes of composition or arrangement, and grant discharges. But in the local County Courts the registrars can grant orders of discharge, or approve schemes of composition, only where such matters are unopposed.

The petition must be presented to the High Court when the debtor resided or had his place of business within the metropolitan district for the greater part of the six months immediately preceding the presentation of the petition, or when he is not resident in England, or when his address is not known. In other cases, the petition must be presented to the County Court of the district in which the debtor has resided, or has carried on business for the longest period during the six months prior to the presentation of the petition.

The leading topics of the law of bankruptcy will be dealt with in the following order:—

(1) Who may be made bankrupt.
(2) The conditions necessary in order that an insolvent debtor may be made bankrupt.
  (*a*) An act of bankruptcy.
  (*b*) The amount of debt due to the creditor.
(3) The Petition.
(4) The Receiving Order.
(5) The Official Receiver.
(6) The events occurring between the appointment of the official receiver and the appointment of the trustee.
  (*a*) Debtor's statement of affairs.
  (*b*) The public examination of the debtor.
  (*c*) The first meeting of the creditors in which the debtor may be adjudged bankrupt, and in which the trustee is appointed.
(7) The debts provable in bankruptcy.
(8) The property divisible amongst the creditors.
(9) The Trustee.
(10) Preferential Payments and the Distribution of the Property among the Creditors.
(11) Discharge of the Bankrupt.
(12) Small bankruptcies.

WHO MAY BE MADE BANKRUPT. Generally speaking, only those who are capable of making a binding contract are liable to be made bankrupt. (1) An infant cannot be made bankrupt. (2) A *lunatic* may be made bankrupt for debts contracted whilst sane, or if the act of bankruptcy was committed during a lucid interval. He may also be made bankrupt if it is for his benefit, provided that the court or his committee (that is, the person who takes care of the lunatic's estate) consents to his being made bankrupt. (3) A *married woman* carrying on a trade separately from her husband can be made bankrupt. (4) An *alien* may be made bankrupt provided that he is domiciled in England, or has within a year before the presentation of the petition, ordinarily resided or had a dwelling-house or place of business in England. (5) A *dead man* cannot be made bankrupt, but his estate can be administered in bankruptcy.

ACT OF BANKRUPTCY. Any act of the debtor which indicates that he is insolvent, and upon his doing any of these acts, a petition in bankruptcy may be presented against him. Acts of bankruptcy are as follows:—

1. If with intent to defeat or delay his creditors he leaves England, or remains out of England, or adopts any plan to keep out of the way of his creditors, e.g., absenting himself from his dwelling-house, or shutting himself up in his dwelling-house.

2. If he assigns his property to a trustee for the benefit of his creditors; or if he makes any fraudulent gift or transfer of his property or any part of it; or if he fraudulently prefers one creditor to another.

3. If he files a declaration of his inability to pay his debts, or gives notice, either verbally or in writing, to his creditors that he has suspended or is about to suspend payment, or if his goods have been seized to satisfy a judgment obtained against him, and such goods have been sold or have been held by the sheriff for twenty-one days; or if he fails to satisfy a final judgment against himself, after a creditor has served a bankruptcy notice upon him requiring him to pay the judgment debt.

It must be remembered that in the case of a married woman carrying on business separately from her husband, failure to satisfy a judgment debt after a bankruptcy notice has been served on her will not constitute an act of bankruptcy.

THE PETITION. When an act of bankruptcy has been committed by a debtor, a bankruptcy petition may be presented by a qualified creditor, and a receiving order will be made against such debtor provided that—

(1) The debt is not less than £50. Two or more creditors may join in a petition if the total amount due to them is not less than £50.

(2) The debt is a definite sum of money, or is a sum capable of being definitely ascertained, and is payable immediately or at a certain future time.

(3) The act of bankruptcy occurred within three months of the presentation of the petition.

(4) The debt is not secured, i.e., a debt charged on some portion of the bankrupt's property, e.g., a mortgage or a bill of sale.

(5) The debtor is domiciled in England, or within a year before the presentation of the petition has ordinarily resided or had a place of business in England.

At the hearing of the petition, which takes place within eight days after a copy of the petition has been served on the debtor, the creditor must prove the debt due to him, the service of the petition, and the act of bankruptcy. The petitioning creditor should attend the hearing, otherwise the petition may be dismissed. If the Court is not satisfied with the proof of any of these matters, or is satisfied that for any other reason no receiving order ought to be made, the petition will be dismissed. If a debtor present a petition against himself, his petition must state that he is unable to pay his debts, and the Court may thereupon make a receiving order, and if so the debtor is at once adjudged bankrupt. On presenting the petition the petitioning creditor must pay the stamp duty of £5, and must pay the necessary deposit into Court.

THE RECEIVING ORDER. The receiving order does not deprive the debtor of his property but protects it, so that it may not be wasted or diminished by any act of the debtor or of any creditor. It is made, if in the opinion of the Court the facts set out in the petition are proved. This receiving order is advertised in the local paper and in the *Gazette*, and a copy is served on debtor by the official receiver.

The official receiver now becomes the protector of the debtor's property. Ordinary creditors cannot from the date of the receiving order sue the debtor, and all legal proceedings brought by creditors against him are stayed. But, notwithstanding the receiving order, a secured

creditor can realise his security, e.g., a creditor having a bill of sale on the debtor's goods may seize them, so also can a landlord distrain for rent. Again, the receiving order does not affect a creditor whose debt is not provable in bankruptcy. A judgment creditor who has levied execution upon the debtor's estate must, in order to retain the benefit of such execution, have done so before the date of the receiving order and before he had any notice of the act of bankruptcy or of the petition.

The receiving order may be rescinded, if all the creditors are paid in full and the petitioning creditor assents; or if the creditors accept a composition approved by the Court, or if the interests of the creditors and public policy require it; or if a majority in number and in value of the creditors reside in Scotland or Ireland, and the estate ought to be administered there.

CONTROL EXERCISED OVER THE DEBTOR. From the date of the receiving order a strict control is kept upon the debtor. He must submit to the official receiver a statement of his affairs, and at his public examination give every information in his power. If adjudged bankrupt, he must do all that he can to assist in the realisation of the estate and the distribution of the proceeds amongst the creditors. The Court may order for any time not exceeding three months that the debtor's letters shall be delivered not to the debtor but to the official receiver. The debtor may be arrested in any of the following cases. If after a bankruptcy notice has been served upon him, or after presentation of a bankruptcy petition, or after the receiving order has been made—

(1) He absconds or is about to abscond.

(2) He removes or is about to remove his goods with the view of preventing or delaying possession being taken of them by the official receiver or the trustee, or if he conceals or destroys any of his goods, or any of his books or papers that might be of use to his creditors.

(3) Without the leave of the official receiver or the trustee he removes any goods in his possession above the value of £5.

(4) Without good cause he fails to attend any examination ordered by the Court.

THE OFFICIAL RECEIVER. This official is appointed by the Board of Trade. He investigates into the conduct of the debtor, and into his statement of affairs. And he reports particularly in regard to any act of the debtor which amounts to a criminal offence, or which would justify the Court in refusing or suspending the bankrupt's discharge.

The official receiver acts as protector of the debtor's estate until the appointment of the trustee. He acts as trustee during any vacancy in that office. It is his duty to advertise the receiving order, to summon and to preside at the first meeting of creditors, to issue proxies for meetings, to report to the creditors any proposal which the debtor may make to satisfy their claims.

STATEMENT OF AFFAIRS. Within three days of the receiving order the debtor must furnish to the official receiver a clear and accurate statement of his affairs. This statement must be in a form laid down by the law. If the petition is made by himself, the statement of affairs must be furnished within seven days of the receiving order. Any material omission or error in the statement of affairs, if made fraudulently by the debtor, renders him liable to imprisonment.

PUBLIC EXAMINATION. After the debtor has furnished his statement of affairs, he must attend his public examination, on a date fixed by the official receiver. The date is fixed as soon as possible after the debtor has furnished his statement of affairs. The examination will not be concluded until the affairs of the debtor have been sufficiently investigated, and not until after the day appointed for the first meeting of creditors. If the first meeting of creditors is adjourned, the public examination will not be closed until the first adjourned meeting is over.

The examination is held in open court. The debtor may be questioned by the official receiver or by any creditor who has proved his debt. These questions deal with the way in which the debtor has conducted his business, and his dealings with his property, to which questions he must answer on oath, and his answers may afterwards be used in evidence against him.

The public examination may be dispensed with when there is a proposal for a composition by joint debtors (e.g., partners), and one of them is unable to attend through illness or other good cause; *or* when the debtor is a lunatic, or is unfitted mentally or physically to attend.

MEETINGS OF THE CREDITORS. The first meeting of the creditors is held not later than fourteen days after the date of the receiving order, unless the Court extends the time. The debtor must attend and give every information in his power, unless he is prevented by illness or other good cause. Every creditor who has proved his debt can attend and vote either in person or by proxy. The affairs of the debtor and the causes of his failure are discussed, together with the comments of the official receiver upon the debtor's conduct, a copy of these matters having been previously sent to each creditor mentioned in the debtor's statement of affairs.

This meeting decides whether the debtor shall be adjudged bankrupt, or whether a composition or a scheme of arrangement shall be accepted from him, and as to the manner of dealing with the debtor's property. A composition or a scheme of arrangement must be passed by a majority in number representing three-fourths in value of all the creditors who have proved their debts. The debtor may be adjudged bankrupt by a majority in value of the creditors. After a debtor has been adjudged bankrupt, a trustee is appointed by the creditors to take charge and manage the estate during the bankruptcy. All these matters must, however, be approved of by the Court.

At the various meetings of the creditors, such matters as the appointment, removal, and remuneration of the trustee, the appointment of a committee of inspection, and whether an allowance should be made to the bankrupt are also decided.

The order adjudging a debtor a bankrupt may be annulled if a composition is afterwards accepted, or if the bankrupt has paid all his debts in full, or if the Court thinks that the debtor ought not to have been adjudged bankrupt.

DEBTS PROVABLE IN BANKRUPTCY. A creditor may give proof of any debt or liability to which the debtor is subject at the date of the receiving order, or to which the debtor may be subject before his discharge by reason of any obligation incurred before the date of the receiving order. But a creditor can not give proof of the following:—

(1) Demands in the nature of *unliquidated damages*, unless they arise by reason of a contract, promise, or breach of trust.

(2) Debts contracted by the debtor with any person after that person has had notice of an act of bankruptcy.

(3) Contingent debts, the value of which cannot be fairly estimated.

Every creditor should prove his debt as soon as possible after the receiving order. He must make an affidavit verifying the debt, giving full particulars of the debt, and the proofs by which it can be substantiated. This affidavit may be sent through the post to the official receiver. The creditor must deduct from his debt all trade discounts, but if he agreed to allow discount for ready cash he need not deduct more than five per cent.

A secured creditor may realise his security, and if the security does not realise sufficient to pay him the amount of the debt, he can prove for the balance. A secured creditor may surrender his security for the benefit of the other creditors, and may then prove for the whole amount of his debt.

The trustee must examine every proof, and in writing admit it or reject it. If he rejects a proof he must state in writing the grounds of rejection. For these purposes the trustee may administer oaths and take affidavits. Until the appointment of a trustee, the official receiver possesses all these powers.

N.B.—Any person wilfully making a false claim in bankruptcy is guilty of a criminal offence.

THE PROPERTY DIVISIBLE AMONG THE CREDITORS. The creditors can claim all property which may belong to

the bankrupt at the commencement of his bankruptcy, or of which he may become the owner before he obtains his discharge, except money earned wholly by the personal labour of the bankrupt. So, too, all goods belonging to other persons, which are at the commencement of the bankruptcy, in the possession, order, or disposition of the bankrupt *in the course of his trade or business* by the consent of the true owner, can be claimed by the creditors. Of course these goods must be under the bankrupt's control in such circumstances as to lead others to believe that he is the owner of them. Further, if a debtor has conveyed his property to another for the purpose of delaying, defeating, or hindering his creditors, such conveyance will be void, and the property will be divisible among the creditors. Again, if the person who is adjudged bankrupt has made a voluntary settlement of his property on another, such settlement will be void and the property will be deemed divisible amongst the creditors, if the settlement was made within two years of the bankruptcy. And if the settlement was made within ten years of the bankruptcy, it will be void unless the bankrupt can prove that at the time the settlement was made he was able to pay all his debts in full without the aid of the property comprised in the settlement, and that all his interest in the property then passed completely from him.

For example, suppose a man after his marriage voluntarily and gratuitously settles property on his wife or children, and becomes bankrupt within two years, the creditors can claim the property. And if he becomes bankrupt within ten years, they can also claim the property, unless he can show that at the time the settlement was made he was able to pay all his debts in full without the aid of that property, and that he ceased to have any interest in the property after he had transferred it to the wife or children.

A "voluntary" settlement is one that is not made for a good consideration Marriage is a good consideration, so that the creditors could not take the property if he had made the settlement on his wife or children *before*, and *in consideration of*, his marriage. The same is the case if he had sold the property to a *bona fide* purchaser who gave value for it; or if after marriage he had made the settlement on his wife or children of property which accrued to him after marriage in right of his wife.

Moreover, a fraudulent preference of one creditor over another will be set aside, if made within three months prior to the date of the receiving order. The preferred creditor will be compelled to surrender the property or the payment to the trustee in bankruptcy, for the benefit of the creditors. But the payment to be set aside must have been made with the intention of preferring one creditor to another, e.g., if made under threats, or if the debtor had paid his creditor to save himself from exposure, or from a criminal prosecution, such payment would not be a fraudulent preference, and could not be set aside. Lastly, property over which the bankrupt has a "general power of appointment," that is, property which he can appoint or give to any one, including himself, is divisible amongst the creditors.

The following kinds of property belonging to the bankrupt will not pass to his creditors:—

(1) Property which he holds as trustee.

(2) The tools of his trade, and the bedding and wearing apparel of himself, his wife, and his children, not exceeding in value £20.

(3) Money earned wholly by the personal labour of the bankrupt during his bankruptcy, if such money is not more than is reasonably sufficient for his support.

(4) Any money which he may have obtained as damages for mental or bodily injuries inflicted on him, e.g., damages for libel damages for injuries sustained in an accident, and the like.

(5) Property settled on the bankrupt until he shall become bankrupt. Of course this property must have been settled on the bankrupt by some person other than himself.

THE TRUSTEE. After the debtor has been adjudicated bankrupt, the trustee is appointed by the creditors. All the property of the bankrupt at once vests in the trustee, whose duty it is to take charge and manage the estate during the bankruptcy. He is often assisted by a committee of inspection, which sees that everything is carried out in the general interest of the creditors. The Board of Trade requires the trustee to give security for the proper performance of his duties. His remuneration is fixed by the creditors or by the committee of inspection, and is a commission payable partly on the amount realised by the trustee out of the estate, and partly on the amount distributed as dividends. If one-fourth in number or in value of the creditors, or if the bankrupt himself think the remuneration too great, the amount will be settled by the Board of Trade.

All money received by the trustee must be paid into the Bank of England, unless the Board of Trade allows it to be paid into a local bank. If a trustee retains in his own hands for more than ten days a sum exceeding £50, he is liable to pay twenty per cent. interest on the excess, and may be removed from his office, and receive no remuneration.

The *duties of a trustee* are to realise the estate and get in all the assets possible. For this purpose:—

(1) He may, with the consent of the committee of inspection, carry on the business of the bankrupt, or permit the bankrupt to do so, and bring and defend actions regarding the property of the bankrupt.

(2) He must keep clear and accurate accounts, and submit them to the committee of inspection at least once in three months; and he must furnish at least once a year to the Board of Trade a statement showing the proceedings in the bankruptcy up to the date of the statement.

(3) He may disclaim all property of the bankrupt which is subject to burdensome covenants, or all contracts of the bankrupt which would be likely to diminish the assets available for the creditors.

Having realised the assets, he must distribute the dividends to the creditors. When all these things are done he may be released from his office on satisfying the Board of Trade that he has satisfactorily performed his duties.

DISTRIBUTION OF THE PROPERTY AMONG THE CREDITORS. Generally speaking, all debts provable in the bankruptcy are paid *pari passu*; but there are certain debts which will be paid before the others. These Preferential Payments are:—

(1) The expenses of the bankruptcy proceedings, which must be paid in full.

(2) All rates and taxes due and payable within the twelve months preceding the bankruptcy, but not exceeding on the whole one year's assessment.

(3) All wages or salary of any clerk or servant for services rendered to the bankrupt within four months before the date of the receiving order, and not exceeding £50.

(4) All wages of any workman not exceeding £25, for services rendered to the bankrupt during two months before the date of the receiving order.

(5) Where an agricultural labourer has entered into a contract for the payment of a portion of his wages in a lump sum at the end of the year of hiring, that sum shall have priority.

(6) Where a landlord, after the commencement of the bankruptcy, distrains upon the goods of a bankrupt for rent due, the distress will be available only for six months' rent due prior to the adjudication order. But the landlord may prove for any surplus which may be due, and if he distrains before the filing of the petition the *whole* of the rent has a prior claim.

DISCHARGE OF THE BANKRUPT. At any time after he has been adjudged bankrupt, but not until his public examination is concluded, a bankrupt may apply for his discharge, but the application will not be heard until the public examination is closed. In dealing with the application, the Court takes into special account the report of the official receiver, and may either grant or refuse the discharge, or suspend the discharge or grant it, subject to some condition with regard to any earnings which may afterwards become due to the bankrupt, or with respect to his after-acquired property. But the Court must refuse the discharge if the bankrupt has been guilty of any criminal offence against the bankruptcy laws, or any other misdemeanour connected with his bankruptcy.

The Court must suspend the discharge for two years at least in the following cases:—

(1) When the estate has not paid a dividend of ten shillings in the pound to the ordinary creditors, unless this is due to circumstances beyond the control of the debtor.

(2) When the bankrupt has not kept proper books of account during the three years preceding the bankruptcy.

(3) When the bankrupt has continued to trade after knowing himself to be insolvent.

(4) When he has contracted debts with no reasonable prospect of being able to pay them.

(5) When the bankrupt has failed to account satisfactorily for a loss or a deficiency of assets.

(6) When the bankrupt has brought about his bankruptcy by rash and hazardous speculations, or by unjustifiable extravagance, or by gambling, or by gross neglect of his business.

(7) When the bankrupt has put any of his creditors to unnecessary expense by a frivolous or vexatious defence to an action properly brought against him.

(8) Where the bankrupt has within three months preceding the date of the receiving order incurred unnecessary expense by bringing a frivolous or vexatious action.

(9) Where undue preference has been given to any creditor within three months preceding the receiving order, the bankrupt not being then able to pay his debts as they became due.

(10) When the bankrupt has on any previous occasion been adjudged bankrupt, or made a composition or arrangement with his creditors.

(11) When the bankrupt has been guilty of any fraud or a fraudulent breach of trust.

The order of discharge frees the bankrupt from all his past debts, except when the liability is incurred through his own fraud. But he is not relieved from debts due by him to the Crown, or debts due as a penalty for infringing the revenue laws, or debts due under a judgment against him in an action for seduction, or under an affiliation order, or under a judgment against him as a co-respondent in a matrimonial cause.

An undischarged bankrupt labours under many disabilities. If he obtains credit to the extent of £20 or upwards, without disclosing that he is undischarged, he is liable to two years' imprisonment. All property to which he may become entitled until he receives his discharge will go to his creditors. Moreover, he cannot sit or vote in either House of Parliament; or act as a justice of the peace, or fill the office of county or borough councillor, or sit on various other local boards.

SMALL BANKRUPTCIES. Where the estate of the debtor is not likely to exceed £300, the Court may order it to be summarily administered with the object of saving time and expense. The procedure is the same as in ordinary bankruptcies, with these differences:—

There is no committee of inspection, and the official receiver has all the powers of a trustee. Notices of sittings of the Courts other than first meetings are not sent to creditors whose debts do not exceed £2. Six months are allowed for the distribution of a dividend, which, if possible, ought to be a final dividend.

If a debtor against whom a judgment has been obtained in a County Court is unable to pay the amount forthwith, and it appears his whole indebtedness does not exceed £50, the County Court may make an order for the administration of his estate and for the payment of his debts by instalments or otherwise.

AVOIDANCE OF BANKRUPTCY PROCEEDINGS.

To avoid the expense and trouble of bankruptcy proceedings, so that the creditors of an insolvent debtor may be paid a greater proportion of the money owing to them, and to avoid the disgrace and the disabilities attaching to a person who is adjudicated bankrupt, a deed of arrangement is sometimes agreed to between the two parties.

DEEDS OF ARRANGEMENT take various forms, the most common of which are:—(1) Deeds of Assignment for the benefit of creditors, (2) Deeds of Composition and (3) Deeds of Inspectorship. It should be remembered that a debtor in entering into any of these schemes should obtain the consent of all his creditors, for if any one of them refuses his assent, he may, within three months, file a petition in bankruptcy against the debtor, as such a proceeding is an act of bankruptcy on the part of the debtor. After the expiration of three months, a dissenting creditor will not be permitted to take bankruptcy proceedings against the debtor.

(1) **Deed of Assignment.** A deed by which an insolvent debtor transfers the whole of his property to a trustee, whose duty it is to realise the estate, and after paying expenses to distribute the proceeds amongst the creditors, in proportion to the amount of their debts.

(2) **Deed of Composition.** By a deed of composition the debtor agrees to pay so much in the £, either in a lump sum or by instalments, the creditors in return releasing him absolutely from all their claims upon him, or giving him a release conditional on his performing his agreement.

(3) **Deed of Inspectorship.** By a deed of inspectorship a debtor is allowed to carry on his business under the supervision of inspectors or trustees, appointed by the general body of creditors.

A deed of arrangement must be registered as a Bill of Sale in the Bills of Sale Office of the High Court, otherwise it will be void. A deed of arrangement may also be set aside if it is designed to defraud creditors, or if within three months of its execution a creditor who has not assented to the scheme files a bankruptcy petition against the debtor, and obtains a receiving order against him.

A trustee under a deed of arrangement must transmit to the Board of Trade in the month of January of every year, accurate accounts of what he has received and paid out on behalf of the estate. If he carries on the business of the debtor, he will be personally liable on any contract he may have entered into on behalf of the business, unless he makes the contract in the debtor's name.

Every deed of arrangement must bear a **stamp** of ten shillings, and in addition a stamp of one shilling for every £100 or part of £100 upon the value of the property transferred to the trustee, or on the amount of the composition to be paid.

LIMITED LIABILITY COMPANIES.

JOINT STOCK COMPANY. A joint stock company is an association of seven or more persons who contribute a certain amount of capital, in the same or different proportions, for carrying on a certain business or undertaking with a view to profit. Joint stock companies are either limited or unlimited:—

UNLIMITED COMPANIES. In these companies the liability of the members is unlimited, each shareholder being liable, to the full extent of his property, for debts incurred by the company. Moreover, should any shareholders prove unable to pay their fair proportion of the loss, the other shareholders are bound to make up the deficiency so long as any property remains to them. The liability, however, of each member ceases at the end of a twelvemonth from the time he withdrew from the company. Such companies are now extremely rare.

LIMITED COMPANIES. These are limited either by (*a*) guarantee or (*b*) shares. In (*a*) each member of the association makes himself responsible for an amount not exceeding a certain fixed sum. In (*b*) the liability of each shareholder is limited to the nominal value of the shares that he holds. When his shares are once fully paid up, he has no further liability.

NATURE OF A LIMITED COMPANY. Such an association differs from a partnership in various ways:—

1. A limited company is a being or person distinct from the persons composing it. The property of the company is the property of the members only in proportion to their shares after the discharge of all liabilities, and their goods cannot be seized for the debts of the company. While in a partnership firm, the property of the firm is the property of the partners in common, and their private property can be seized for the debts of the firm.

2. A shareholder in a limited company is not an agent of the company which is in no way liable for the acts of the shareholder; but a partner is the agent of his fellow partners, and they are liable for his contracts or for his fraud or other wrongs done by him in the scope of the partnership business.

3. Shares in a limited company are as a rule transferable, unless the regulations of the company restrict transfer; but a partner cannot transfer his share without the consent of his fellow partners.

4. On the death of a partner the partnership is dissolved, but the death of a shareholder does not terminate the existence of a limited company.

5. In a partnership, the liability of each partner for the partnership debts is unlimited, and the whole of a partner's private property can, if necessary, be seized to satisfy the "firm's" creditors; but in a limited company, the liability of a shareholder is usually limited to the amount unpaid on his shares, and if these are fully paid up, he is under no further liability. In a very few companies the liability of the shareholders is limited by guarantee. Each shareholder agrees that he will contribute a sum up to a certain amount to meet the liabilities of the company so long as he remains a member, and for twelve months after he has ceased to be a member.

6. Lastly, the number of persons forming a partnership must not exceed twenty, and in the case of a banking partnership, ten persons, whereas in a limited company the number of members must never be less than seven, but there is no limit to the number of shareholders beyond this figure; they cannot, however, exceed the number of the shares into which the capital of the company is divided.

ONE MAN COMPANY. What is known as "a one man company" shows that a limited company is a very different person from the members composing it. In such a company one man holds practically all the shares, except those that are allotted to the six other persons necessary to form the company. Such companies may be very useful, possessing as they do all the advantages of private enterprise, while at the same time the liability of the virtual controller of the company is limited. His rights and liabilities are totally different from what they would be were his business not a company, and hence it may lead to sharp practices, by which the creditors of the company, who are virtually his creditors, do not receive a single penny piece.

> For example, S sold his business to a company consisting of himself and six members of his family, who took one £1 share each, while he took 20,000 shares. The price paid to him for his business was £30,000, the payment being not in cash but in 20,000 fully paid up shares, and £10,000 in debentures, that is, he lent the balance of his purchase money, £10,000, to the company on a mortgage of the property of the company. This gave him priority over any other creditors of the company. The company did not succeed, and was wound up, the assets realising £6,000 out of which to pay the £10,000 due to S (which was secured by debentures), and an additional sum of £7,000 due to unsecured creditors.
>
> The ordinary creditors claimed that S and Co. was really the same person as S himself; that he could not owe the £10,000 to himself, and that they should be paid their claims first out of the £6,000. It was held that S and Co. was a different person from S himself, and that he could keep the £6,000, as part payment of his loan to the company. The ordinary creditors got nothing.

The following remarks apply exclusively to companies in which the liability of the members is limited by shares. This is the class of limited company, public or private, with which every one is familiar.

FORMATION OF A LIMITED COMPANY. Suppose that it is desired to convert a private business into a limited company. A "Promoter" comes along and offers to buy the business and goodwill at an agreed price, or undertakes to find a purchaser for it. In the latter case he will obtain a contract for sale—a "preliminary agreement" to be entered into between the owner of the business and some person acting on behalf of the intended company. This he does so as to prevent the owner or vendor of the business from afterwards backing out. Having done this, he induces at least six other people to assist him in forming the company. They decide upon five things, which are embodied in a document known as the "Memorandum of Association."

> The five points are; (1) the objects which the company is formed to carry out; (2) the name of the company; (3) the address where the business is to be carried on; (4) how far each member is to be liable for losses; (5) the amount of capital which is needed for acquiring and carrying on the business.

The Memorandum of Association is then signed by the seven persons, who must each agree to take one share at least in the company, and their signatures to the document must be attested by a witness. The people who sign the Memorandum have to arrange how the business is to be carried on.

This is set out at length in a document called the "Articles of Association," which is signed by the seven people who subscribed to the Memorandum of Association. The articles describe how the whole internal management of the company is to be conducted, and, among other things, the duties and remuneration of the directors, the division of the capital, meetings of members, and the like.

The Memorandum, the Articles, and certain other documents, on being duly signed and stamped, are taken to Somerset House and delivered to the "Registrar of Joint Stock Companies," who, on payment of certain fees, enters the company on the Register and gives a "Certificate of Incorporation."

FLOTATION OF THE COMPANY. The persons forming the company may not have sufficient capital necessary for the successful carrying on the company's business, or they may desire to allow others to share in their good fortune. In either case they will invite the public to join them in sharing the burdens and the profits of the business. They will invite the public to contribute the capital by subscribing for shares. This is done by issuing a circular called a "prospectus," describing the nature of the business, the advantages to be derived from taking shares in the company, and the minimum amount of capital to be subscribed before proceeding to allotment.

> Before issuing the prospectus, the vendors or promoters, if at all doubtful that the public will subscribe capital sufficient to warrant their going to allotment, take care to have all or a part of the shares which they are issuing to the public "underwritten" or guaranteed. This means that they procure a person (underwriter) who for an agreed commission undertakes that in case the public do not take up the shares, he himself will take them up.

Accompanying the prospectus is a "form of application" to be filled up by those applying for shares, stating the number of shares for which they wish to subscribe, and enclosing a sum by way of deposit. This form of application is forwarded to the company's bankers, and on an appointed day the lists are closed, after which no application for shares is entertained.

The next step is to "allot" the shares among the applicants, and a "letter of allotment" is sent to those applicants whose offers to subscribe for shares have been accepted. The letter of allotment states the number of shares granted to the applicant, which may or may not be equal to the number for which he applied. On the allotment of all the shares, or as many as represent the minimum amount of capital required before commencing business (as stated in the prospectus), the company is said to have been successfully floated.

Following these preliminary remarks, the subject of Limited Companies is dealt with under the following heads:—

1. Memorandum of Association.
2. Articles of Association.
3. Incorporation.
4. Underwriting and Placing Shares.
5. Prospectus.
6. Promoters.
7. Directors.
8. Capital.
9. Members.
10. Shares.
11. Dividends.
12. Accounts and Auditors.
13. Meetings and Resolutions.
14. Borrowing Powers.
15. Debentures.
16. Winding up.
17. Readjustment Schemes.

MEMORANDUM OF ASSOCIATION.

This document must contain: (*a*) The name of the company, ending with the word "Limited." (*b*) The address of the registered office of the company. (*c*) The objects and powers of the company. (*d*) How the liability of the

members is limited. (*e*) The amount of the capital and the number of the shares into which it is divided.

(*a*) **THE NAME.** The name of the company with the word "limited" must be shown conspicuously on the outside of every building in which the company carries on its business, and all notices, advertisements, bills, and other documents of the company. In this way every person dealing with the company may know that the liability of its members is limited. The words "royal" and "imperial" must not form part of the name without the sanction of the Home Secretary.

A company may change its name, either by special resolution with the consent of the Board of Trade, or if it has inadvertently adopted a name similar to that of an existing company, the name may be changed by special resolution with the consent of the Registrar of Joint Stock Societies.

(*b*) **THE REGISTERED OFFICE.** The address of the company fixes the domicile or place of abode of the company —the country to whose laws the company is subject. This domicile cannot be changed without an Act of Parliament, but of course, the address may be changed from one part of the kingdom to another by giving notice to the Registrar. The registered office is the place where the register of members is kept, and at which writs or other notices must be served on the company.

(*c*) **THE OBJECTS AND POWERS.** The objects and powers of the company should be made as wide as possible, and should include everything connected, however remotely, with the main objects of the company's business. The reason for so doing is because the company cannot do anything outside the objects and powers given in the Memorandum. Anything done outside the scope of the Memorandum is *ultra vires* and is void, and cannot be ratified by the company, even though every shareholder agreed to it. The shareholders cannot ratify or make valid any act which is *ultra vires* the Memorandum, for they cannot do that which is forbidden by the law of the land. The Memorandum itself cannot be changed without the leave of the Court, and this is another reason for making its scope as wide as possible, so as to save the trouble and expense of resorting to the Court. Hence the greatest care should be taken in framing the Memorandum.

The objects of the company must not be illegal, and if the main objects of a company are gone, the company must be wound up.

A company may alter or extend its Memorandum by special resolution confirmed by the Court, if the alteration is to enable the company to carry on its business more economically or efficiently; or to attain its main purpose by new or improved means; or to enlarge or change the local area of its operations; or to carry on some other business which may be conveniently combined with its own; or to restrict or abandon any of its objects.

(*d*) **THE LIMITATION OF LIABILITY.** The liability may be limited by shares or by guarantee. If a simple statement is made that the liability of members is limited without any further words, it will be taken to mean "limited by shares," i.e. that no shareholder, in the event of the company being wound up, can be called on to pay more than the nominal value of his shares, or so much of it as remains unpaid, and if the shares are fully paid up he is under no further liability.

(*e*) **CAPITAL AND SHARES.** There is no limit to the amount of the capital or the amount of each share. The Memorandum ends with the "Association Clause," which runs as follows:—

> "We, the several persons whose names and addresses are subscribed, are desirous of being formed into a company in pursuance of this Memorandum of Association, and we respectively agree to take the number of shares in the capital of the company set opposite to our respective names."

There must be at least seven persons each taking at least one share to sign this document. Their full names and description must be given. One witness to all the signatures is sufficient. An infant may subscribe his name. All the subscribers may be aliens, provided that the business is carried on or is managed in England. The subscribers must pay for the shares set out against their names, must sign the Articles of Association, and must appoint the first directors. Until the directors are appointed the subscribers act as directors.

THE ARTICLES OF ASSOCIATION OR REGULATIONS.

(*a*) **THE ARTICLES.** The Articles are the rules which describe the mode of carrying on the business of a limited company. They deal with the appointment, duties, qualification, and remuneration of directors, the division of capital into shares, the issue and transfer of shares, calls, forfeiture of shares for non-payment, borrowing powers, meetings, votes, and resolutions, the payment of dividends, accounts, audit, and such other matters as may be necessary according to the nature of the company's business.

> A company need not draw up Articles, for if there are none, the form known as Table A in the first schedule of the Act of 1908 becomes the Articles of the Company.

The Articles must be printed in numbered paragraphs, and must be signed by the same persons who subscribed to the Memorandum. There must be a witness to the signatures. The articles must bear a 10*s.* deed stamp and a 5*s.* registration stamp.

The "Regulations" of the company are the Articles and any special resolutions altering the Articles passed by the company. These resolutions must be printed and appended to the original Articles, and a copy must be filed with the Registrar of Joint Stock Companies, together with a registration fee of 5*s.*

(*b*) **ALTERATION OF ARTICLES.** The Articles may be altered by a special resolution in a general meeting, i.e. a resolution passed by a majority of three-fourths of those present at a meeting of which due notice has been given, and confirmed by a bare majority at another meeting held from two weeks to a month later.

The alteration must be within the powers given in the Memorandum, otherwise it will be invalid, but any alteration which sacrifices the interests of a minority of the shareholders will not be allowed unless the alteration is for the good of the company as a whole.

A company cannot deprive itself of the power to alter its articles. An alteration not made in the proper way is not necessarily bad. It may be retrospective.

(*c*) **EFFECT OF THE ARTICLES.** The Articles bind each member to the company and to the other members. Thus where the Articles provided that if any member should become bankrupt, his shares should be sold to certain other members at a certain price, it was held that such an arrangement was good.

The Articles cannot authorise any act outside the scope and powers of the Memorandum. Such an act would be *ultra vires* and could not be ratified even if all the shareholders agreed to it. Whereas an act not authorised by the Articles, but within the powers of the Memorandum, may be ratified.

Shareholders are entitled to have a copy of the Memorandum and the Articles on payment of a shilling to the company. Any one may inspect these documents at Somerset House. Hence if any one deals with the company in any matter outside the scope of the Memorandum and the Articles, he may not be able to enforce the contract, for he could easily have ascertained that the matter was beyond the powers of the company.

But if the matter is within the scope of the Memorandum and the Articles, a stranger is not bound to inquire as to whether the directors have taken all the necessary steps. Thus in a certain company the directors had power to borrow money on bonds if authorised to do so by special resolution. They issued bonds without a special resolution having been passed. It was held that the bond holders could enforce the bond. If the bond holders, when they lent their money, had been aware of the irregularity, they would not have been able to enforce the bonds.

INCORPORATION.

(*a*) **DOCUMENTS AND STAMPS.** Before the company can be registered and incorporated, the following documents, duly stamped and signed, must be deposited with the Registrar of Joint Stock Companies.

(1) The Memorandum of Association, bearing a deed stamp of 10s. and (if the nominal capital of the company does not exceed £2,000) a fee stamp of £2. If the nominal capital exceeds £2,000, then the above fee of £2 and the following additional fees:—

For every £1,000 or part of £1,000, after the first £2,000 up to £5,000	£1	0	0
For every £1,000 or part of £1,000, after the first £5,000 up to £100,000	0	5	0
For every £1,000 or part of £1,000, after the first £100,000	0	1	0

But the total fees shall not exceed £50.

(2) Articles of Association, bearing a deed stamp of 10s. and a fee stamp of 5s.

(3) List of persons who have consented to be Directors, with a stamp of 5s.

(4) A Statutory Declaration of compliance with the Companies Acts, with a stamp of 5s.

(5) Statement of the Nominal Share Capital, with an *ad valorem* stamp duty of 5s. on every £100 or part of £100 of such capital.

(*b*) **FORM OF CERTIFICATE OF INCORPORATION.** "I hereby certify that the ——— Company, Limited, is this day duly incorporated under the Companies Acts, 1862 to 1900, and that the company is limited.

Given under my hand this—— day of ——

(Signature) Registrar of Joint Stock Companies.

This certificate is conclusive evidence that the company is duly registered, and that all matters necessary for registration have been complied with.

UNDERWRITING AND PLACING SHARES.

An underwriting agreement is one entered into before the shares are brought before the public, that in the event of the public not taking up the whole of the shares, or the number mentioned in the agreement, the underwriter will, for an agreed commission, take an allotment of such part of the shares as the public has not applied for. The commission may be for any amount, if (1) the Articles authorise payment; (2) the prospectus discloses this fact; and (3) the shares are offered to the public.

Underwriting differs from Placing Shares, in this, that the person who agrees to "place" shares, does not agree to take the shares, but to find others who will take them. For his services he is entitled to a commission.

THE PROSPECTUS.

(*a*) **WHAT IT IS.** The prospectus is a circular issued by the promoters after the company has been formed, inviting the public to take shares in the company. The greatest care should be taken in framing the prospectus, for although some colouring and exaggeration may be permissible, yet it must not contain any untrue statements of fact. It must not conceal any material facts, and it must disclose everything required by the Companies Consolidation Act of 1908, and it must be dated and filed with the Registrar.

Companies are not bound to issue a prospectus, but if they do not do so they may not allot any shares or debentures unless before the first allotment there has been filed with the Registrar a statement in lieu of prospectus signed by all the Directors, or proposed Directors, according to a form set out in the Companies Act, 1908, and giving particulars similar to those necessary for a prospectus.

(*b*) **FALSE STATEMENTS IN PROSPECTUS.** Where the false statements are made knowingly, in other words fraudulently, a shareholder who has been induced to take shares on the strength of such false statements may have his contract rescinded, that is, he may get his money back, and he may also recover damages if he has actually sustained damage.

Where the false statements have been made unwittingly, that is made honestly, the shareholder who has applied for and has obtained shares can get his contract rescinded, but he must apply to the Court for rescission of the contract as soon as possible after he has discovered the misrepresentation, and before the company is wound up. He may also get damages against the directors or the promoters for the false statements, unless:—

(1) They had reasonable grounds for believing the false statements to be true: or

(2) They made the statements upon the authority of an expert whom they had reasonable grounds for believing to be competent: or

(3) The statements were a correct copy of an official document.

Concealment, which implies falsehood, amounts to fraud, and such concealment will render the directors liable.

(*c*) **THE PROSPECTUS** must state the following particulars:—

(1) The contents of the Memorandum.

(2) The number of shares as the qualification of directors and their remuneration, and their names and addresses.

(3) The minimum subscription on which the directors may proceed to allotment. This means the minimum amount of capital which must be subscribed by the public before shares will be allotted.

(4) The number of shares and debentures issued for other than a cash payment.

(5) The names of the vendors and the amount payable to each, and whether in cash, shares, or debentures, and the amount of the purchase money specifying the amount paid for goodwill.

(6) The amount payable as underwriting commission (if any).

(7) An estimate of the preliminary expenses.

(8) Promoters' fees.

(9) The date of and the parties to any material contract—but not if made in the ordinary course of the company's business, or if made more than three years before the issue of the prospectus.

(10) Names and addresses of the auditors.

(11) The interest of every director or promoter in the promotion of or in the property proposed to be acquired by the company.

(12) The names, descriptions and addresses of the directors or proposed directors.

(13) The amount payable as purchase money in cash, shares, or debentures, specifying the amount (if any) payable for goodwill.

(14) If the shares are of more than one class, the right of voting at meetings conferred by the several classes of shares respectively.

If any of the above items be omitted in the prospectus, a director or a promoter will be liable in damages to any shareholder who sustains damage by reason of such omission, unless he did not know of the matter omitted, or the omission arose from an honest mistake of fact on his part. But a shareholder cannot repudiate his shares by reason of the above matters being omitted in the prospectus.

PROMOTERS.

(*a*) **WHO THEY ARE.** A promoter is one who undertakes to form a company and to set it going, and who takes the necessary steps for that purpose. The term is simply a business one, and implies a person who "floats" the company. A promoter is not a trustee or an agent of the company, for it is not yet in existence, but he is practically in the position of a trustee towards the company which he promotes and towards the persons whom he induces to become shareholders.

The promoter makes the prospectus as attractive as possible, but he must take the greatest care to disclose all material matters, and not to make false or fraudulent statements in it (see above).

(*b*) **FIDUCIARY POSITION.** A promoter must not make any secret profits. If he secretly receives any commission or profit from the vendors or any one else, he can be compelled to give it up to the company.

Further, a promoter is not allowed to derive a profit from the sale of his own property to the company, unless all material facts are disclosed. He ought to disclose the amount of his profit on the sale. He ought to disclose

this either in the prospectus, or the Articles of Association, or to an independent board of directors.

DIRECTORS.

Directors are the persons managing a trading concern for the benefit of themselves and all other shareholders.

(*a*) **WHO MAY BE DIRECTORS.** Any one, except a clergyman licensed or allowed to perform the duties of an ecclesiastical office, may be the director of a limited company.

(*b*) **POSITION OF DIRECTORS.** A director is in a sense both an agent of and a trustee for the company. He must act faithfully as a trustee of all the property of the company which comes into his hands, and he must exercise *bona fide* all the powers which the company may have conferred upon him. But directors are not trustees for individual shareholders; thus directors while negotiating for the sale of the company at a very high price, bought shares from a shareholder without disclosing this fact to him, and it was held that the sale was good. Had they been trustees for him, they would have been bound to return him the shares. A director cannot, without the consent of the company, make a secret profit at its expense; nor can he contract with the company unless the Articles permit him to do so, otherwise the company may repudiate such a contract.

Directors are agents of the company. Hence any contract made by them for the company binds the company, provided it is within the scope of the company's business as defined in the Memorandum, and they themselves are not personally liable on such a contract, provided they make it clear that they are acting merely in their capacity of directors.

If the directors do an act beyond their powers as laid down in the Articles, but not beyond the powers of the company as defined in the Memorandum, such an act may be made valid by the consent of every shareholder. And in the same circumstances, if they make a contract on behalf of the company with an outsider who has no knowledge of their want of powers, the company will be bound by the contract.

If the directors, as agents of the company, commit a fraud or other wrong upon an outsider, the company will be liable provided that the act done was in the scope of their authority, and was in the company's interests.

(*c*) **APPOINTMENT OF FIRST DIRECTORS.** First directors may be appointed by the Articles, or by the subscribers to the Memorandum.

If appointed by the Articles, every such proposed director must have signed and filed with the Registrar his consent to act as director, and must either have signed the Memorandum for his qualification shares, or have signed and filed with the Registrar a contract to take from the company and to pay for his qualification shares (if any).

If appointed by the subscribers to the Memorandum, the appointment must be made either by the majority at a meeting of subscribers to which all of them have been properly summoned, or by a writing signed by all the subscribers.

(*d*) **QUALIFICATION.** A share qualification for directors is not essential, unless the company desires that its securities may obtain official quotation on the Stock Exchange. The Articles usually provide that no one may be a director unless he holds a certain number of shares, in which case the qualification must—(1) be disclosed in the prospectus; (2) each director must obtain his qualification shares within two months of his appointment, otherwise he will be liable to a fine of £5 for every day that he acts as director from the expiration of the two months; and (3) the company cannot commence business until every director has taken up his qualification shares and paid on them, if payable in cash, the same proportion as has been paid by the public on application and allotment. And the same rule applies to all shares taken or contracted to be taken by Directors before the Company can begin business.

(*e*) **DISQUALIFICATION.** If a director parts with his qualification shares he is disqualified. The Articles usually specify what acts will disqualify a director, e.g. holding a paid office under the company, such as secretary, making secret profits, or voluntarily absenting himself from meetings. When disqualified he cannot act, and the company may obtain an injunction to restrain him from acting; but an individual shareholder cannot take proceedings against him, unless the director holds the majority of the shares, and so prevents the company from bringing the action. Even then the shareholder can only bring proceedings if the director is perpetrating a fraud or is acting *ultra vires* the company.

The Articles may stipulate that acts done by disqualified directors, or by directors not properly elected, shall be valid in spite of the disqualification.

(*f*) **REMUNERATION.** Directors cannot claim any remuneration for their services unless the Articles authorise payment; when there is no special provision in the Articles, payment to the directors is in the nature of a gratuity, and cannot be sued for. If the Articles provide for remuneration, the directors may sue for it, whether the company is making any profits or not.

If the Articles provide that the directors shall be paid a fixed sum per annum, or a yearly sum, a director who retires before the end of a year of service cannot claim anything. It is otherwise if the Articles provide that the directors shall be paid "at the rate of" so much per annum.

The fact that directors give their services gratuitously does not lessen their liability in any way.

(*g*) **QUORUM.** This is the number of directors who must be present to enable them to act as a board and to exercise the powers vested in them as a body. If the requisite number is not present, the meeting is irregular and cannot transact business. The Articles or Regulations usually fix the quorum. If no quorum is fixed, then the number who usually act will be sufficient. Every director must be summoned to the meeting. Proper minutes must be kept of their proceedings.

(*h*) **POWERS.** The powers of the directors are given by the Articles, but in addition to the specific powers given them there is usually a clause stating that the directors may exercise all the powers of the company which are not otherwise required to be exercised by the company in general meeting.

Directors who act in excess of these powers may be personally liable to those with whom they have to deal, on the ground that they warranted that they possessed authority so to act. Where the act done by the directors is in excess of their powers, the shareholders may ratify it, provided the act is within the powers of the company, as defined in the Memorandum.

Directors cannot, as a rule, make contracts with their company. Such contracts may be set aside, whether there is fraud or not. Of course this rule does not apply to the case of a director taking shares or debentures in the company. Again, the Articles may permit a director to make a contract or be interested in a contract with the company on certain conditions, e.g. that he is to disclose the nature of his interest in the contract, and is not to vote in the matter.

The directors exercise their powers by resolutions passed at a board meeting, of which due notice is given to every director, and at which the requisite quorum is present. The Articles may give them power to act otherwise. Directors cannot delegate their powers unless expressly authorised by the Articles to do so. The powers of directors cease as soon as winding-up proceedings have commenced. Unless the Articles contain a power to remove directors, a director cannot be removed until the Articles have been altered by special resolution. If it happens that a director cannot be removed, and a dead-lock ensues, the only thing that can be done is to obtain a winding-up order.

(*k*) **LIABILITIES.** In regard to false statements contained in a prospectus, the civil liability of directors has been already dealt with. But they may also be criminally

liable for false statements which are fraudulent, if made with intent to deceive any member, or with intent to induce persons to become shareholders, or to intrust their property to the company—the punishment being imprisonment not exceeding two years, or penal servitude not exceeding seven years.

Further, directors are liable in heavy penalties for breaches of the Companies Acts. Among the most important of these offences are—acting without qualification, allotting shares irregularly, not filing report of statutory meeting, not registering mortgages and charges, making false statements in documents, and commencing business improperly.

Where directors apply the funds of the company to purposes which are *ultra vires* the company (that is to purposes outside the powers given in the Memorandum,) they are personally liable to replace the funds, no matter how honestly they may have acted. Directors who are guilty of constant non-attendance and leave the management to others may be liable for the breaches of trust committed by others; in other words, they may be liable for negligence. In case directors are made liable for wrong doing, then any one who has to pay the damages may be entitled to call on the others who are equally blameworthy to contribute their proper share to the amount.

CAPITAL.

(*a*) **VARIETIES.** The capital of the company may be divided into three classes: Preference Shares, Ordinary Shares, and Deferred Shares.

(1) **Preference Shares** may entitle the holders either to priority in respect of dividends, or to priority in respect of return of capital in the event of the company's being wound up. The holder of preference shares of the first kind is entitled to a fixed annual dividend before any dividend can be paid on the ordinary shares, but he is not entitled to anything more, no matter how great the profits may be. Such shares are either "cumulative" or "non-cumulative." In the case of cumulative shares, if the profits in any one year are not sufficient to pay the fixed dividend, the deficiency must be made good out of the profits of subsequent years.

Preference shares are cumulative unless they are expressly made non-cumulative, or language is employed to show that they are not cumulative, e.g. where the Articles provide that the holders of the preference shares shall be entitled "out of the net profits of each year" to a preference dividend at the rate of five per cent. per annum. In this case the shares would not be cumulative.

(2) **Ordinary Shares.** These receive dividends after the preference shares have been paid their fixed dividend.

(3) **Deferred Shares or Founders' Shares.** The holders of these shares are entitled to the surplus profits, or to a certain portion of the profits after the payment of a certain dividend on the ordinary shares. They are usually very few in number, and hence, if the company is successful, they will be worth many times the value of the ordinary shares. The public do not like these shares, which are now seldom created. Founders' shares are allotted to persons who have borne the chief burden and expense in forming the company.

(*b*) **RESERVE CAPITAL** is capital which has not yet been called up, and which the company by special resolution decides shall not be called up except in the event of the winding-up of the company. In a recent case it was decided that a company has no power to mortgage its reserve capital.

(*c*) **STOCK.** When the shareholders have fully paid up to the company the nominal value of the shares, the shares may be turned into stock. The difference between stock and shares is that stock may be divided into fractional amounts, whereas shares cannot be subdivided, unless authorised by the regulations or by special resolutions. But the holders of the stock are members and have the same rights as they enjoyed when holding shares of the same value as the stock. One great convenience of stock is that in transferring it, it is not necessary to specify all the numbers, as would be the case in transferring shares. A transfer of stock is merely one of so many pounds' worth of stock.

(*d*) **INCREASE OF CAPITAL.** When a company has issued all its share capital, and requires further funds for carrying on its business, it may issue new shares to the public. This power to increase capital is usually given in the Articles which prescribe the manner in which the permission to increase is given, whether by special resolution, extraordinary resolution, by the directors with the sanction of a general meeting, or by the directors alone. If the Articles are silent as to the increase of capital, the capital may be increased by special resolution. The new shares may be preference, or ordinary or deferred, provided that there is nothing in the Memorandum to prevent it. Any increase of capital must be notified to the Registrar of Joint Stock Companies.

(*e*) **ALTERATION.** Capital may be altered by "consolidating" existing shares, e.g. by changing every four £5 shares into one £20 share; or, as is more frequently done, by "subdividing" them, e.g. by changing every £5 share into five shares of £1 each; or by turning fully paid-up shares into stock.

The method by which an alteration of capital is effected is the same as that for effecting an increase of capital. Notice of the increase must be sent to the Registrar within fifteen days, under a penalty of £5 per day on every director of the company.

(*f*) **REDUCTION OF CAPITAL.** Where a part of the capital has been lost, dividends ought not to be paid without making some provision out of the profits for repairing the loss. The loss may be so great as, e.g. where a shipping company loses part of its fleet by a storm, or where a new invention makes articles unsaleable that it would be impossible to pay any dividends at all, for any profits would be employed in restoring the lost capital. In such cases the company may, by leave of the Court, write off this lost capital and pay dividends on the remaining capital.

In all cases where the rights of creditors would be jeopardised, the reduction cannot be effected without the leave of the Court, for the creditors look to this capital as the fund out of which they are to be paid. It is on the strength of this fund, and on the fact that the shareholders are liable for the amounts unpaid on their shares, that creditors deal with the company. If then this capital were reduced, and the liability of the shareholders to pay up on their unpaid shares consequently disappeared, the position of the creditors would be altered for the worse. The same would be the case were a portion of the paid-up capital returned to the shareholders. Hence before a reduction of capital can be effected, the sanction of the Court must be obtained, so that the rights of creditors may be safeguarded. But in cases where the rights of creditors are not endangered, reduction of capital can be effected without leave of the Court.

The company can, without leave of the Court, reduce its capital:—

(1) By forfeiting shares for non-payment of calls or other liabilities.

(2) By paying off paid-up capital out of accumulated profits, on the understanding that it may be called up again.

(3) By cancelling shares which have not been taken up.

The following modes of reduction require the leave of the Court:—

(1) Reducing the liability of members for uncancelled or unpaid capital, e.g. where the shares are £2 each, with £1 paid up, reducing them to £1 fully paid-up shares, and thus relieving the shareholders of a liability of £1.

(2) Returning to the shareholders, paid-up capital not wanted for the purposes of the company, e.g. where the shares are £2 fully paid up, reducing them to £1 10s., and giving back 10s. on each share.

(3) Paying off paid-up capital out of capital on the footing that it may be called up again.

(4) Cancelling or writing off capital which has been

lost or which is not represented by available assets, e.g. where uninsured property has been lost or destroyed.

The most common form of reduction is an "all round reduction," i.e. the nominal value of all the shares is proportionately reduced. The reduction may be written off one class of shares and not off others, as e.g. where the ordinary shares and not the preference shares are reduced. But no reduction will be permitted that is unfair to any class of shareholders.

In order to effect a reduction of capital, the Articles must give a power to reduce. If there is no power in the Articles, the Articles must be altered by special resolution so as to give the power to reduce. Subsequently a special resolution is passed to reduce the capital. The company then petitions the Court to confirm the resolution. An inquiry is ordered by the Court as to the debts and liabilities of the company. The creditors must consent or must be paid off, and after the lapse of some months the Court hears the petition, and confirms or refuses it as the case may be. If the petition is confirmed, and the Court sanctions the reduction, the words "and reduced" must be added to the name of the company, e.g. The X. Company, Limited and Reduced. The words are added only for a short period, about a month from the time the Court sanctions the reduction.

MEMBERS.

(*a*) **WHO ARE MEMBERS.** (1) Persons who sign the Memorandum become members when the company is incorporated. (2) Persons who agree to become members by applying for an allotment of shares or by taking a transfer of shares from a member and have been placed on the register of members. (3) Persons who are registered as members in succession to a deceased or a bankrupt member. (4) Persons who allow their names to be on the register of members.

A subscriber to the Memorandum must take and pay for the shares which he agreed to take unless all the shares have been taken up by others, and he must take the shares direct from the company; he cannot take them from another subscriber. A subscriber should be careful in this matter. Supposing a vendor agrees to take shares as part of the purchase money, and signs the Memorandum for those shares, he will have to take them twice over, once as part of the purchase money, and once for having signed the Memorandum for that number of shares.

Those who agree to take shares are not deemed to be members until their name is put on the register. But if a person has shares allotted to him he can insist on his name being put on the register, and if a member's name is wrongfully struck off, he is still a member. Further, if a person who has not agreed to take shares is put on the register, he is not a member at all.

An infant may be a member, but he can repudiate his shares on his coming of age, unless in the meantime he has received some benefit from them, e.g. dividends. If a person lends money to the company on a mortgage of its shares, he is in the position of a member in respect of those shares. A company may be a shareholder in another company, if its Memorandum gives it power to do so, or if it takes the shares in payment of a debt due to it by the other company. A person who agrees to "place" shares is not a member, because he does not agree to take the shares.

(*b*) **A PERSON CEASES TO BE A MEMBER:—**

(1) By transferring his shares to another, but for a year he still remains liable to be put on the "B list" of contributories. (See under "Winding up.") (2) By his shares being forfeited. (3) By his shares being sold by the company in order to enforce its lien on the shares. (4) By death; but his shares pass to his executor or administrator. (5) By the trustee in bankruptcy of a bankrupt member disclaiming his shares. (6) By having his contract of membership rescinded on the ground of mistake, or of a misrepresentation in the prospectus.

(*c*) **LIABILITY OF MEMBERS.** A shareholder is liable to pay to the company the whole of the nominal value of his share in cash. Otherwise he will be liable in the event of the winding-up for the amount remaining unpaid. This is quite irrespective of the price he himself may have paid for the shares. For example, the shares of a company may be of the nominal value of £5, on which only £2 has been paid up. The market price of those shares may be anything. In fact, if the company is very prosperous, a person buying the shares in the market might have to pay £20 for each share, and yet he would be liable for £3, the amount still remaining unpaid. If, then, the company afterwards fell on evil times, the position of such a purchaser would be serious.

The payment for shares must be in cash, but suppose the company owed a person, say £300, and he agreed to take 300 £1 shares in satisfaction of the debt, such a person would be deemed to have paid cash for his shares. Payment for shares may also be made not merely in cash, but in money's worth, e.g. by giving property or services in return for the shares. In this case, however, the contract to take the shares must, within one month, be registered with the Registrar of Joint Stock Companies. This contract must show what consideration the person gave for his shares, as e.g. property or services. Apart from circumstances of fraud, it is not necessary that the property or the services should be worth the shares given for them.

In ordinary cases, the shares must be paid for in cash, and the shareholder remains liable until the whole nominal value of the shares is paid up. Hence the company cannot "issue shares at a discount," that is, the company cannot issue shares say of £1 each, to a person for 15s. a piece, on the understanding that they are to be deemed fully paid up. If the company does issue the shares on those terms, the person taking the shares will be liable to pay the remaining 5s. on each share in the event of winding-up. It is *ultra vires* the company to issue its shares at a discount, and neither the Memorandum, nor the Articles, nor a unanimous vote of the shareholders can make it lawful.

N.B.—Even after a member has parted with his shares he remains liable for a year (see "Winding up").

(*d*) **REGISTER OF MEMBERS.** The register contains the names, addresses, and occupations of each member, the amount and the numbers of his shares (each share bears a number), the date of his acquiring them, and the amount paid up on each share. It must be remembered that the amount paid up on the shares has nothing whatever to do with the price which the member may have paid for his shares.

Outsiders may inspect this register on paying a shilling, members may inspect it gratis. Extracts may not be made, but a member may obtain a copy at the rate of 6d. per 100 words. The company may close the register for not more than thirty days in each year. The closing must be advertised.

No notice of any trust shall be put on the register. This does not mean that a person cannot hold shares in trust for another, but it does mean that so far as the company is concerned, it will regard the holder of the shares not as a trustee of, but as the owner of the shares, and therefore personally liable for calls upon the shares.

SHARES.

(*a*) **ALLOTMENT.** When a person applies for shares he makes an offer to take shares. The allotment is the acceptance of his offer. It is "the appropriation of a certain number of shares to a person by a resolution of the directors." To constitute a valid allotment there must be a duly constituted board of directors. The rules governing allotment are the same as those governing ordinary contracts, together with certain rules made by the Companies Acts.

An application to take shares may be revoked at any time before notice of allotment has been *posted* to the applicant. The moment the letter of allotment has been posted, the applicant is bound to take the shares, even though the letter never reaches him. But if there is unreasonable delay in allotting shares to an applicant, he may refuse to take them when allotted. Again, if he

makes a conditional application, and the condition is not fulfilled, he is not bound to take the shares. For example, B offered to take 100 shares if he were appointed manager. He was not appointed, and therefore he was not bound to accept the shares. Further, the directors in allotting shares must do so unconditionally, e.g. if in allotting they introduce a new term stating that the shares must be paid up at once under penalty of forfeiture, this is not binding on the applicant, who can, if he likes, refuse the shares. The company cannot proceed to allotment unless at least the amount of shares (if any) fixed by the Memorandum or the Articles as the minimum amount, upon which the directors may proceed to allotment, has been applied for, and not less than five per cent. of the value of the shares has been paid.

This is to prevent directors going to allotment when there is no possible chance of getting sufficient capital to carry on the company. Frequently they used to go to allotment merely for the purpose of getting their preliminary expenses.

If the minimum subscription is not subscribed within forty days from the issue of the prospectus, the money paid by the applicants must be returned within the next eight days; otherwise the directors will be liable to pay in addition five per cent. interest from the end of the forty-eight days.

(*b*) **SHARE CERTIFICATE.** The document issued to a shareholder by the company stating that he is the holder of so many shares, with their numbers, and the amount which has been paid up on each share.

Shareholders very often raise money by pledging the share certificate. Persons who lend money on these pledges run some risk, for a shareholder can nearly always get a new certificate by declaring that the old one is lost or destroyed.

(*c*) **TRANSFER.** A transfer of shares must be in writing. It need not be by deed unless the Articles require it. The transfer is not complete until the transferee is entered on the register. The stamp duty is 10s. per cent. on the price paid for the shares. If the shares are transferred for a nominal consideration, the stamp duty is 10s., whatever the actual value of the shares.

Where a shareholder transfers his shares to a man-of-straw in order to escape liability on the shares, the transfer is good, and the transferor is released from his liability provided he retains no right or interest in the shares. Usually, however, the Articles restrain the right of transfer by empowering the directors to refuse to register the transferee if calls are in arrear. In some cases they are empowered to refuse a transfer without assigning reasons, but in this case the directors must act *bona fide*. Again, the Articles may stipulate that before the shares can be offered to outsiders, the other shareholders may have the right to buy them at a fixed price. This is often done in the case of private companies.

In the case of "blank transfers," i.e. transfers where the name of the transferee is not inserted at the time of the transfer, the name of the transferee may be subsequently filled in. But if the transfer is to be by deed, this cannot be done unless the transferor gives the transferee a power of attorney to do so, and if this power is not given the transfer is void. Blank transfers are employed when a shareholder mortgages his shares, and in case he does not repay the loan, the mortgagee can fill in his own name, and get himself put on the register of members.

Where a shareholder sells part only of his shares, two new share certificates must be issued by the company—one for the shares not sold, which is given in place of the old certificate, and one issued to the purchaser of the sold shares.

(*d*) **FORGED TRANSFERS.** Where a transfer is forged, and the innocent transferee obtains a new certificate from the company, the true owner can nevertheless claim the shares, and have his name restored to the register. The transferee has no remedy against the company, but only against the person who transferred the shares, who is, of course, a criminal. But if the transferee has acted on the faith of the certificate, and has, for example, sold the shares, then he or the *bona fide* purchaser from him may sue the company. Hence a company, when a transfer has to be registered, usually writes to the transferor informing him of the deposit of the transfer form, and stating that it will be registered unless, by return of post, he objects. He need not reply, and if in fact the transfer is forged, his not replying will not prevent him from claiming the shares.

Where a transfer is invalid, the transferor is still liable for calls on the shares. Upon a valid transfer of shares, the transferee is bound to pay subsequent calls on the shares, and to indemnify the transferor against any calls or liability which may arise after the transfer. The transferor, however, remains liable for a year, in case the transferee is unable to meet calls.

Transfers made during a compulsory winding-up or during a winding-up under supervision of the Court, are void unless sanctioned by the Court. If made during a voluntary winding-up, they are void unless sanctioned by the liquidator. If a transfer is incomplete at the commencement of the winding-up because of not being registered, the Court will not put the buyer on the register, and he will thus not be liable on the shares. Where the same shares have been transferred to different persons who are not aware of the transferor's dishonesty in so doing, the transferee who is the first to get himself registered as a member is regarded as the owner of the shares.

(*e*) **TRANSMISSION.** When a shareholder dies his shares vest in his executor or administrator, and his estate remains liable for calls. The executor can be put on the register, but this will make him personally liable for calls, but he can recoup himself out of the estate. The executor can sell the shares without being put on the register.

When a shareholder becomes bankrupt, his trustee in bankruptcy can sell the shares for the benefit of his creditors. The trustee can repudiate the shares if they are worthless, or if there is any liability on them as for calls. In that case, the company can prove in the bankruptcy for the calls.

(*f*) **SHARE WARRANTS TO BEARER.** *When shares are fully paid up*, the company, if allowed by the Articles, may, on their giving up their share certificates, issue to its shareholders share warrants to bearer, stating that the bearer is entitled to the shares mentioned therein. The shares can then be transferred by simple delivery of the share warrant, and no stamp duty is required for the transfer, but the share warrant bears a stamp of 30s. for every £100. These documents, though under seal, are held to be negotiable instruments.

When a share warrant is issued to a shareholder his name is struck off the register, because, as the holder of the warrant is for the time being the shareholder, the company has no means of knowing who he may be. Hence "coupons" are attached to these warrants, entitling the holder to dividends on the dates mentioned in the coupons. When the dividend is due, the appropriate coupon is torn off and presented to the company for payment.

The holder of a share warrant has all the rights of a member, though his name is not on the register. Before he can attend a meeting or vote he must produce his share warrant.

(*g*) **CALLS.** Calls are instalments of the amount unpaid on shares, payable "when called for" by the directors in the manner prescribed by the Articles. Instalments payable by the terms of the prospectus are not calls, e.g. £1 shares may be issued on the terms of 5s. payable on application, 2s. 6d. on allotment, and 2s. 6d. within three months of allotment, the remaining 10s. when called for. The first three payments are not calls. The remaining 10s. is paid by means of calls.

Calls must be made by the directors in the manner specified in the Articles, otherwise they are invalid, and the shareholder need not pay. The call must specify the time and the place of payment.

The company can sue shareholders who refuse to pay calls. Interest may be charged on calls in arrear. The directors must take all necessary steps to enforce payment of calls, otherwise they will be guilty of a breach of duty.

The power of making calls must be exercised by the directors *bona fide* and for the benefit of the company.

(*h*) **PAYMENT IN ADVANCE OF CALLS.** The Articles may empower directors to receive from a member money due on their shares before any call has been made, and may pay interest on the amount so paid. But the directors can only receive such "payments in advance of calls" when it is for the benefit of the company, and the interest paid must not be excessive. In one case a company was insolvent. There was no money to pay the directors' fees. They accordingly paid up the amount due on their shares, and then out of this money paid themselves their fees. It was held that the directors were still liable on their shares. Where a shareholder pays in advance of calls, he is to that extent a creditor of the company, and is entitled to his interest on the amount so paid, even though there are no profits. The interest will in that case be paid out of capital.

Calls must be paid in cash. Money due from the company to a shareholder can be set-off against a call, and reckoned as a payment of the call.

Where a call is made before transfer, but payable after the transfer, the transferor is the person who has to pay the call.

(*k*) **FORFEITURE.** Shares may be forfeited if a shareholder does not pay calls, but only if the Articles give the directors this power. The forfeiture must not be collusive, i.e. it must not be made for the purpose of enabling a shareholder to escape from his liabilities. Forfeited shares are the property of the company, and may be sold for whatever price they will fetch. In other words, forfeited shares may be "issued at a discount."

When shares are forfeited, the shareholder cannot be sued for past calls, unless the Articles expressly provide for this; but in the event of the company being wound up within a year from the forfeiture, he would still be liable as a past member.

(*l*) **LIEN.** The company has a lien on the shares of a member for his debts and liabilities to the company. This lien may be enforced by the company selling the shares, provided that the Articles give the company power to do so.

DIVIDENDS.

The Articles usually determine in what proportion the profits shall be divided amongst the various classes of shares. If not, the profits are paid on each share in proportion to its nominal value, quite irrespective of the amount paid up on the shares.

On the declaration of a dividend, it becomes a debt due from the company to the shareholder for which he can sue at any time within *twenty years* from the date of the dividend. It must be paid in cash, unless the Articles expressly authorise payment in some other manner.

Dividends can be paid only out of profits. They must not be paid out of capital. To pay them out of capital is absolutely illegal; but in this connection a distinction is made between "Circulating Capital" and "Fixed Capital."

> *Circulating capital* is property which is acquired or produced with the view of selling at a profit; and the law and the practice is, that any loss of such capital must be repaired out of the profits before a dividend can be declared. *Fixed Capital* is property not intended for sale but to be used in producing goods, e.g. the buildings, plant, and machinery of a business.

Where a loss or depreciation of fixed capital occurs, the directors should make some provision out of the profits for repairing such loss before declaring a dividend. Any increase in the value of the assets or capital may be distributed as dividend.

If the directors pay dividend out of capital they are liable for the amount so paid out, but they can recover from the shareholders the amounts so paid to each shareholder, if the shareholder knew that the dividend was paid out of capital. Further, directors who pay a fictitious dividend when there are no profits, with a view of raising the price of the company's shares, may be criminally liable for conspiracy. Profits which have been set apart as a "reserve fund" are not capital, and may be distributed as dividend though there are no profits for the current year, and though there may be a loss of capital.

A transfer of shares does not give the purchaser the right to the dividend then accruing, unless the transfer is made "cum dividend." If the transfer is made "ex dividend," the seller claims the dividend accruing. In the absence of anything to the contrary, the buyer is entitled to all dividends declared after the date when he agreed to buy the shares, even though the shares have not yet been transferred to him.

ACCOUNTS AND AUDITORS.

Directors must keep proper accounts, which are usually made out annually, and copies are sent to the shareholders. At the annual meeting the accounts are passed.

The Capital Account will show on the one side the liabilities, including the amount of the subscribed capital, amount of bad debts, and other items. On the other side will be shown the value of the assets, with the necessary deductions for depreciation. The difference between the two sides will show the profit or the loss for the year. The same difference will be shown in the Profit and Loss Account.

The auditor must be appointed at the general meeting. If this is not done, the Board of Trade may appoint one. A director cannot be an auditor.

The duty of the auditor is to see that the books show the true financial position of the company, and to do this he must exercise reasonable care and skill in making investigations, but he is not liable for failing to find out skilfully laid schemes of fraud, when there is nothing to arouse his suspicions. He must not certify what he does not believe to be true. If he does not act honestly or with reasonable care and skill, the company may sue him for damages. It is no part of his duty to give advice to directors or shareholders; and it is nothing to him whether the business of a company is conducted prudently or imprudently.

The auditors shall have access to the books and papers of the company, and shall sign a certificate at the foot of the balance sheet stating that all their requirements have been complied with, and shall make a report to the shareholders as to the accounts and balance sheet laid before them, and shall state whether the balance sheet exhibits a true and correct view of the state of the company's affairs, according to the best of their information and the explanations given to them, and as shown in the books of the company.

MEETINGS AND RESOLUTIONS.

(*a*) **STATUTORY MEETING.** The general meeting, which must be held not less than one month and not more than three months from the date at which it is entitled to commence business. Seven days before this meeting a report must be sent to all the shareholders, showing:—

(1) The number of shares allotted, and the amount paid on each, or other consideration for which they have been allotted.

(2) The cash received for those shares.

(3) An abstract of the receipts and payments of the company, and an estimate of the preliminary expenses.

(4) The names and addresses of the directors, auditors, manager and secretary.

(5) If any contract requiring modification is to be submitted to the meeting, the particulars of the contract and the modifications.

(*b*) **ORDINARY MEETING.** The annual general meeting, which is usually held at some specified date in the year. This must be held in addition to the statutory meeting.

(*c*) **EXTRAORDINARY MEETING.** A meeting convened for the purpose of transacting business which must be done before the next ordinary meeting. An extraordinary meeting must be called if the holders of one-tenth of the issued capital of the company demand it.

(*d*) **MODE OF PROCEDURE:**—(1) **Notice.** Every member is entitled to notice of all these various meetings. The notice must specify any special business that is to be transacted.

(2) **Quorum.** Two members may form a quorum, unless the Articles specify the number.

(3) **Chairman.** Unless appointed by the Articles, the

chairman is elected by the meeting. Should he close the meeting capriciously, another chairman may be elected.

(4) **Voting.** Each shareholder has one vote, unless the Articles state that the voting power shall depend on the number of shares held. The voting is first done by a show of hands. At this state of the proceedings, proxies are not counted, and each member has but one vote. Any five members may demand a poll, which may be taken then and there. At the poll, each person signs a paper "for" or "against," and proxies are counted.

(5) **Proxy.** A written paper bearing a penny stamp, authorising a person to vote for a shareholder at a certain meeting. If it authorises him to vote at a series of meetings, it must be stamped as a power of attorney with a stamp of 10s. Voting by proxy is permitted only when the Articles expressly provide for it. The proxy holder is not bound to produce his proxy paper at the meeting.

(*c*) **RESOLUTIONS.** Resolutions are of three kinds—ordinary, special, and extraordinary.

(1) **Ordinary.** A resolution passed by the majority at a general meeting.

(2) **Special.** A resolution passed by a three-quarters' majority at a meeting convened for that purpose, and confirmed by a majority at a second meeting held not less than fourteen days and not more than a month after the first. Special resolutions are required for various purposes, e.g.:

i. To alter the Memorandum or the Articles.
ii. To increase, alter, or reduce the capital of the company.
iii. To wind-up the company voluntarily.

(3) **Extraordinary Resolution.** This is the same as a special resolution, except that it does not require confirmation at a second meeting. When it is expedient to wind up a company voluntarily, owing to the fact that it cannot carry on its business by reason of its liabilities, an extraordinary resolution is passed.

BORROWING POWERS.

Every trading company has power to borrow money for the purposes of its trading, but other companies have no such power unless provided for by the Memorandum, or by the Act of Parliament creating the company. The borrowing powers of a trading company are usually exercised by the directors.

(*a*) **ULTRA VIRES BORROWING.** Where the Memorandum fixes the limit to the borrowing powers, any borrowing in excess of this limit is *ultra vires* the company, and is absolutely void, and the securities given for the loan are void. Such borrowing cannot be ratified by the shareholders. The lender cannot sue the company for repayment; but if the money has not been spent he can obtain an injunction to prevent the company from parting with it; or if the money has been employed in paying off just debts owing to creditors of the company, he is entitled to stand in the shoes of those creditors, and can sue the company for the amount owing to them. The lender, too, may in some cases be able to sue the directors for breach of an implied warranty that they had power so to borrow.

If the company has unlimited powers of borrowing money, but the directors have only limited powers and exceed them, the borrowing is *ultra vires* the directors, and is void, and the lender cannot sue the company unless the shareholders ratify the borrowing.

(*b*) **SECURITY.** When a company has power to borrow, it may borrow on the security of all or any of its property, real or personal, present or future. It may mortgage uncancelled capital if there is a power in the Memorandum so to do, or if there is power in the Articles, and there is nothing to the contrary in the Memorandum. The Company may not, however, borrow on the security of its reserve capital, nor can it borrow on the security of its books, for these must be kept at the office of the company and be open for inspection. Hence the liquidator in a winding-up has a better right to the books than a receiver appointed by the debenture holders.

(*c*) **MODE OF BORROWING.** Money may be raised by any one or by several of the following securities:—

(1) By a legal mortgage of specific parts of its property, or by an equitable mortgage, e.g. by deposit of title deeds.
(2) By a floating charge on the whole property of the company.
(3) By bonds, or by promissory notes.
(4) By debentures, or by debenture stock.

The method of raising money by the issue of debentures, or of debenture stock, will now be dealt with.

DEBENTURES AND DEBENTURE STOCK.

(*a*) **THEIR NATURE.** A debenture is a writing promising to repay a specified sum at a given date, with interest in the meantime half-yearly. It usually gives "a floating charge" on the assets of the company, as security for the loan. A floating charge means that the whole of the company's property, present and future, is security for the loan, but that the company, until the charge becomes a fixed charge, has power to deal with any specific part of its assets in the ordinary course of its business. It is a charge that is not enforced until the undertaking ceases to be a going concern, or until the person in whose favour the charge is created finds that default has been made in paying him his interest or principal. Until the debenture holders enforce their rights, the company has a free hand to deal with its assets in the ordinary course of business, i.e. may sell, lease, mortgage, or exchange its property as it thinks expedient.

A floating charge is liable to be postponed to the rights of the following persons, if they enforce their rights before the debenture holders proceed to enforce theirs.

(1) Landlord distraining for rent.
(2) A creditor who obtains a garnishee order.
(3) Persons, such as a clerk or a servant, entitled to preferential payments under the Bankruptcy Acts.
(4) A judgment creditor, if the goods are seized and sold before the debenture holders enforce their rights.

Debentures which give a charge on the company's property are sometimes called "mortgage debentures," but in that case a trust deed is drawn up giving to trustees power to act on behalf of the debenture holders.

The difference between debentures and debenture stock is chiefly one of name; the holders of the debenture stock are in much the same position as debenture holders. Debentures are either payable to bearer or payable to registered holder.

Debentures payable to bearer are negotiable instruments. Hence they may be transferred by simple delivery without paying a stamp duty on the transfer, and without notifying the transfer to the company, and further, the transferee who takes it in good faith and for value gets an absolutely good title, no matter what title his transferor had.

(*b*) **REGISTRATION.** Every debenture created, i.e. "sealed and issued" after January 1st, 1901, must be registered with the Registrar within twenty-one days of its issue, otherwise it will be null and void as against the liquidator and the creditors of the company. This means that the debenture holders cannot enforce their security, but the company is still bound to repay the loan. The Court may extend the time for registration. Debentures created before 1901 were merely registered in the company's register. The penalty for non-registration was only £50, and registration might be made at any time. Before 1901, intending creditors had no power of seeing what previous securities a company had given, but now any one on paying a shilling can inspect the register at Somerset House.

(*c*) **TRANSFER.** Debentures payable to bearer are transferred by simple delivery; debentures payable to the registered holder are transferred in the manner laid down in the conditions on the back of the instrument. If the instrument is silent on the point, they can be assigned by a simple writing, with notice to the company.

(*d*) **REMEDIES OF DEBENTURE HOLDERS.** A debenture holder who wishes to recover payment of his loan may employ any or all of the following remedies:—

(1) He may exercise such means as are given to him by the securities themselves, e.g. he may sell the company's

property, or have a receiver appointed if the conditions on the debentures give him these powers.

(2) He may petition for the winding-up of the company.

(3) He may obtain from the Court an order for foreclosure, i.e. he may become the owner of the property of the company.

(4) He may sue for the debt, and the Court will appoint a receiver.

WINDING-UP.

If a company becomes insolvent, or if there is good reason that the company should come to an end, the company is wound up. It cannot be made bankrupt. There are three kinds of winding-up: (*a*) Compulsory winding-up by the Court; (*b*) Voluntary winding-up; and (*c*) Winding-up under the supervision of the Court, a mode of proceeding seldom resorted to.

In the winding-up a liquidator is appointed, whose duty is to realise the assets and apply them in paying the creditors, and to distribute the residue, if there is any, amongst the shareholders. In a compulsory winding-up by the Court, after the winding-up order has been made, all proceedings against the company *must* cease, unless the Court orders otherwise. On a voluntary winding-up the Court *may* stay proceedings. Any disposition of its property made by a company after the commencement of the winding-up is void, as are all transfers of shares, unless the Court otherwise orders. In the case of a voluntary winding-up, transfers made during the winding-up must be sanctioned by the liquidator, otherwise they are void.

(*a*) **WINDING-UP BY THE COURT.** A company may be compulsorily wound up by the Court—

(1) When the company has passed a special resolution to that effect; or

(2) When the company does not commence business within a year from its incorporation, or if it suspends business for a year; or

(3) When the number of its members falls below seven; or

(4) When the company is unable to pay its debts; or

(5) When the Court is of opinion that it is just or equitable that the company should be wound up.

Winding-up for any of the first three causes seldom takes place. It usually arises from the inability of the company to pay its debts. A company is accounted insolvent:—

(1) If a creditor to whom the company owes £50 or more demands payment, and the debt is not paid within three weeks; or

(2) If a judgment debt or an execution remains unsatisfied; or

(3) If it is proved to the satisfaction of the Court that the company cannot pay its debts.

The first step in the compulsory winding-up of a company is usually taken by a creditor presenting a petition to the Court to give a winding-up order. A creditor may petition if there is an undisputed debt of £50 or more due to him, and any of the things mentioned above have happened. But the Court may refuse a winding-up order if there are no assets, or if the majority of the creditors do not wish it, or if the order will do no good. The winding-up dates from the presentation of the successful petition. When the affairs of the company are fully wound up, the Court makes an order that the company be dissolved, and this order is entered in the register of Joint Stock Companies.

(*b*) **VOLUNTARY WINDING-UP.** This is the most usual way of winding-up a company. It can be wound up voluntarily:—

(1) By an ordinary resolution, if the period fixed for the duration of the company has come to an end, or if an event upon which the company is to be wound up has happened.

(2) If for any cause whatever the company has passed a special resolution to wind up.

(3) If the company passes an extraordinary resolution that it cannot by reason of its liabilities carry on its business, and that, therefore, the company should be wound up.

A voluntary winding-up dates from the passing of the resolution to wind up. The company then ceases to carry on its business except for the purpose of winding-up; and transfers of shares are void except with the permission of the liquidator.

When the affairs of the company are wound up, the liquidator calls a general meeting, and lays his accounts before it, and after three months the company is deemed to be dissolved and ceases to exist.

(*c*) **THE LIQUIDATOR.** In compulsory winding-up, the liquidator is appointed by the Court, and is a trustee for the creditors; in voluntary winding-up he is appointed by the shareholders and is a trustee for them. He is paid a salary, and must give security not to make away with the assets, and he can be removed by the authority which appointed him. The liquidator may be assisted by a "committee of inspection," composed of contributories and creditors, who must meet at least once a month.

On his appointment, all the property of the company vests in him, and he has considerable powers vested in him. He can bring and defend actions on behalf of the company. He carries on the business of the company as far as is necessary for its winding-up. He may sell the property of the company, draw bills of exchange, and do all things that may be necessary for the winding-up of the company and the distribution of its assets. He has power to summon meetings of contributories, to settle the lists of contributories, to make calls on them for the purpose of paying the debts of the company, and to fix the date by which creditors must prove their claims or be deprived of all remedy against the company.

(*d*) **CONTRIBUTORIES.** These are the shareholders, past and present, who are liable for the amount unpaid on the shares. The "A list" comprises all the present members of the company. The "B list" comprises all persons who have ceased to be members within a year of the winding-up. Persons in the "B list" are liable only in respect of debts that were incurred while they were members. And they are only liable in respect of these debts when the members on the "A list" are unable to pay the calls made on them by the liquidator.

A contributory may also be a creditor of the company, but he cannot set off the debt due to him against his liability for calls; for example, a person may be liable for calls to the extent say of £2,000, and the company may owe him the same amount. He must pay to the liquidator the whole sum of £2,000, and afterwards prove his debt in the winding-up. He may thus stand to lose anything less than the £2,000. Certain creditors, however, such as clerks or servants of the company, have in the winding-up a right to be paid their claims before the other creditors (see "Distribution of the Property," under *Bankruptcy*).

READJUSTMENT SCHEMES.

(*a*) **ARRANGEMENTS WITH CREDITORS.** A company may enter into a scheme of arrangement with its creditors. Application is made to the Court to direct meetings of the creditors and contributories to consider the scheme. The resolution approving the scheme must be carried by a three-quarters majority of those present in person or by proxy at the meeting. A petition is then made to the Court to sanction the scheme. The most usual kind of scheme provides for the formation of a new company, that the debenture holders in the old company shall take debentures or preference shares in the new company, that the ordinary creditors of the old company shall take a composition of so much in the pound, payable partly in cash and partly in shares or debentures, and that the shareholders in the old company shall take shares in the new company on which a certain amount only shall be deemed to be paid up.

(*b*) **RECONSTRUCTION.** A company may be unable to alter or extend its objects as defined in the Memorandum, or it may be embarrassed by the rights of preference shares or of founders' shares, which being given by the Memorandum cannot be altered, or it may want new capital which it cannot get from the existing shareholders or from the public. In these cases, the company, instead of being wound up, may be reconstructed. To do this a new company is formed, and the old company sells its undertakings to the new company, on the footing that each shareholder in the old company shall receive a certain number of partly paid up shares in the new. The sale

may be effected by passing a resolution to wind up the old company and appointing liquidators with a power to sell to the new company. But if a member dissents from the sale, he may obtain payment in cash of the value of his interest.

The sale may be under a power in the Memorandum giving the company the right to sell its undertaking to a new company for shares in the new company, and to distribute these shares among the old shareholders. In this case the Memorandum may deprive the shareholders of their right to dissent.

(c) **AMALGAMATION.** Where two or more companies wish to amalgamate their undertakings, they may do so by the formation of a new company which takes over the undertakings of the existing companies; or one of the existing companies may take over the others provided its Memorandum gives it power to acquire the undertakings of other companies.

PARTNERS AND PARTNERSHIPS.

WHAT IS A PARTNERSHIP? The greater part of the law of partnership is consolidated in the Partnership Act, 1890. In that Act, partnership is defined as "the relation which subsists between persons carrying on a business in common with a view of profit." The relation between members of any company registered under the Companies Acts or formed by Royal Charter, etc., is not a partnership within the meaning of the Act. Common ownership of property, sharing gross returns, or even the receipt by a person of a share of profits from a business, does not of itself create a partnership. Thus it has been held an agreement between two joint owners of a house that one should put it in repair, manage the house, and let it if possible, and that the rent should be divided equally, did not constitute a partnership. An agreement between the owner of a theatre and a manager that the latter should provide a company to act, and that the gross receipts should be divided between the proprietor of the theatre and the manager, was held not to be a partnership. On the other hand, the receipt by a person of a share in the net profits of a business will generally be held to make him a partner in the business, though it is not conclusive evidence to that effect. The Partnership Act, 1890, specially provides that in the following cases receipt of a share of profits does not of itself make a person a partner.

(1) Where a debt is received by instalments out of the profits of a business.

(2) Where a servant or agent is remunerated by a share of the profits of a business.

(3) Where a widow or child of a deceased partner receives by way of annuity a portion of the profits made in the business.

(4) Where a person, under a contract in writing, has lent money to another and receives a rate of interest varying with the profits of that other's business, or a share of the profits.

(5) Where a person receives by way of annuity or otherwise, a portion of the profits of a business in consideration of the sale by him of the goodwill of the business.

But in cases (4) and (5) if the owner of the business becomes bankrupt, or dies insolvent, or makes an arrangement with his creditors to pay them less than twenty shillings in the pound, the lender of the loan or seller of the goodwill is postponed to the other creditors of the borrower or buyer.

WHO MAY BE PARTNERS. Each of the partners must be competent to contract; and, therefore, if an infant enters into a contract of partnership, he is not responsible for the debts of the firm, and he may repudiate the partnership before or when he comes of age. A married woman can be a partner, but she cannot always be made a bankrupt with the rest of the firm [See under *Bankruptcy*]. Certain professions cannot be carried on in partnership, e.g. the profession of a barrister.

CONTRACT OF PARTNERSHIP. Persons who have entered into partnership with one another are called collectively a firm, and the name under which their business is carried on is called the firm-name. The partnership contract need not be in writing, but may be entered into verbally. Sometimes, indeed, a partnership is inferred from the mere fact that persons carry on business together and share the profits. A partnership may be at will, i.e. determinable by any one of the partners by notice to the others, or it may be for a fixed period of time. If a partnership is to extend beyond a year, or an agreement is made that a partnership shall be entered into at some date more than a year after the date of the agreement, there must be some evidence in writing of the contract. An agreement in writing for a partnership is termed "Articles of Partnership." A person may be a "dormant or sleeping partner," i.e., he may participate in the profits without taking any active share in the management, and without appearing to the world as a partner. Such a partner, like any other, is responsible for the debts of the firm unless he is registered as a "limited partner" (see p. 590 under *Liability of Partner for Debts of the Firm*). Sometimes a man who is not a partner may be held liable for the debts of the firm on the ground that he has induced others to give credit to the firm under the belief that he is a partner therein. For instance, if a partner, other than a dormant partner, retires from the firm, and does not give any notice to the firm's creditors, he may be liable for debts contracted after his retirement.

ILLEGAL PARTNERSHIPS. A private partnership cannot be formed of more than ten persons for banking, or twenty for any other business. If it exceeds that number, the members, while individually liable for debts incurred to those who had no notice of the illegality of the business, cannot enforce any claim arising out of the partnership dealings. If a number of persons exceeding the above desire to carry on business lawfully together, they must get themselves registered as a Company. A partnership is also illegal if the business intended to be carried on is, or afterwards becomes, contrary to law, morality, or public policy.

DURATION OF PARTNERSHIP. A partnership may be at will, or it may be for a definite period. If a partnership, entered into for a fixed term, is continued after the term has expired, it becomes a partnership at will, if no express new agreement is made, and the rights and duties of the partners remain the same as they were at the expiration of the fixed term so far as is consistent with the nature of a partnership at will; thus the terms of the original agreement as to share of profits, arbitration between the partners in the event of dispute, and so forth, would be still binding; but a clause in the articles providing that a partner wishing to retire must give a certain length of notice would be no longer applicable, for a partnership at will can be dissolved by notice at any time. If the partnership was originally constituted by *deed*, and has been continued as a partnership at will, such notice must be in writing.

EXTENT OF PARTNER'S AUTHORITY. Every partner is an agent of the firm and his other partners for the purpose of the business of the partnership, and the acts of any partner who does any act within the usual course of the firm's business, binds the firm and his partners, unless the person with whom he dealt knew that in fact the partner so acting had no authority, or did not know or believe him to be a partner. The question in such case is, "What is the usual course of the business?" Accordingly, this implied authority of each partner is more extensive in trading than in other kinds of partnership. Thus in every partnership, a partner has an implied authority to sell or buy goods, give receipts for debts, and engage servants; and in trading partnerships he may also bind the firm by borrowing money, negotiating promissory notes and bills of exchange, and pledging the firm's property. A partner cannot, however, bind the firm by executing a deed unless authorised by deed to do so; and a guarantee given by one partner in the name of the firm does not bind the firm unless there is some agreement to that effect among the partners.

LIABILITY OF PARTNER FOR DEBTS OF THE FIRM. By the Partnership Act, 1890, it is provided that "Every partner in a firm is liable jointly with the other partners for all debts and obligations of the firm incurred while he is a partner; and after his death his estate is also severally liable for such debts, subject to prior payment of his separate debts" and this is the general rule of Partnership Law; but certain modifications have been introduced by the Limited Partnerships Act, 1907, which permits the formation and registration of "limited partnerships" which must consist of one or more persons called *general partners*, who are liable for all debts and obligations of the firm, and one or more persons called *limited partners*, who are not liable for the debts or obligations of the firm beyond the amount of the sum they have contributed towards its capital. Limited partners may take no part in the management of the business (except to advise with the other partners as to its state and prospects), otherwise they will lose the protection afforded by the Act. A limited partnership is not dissolved by the death or bankruptcy of a limited partner. The registration of a limited partnership is effected by sending to the registrar at the register office, in that part of the United Kingdom in which the principal place of business of the limited partnership is situated, a statement signed by the partners giving particulars of the business, the names of the partners and the sum contributed (whether in cash or otherwise) by each limited partner.

LIABILITY OF RETIRED PARTNER. An ordinary partner who retires from the firm is liable for debts incurred before he retired unless he is discharged by an agreement between the new firm and the old creditors. This agreement may be express, or implied from the conduct of the partners. A retired partner may sometimes be liable for debts incurred after his retirement, i.e., if his name remains in the business, and persons give credit to the firm under the belief that he is still a member. *The estate of a deceased partner*, however, is not liable merely because, after his death, the partnership business is continued in the old firm-name.

> **An incoming partner** is not liable for debts incurred before he became a partner, unless there is some express or implied agreement between the new firm and the old creditors, by which the creditors discharge the old partnership from liability and agree to accept the liability of the new firm instead.

LIABILITY OF PARTNERS FOR TORTS. The firm is liable for the tort of any partner committed in the ordinary course of the business of the firm, or with the authority of his co-partners. The liability of partners for tort is joint and several. In particular, it is laid down by the Partnership Act, 1890, that if one partner, acting within the scope of his apparent authority, receives the money or property of a third person and misapplies it; or if the firm in the course of its business receives property of a third person, and the property is misapplied by one or more of the partners while it is in the custody of the firm, the firm is liable to make good the loss. If a partner is a *trustee*, and improperly employs trust money in the business, the other partners are not liable for the trust property unless they had notice of the breach of trust.

In regard to the liability of the firm for a tort, or wrong, of any partner, the test is whether or not the act was committed by the partner acting in the ordinary course of the business of the firm.

> Thus, where A and B were a firm of solicitors, and A received money from X to invest in a security specified by X, and A misapplied the money, B was held liable as well as A; but where A received money from X with general directions to invest it at the discretion of the firm, and A misapplied it, B was held not liable, because to receive money for general investment is not part of the business of solicitors.

RELATIONS OF PARTNERS ONE TO ANOTHER.

The mutual rights and duties of partners may be varied by the consent of all the partners. The subsequent rules, therefore, only apply in the absence of any agreement to the contrary.

1. PARTNERSHIP PROPERTY consists of all property brought into the partnership stock or afterwards acquired on account of the firm. Such property, even when it consists of land, is to be treated, as between the partners and their representatives, as personal estate. If A and B take a lease of a colliery to work it in partnership, the colliery is partnership property. So, too, if A and B are left land, and carry on the business of nurserymen already established thereon, the land devised to A and B is partnership property. But in a case where A and B were tenants in common of a colliery and began to work it in partnership, it was held that this did not by itself make the colliery partnership property. The Court can make an order on the application of any separate creditor of a partner who has obtained a judgment for his debt, charging such partner's interest in the partnership property with payment of the amount of the judgment debt, and may appoint a receiver of that partner's share of profits. The other partners have power to redeem the interest so charged.

2. PARTNER'S SHARE. In the absence of any contrary agreement, all the partners are entitled to share equally in the capital and profits of the business, and must contribute equally towards the losses of the firm.

> Thus A, B, and C were partners under articles which provided that profits and losses should be shared equally. A brought in a capital of £10,000, B £5,000, C nothing. On the partnership being dissolved, the assets realised £10,000 and the debts amounted to £5,000. Hence the net assets were £5,000, and as the capital of the firm originally amounted to £15,000, there was a total loss of £10,000. Each partner stands to lose £3,333 6s. 8d. As C put in no capital he will have to contribute £3,333 6s. 8d., which will be added to the net assets, so that there will be £8,333 6s. 8d. available for distribution between A and B. Of this sum A will receive £6,666 13s. 4d., because the share of capital which he put into the partnership was £10,000, and he must lose £3,333 6s. 8d. For the same reason B will receive £1,666 13s. 4d.

3. INDEMNITY. The firm must indemnity every partner for any proper payment made or liability incurred by him in the ordinary course of business, or in preserving the property of the firm.

4. INTEREST ON ADVANCES AND CAPITAL. If a partner makes any actual advance beyond the amount of capital he agreed to subscribe, he is entitled to interest at the rate of 5 per cent. A partner is not entitled, before the ascertainment of profits, to interest on the capital subscribed by him.

5. CONDUCT OF PARTNERSHIP BUSINESS. Every partner may take part in the management of the partnership business, but no partner shall be entitled to remuneration for acting in the business. No person may be introduced as a partner without the consent of all the existing partners. The majority of the partners may decide differences as to ordinary matters, e.g. of management; but no change in the place or scope of the business can be made without the consent of all the parties. No majority of the partners can expel any partner unless a power to do so has been conferred by express agreement between the partners.

6. DUTY TO OBSERVE GOOD FAITH. Partners are bound to render true accounts and full information of all things affecting the partnership, to any partner or his legal representative. A partner must not make a private profit out of the partnership property or by use of the firm name. If a partner, without the consent of the other partners, carries on any business competing with that of the firm, he must account for and pay over to the firm all profits made by him in that business. Any partner has a right to inspect the books of the firm; but if he is about to retire from the firm and has sold the goodwill to the other partners, he must not extract from the books the names of the customers with a view to soliciting them in the event of his starting a new business for himself.

7. ASSIGNMENT OF PARTNERSHIP SHARE. Where a partner assigns his share of the partnership to an outsider, the assignee has no right to interfere in the management of the business, or to inspect the partnership accounts. The assignee is, however, entitled to the share

of the profits to which the assigning partner would otherwise be entitled. Should the partnership be dissolved, the assignee is entitled to receive that share of the partnership assets to which the assigning partner is entitled.

DISSOLUTION OF PARTNERSHIP. A partnership is *ipso facto* dissolved:

(1) by the death or bankruptcy of any partner.
(2) by becoming unlawful.
(3) by effluxion of time, if it was a partnership for a fixed term.
(4) by notice, if it was a partnership at will.
(5) at option of the other partners, if any partner allows his share to be charged for his separate debt.

A partnership can be dissolved by the Court on application by a partner.

(1) If a partner becomes lunatic.
(2) If a partner, other than the partner suing, becomes permanently incapable.
(3) If a partner, other than the partner suing, is guilty of such misconduct or breaches of the partnership agreement as injure the business or render it impossible to go on with him.
(4) If the business of the partnership can only be carried on at a loss.
(5) If the Court thinks it just and equitable that the partnership should be dissolved.

RIGHTS OF PARTNERS AFTER DISSOLUTION. After dissolution, the authority of each partner to bind the firm continues so far as may be necessary to wind up the affairs of the partnership. Each partner, in the absence of contrary agreement, has a right to have the firm's property sold, including the goodwill, and to have the surplus divided. If a partner has paid a premium to enter a partnership for a fixed term, and dissolution occurs before the term expires, the Court will order repayment of the premium, usually in proportion to the unexpired part of the term, unless the dissolution was due to the fault of the partner who paid the premium, or the partnership was dissolved by an agreement containing no provision for return of any part of the premium. If a member of a firm dies or otherwise ceases to be a partner, and the remaining partners carry on the business without paying him out his share of the partnership assets, he, or his representatives, can claim such part of the profits made after dissolution as the Court considers due to the use of his share, or interest at 5 per cent. on the amount of his share. If the Court rescinds a partnership contract on the ground of fraud or misrepresentation, the party entitled to rescind has a right, out of the surplus assets, after debts have been paid, to the return of his capital and any sum paid by him for the purchase of a share in the partnership, and to be indemnified by the person guilty of the fraud or misrepresentation against all the debts of the firm.

FINAL DISTRIBUTION OF ASSETS. Losses, including losses of capital, are paid first out of profits, next out of capital, and then by the partners individually in the proportion in which they were entitled to share profits. The assets of the firm, including the sums, if any, contributed by the partners to make up losses of capital, are then applied.

(1) in paying debts and liabilities to third persons.
(2) in repaying advances made to the firm by any partner.
(3) in repaying capital put in by the partners.
(4) the residue is then divided between the partners in the proportion in which profits are divisible, i.e. equally unless the Partnership Articles provide to the contrary.

ADMINISTRATION OF ESTATES OF DECEASED PARTNERS AND OF BANKRUPT PARTNERS. Where the Court administers the estates of deceased partners and of bankrupt and insolvent partners, the partnership property is applied as joint estate in payment of the debts of the firm, and the separate property of each partner is applied as separate estate in payment of his separate debts. The surplus, if any, of the joint estate is applied in payment of the separate debts of the partners, or the surplus, if any of the separate estate is applied in payment of the debts of the firm. This is the general rule, but in some cases a firm's creditor may prove his debt in the first instance against the separate estate of a partner, e.g. if the debt was incurred by fraud of the partner.

PRINCIPAL AND AGENT.

THE PARTIES. In some respects the relationship of principal and agent resembles the relationship between a master and servant, indeed, in many cases, servants are also the agents of their masters; but the main characteristic of agency is that, in general, an agent is a mere connecting link between the principal and the third party. The agent, except in a few cases, which will be noticed later, does not enter into contracts on his own behalf; he is merely the representative of his principal, and therefore the latter alone is usually bound by his acts, while the agent himself does not, in general, incur any liability towards the third party.

The general rule is that anyone may be an agent, whether he or she be a minor, a married woman, or a bankrupt; but it is not every one who may be a principal. As it is the principal who is usually bound by the agent's contracts, only those persons can be principals who have themselves power to make the contracts which they employ the agents to effect. Thus infants cannot be bound by contracts that are not for necessaries; therefore they can only employ agents to effect contracts which are in the nature of necessities. If an infant employs an agent for another purpose, the agency will be void.

In those few cases in which an agent is personally responsible (see below) he must have capacity to contract personally, or he will not be bound.

APPOINTMENT OF AGENT. A person may be appointed an agent either expressly or by implication. Certain express agencies can only be created by deed, whilst others may be made verbally, the rule being: if the agent's duties require him to execute a deed he must be appointed by deed. Deeds appointing agents and giving them power to execute deeds are called "Powers of Attorney." The only other case in which the appointment of the agent must be by deed, is where the appointment is made by a corporation, for corporations cannot be bound by any important contract which is not executed under their corporate seal.

With the exception of a few unimportant cases, all other appointments may be made verbally. Principals and agents, however, cannot be advised, except in trivial cases, to content themselves with a verbal appointment. It is always best that the parties should draw up a written instrument stating clearly the nature of all the duties which the agent may be called upon to perform. This course of procedure would obviate many of the questions which frequently arise as to whether or not an agent in a particular transaction has exceeded the limits of his authority. An agency may be created without any words at all, and sometimes even unintentionally. There are many cases where the law will infer an agency. Thus a wife living with her husband is his implied agent for the purpose of obtaining the ordinary housekeeping stores and necessaries, unless he has expressly forbidden her to pledge his credit or given her an ample allowance for such purposes.

Lastly, there is a species of agency known as an "agency of necessity," where the principal will be presumed to have authorised the agent to act in a certain manner. Thus the master of a ship has an implied authority to pledge the owners' credit to enable him to continue the voyage, if he is unable to communicate with the owners. So, too, is a wife living apart from her husband, owing to his misconduct, an agent of that husband for the supply of necessaries to her, and he is bound to pay for those necessaries.

VARIETIES OF AGENTS. A principal can expressly authorise an agent to do whatever he pleases, provided it be for a lawful object, and the agent consents to perform it. But in cases of implied authority, it is frequently diffi-

cult to know what the agent can lawfully do, so as to bind the principal. The general rule is that where an agent of a particular kind is appointed, he has implied authority to do the things usually done by agents of a similar kind. Hence we come to consider some of the various kinds of agents:—

A Commission Agent is usually one who acts as agent in England for a foreign principal. The person in England with whom he deals looks upon him as the principal in the transactions. The term is also used loosely for all those who buy and sell on commission.

A "Del credere" Agent is an agent employed to sell goods for his principal and who gets an extra commission for guaranteeing to the seller the solvency of the buyer. In other words he guarantees that no bad debts will be incurred.

A Factor is an agent entrusted with the possession of goods for the purpose of selling them on commission. He has, under the Factor's Act, 1889, an implied authority to dispose of them in the ordinary course of his business, and can bind his principal on a *bonâ fide* sale, even where he has no express authority to sell.

An Auctioneer is an agent both for the buyer and seller, but it is the seller who usually pays his commission. Where he advertises a sale by auction "without reserve" he has implied authority, and is indeed bound, to sell to the highest bidder. Being an agent of both parties he has an implied authority to make the necessary signed memorandum on behalf of either party which is required by the provisions of the Sale of Goods Act, 1893. Where he has possession of the goods for the purposes of their sale by auction he has a lien for his charges.

A Broker is an agent employed to perform commercial transactions, and is usually paid by commissions called "brokerage." His implied authority varies in accordance with the customs of the particular trade with which it is his business to deal. Thus a stock exchange broker has implied authority to deal according to the rules and customs of the stock exchange.

DUTIES OF THE PRINCIPAL. The chief duty of the principal is to pay the agent the proper remuneration for his services. Such remuneration may take the form of salary or commission, or both. Where the remuneration is by way of commission, the agent is only entitled to it if the transaction is completed, unless the principal has acted wrongfully in preventing the transaction from being completed. The other great duty of the principal is to indemnify the agent against such expenses and losses as he may have incurred in the proper discharge of his duties. The duty to indemnify need not be expressed in the agency agreement; for when the principal has requested his agent to do anything which involves expense, the law will usually infer an agreement on the part of the principal to reimburse the agent for his out-of-pocket expenses.

DUTIES OF THE AGENT. The most important of all the duties which an agent has to perform is that which requires him to account for, and hand over to his principal, all the commissions and profits he may obtain in his agency transactions other than the remunerations which the principal has expressly or impliedly agreed to pay him. On no account may he keep any secret profit or commission; if he does so, the principal has the option of suing him for the secret profit, or suing him for damages for fraud, or treating the transaction in which the secret profit was made as void. Those who have business transactions with the agents of others must be careful not to give to such agents any secret profit, or they, too, may be called upon to pay damages for fraud. And by the Prevention of Corruption Act, 1906, such corrupt practices, on the part either of an agent or the person who transacts business with him, entail consequences still more serious (see below).

The next important duty of the agent is to carry out the agency transactions himself, and not to delegate his authority to someone else. This is the general rule, but there are a few exceptions to it. Thus an agent may delegate his authority whenever his principal expressly or impliedly permits him to do so, or where from the nature of the business or other unforeseen circumstances it is necessary or customary to delegate the authority. The agent cannot bind his principal on a contract made by a sub-agent, if he has merely employed the sub-agent to save himself trouble and inconvenience.

Lastly, it is the duty of an agent to be diligent and skilful in carrying out the transactions which he has been appointed to perform. The amount of diligence and skill required of him would, of course, vary with the nature of the employment and the circumstances of the case. Thus, if the agent were a stock-broker, he would be expected to display the knowledge of the rules regulating stock-exchange transactions necessary for the proper discharge of his functions; whereas a less amount of skill would be required from a person who does not hold himself out as being conversant with business transactions.

PUNISHMENT OF CORRUPT TRANSACTIONS. By the Prevention of Corruption Act, 1906, any agent who corruptly accepts any gift or consideration as an inducement (1) to do or forbear to do any act in relation to his principal's affairs or (2) to show favour or disfavour to any person in relation to his principal's affairs, shall be guilty of a misdemeanour and liable on conviction on indictment to imprisonment for a term not exceeding two years, or to a fine not exceeding £500, or to both such imprisonment and such fine, or on summary conviction to imprisonment not exceeding four months, or to a maximum fine of £50, or to both such imprisonment and such fine. The same penalties and punishment are incurred by any person who is proved guilty of corruptly giving a bribe to the agent.

LIABILITY OF PRINCIPAL FOR AGENT'S ACTS. The general rule is that the principal and he alone is responsible for the contracts entered into on his behalf by the agent. The agent is generally in the position of a mere conduit pipe connecting the principal with the third party, and so he assumes no personal liability. The cases where the agent is personally responsible are exceptions from the general rule. They arise where the agent has acted beyond the scope of his express or implied authority. In such cases the principal would not be liable on the contract unless he has ratified it.

The liability of the principal for the acts of his agent within the scope of his express or implied authority is not, however, confined to *bonâ fide* transactions. The principal is also liable for the fraud of his agent. If the agent, acting within the scope of his authority, express or implied, is guilty of any fraud, not only will the principal and agent be prevented from deriving any benefit from the fraud, the injured party may also recover damages for the fraud against both the principal and the agent, for "the fraud of the agent is the fraud of the principal."

If the agent acts beyond the scope of his express or implied authority, the principal would not be liable. But where an agent of a particular kind is employed, he is presumed by law to have the authority usually given to agents of that kind.

> Thus the servant of a private gentleman ordered to sell a horse has no implied authority to give a warranty; but it would be otherwise if he were the servant of a horse dealer.

So if an agent has authority to do a thing, and exercises that authority fraudulently, the principal will be liable if the fraud were committed for his benefit or if he had received any benefit from it; but the principal would not be liable if the agent committed the fraud solely for his own benefit.

RATIFICATION. In certain cases a principal will be liable for the acts of his agent where such acts do not come within the scope of the agent's authority. Thus if the agent performs a contract on behalf of his principal, which he has no express or implied authority to perform, the principal may make himself liable on the contract by ratifying the act of the agent, a subsequent ratification being regarded as equivalent to a prior command. It is not, however, every act of an agent which the principal is legally allowed to ratify. At the time when the agent performed the particular act or contract, he must have represented himself to be an agent for some particular person (whose identity he need not, however, disclose), or the principal will not be allowed to ratify it. Again, the principal must be actu-

ally existing at the time of the performance of the contract, or the subsequent ratification would not be effective.

Thus in the well known case of Kelner *v.* Baxter an agent purported to act as agent for a company which was not yet formed, and which consequently had no legal existence. It was held that the company when it was afterwards formed could not ratify the previous transaction.

Persons, therefore, who enter into contracts with agents purporting to act on behalf of companies about to be formed should be careful to see that the agent is personally bound on the contract, and that he is a person of sufficient substance to be worth suing, should the contract be broken; for in law such an agent would be regarded not as agent, but as principal in the transaction.

WHOM TO SUE ON AN AGENT'S CONTRACT. We now come to consider the rules which indicate whether in any particular case the agent or the principal is the proper person to be sued for the breach or non-performance of a contract entered into by the agent.

(1) If the agent falsely purports to act on the express or implied authority of a named existing principal, when in fact he has no such authority, the principal is liable if he ratifies the agent's act.

(2) If in the above case the principal does not ratify the agent's act or if, being non-existent at the time of the act, the law will not permit him to ratify it; the agent is the person liable. If he knew he had no authority, the proceedings would take the form of an action for damages for fraud; and if he honestly believed that he had the authority, the action would be for damages for the breach of an express or implied warranty of authority.

(3) If the agent rightfully purports to act for a principal whose name he discloses, the principal alone is liable on the contract; unless the third party, knowing who the principal is, deliberately elects to give credit to the agent only.

(4) If the agent rightfully purports to act as agent on behalf of a principal whose name he does not disclose, both the principal and the agent are liable on the contract. In such a case the agent is in the first instance the proper person to be sued, as it is impossible to sue an unknown person; but if the principal's identity is afterwards discovered, the third party may sue him instead of the agent.

(5) If the agent in England rightfully purports to act on behalf of a principal abroad and there is no evidence that he has been authorised to pledge the credit of the foreign principal, the proper person to be held liable is the agent and not the principal. This rule has become established, not because it is in accordance with the general principles of the law, but because, being a rule of public convenience and long recognised as customary, usual and right among mercantile persons, it has eventually received a legal sanction.

(6) Where the agent signs a bill of exchange as an agent, he must be careful to disclose the identity of his principal, or he will be personally liable; for by the Bills of Exchange Act, 1882, where a person signs a bill as drawer, indorser, or acceptor and adds words to his signature indicating that he signs on behalf of a principal, he is not personally liable; but the mere addition to his signature of words describing him as an agent does not exempt him from personal liability.

TERMINATION OF AGENCY. An agency contract is brought to an end in a number of ways. The simplest way is by agreement between the principal and agent; but of course they must not enter into any agreement which would prejudice the third parties on contracts already arranged. Secondly, the agency comes to an end when the object has been accomplished for which the agency was formed. This is especially the case where an agent has been appointed to do any one particular thing; as where he has been entrusted to sell a horse, the agency terminates when the horse is sold and the price paid to the principal. Similarly, where an agent has been appointed to act for a certain specified time, or where the custom of the particular business fixes a definite period for the performance of certain duties, the agency terminates at the end of that period.

Moreover, a principal has power to terminate the agency by revoking the authority he has given to the agent. But he must not revoke the agent's authority, without the agent's consent, if the agent has an interest coupled to the authority, of such a nature that the revocation would bring him into discredit. But a principal can always dismiss a fraudulent agent or one who makes a secret profit or commission. Again, the principal must not revoke the authority to the prejudice of an innocent party who has acted on the authority whilst it existed.

Lastly, the death or bankruptcy of either the principal or the agent usually has the effect of terminating the agency. The few exceptions to this rule are chiefly statutory, and have the effect of protecting innocent persons who have acted in good faith without notice of the death or bankruptcy.

GUARANTOR & GUARANTEE.

A GUARANTEE. This is a promise by one person to be answerable for the debt, default, or miscarriage of another. Originally at Common Law it need not be in writing, but the Statute of Frauds provided that "no action shall be brought whereby to charge the defendant upon any special promise to answer for the debt, default, or miscarriages of another person, unless the agreement upon which such action shall be brought or such memorandum or note thereof shall be in writing and signed by the party to be charged therewith, or some other person thereunto lawfully authorized."

Upon this section, it was held for many years that the note or memorandum of the agreement, to comply with the Statute, must set forth the consideration for the contract, but eventually the Mercantile Law Amendment Act provided that such a memorandum was not to be considered invalid to support an action merely by reason that the consideration did not appear in writing or by necessary inference from a written agreement.

DISTINCTION BETWEEN GUARANTEE AND INDEMNITY. In point of form, the distinction between these two contracts is, that a guarantee must be in writing, whilst an indemnity may be given verbally. As far as the substance of the two is concerned, in order to constitute a guarantee there must be an actual or prospective liability by a person to a third party for which the guarantor becomes collaterally liable, whilst an indemnity is a promise by one person to save another harmless from loss resulting from a transaction into which he enters at the instance of the person giving the indemnity.

LIABILITY OF GUARANTOR OR SURETY. After the debt has become due, the creditor may sue the guarantor without its being necessary to sue the principal debtor first. The surety or guarantor then has, as against the principal debtor, the same rights as the creditor had. In fact he stands in the creditor's shoes.

DISCHARGE OF GUARANTOR.

A guarantee being a contract in which the surety is strictly held to the terms of his agreement, a corresponding strictness is exercised in his favour, and he may be released from his engagement, not only in the usual course by the ordinary and legal termination of the contract, i.e. by satisfaction, discharge, etc., but in many other ways, some of the more important of which are dealt with below.

1. CHANGE OF PARTIES. A variation of the parties to or for whom the guarantee is given will sometimes discharge the guarantor. Cases of this kind have mainly arisen in connection with guarantees given to or for firms consisting of several partners, and the law on this head is laid down by section 4 of the Mercantile Law Amendment Act, which provides as follows:—

"No promise to answer for the debt, default, or miscarriage of another made to a firm consisting of two or more persons or to a single person trading under the name of a firm, and no promise to answer for the debt, default, or miscarriage of a firm consisting of two or more persons, or of a single person trading under the name of a firm, shall be binding on the person making such promise in respect of anything done or omitted to be done after a change shall have taken place in any one or more of the persons constituting the firm, or in the person trading under the name of a firm, unless the intention of the

parties that such promise shall continue to be binding, notwithstanding such changes shall appear either by express stipulation or by necessary implication from the nature of the firm or otherwise."

2. **GIVING TIME TO A DEBTOR.** It is the general rule that if a creditor, without obtaining the consent of a guarantor, enters into an agreement for valuable consideration with the principal debtor which would be enforceable by the latter, to give him further time for payment, the guarantor will be discharged from liability, whether or not the arrangement made between the creditor and the debtor was for the advantage or disadvantage of the guarantor. The reason for releasing the latter is that the arrangement is an interference with his right to pay the debt at any time and then sue the principal debtor himself. The case of the Oriental Financial Corporation *v.* Overend, Gurney and Co., is an authority for the further proposition that an agreement by the creditor with the principal debtor to give time to a guarantor may discharge the latter from further liability.

3. **CHANGE IN THE TERMS OF THE AGREEMENT.** A guarantor is entitled to be discharged if the terms of the agreement under which he agreed to become liable are varied in any way. Lord Hatherly summed up the law on this point as follows: "Now it must always be recollected in what manner a surety is bound. You bind him to the letter of his engagement. Beyond the proper interpretation of that engagement you have no hold upon him. He receives no benefit and no consideration. He is bound, therefore, merely according to the proper meaning and effect of the written engagement that he has entered into. If that written engagement is altered in a single line, no matter whether it be altered for his benefit, no matter whether the alteration be innocently made, he has a right to say, 'The contract is no longer that for which I engaged to be a surety. You have put an end to the contract that I guaranteed, and my obligation therefore is at an end.'"

In addition to being discharged, if a variation is made in the terms of his own contract, a surety will be discharged by a variation in the contract made between the creditor and the principal debtor if (*a*) the alteration is a material one, or (*b*) although immaterial the guarantor entered into the contract upon the terms of the contract made between the creditor and the principal debtor.

4. **CREDITOR DEALING WITH SECURITIES.** A guarantor who is called upon to pay is entitled to all the securities in the hands of the creditor, whether he was aware of their existence or not, and no matter whether they came into the possession of the creditor before or after the contract of suretyship was entered into. This being the case, if the creditor does any act in connection with such securities, or omits to do anything which renders them ineffectual, the surety will be relieved *pro tanto* to the extent of the security in question. A surety, however, will not be discharged merely because a security becomes worthless, unless the creditor was directly responsible.

5. **RELEASE OF THE PRINCIPAL.** As a general rule, if the principal debtor is released by the creditor, such a release will operate as a discharge of the guarantor or guarantors also. In order that the sureties should be discharged, however, the release of the debtor must be an actual legal release, and one obtained from the creditor by fraud will not have the effect of discharging the sureties. A surety may, if he please, contract to remain liable, although the principal debtor is discharged, and in such a case he will not be affected by the release of the latter. The terms of the release of the debtor may also contain a reservation of the creditors' rights against the sureties. If the release is so worded as to be an absolute discharge of the debtor, the debt being extinguished, no rights could be reserved against the sureties, but where words of reservation are found, and the release does not purport to extinguish the debt absolutely, the release will often be construed not as putting an end to the debt entirely, but as a covenant not to sue, in which case the rights against the sureties would remain in existence.

6. **PAYMENT OF THE PRINCIPAL CREDITOR.** It is almost unnecessary to say that if the debt owing to the principal creditor is paid in full, the guarantor will be discharged from further liability, and if the debt is partially paid off, he will be discharged to that extent. The payment, however, must be a valid one. No unusual considerations affecting the validity of a payment are introduced merely by reason of the fact of the existence of a guarantor, and as a consequence the ordinary rules of law which determine the validity of a payment in other cases hold good in a contract of suretyship.

Not only is a surety entitled to the benefit of all voluntary payments by the debtor to the principal creditor, but also to the benefit of all payments the debtor may be compelled to make as a consequence of legal proceedings taken against him, and to any sums which may be realised by the creditor upon securities given to him by the debtor.

7. **RETENTION OF A GUARANTEED CLERK OR SERVANT AFTER DISHONESTY.** A very common form of the contract of suretyship is that in which one person guarantees the honesty of a servant entering the employment of another. Where such a continuing guarantee is given, if the master discovers that the servant has been guilty of dishonesty in the course of the service, and instead of dismissing the servant he chooses to continue him in his employ without the knowledge and consent of the surety, express or implied, he cannot afterwards have recourse to the surety to make good any loss which may arise from the dishonesty of the servant during the subsequent service.

GUARANTOR'S RIGHT TO CONTRIBUTION FROM CO-SURETIES. Where there are several guarantors of one debt, if one of them has been compelled by the creditor to pay the whole amount, or more than his fair proportion of it, he has the right to compel the other sureties to contribute a fair proportion of the amount so paid. This right to contribution usually arises only in the circumstances mentioned above, but it may also be put in force before an actual payment has been made by the surety. For instance, it is now established that if a guarantor is called upon to pay part of a debt due to the creditor, he may, before making any payment, take proceedings against his fellow sureties to enforce his right of contribution.

With regard to the proportion of the debt to be paid by the various sureties, the general rule is that they must contribute in equal shares if each is a surety to an equal amount, and if they are not equally bound, then proportionally to the amount for which each is a surety. The right of contribution by a surety cannot be enforced against his co-sureties if a fraud would be committed by insisting upon it, but it is not affected by the fact that the principal creditor has given the surety time for payment.

The method of enforcing the right is either by action, or in the case of the insolvency of the co-surety, by the institution of bankruptcy proceedings against him. Like other rights, a guarantor's right to contribution may be barred by the Statute of Limitations, time beginning to run against him when (*a*) he has actually paid more than the amount for which he is liable, or (*b*) when the liability of the surety is ascertained, i.e. when the claim of the principal creditor has been established against him, and this is the case although at the time of the action for contribution the statute may have run as between the principal debtor and the co-surety.

MONEY-LENDERS AND PAWNBROKERS.

REGISTRATION OF MONEY-LENDERS. Under the Money-lenders Act, 1900, the expression "money-lender" includes every person whose business is that of money-lending, or who advertises or announces himself, or holds

himself out in any way, as carrying on that business, except pawn-brokers, registered Friendly, Loan, or Building Societies, *bonâ fide* Banks and Insurance offices, such Corporations as may be authorized to lend money by special Acts of Parliament or by the Board of Trade, and persons *bonâ fide* carrying on any business not having for its primary object the lending of money. It is, however, safer for a person who is doubtful as to whether he is a "money-lender" within the meaning of the Act, to register himself as such; for it has recently been decided by the Court of Appeal that an unregistered money-lender cannot enforce his bargain against a borrower in a court of law.

The Act requires a money-lender to register himself as such, at an office provided for the purpose by the Commissioners of Inland Revenue, under his own or usual trade name, and in no other name, and with the address, or all the addresses, if more than one, at which he carries on his money-lending business. By the Act he is forbidden to carry on his business in any name other than his registered name, or in any place other than at his registered address or addresses.

The Commissioners of Inland Revenue have power, subject to the approval of the Treasury, to make regulations respecting the registration of money-lenders, the form of register, the particulars to be entered therein, and the fees to be paid on registration or renewal, which must not, however, exceed one pound.

The registration ceases to have effect after three years; but it may be renewed from time to time, and if renewed it has effect for three years from the date of renewal.

If a money-lender fails to register himself, as required by the Act, or carries on business otherwise than in his registered name, or elsewhere than at his registered address, he is liable on summary conviction to a fine not exceeding £100, and in the case of a second or subsequent conviction, to imprisonment, with or without hard labour, for a term not exceeding three months, or to a fine not exceeding £100, or to both. But inasmuch as a corporation cannot conveniently be imprisoned, it is provided that in the case of the second or subsequent conviction of a corporation, the penalty is a fine not exceeding £500.

By these provisions as to the registration of money-lenders the Legislature has been able to stamp out an undesirable practice by which a money-lender would, under another name, lend money to extricate one of his own victims from his difficulties, thus getting him still further enmeshed within his toils.

PENALTIES FOR FALSE STATEMENTS AND REPRESENTATIONS. Under the Money-lenders Act, 1900, if a money-lender, by any false, misleading, or deceptive statement, representation, or promise, or by any dishonest concealment of material facts, fraudulently induces or attempts to induce any person to borrow money, or to agree to the terms on which money is to be borrowed, he is guilty of a misdemeanour and liable on indictment to imprisonment, with or without hard labour, for a term not exceeding two years, or to a fine not exceeding £500, or to both. The offence and punishment are the same where the offender is not a money-lender himself, but the manager, agent, or clerk of a money-lender.

Again, under Section 90 of the Larceny Act, 1861, if a person, with intent to defraud or injure any other person, by any false pretence fraudulently causes or induces any other person to execute any valuable security, or to affix his name to any document, in order that the same may be afterwards converted into or used as a valuable security, he is guilty of a misdemeanour and liable to three years' penal servitude, or to two years' imprisonment, with or without hard labour, and solitary confinement.

The above provisions, and especially the former, are aimed at money-lenders more than borrowers. But there is in addition the offence known as *false pretences*, which applies equally to money-lenders and borrowers. There is a great difference between the crime of obtaining money by false pretences and the crime referred to above under the Money-lenders Act, In false pretences the false statement or pretence which induces the other person to part with his property must be a statement as to an *existing* fact. Therefore, a mere fraudulent promise to do any particular thing is not a false pretence within the meaning of the Larceny Act, though it is an offence under the Money-lenders Act. It will thus be seen that the law leaves a fraudulent borrower in a more favourable position than a fraudulent money-lender.

The false pretences by which money may be obtained or loans effected need not, however, be expressed in words. It is sufficient if the offender's action or conduct is such as to constitute a false pretence as to some existing fact.

Thus, if the borrower fraudulently disguises himself as a policeman and thereby induces the money-lender to enter into a transaction which he would not otherwise have undertaken, the law holds that he has by his conduct made the false pretence that he is in fact a policeman, to obtain the credit due to a person in such a position.

RELIEF GIVEN TO BORROWERS. Where legal proceedings are taken by the money-lender for the recovery of money lent, or for the enforcement of any agreement or security made or taken in respect of money lent, and the judge is satisfied that the interest charged in respect of the sum actually lent is excessive, or that the amounts charged for expenses, inquiries, fines, bonus, premium, renewals, etc., are excessive, and that in either case the transaction is harsh and unconscionable, or is of such a nature that Courts of Equity would give relief, the Court may, under the Money-lenders Act, 1900, re-open any account already made and relieve the person sued from payment of any sum in excess of the sum adjudged by the Court to be fairly due.

In ascertaining what is fairly due, the Court must take into consideration the risk and all the other circumstances of the case. And when the debtor has paid over more than is fairly due, the Court may order the creditor to refund the excess. Indeed, it is not necessary for the debtor to wait for the money-lender to take proceedings. He may himself apply to the Court, even before the time for repayment has arrived.

Money-lenders cannot, by any agreement to the contrary, deprive borrowers of these rights to relief. Again, a creditor cannot deprive the borrower of the relief to which he is entitled, by making the transaction take any particular form. Whatever its form, if the transaction is substantially one of money-lending by a money-lender the creditor is entitled to the relief given by the Act.

Again, Courts of Equity will always give relief to heirs, reversioners, and expectants who have made bargains unfair to themselves, especially in the case of *post obit* bonds, that is, bonds by which a person binds himself to pay a certain sum on the death, or at a fixed period after the death, of a person from whom he hopes to inherit property.

Sometimes a money-lender will try to mask his transaction by supplying the improvident with goods instead of money, knowing well that the borrower will speedily convert these goods into cash. Equity will give relief in these cases, by setting aside the transaction upon repayment of the proceeds of the resale with interest.

MONEY LENT TO INFANTS. Infants are, in law, persons under twenty-one years of age. Under the Betting and Loans (Infants) Act, 1892, if any one, for the purpose of earning interest, commission, reward, or other profit, sends or causes to be sent to a person whom he knows to be an infant, any circular, notice, advertisement, letter, telegram, or other document which invites, or may reasonably be implied to invite, the person receiving it to borrow money, or to apply to any person or at any place with a view to obtaining information or advice as to borrowing money, he is guilty of a misdemeanour, and liable, if convicted on indictment, to imprisonment, with or without hard labour, for a term not exceeding three months, or to a fine not exceeding £100, or to both the imprisonment and the fine. If he is convicted summarily, the imprisonment is limited to one month and the fine to £20; and where any such document sent to an infant purports to be issued from any address or indicates any

address where any business connected with loans is carried on, every person who attends at that address for the purpose of carrying on such business is deemed to have caused the document to be sent, unless he can prove that he is wholly ignorant of the despatch of the document.

Again, under the Money-lenders Act, 1900, where it is proved that the person to whom the document is sent is an infant, the person charged will be deemed to have known that he was an infant, unless he proves that he had reasonable grounds for believing the contrary. And this is especially so under the Betting and Loans (Infants) Act, 1892, when the document is sent to a university, college, school, or other place of education.

Under the Infants Relief Act, 1874, all contracts entered into by infants for the repayment of money lent or to be lent are absolutely void; and the Betting and Loans (Infants) Act, 1892, makes void any agreement made by the infant after he comes of age to repay loans advanced during infancy. But where an infant has obtained a benefit by falsely representing himself to be of full age, he is bound in equity to restore any advantage he may have obtained through his false representation.

RECOVERY OF MONEY LENT. Generally speaking, money lent can be recovered by action; but the Law will not give its assistance for the recovery of money in cases where it has been lent for an illegal or immoral purpose. In other words, the law declines to put a premium on crime, illegality or immorality.

For instance, certain games are considered by law to be "unlawful" games. They include every game of cards which is not a game of mere skill, and all games of dice except backgammon. Money lent for the purpose of being employed in the playing of such games cannot be recovered. Similarly, money cannot be recovered which has been lent for the purpose of settling the borrower's losses on illegal stock-jobbing transactions, even in cases where the lender has not been a party to the illegal transactions. So, too, where money or goods have been lent for an immoral purpose they cannot be recovered. Mere immorality is not illegal, but the law will not assist those who traffic in it.

> Thus, in the case of Pearce *v.* Brooks (1866 L.R. 1 Ex. 213.), where a firm of coach-builders had supplied a carriage on credit terms to a person who, as they knew, wanted it for an immoral purpose; it was held that no action would lie for the price of the carriage.

If a borrower refuses to carry out his agreement to borrow, the money-lender cannot as a rule obtain from the Courts a decree for the specific performance of the contract. The proper remedy for the breach of such a contract is an action for damages. The amount that the money-lender will recover by way of damages will not, however, in any way depend on the amount of the sum agreed to be lent. He will recover by way of damages any loss which he has actually sustained through the breach of the contract, but no more. The same reasoning applies where the lender refuses to carry out his contract to lend.

INTEREST GENERALLY. It has long been decided that no action lies at law for the recovery of interest on money lent unless the lender and borrower have come to some special agreement that interest shall be paid, or unless such an agreement may be implied from the usage of trade or from the special circumstances of the case.

> Thus, if A obliges his friend B with a temporary loan and nothing is said about interest, he cannot expect B to repay more than the actual amount of the loan. But with the exception of such temporary loans between friends, it is seldom indeed that money is ever lent except on terms as to interest.

With certain Statutory exceptions there is *no limit* to the interest that may be charged, and the rate frequently imposed by money-lenders is very high indeed. The Statutory provisions fixing the amount of interest chargeable on small advances by pawnbrokers on the security of goods pledged are dealt with in the next section. Generally speaking, therefore, since the repeal of the Usury Laws in 1854, borrowers have been, and still are, liable for the payment of such interest as they may have agreed to pay. Though, as will be seen below, Courts of Equity and courts acting under the Money-lenders Act, 1900, are in the habit of giving relief to borrowers who have agreed to excessive and unconscionable rates of interest.

Money is usually lent in one or two ways, and the rate of interest generally varies accordingly. The first of these is the lending of the money on good security, and the second is when it is lent on merely personal security, as on a promissory note. Where the security is good the competition of the money market brings the interest down to a very low level, generally as low as six, five, or four per cent., and occasionally lower. But where the money is obtained from a money-lender on merely personal security, the rate charged is generally enormous.

It not infrequently happens that even persons who possess good and valuable security will go to a money-lender instead of to a banker. Sometimes they are induced to do this for the sake of secrecy, but generally because they are unversed in business matters and unable to appreciate the value of their security in the open market. Borrowers should be warned against accepting the apparently easy terms offered by money-lenders on merely personal security. A money-lender will frequently make a preliminary loan on comparatively easy terms. When the time for payment arrives the borrower may be in difficulties; the only thing that suggests itself to be done is to obtain a renewal of the loan, and it is on these renewals that money-lenders charge such exorbitant rates of interest.

INTEREST ON SMALL ADVANCES BY PAWNBROKERS. Borrowers frequently raise money by pawning their goods. The Legislature has protected their interests in the case of small loans by the provisions of the Pawnbrokers Act, 1872. The interest fixed by the Act only applies to loans of ten pounds and under. In assessing the interest the Act divides these loans into three classes, according to the amount of the loan.

> (1) For loans of ten shillings or under the pawnbroker is entitled to charge a halfpenny for the ticket, and by way of interest a further sum of one halfpenny per calendar month on each florin or part of a florin lent. But after the first calendar month any time not exceeding fourteen days is to be reckoned as half a month only.
>
> (2) For loans of more than ten shillings, but not more than forty shillings, the pawnbroker is entitled to charge a penny for the ticket, and by way of interest a further sum of one halfpenny per florin per calendar month. After the first calendar month, a fortnight or less is reckoned as half a month only.
>
> (3) For loans above forty shillings and under ten pounds the authorised charge for the ticket is one penny, and the authorised interest is a halfpenny on every half-crown per month.

PAWNBROKER'S OBLIGATIONS. A pawnbroker is defined by the Pawnbrokers Act, 1872, as including "every person who carries on the business of taking goods and chattels in pawn." The Act regulates very effectively the transactions of pawnbrokers, particularly with regard to loans of under £10. The pawnbroker must take out an annual licence (which expires on the 31st July in every year) for each shop in which he carries on the business. The excise duty on each licence is £7 10s. If he acts as a pawnbroker without having a proper licence in force he is liable to a maximum penalty of £50. On conviction of fraud or criminal receiving the court may direct that the licence be cancelled.

> No person may establish a new pawn-broking business, or receive a licence to carry it on, unless he has obtained a certificate from the justices of petty sessions or from a stipendiary magistrate. This certificate is not necessary in the case of the executors, administrators, assigns, or successors to an existing business.

A pawnbroker must exhibit his full name with the word "pawnbroker" in conspicuous letters on the outer door of his shop, and must always keep in a conspicuous part of his shop the same information as is required by the third schedule of the Act to be printed on pawn tickets. He must also keep the proper books as required by the Act, and fairly and legibly enter his transactions therein.

THINGS A PAWNBROKER MUST NOT DO. A pawnbroker must not:—

(1) Receive a pledge in pawn unless he gives in return a proper pawn-ticket in the form required by the Act.

(2) Take a larger profit on a loan on pledge than is allowed by the Act (see above).

(3) Take an article in pawn from a person appearing to be intoxicated or under the age of fourteen (the Children's Act, 1908).

(4) Purchase, take in pawn or exchange a pawn-ticket issued by another pawnbroker.

(5) Employ any servant under the age of sixteen to take pledges in pawn.

(6) Purchase, except at public auction, any pledge while in pawn with him, or allow any pledge while in pawn with him to be redeemed with a view to his purchasing it.

(7) Dispose of property pledged, save at such time and in such manner as is allowed by the Act. The fine for infringement of these regulations is a sum not exceeding £10.

REDEMPTION OF THE PROPERTY PAWNED.— Pledges may be redeemed at any time within a year and seven days from the day of pawning. The holder for the time being of a pawn-ticket is presumed by law to be the person entitled to redeem the pledge, so that the pawnbroker is bound to return the pledge to any one who, within the year and seven days, produces the ticket and pays the amount of the loan and the proper interest thereon. If a person claims to have been entitled to a pawn-ticket, but alleges that the same has been lost, destroyed or stolen, he must apply to the pawnbroker for a printed form of declaration, which the pawnbroker must supply. The applicant, and some one to identify him, must then duly make the declaration before a justice and within three days return it to the pawnbroker. During the three days the pawnbroker is entitled to refuse to give the pledge to any one producing the ticket, and after the declaration has been returned he is indemnified by the Act for handing it over to the applicant producing the declaration. The making of a false declaration is punishable as perjury.

DISPOSAL OF THE PROPERTY PAWNED. After the expiration of the year and seven days the disposal of the pledge depends on the amount of the original loan. If the loan was for less than 10s. the article becomes the absolute property of the pawnbroker. If the loan was for more than 10s. the pawnbroker can, after the year and seven days, either allow the pledge to continue or dispose of it by *public auction*. In this case the holder of the ticket can always redeem until the sale. Before the sale the auctioneer must expose the pledges to public view, and publish catalogues and advertisements of the sale in manner provided by the Act. The pawnbroker may bid for himself at the auction, but on knocking down any article to a pawnbroker the auctioneer must audibly declare his name. The pawnbroker must keep for three years a copy of every catalogue relating to pledges sold by him, filled up with the amounts they fetched, duly authenticated by the signature of the auctioneer. At any time within the three years the holder of the pawn-ticket may inspect the entry of the sale in the pawnbroker's books and in the filled-up catalogue; and if the pledge has been sold for more than the amount of the loan and interest, the pawnbroker must on demand pay over the surplus, after deducting the expenses of the sale, to the holder of the ticket. If the sale results in a deficit the pawnbroker can sue for the balance, or set off the amount of the deficit against a surplus on another article pledged by the same person; but in this case the two sales must be within twelve months of each other.

PAWNBROKER'S LIABILITIES. These refer especially to pledges stolen, damaged, or destroyed by fire:—

(*a*) **Damage by Fire.** Where a pledge is destroyed or damaged by fire the pawnbroker must pay the pawner the *value* of the pledge, after deducting the amount of the loan and profit. The *value* of a pledge is to be reckoned as the amount of the loan and profit, *plus* 25 % on the amount of the loan.

(*b*) **Compensation for Depreciation.** If the pawner or holder of the ticket can prove to the satisfaction of a court of summary jurisdiction that the pledge has depreciated in value through the default, neglect or wilful misbehaviour of the pawnbroker, the court may award him reasonable compensation. This applies only to chattels pledged for less than £10. For pledges of a higher amount, if the pawner is able to prove negligence on the part of the pawnbroker or his servants, he can obtain damages in a civil court.

(*c*) **Loss by Theft.** The pawnbroker is not expected to guarantee against theft, but if he has been guilty of negligence, or omitted to take reasonable care in looking after the property he will be liable to make good the loss.

PAWNING OF STOLEN GOODS. Pawnbrokers run great risk of being regarded as the receivers of stolen property. If they take in goods, knowing that they have been stolen, they are punished as receivers. In all cases where they have acted innocently they are expected to give the police every possible assistance, and the court which tries the thief has a discretion to allow the pawnbroker to retain the goods or to compel him to return them to the true owner, according to the view it takes of the conduct of the owner and pawnbroker respectively. Most frequently it orders a return of the goods, on the terms that the owner pays the pawnbroker half the amount originally advanced on the pledge.

LANDLORD AND PAWNBROKER. If an ordinary pledgee (see "Pawn or Pledge" in *Commercial Dictionary*) falls into arrears with his rent, his landlord may distrain upon the pledged goods found on his premises; but in the case of a pawnbroker who takes in pledges in the ordinary course of his trade, his landlord cannot seize the pledged goods for arrears of rent.

BILLS OF SALE.

A bill of sale is a grant by deed, by which the ownership of personal chattels, but not the possession thereof, is transferred from one person called the grantor to another person called the grantee. The grant may be absolute, that is, the goods and chattels are sold outright to the grantee, though the seller is allowed to retain possession of them; or the grant may be conditional, in which case it is usually made as a security for the repayment of money lent by the grantee to the grantor. If the money is repaid the grant ceases to have any effect, that is, the grantee has no longer any claim upon the chattels; but if the money is not repaid, the grantee may, under certain conditions, take possession of the goods, and being already the owner of them, may dispose of the goods as he pleases.

As a bill of sale can only be given in regard to personal chattels, it is well to know what are included under this term. *Personal chattels* include goods, furniture and other articles, the ownership of which can be transferred by simple delivery. The term includes trade machinery, and also fixtures and growing crops, when assigned separately from the buildings or land to which they are attached. But shares or securities in Government stock, or shares and stock in public funds, or things in action (e.g., bills of exchange, book-debts and the like), are not personal chattels on which a bill of sale can be given.

For ordinary purposes, it is not necessary to explain what instruments are bills of sale, and what are not. But among familiar examples, it is well to note that a hire purchase agreement, whereby the owner of the goods reserves to himself the power to resume possession of the goods in case there is default in making the periodical payments as they become due, is not a bill of sale, because it is not a license or permission given to him to take the goods. The goods are his, and he reserves to himself the right to resume possession, in case the payments are not kept up.

ABSOLUTE BILLS OF SALE must be attested by a solicitor, and the attestation clause must state that before the execution of the bill of sale its effect has been explained to the grantor by the attesting solicitor. The bill of sale must truly set forth the consideration (value) for which it was given, and must be registered in the High Court within

seven days after its execution. In applying for registration a true copy of the bill is filed, with an affidavit stating the date of the bill, its due attestation and execution, the residence and occupation of the grantor and of the attesting witnesses. The registration must be renewed every five years. The renewal is effected by filing with the Registrar in the High Court an affidavit stating the date of the bill, the names, residences and occupations of the parties to the bill, and that the bill of sale is still in force as a security. If there is any material error in the affidavit, the registration will be void.

CONDITIONAL BILLS OF SALE are more commonly met with than are absolute bills of sale. They are usually given as security for the repayment of money borrowed by the grantor of the bill of sale, and are somewhat like mortgages of land. With this difference, that a legal mortgagee of land is entitled to go into immediate possession of the land, though as a matter of fact he rarely does so; while the grantee of a bill of sale cannot take possession of the chattels except under certain circumstances which will be mentioned subsequently. Under a conditional bill of sale, a person who borrows money remains in possession of the goods, but the goods belong to the person who lent the money, subject to this condition, that when the debt is paid off, the ownership of the chattels reverts to the person who has given the bill of sale (i.e., the borrower).

Those who wish to preserve their credit should never resort to this method of raising money. It is the last resource of the needy, the reckless, or the unscrupulous. Persons in a position of trust, such as bank clerks, cashiers, and the like, should never under any circumstances borrow money by giving a bill of sale on their furniture or other goods, because every bill of sale has to be registered in the High Court. The register may be examined by any one, and lists of these registered bills of sale are regularly published by certain trade protection agencies. Hence it is easy for employers and others to obtain information as to whether those in their employ have resorted to this method of raising money. Accordingly, if employees in positions of trust do so their employers will get to learn of it, and will think that for one reason or another such employees are living beyond their means, and therefore exposed to the temptation of helping themselves to the money belonging to their employers. Indeed, many banks have adopted the rule of dismissing any of their clerks who borrow money in this way.

In order to constitute a valid bill of sale, it must be duly attested, duly registered, and must truly state the consideration (value) for which it is given, which consideration must not be less than £30. The bill must also be made in accordance with the form laid down by the Bills of Sale Act, 1882. If every one of these things is not observed the bill of sale is absolutely void, not only as against other creditors, but as between the grantor and grantee. It must be remembered that though in these cases the bill of sale will be void as between the grantor and the grantee, so that the grantee has no right whatever to the chattels mentioned in the bill of sale, still he can recover the money which he actually advanced to the grantor.

It will be seen from the above, a bill of sale on one's furniture cannot be given unless the money borrowed on it is not less than £30.

FORM OF A BILL OF SALE. The Bills of Sale Act lays down a form, but it is not absolutely necessary to follow that form in every detail. But the form must comply in all essential particulars with that given in the Act. The bill of sale must be by deed, that is, it must be in writing, signed and sealed by the grantor. It must state the names and residences of the grantor (borrower), and of the grantee (lender), and the consideration for which the bill is given, i.e. the amount borrowed by the grantor. It must state that the grantor, by way of security for the money lent, assigns to the grantee the chattels mentioned in the inventory attached to the bill. The bill must also state the rate of interest to be paid for the loan, and contain a covenant by the grantor that he will repay the loan with the stipulated interest on a given day, and a further covenant by the grantor that he will insure the goods, and pay all rent, rates, and taxes due on the premises in which the goods and chattels are. The bill of sale must also contain a clause that the goods so assigned shall not be seized or taken possession of, except for any cause mentioned in section 7 of the Bills of Sale Act of 1882. The causes for which the lender may seize the chattels are—

(1) If the grantor makes default in payment of the money due, or in the performance of the other covenants contained in the bill of sale.

(2) If the grantor becomes bankrupt, or has his goods distrained for non-payment of rent, rates, and taxes.

(3) If the grantor fraudulently removes or suffers the goods to be removed from the premises in which they were at the date of the bill.

(4) If the grantor unreasonably refuses to produce his last receipts for rent, rates, and taxes, when asked in writing by the grantee.

(5) If execution is levied against the goods under any judgment in law.

ATTESTATION. The bill of sale must be attested by one or more credible witnesses, who are not parties to the bill, i.e. who are neither the grantor nor the grantee, but an agent of the grantee may be an attesting witness. The address and occupation of an attesting witness must be accurately given, and if he has no occupation, that fact should be stated.

REGISTRATION. A bill of sale must be registered within seven days of its execution. If there are several bills of sale on the same chattels, they take priority according to the date of registration. The registration must be renewed every five years.

GRANTEE'S RIGHTS. The grantee has a right in the circumstances already stated, to seize the chattels mentioned in the bill of sale, and at the expiration of five clear days to remove and sell them.

GRANTOR'S RIGHTS. A grantor may have the bill of sale set aside if it has been obtained by misrepresentation or fraud. He can, if the seizure is irregular, or if the bill is invalid, apply to the High Court to restrain the grantee from removing and selling the goods; but he must make the application within five days of the seizure. If the goods have been wrongfully seized and sold, he can bring an action for damages.

RIGHTS OF THE OTHER CREDITORS OF THE GRANTOR. The landlord can, for non-payment of his rent, distrain upon goods comprised in a bill of sale, and so defeat the rights of the grantee. So also goods upon which a bill of sale has been given can be seized for unpaid rates and taxes. But a judgment creditor, i.e. a creditor who has obtained in a court of law a judgment against the debtor, ordering the debt to be paid, cannot seize goods upon which a bill of sale has been given. This is one of the ways in which an unscrupulous debtor defeats his creditors. He gives a pretended bill of sale on his furniture to a friend, who is in the know. No money need pass between them. The bill is duly registered and all the formalities complied with. Then when a creditor obtains a judgment against the debtor, and proceeds to seize the goods in accordance with the judgment, he is met by the bill of sale, and so cannot seize the goods.

STAMPS AND FEES. The fees payable are:—

	£	s.	d.
On filing a bill of sale and the affidavit where the amount advanced, including further advances, does not exceed £100	0	5	0
Above £100 but not exceeding £200	0	10	0
Above £200	1	0	0
Affidavit of re-registration	0	10	0
Fiat of satisfaction	0	5	0
Request for search	0	2	6
Certificate	0	2	6
Special or official search with affidavit ..	0	5	0
Warrant of attorney with affidavit	0	5	0
Office copies—per folio	0	0	6

These fees are to be paid by means of impressed stamps

The stamp duty on a conditional bill of sale is an *ad valorem* duty, that is where the loan

	s.	d.
exceeds £30 and does not exceed £50	1	3
exceeds £50 and does not exceed £100	2	6
exceeds £100 and does not exceed £150	3	9
exceeds £150 and does not exceed £200	5	0
exceeds £200 and does not exceed £250	6	3
exceeds £250 and does not exceed £300	7	6
exceeds £300, then for every £100 or fraction of £100	2	6

COPYRIGHT.

DURATION OF COPYRIGHT. A Bill to amend the law of copyright was introduced in the House of Commons in July, 1910, with an intimation from the Government that facilities to proceed with it will be afforded later. Copyright, or the sole and exclusive liberty of printing or otherwise multiplying copies of an original work, is not a right which endures for ever. The general policy of the law is against monopolies; at the same time if no such thing as copyright existed, authors, artists, and inventors would be seriously handicapped, as the enjoyment of the fruits of their toil would be snatched from them ere they could reap an adequate reward. The result of these two conflicting principles is a compromise which enables the proprietor of a copyright to enjoy a monopoly for a certain fixed or limited period.

The following gives the duration of copyright for the different classes of work:—

(1) For books, dramatic pieces, and musical compositions whichever is the longer of these two periods: (*a*) The author's lifetime and seven years after his death; (*b*) Forty-two years from the first publication.

(2) For engravings and prints, twenty-eight years.

(3) For paintings, drawings, and photographs, the life of the author and seven years afterwards.

(4) For sculpture, fourteen years, but if the sculptor is alive at the end of that period, the copyright holds good for another fourteen years.

REGISTRATION OF COPYRIGHT. The proprietor of the copyright in any book or musical composition should register it at Stationers' Hall. The entry in the register should state correctly the title of the book, the time of its first publication, and the names and addresses of the publisher and the proprietor of the copyright. In the case of newspapers and other periodicals, the first number only need be registered. Where an author registers the copyright of a painting, drawing, or photograph the entry should contain his name and address, with a short description of the subject of the picture. He may, if he likes, supplement this with a photograph or sketch of the registered picture. In the case of dramatic works, registration is not necessary to secure the right of performance or "playright," but in so far as they are books, the "copyright," or right of multiplying copies, should be registered. Engravings do not require registration; but by the Engraving Copyright Act, 1734, the proprietor's name must be printed on each print to preserve the copyright.

The registration at Stationers' Hall does not confer a copyright. The only effect of registration being that an action cannot be brought for infringement of copyright until registration has taken place; but the registration may be made even after the alleged infringement, and indeed at any time before the commencement of the action. Where a copyright is assigned, the assignment should be registered so as to enable the assignee to sue in case of an infringement.

COMPULSORY PRESENTATION OF COPIES. By the Copyright Act, 1842, a complete printed copy of every book published (and copies of subsequent editions containing additions or alterations), must within one month of publication, if published within the Bills of Mortality, and within three months if published elsewhere in the United Kingdom, be delivered on behalf of the publisher thereof at the British Museum. By the same Act the publishers must, if required to do so by the authorities at Stationers' Hall, or the librarians of any of the following libraries, deliver copies within twelve months of publication to the Bodleian Library at Oxford, the Public Library at Cambridge, the Library of the Faculty of Advocates at Edinburgh, and the Library of the College of the Holy and Undivided Trinity of Queen Elizabeth near Dublin. The penalty for neglecting to furnish these presentation copies is a sum not exceeding £5 in addition to the value of the book.

INFRINGEMENT OF COPYRIGHT. The copyright of a work may be infringed in a variety of ways, as by the unauthorised publication or sale of an exact and complete copy of the original work, or by a colourable imitation of it, or indeed, by making excerpts from it. There is no copyright in an idea and none in news; but forms of expression used to describe the idea or news are capable of copyright. Again, there can be no copyright in the title of a work; but if any one uses for his own work a title calculated to lead other people to believe that it is the work of some one else who has published something under the same name, he might be liable to an action for fraud.

There are many things which are incapable of copyright; thus immoral, indecent, and blasphemous works cannot be the subject of legal copyright; so, too, works possessing no originality whatever are generally incapable of copyright. There is no copyright in facts nor is there any in law; but if originality of statement or treatment is accorded to the facts or the law in any work, such originality of statement or treatment is capable of copyright.

An author cannot escape the consequences of infringement by the mere fact that in his work there is some original matter in addition to the matter which has been copied. An abridgment of a copyright work need not necessarily be an infringement, indeed it generally is not; it would, however, be an infringement if it were a mere colourable imitation of the original work and calculated to injure the sale of such work. Quotations, again, from a copyright work may or may not constitute infringement. They would be looked upon as infringements if used merely as a cloak to the utilisation of the labours of another.

Where a statute has assigned penalties for the infringement of a copyright, the appropriate remedy is an action for the recovery of the penalties; in other cases the proper remedy is an action for damages for the infringement, which may or may not, according to the circumstances of the case, be coupled with a claim for an injunction to restrain further infringement. An injunction alone may be sought, or, indeed, all or any of the three methods of procedure may be employed. The Courts will not grant injunctions where the infringements are trivial in character, and, of course, the amount of damages recoverable would depend largely on the extent to which the plaintiff had been injured by the infringement.

PROPRIETOR OF THE COPYRIGHT. Generally speaking, the copyright of an original work belongs to the author; but this is by no means invariably the case, as will be seen presently. Moreover, questions sometimes arise as to who is the person who ought properly to be regarded as the author.

Thus it has been held in the case of a *photograph*, that the assistant who arranged the group and took the picture was the author, and not the actual proprietor of the business. But it should be remembered here that by the Fine Arts Copyright Act, 1862, it is provided that where any painting, drawing, or negative of a photograph is sold to, or executed for or on behalf of, any other person for a good and valuable consideration, the person executing the same does not retain the copyright, unless the other person agrees in writing that he shall retain it, but the copyright goes to the other person. It has even been held that where a person orders and pays for a photograph of himself in the usual way, he can by injunction restrain the photographer from selling, or even from exhibiting as an advertisement, copies of the photograph.

With regard to the copyright in *articles* appearing in Encyclopædias, the Copyright Act, 1842, provides that, where the proprietor of an Encyclopædia employs persons to write articles for it and pays them for the work on the terms that he shall have the copyright, the copyright belongs to the proprietor; but he may not publish the articles or any of them separately without the author's consent. The same Act contains a similar provision with regard to articles written for reviews, magazines, or other periodicals of a like nature, with this difference, that, after the term of twenty-eight years from the first publication, the right of publishing the articles separately reverts to the author.

Copyright in *lectures* is dealt with in the Lectures Copyright Act, 1835, which provides that the sole right of printing or publishing them belongs to the author, or the person to whom he has sold the copyright. But the Act

does not apply unless two days' notice of the intention to give the lecture has been given to two local magistrates; nor does it apply to lectures given in universities, colleges, or public schools, or on any public foundation. But apart from the Act, where a lecture is not delivered to the public generally, the lecturer can restrain by injunction any publication of it, though members of the audience may make use of their notes of the lecture for their own instruction.

The law as to copyright in a *public speech* was recently laid down in the celebrated case of Walter *v.* Lane, wherein it was held that a reporter of the "Times" who took down verbatim a speech by Lord Rosebery, acquired a copyright in his report.

Lastly, registered proprietors of copyright works may assign or transfer their rights to other persons by entering particulars of the assignment in the register at Stationers' Hall. The assignment of the copyright in a dramatic piece does not carry with it the right of representation. All assignments must be in writing, and licenses to copy given by the proprietor to any person should also be in writing.

COPYRIGHT IN ART. The Fine Arts Copyright Act, 1862, gives to the "author" of every original *painting*, *drawing*, and *photograph* the copyright of such work for the term of his natural life and seven years after his death. But if at any time he sells or disposes of the work for a good and valuable consideration, he loses the copyright, unless it is expressly reserved to him at the time in writing, signed by the person to whom it is sold. If at the time of the sale the seller transfers the copyright to the buyer, he must do so in writing. It will thus be seen that the copyright in a work of art may easily be lost.

Sculpture is on a somewhat different footing. By the Sculpture Copyright Act, 1814, the copyright is given to the proprietor, who is generally the artist, for fourteen years from the date of "publication." Questions sometimes arise as to what is the date of publication. It generally means the time from which the public eye is first allowed to rest on it, as where it has been unveiled in a public place. The proprietor must cause his name and the date to be put on the sculptured work before publication. After the expiration of the fourteen years, if the original proprietor is still alive, the copyright returns to him for a further fourteen years.

With regard to the copyright in *engravings*, by the Engraving Copyright Acts, 1734 and 1766, the copyright in engravings is given to the proprietor or engraver for twenty-eight years, but the name of the proprietor must appear on every engraving. By the International Copyright Act, 1852, the protection is extended to prints taken by lithography or any other mechanical process, by which prints or impressions of drawings or designs are capable of being multiplied indefinitely.

DRAMATIC COPYRIGHT. By the Dramatic Copyright Act, 1833, as amended by the Copyright Act, 1842, the author of any tragedy, comedy, play, opera, farce, or any other dramatic piece or entertainment, or any musical composition, has the sole liberty of representing such production in places of dramatic entertainment for forty-two years from the date of the first publication, or for the term of his natural life and seven years more, whichever is the longer.

Such a production is deemed to be published on the occasion of its first public representation or performance. Questions frequently arise as to what is a "place of dramatic entertainment." It need not be a place habitually or even frequently used for the purpose of such entertainments; but to constitute an infringement the performance must be open to the public generally, and not be a purely private function. The fact that no charge is made for admission will not necessarily save it from being an infringement, but such a fact will be strong evidence of its purely private character. The fact that the performance is given for the benefit of a charity or other worthy or meritorious object will in no way prevent its being an infringement, if otherwise it is an infringement. A person is none the less the "author" of a dramatic piece if he employs assistants in carrying out portions of the work which he has devised.

The right of producing and publicly representing a dramatic work, which is sometimes conveniently called "playright," must be distinguished from "copyright," strictly so called, which is the right of printing or multiplying copies of the original work. The two rights are closely akin, and cannot be treated separately, though it is provided by the Copyright Act, 1842, that the assignment of the "copyright" of a dramatic piece does not carry with it the "playright," unless the intention to convey such a right is expressly entered in the register at Stationers' Hall.

A person may generally without infringement of copyright dramatise a novel written by someone else; but if the author of the novel has also dramatised it, the other person may be liable for infringement of the play though not of the novel, unless his play is entirely different from that of the author of the novel. The proprietor of the "playright" need not have his right registered to enable him to sue in the case of an infringement.

> By the Theatres Act, 1843, no new plays or additions to old ones may be acted in any theatre until they have been submitted to and sanctioned by the Lord Chamberlain. The fee charged for this examination must not exceed two guineas. The Lord Chamberlain has power to forbid the presentation of any play whenever of opinion that it is desirable in the interests of good manners, decorum, or the public peace, so to forbid it. A penalty not exceeding £50 is incurred by every person who presents or causes to be acted for hire any play which has not been sanctioned, or which has been disallowed by the Lord Chamberlain.

MUSICAL COPYRIGHT. Musical compositions are generally governed by the same principles as dramatic works, but there are certain statutes which apply to them and not to other dramatic works. Musical compositions are capable of both playright and copyright. Indeed, many musical compositions, as operas, are frequently indistinguishable from dramatic pieces. A mere song will not generally constitute a "dramatic piece," even when it is intended to be sung in costume, but the authorities are somewhat conflicting on this point. But inasmuch as the Dramatic Copyright Act, 1833, does not apply to musical compositions, the playright of such compositions may be infringed by a public performance which is not "in a place of dramatic entertainment." A sheet of music is a "book" within the meaning of the Copyright Act, 1842, so before an action for infringement of "copyright" can be brought, it must be registered.

By the Copyright (Musical Compositions) Act, 1882, the proprietor of the copyright of any such composition who desires to retain the playright, must have printed on the title page of every copy a notice to the effect that the right of public representation or performance is reserved; and if the owners of the copyright and playright are different persons, the owner of the playright must give to the owner of the copyright a notice in writing requiring him to print the announcement on the title pages.

By the Musical Copyright Act, 1906, every person who prints, reproduces, or sells, or exposes, offers or has in his possession for sale any pirated copies of any musical work, or who has in his possession plates for the purpose of reproducing the same, is liable on summary conviction to a fine not exceeding £5. A subsequent conviction involves a fine of £10 or two months' imprisonment.

COPYRIGHT IN DESIGNS AND TRADE MARKS. *Designs* may be registered in the register of designs at the Patent Office. The comptroller may, if he thinks fit, refuse to register a design presented for registration, but an appeal lies from his decision to the Board of Trade. When a design is registered, the registered proprietor has a copyright in it for five years from the date of registration. On the sale of any article to which a registered design has been applied, the proprietor must, before delivery, mark it with such figures and words to denote that the design is registered as may be prescribed, otherwise the copyright will be lost. The copyright given by the Patents, Designs, and Trade-mark Acts only applies to the right to use the design in connection with articles registered in

the same class in the register. Moreover, the designs must be new and original.

Trade-marks may be registered in the Patent Office. If the comptroller refuses to register a trade mark, an appeal lies to the Board of Trade, which may, however, refer the matter to the Court of Appeal. (See "Registration" under *Trade Marks*.)

INTERNATIONAL COPYRIGHT. By the International Copyright Acts, 1844, 1852, and 1875, the Sovereign may, by Order in Council, direct that copyright may be granted in respect of foreign works in cases where the foreign country has made provision for the copyright of British works. Prior to these Acts no protection was given to the works of foreigners resident abroad.

In 1885 a conference on the subject was held at Berne, in Switzerland, and in consequence of that conference, the International Copyright Act, 1886, was passed, the Berne Convention, 1887, was signed, and the Order in Council of November, 1887, was issued. The countries concerned in these enactments are Belgium, France, Germany, Hayti, Italy, Luxemburg, Monaco, Montenegro, Spain, Switzerland, and Tunis. The authors of works first produced in any of these countries have the same copyright in the United Kingdom as if the works were first published here, except that they are not to have a longer copyright than they would have in their own country.

Austria and Hungary have effected with Great Britain a convention similar to the Berne Convention. With regard to the United States, to secure a copyright there, a British author must not only publish his work simultaneously in both countries, but the books for sale in the United States must be printed there and from type set up there. There is no similar protection for publishers and printers in the United Kingdom.

PATENTS.

The law on this subject was consolidated by the Patents and Designs Act, 1907. A patent may be described as a grant from the Crown by letters patent to the true and first inventor of some manner of new manufacture, conferring on him the sole right or monopoly of making, using, or selling it during the period for which the patent is granted The term "inventor" includes a person who first introduces an invention from abroad; but it must be noted that foreign inventors have certain rights under the International Convention referred to below. A patent may be granted to two or more persons jointly, and of these only one need be the true and first inventor.

SUBJECT MATTER OF PATENT. The essentials of the subject matter of a valid patent are that it shall be (*a*) an invention, (*b*) new, (*c*) useful.

(*a*) **An Invention.** An invention may be something entirely new, as for example the telephone, or it may be a new method of carrying out an old process, as for example the employment of machinery to perform what has previously been done by hand; or it may be an improvement of some existing process or manufacture. Some ingenuity must be shown; thus a mere combination of two existing machines is not good subject matter of a patent unless the means used to connect them require invention. It has been said that "you cannot take out a patent for a principle, but you may take out a patent for a principle coupled with a mode of carrying the principle into effect." Thus the discoverer of electricity could not have patented his discovery; but any new mode of utilising in a practical way the force of electricity is good subject matter for a patent. The discovery of a new use for a process or apparatus formerly used for other purposes is not an invention; thus there is no invention in applying an ordinary water tap to a beer bottle. A new and useful product, for example a new dye, can be patented; but a product is not new merely because it is produced by machinery instead of by hand labour, although in this case the new machinery itself would be good subject matter for a patent.

(*b*) **Novelty.** If the invention has become known in this country by prior use or publication, even by the inventor himself, no patent can be afterwards granted for it. This, however, does not apply:—

(1) Where the prior use was in the nature of an experiment by the patentee to test the utility of his invention, and not for profit.

(2) Where the patentee disclosed the matter only to those in confidential relationship with him, as for instance, to an assistant whom he employed.

(3) Where the prior use was by others who failed to carry out what the subsequent invention afterwards successfully accomplished.

In these cases the patent will be sustained, notwithstanding its prior publication. A patent may, however, be held invalid for want of novelty by reason of prior publication, although the prior publication has never been put to any practical use. It is sufficient for the person who opposes the patent to show that the prior publication was clear enough to enable any one who had ordinary knowledge of the subject to carry out the invention.

(*c*) **Utility.** The patent to be valid must be useful. This does not necessarily mean commercially profitable. A patent is considered to be useful if it fulfils the purpose for which it was designed by the patentee. A small amount of utility is sufficient to support the patent. Thus an invention is useful by which an article, good, though not so good as one of the same kind previously known, can be produced more cheaply by a different process.

GRANT OF PATENT.

1. APPLICATION. The first step in the application for a patent is to fill in a declaration, obtainable at any postal money-order office, in which the applicant states his full name, address, and occupation, and gives the title of the invention. He must declare that he is the true and first inventor, and that to the best of his knowledge and belief the invention is not in use by any other person. The applicant then signs the declaration and sends it to the Comptroller General at the Patent Office, together with his Provisional Specification or Complete Specification. Forms of these can also be obtained at a post office. The *Provisional Specification* sets out shortly the nature of the invention, but does not enter into details. The Complete Specification, if not forwarded with the application, must be sent within six months thereof (or seven, if the comptroller grants an extension), or the application will be deemed to be abandoned. It must describe in detail the nature of the invention and must state distinctly the features of novelty claimed. The Comptroller refers every application to an examiner who makes a report thereon to the Comptroller, whereupon the latter may refuse to accept the application or may require that it or the specification be amended. If the Comptroller thinks fit he may require the supply of suitable drawings, samples or specimens before the acceptance of the complete specification.

If the Comptroller is satisfied that no objection exists to the specification on the ground that the invention claimed has been wholly or in part claimed or described in the complete specification of a former applicant, or on any other lawful ground of objection, he accepts the specification. If he is not so satisfied he hears the applicant and then, if his objections are not removed, he may require that references should be made in the specification to the prior specifications, by way of notice to the public, or he may refuse to accept the application.

On the acceptance of a complete specification the Comptroller advertises the acceptance and the application and specifications with the drawings (if any) become open to public inspection.

If the Comptroller refuses to accept an application, or requires an amendment the applicant may appeal to the Attorney General.

2. PROVISIONAL PROTECTION. After the application has been accepted and up to the date of sealing the invention may be used and published without prejudicing the letters patent to be granted, and the applicant is given the privileges and rights of a patentee, save that he cannot

institute proceedings for infringement until the patent has been granted.

3. OPPOSITION TO GRANT. Any person interested may at any time within two months from the date of the advertisement of the acceptance of a Complete Specification give notice at the Patent Office of opposition to the grant of the patent. Such opposition may be entered on the ground that the applicant obtained the invention from the person opposing or from a person of whom he is the legal representative, or that the invention has already been patented in this country, or that the Complete Specification claims an invention other than that described in the Provisional Specification, and that such other invention forms the subject of an application made by the opponent in the interval between the leaving of the Provisional Specification and the leaving of the Complete Specification. The Comptroller hears the parties and decides the case, subject to an appeal to the law officer (i.e. the Attorney or Solicitor General).

4. SEALING PATENT. If no opposition be entered, or if, in case of opposition, the matter is decided in favour of the applicant, the Comptroller causes a patent to be sealed with the seal of the Patent Office, and issued to the applicant. It should be noted that the investigations and reports of the officials at the Patent Office must not be held in any way to guarantee the validity of a patent.

DURATION OF PATENT. A patent is granted for fourteen years, and is maintained in force by payment of annual renewal fees after the end of the fourth year. A patentee may, however, after advertising his intention to do so, present a petition to the High Court praying for an extension. Such petition must be presented at least six months before the expiration of the patent. If it appears to the Court that the patentee has been inadequately remunerated by his patent, the term may be extended for a further period of seven, or, in exceptional cases, fourteen years.

INFRINGEMENT OF PATENT. During the term of patent right, the privilege of using, selling, or otherwise exercising the patent belongs exclusively to the patentee or his representatives, and any one who interferes with his rights in this respect is liable to an action for infringement. But he will not be able to recover damages from any defendant who can prove that he was not aware of the existence of the patent. Marking the article "patent" will not be deemed to constitute notice of the existence of the patent unless the word is accompanied by the year and number of the patent. But even an innocent infringer can be restrained by injunction from continuing in his infringement. The mere offering for sale, although no sale is effected, and the importing of the patented article from abroad will constitute an infringement.

REMEDY FOR INFRINGEMENT. The remedy of a patentee for an infringement of his patent is to bring an action claiming an injunction, i.e. an order from the Court stopping further infringement, and damages. The party against whom the action is brought can plead that he has not infringed the patent, or that the patentee was not the true or first inventor (in which case the defendant must show who was the true or first inventor), or that the patent is invalid from want of novelty or utility, or is otherwise not proper subject-matter for a patent.

ACTION FOR THREATS. A patentee must remember that if he threatens alleged infringers of his patent with legal proceedings, he must be prepared to carry out his threats if necessary; for it is provided by Statute that if a person, claiming to be a patentee, threatens any other person with legal proceedings, any one aggrieved by such threats, if the person making the threats does not take action, may bring an action against the patentee on the ground that no infringement has been caused, and may obtain an injunction to put a stop to such threats, and damages, if any, caused thereby.

ASSIGNMENT OF PATENT. Letters patent are freely assignable, and the assignee may bring in his own name the same actions against those who have infringed the patent as the patentee himself might have done. An assignment of a patent must be by deed and should be registered.

CO-OWNERS. Either of two joint patentees may use the patent without being liable to account to the other for profits, unless there has been an agreement between them to the contrary; but neither may dispose of the right of the other; nor can one co-owner release a person who has infringed the patent from liability to damages to the other co-owner.

LICENCES. A patentee may grant licences to individuals or to firms to use his patent. Such licences may be restricted, i.e. they may give the right to a part of the invention only, or the right to use or sell the patent only in a certain district. If a man is given a licence to sell patented articles, a purchaser from him can resell without direct authority from the licensee.

COMPULSORY LICENCES. On petition to the Board of Trade by any person interested, the Board, if satisfied, that a *prima facie* case has been made out, shall refer the petition to the Court, who may order that the patentee shall grant licences, or in default have his patent revoked, if he has not satisfied the reasonable requirements of the public; but no order of revocation shall be made before the end of three years from the date of the patent, or if the patentee gives satisfactory reasons for his default.

A government department may use an invention for the services of the Crown on terms to be agreed on with approval of the Treasury between the department and the patentee, or if they cannot agree, on such terms as shall be settled by the Treasury after hearing all parties interested.

INTERNATIONAL AND COLONIAL ARRANGEMENTS. The International Convention for the Protection of Industrial Property, 1902, provides that applicants for a patent in any one of the countries of the Union (to which Great Britain and most of the other important States belong) shall enjoy twelve months within which to apply to the other countries, and the right of priority is established by applying for the patent. Foreign applications when made in this country must be accompanied by a Complete Specification.

REGISTRATION. A register of patents is kept at the Patent Office. The patent is registered here after it has been sealed. The register also contains entries of assignments, licences, amendments, revocation, and other matters affecting the patent. If the patentee borrows money on the security of his patent, the lender should see that the fact of his charge is entered on the register as a notice to others.

REVOCATION. A petition to the Court may be presented asking that a patent shall be revoked. Such petition may be presented by the Attorney General, or any person authorised by him, or by any person who alleges that the patent was obtained in fraud of his rights, or that he was the true inventor and actually published the invention, or that he publicly manufactured, used, or sold, before the date of the patent, anything claimed by the patentee. If a patent is revoked on the ground of fraud, the successful petitioner, if he is the true inventor, may have the patent, for the remainder of its term, transferred to himself.

At any time not later than four years after the date of a patent, any person may apply to the Comptroller for the revocation of the patent on the ground that the patented article or process is manufactured or carried on exclusively or mainly outside the United Kingdom. If the Comptroller is satisfied that the allegations contained in the application are correct, then, unless the patentee proves that the patented article or process is manufactured or carried out to an adequate extent in the United Kingdom, or gives satisfactory reasons why it is not so done, the Comptroller may make an order revoking the patent, either forthwith, or after such reasonable interval as may be specified in the order, unless in the meantime it is shown to his satisfaction that his requirements have been complied with.

FALSE REPRESENTATION. It is an offence, punishable on summary conviction by a fine of £5, for a person to represent that an article sold by him is a patented article when no patent has in fact been granted to him. If an invention has been provisionally protected only, it is an offence to mark it as "patented." If marked at all it should be marked "Patent applied for." It is also an offence, punishable with a fine of £20, for a person to describe himself as a Patent Agent when he is not duly registered as such.

TRADE MARKS.

WHAT IS A TRADE MARK? A trade mark is defined by statute as "a mark used or proposed to be used upon or in connection with goods for the purpose of indicating that they are the goods of the proprietor of such trade mark by virtue of manufacture, selection, certification, dealing with, or offering for sale." By the Trade Marks Act, 1905, a registrable trade mark must contain or consist of at least one of the following essential particulars:—

(1) The name of a company, individual, or firm, represented in a special or particular manner.

(2) The signature of the applicant for registration, or some predecessor in his business.

(3) An invented word or invented words.

(4) A word or words having no direct reference to the character or quality of the goods, and not being according to its ordinary signification a geographical name or a surname.

(5) Any other distinctive mark; but a name, signature, or word or words, other than such as fall within the descriptions in the above paragraphs, will not, except by order of the Board of Trade or the Court, be deemed a distinctive mark.

INVENTED WORD. The meaning of this phrase has caused some difficulty. The House of Lords has recently decided that an invented word may be registered as a trade mark, although it may bear some remote reference to the character and quality of the goods. Thus the word "Solio," as a trade mark for photographic paper, was held good. But the word must really be an invented word, not a mere corruption of, or addition to, a word in common use; nor is it valid if it is merely a word, or number of words, spelt wrongly, but conveying to the ear the sound of the actual words, such as the word "Uneeda."

GEOGRAPHICAL NAME. A geographical name cannot be registered as a trade mark. It has, however, been held that a trade mark is not invalid merely because the word selected is also, by some chance, the name of some obscure place or locality. On the other hand, if the goods are named after the place of their manufacture, such name cannot be registered as a trade mark, even if it be some very out-of-the-way or unknown locality. It will be shown later that there are certain unregistered trade names, some of them geographical, which are upheld as good at common law, quite apart from registration under the Statute.

REGISTRATION. At one time, if a trade mark came by use to be recognised in trade as the mark of the goods of a particular manufacturer or trader, he acquired an exclusive right to use the trade mark in connection with goods of the same kind; but now, by Statute, no infringement of a registrable trade mark can be restrained unless the trade mark has been registered. An application form can be obtained at all the chief post offices for the sum of ten shillings. On this form a representation of the mark should be mounted, and the essential particulars of the trade mark be set out. By the Trade Mark Rules goods are divided into fifty classes, and the applicant must state under which class he desires to register his mark. He, or his agent, then signs the application form and forwards it to the Comptroller at the Patent Office. The Comptroller signifies to the applicant his acceptance or refusal of the trade mark. If accepted, the mark is advertised in the Official Trade Mark Journal. If no opposition is offered within one month, the applicant is called upon to pay a fee of £1, and the certificate of registration is issued. The Comptroller may refuse a trade mark on the ground that it does not conform to the rules, or that it resembles an existing mark. In such a case the applicant may appeal from the Comptroller's decision to the Board of Trade, who may decide the matter themselves, or—a course usually adopted—refer the appeal to the Court.

OPPOSITION. The trade mark may be opposed by some interested person, for example, another trader. The notice of opposition should be given within one month from the date of the advertisement in the Journal; the applicant must then, within one month, send to the Comptroller a counter statement of the grounds on which he relies to support his application. Otherwise he is held to have abandoned his application. Declarations are then made by the opponent and by the applicant in support of their respective cases, and the Comptroller hears and decides the matter. From his decision an appeal lies to the Court or, with the consent of the parties, to the Board of Trade.

EFFECT OF REGISTRATION. Application for registration of a trade mark is deemed to be equivalent to public use of the trade mark; and registration of a person as proprietor of a trade mark is *prima facie* evidence of his right to the exclusive use of the trade mark, and after the expiration of five years from the date of registration it is conclusive evidence of his right, unless the person opposing it applies successfully to have the register rectified by expunging the mark on the ground that it ought never to have been registered, as, for example, if it was not a trade mark at all. A person cannot sue for damages for infringement of his trade mark until it has been registered, except in the case of trade marks in use before August 13th, 1875, in which case, if he has applied for registration and it has been refused on the ground that his trade mark is not registrable, he can sue upon producing a certificate from the Comptroller that registration was so refused.

PERIOD OF PROTECTION. The period of protection for a registered trade mark lasts for fourteen years. At the end of that time the registration may be kept in force for another fourteen years upon payment of a renewal fee of £1, and so on from time to time at the expiration of every period of fourteen years.

RECTIFICATION OF REGISTER. A person aggrieved, i.e. a person who may probably suffer any loss from the use of the trade mark claimed (as, for example, a person who is sued for infringement of a mark which ought never to have been registered), may apply to the Court to have the mark struck off the register, or varied, on such grounds as that the mark is common to the trade, or that the goods distinguished by the trade mark are not traded in, or that it is similar to a trade mark of his own already registered. The registered proprietor, also, may apply to the Court to alter the register in any non-essential particular, as, for instance, to add the word "Limited" to the name of a Company.

IDENTICAL TRADE MARKS. Except by order of the Court or in the case of trade marks in use prior to the 13th August, 1875, no trade mark will be registered in respect of any goods if it is identical with one belonging to a different proprietor already on the register in respect of goods of the same nature. Registration will also be refused if the second trade mark so nearly resembles the one first registered as to be calculated to deceive. Where each of several persons claims to be proprietor of the same trade mark or nearly identical trade marks in respect of the same description of goods, the Registrar may refuse to register any of them until their rights have been determined by the Court. In the case of an honest and concurrent user of a trade mark, or of other special circumstances the Court may, if it think proper, permit the registration of the same or similar marks by different proprietors in respect of the same description of goods, subject, however, to such conditions and limitations as it may think fit to impose.

MARKS REGISTERED ABROAD. A subject of a foreign State, which has become a party to the International Convention for the protection of Industrial Property, can apply to have any trade mark registered by him in his country registered in this country in priority to other applicants coming after the date of foreign registration, provided he files the application within four months of registration abroad. The trade mark must conform to the requisites of English law.

ASSIGNMENT OF TRADE MARK. A person entitled to a trade mark cannot transfer the trade mark except in connection with the goodwill of the business. A person cannot grant licences to others to use his trade mark; to do so would be to forfeit his claim to the mark. If a business, with the trade mark, is assigned, the assignee should apply to the Comptroller to alter the register. If in any case, whether by reason of a dissolution of partnership or otherwise a person ceases to carry on business and the goodwill of such person does not pass to one successor but is divided, the Registrar may permit an apportionment of the registered trade marks of the person among the persons in fact continuing the business. An appeal lies to the Board of Trade from the decision of the Registrar.

TRADE NAME. If the goods of a particular trader have, by long use, become known in the market by an unregistered or unregistrable trade name, i.e. one not capable of registration as a trade mark, he acquires a right to prevent any other person from using the same name in connection with the same kind of goods for trade purposes in such a way as is likely to deceive the public. Thus the words "Yorkshire Relish," though unregistrable as a trade mark, because geographical in nature, were held to be a trade name only usable by those who had the secret of the manufacture. In some cases the use of a man's own name may be such as to deceive; for example, if there is a well-known firm of a certain name, and another person of that name starts trading in the same articles. Where this is so, the person aggrieved can obtain an injunction against such use of the name, but, as a rule, he must prove fraudulent intent.

SHEFFIELD MARKS. The Trade Marks Act, 1905, makes special provision for the registration at Sheffield by the Cutler's Company, in a register termed the Sheffield Register, of trade marks used on metal goods. In the case of persons carrying on business in Hallamshire, or within six miles thereof, the application for registration must be made to the Cutler's Company direct.

COTTON MARKS. The Trade Marks Act, 1905, also provides for the continuance of a branch registry at Manchester for the registration of Cotton Marks, the registrar thereof being styled the "Keeper of Cotton Marks."

REMEDY FOR INFRINGEMENT. The remedy for infringement of a trade mark is an action for damages and an injunction. Where the trade mark has been used with knowledge that it belongs to another manufacturer, the Court will order an account to be taken of any profits made, and give compensation accordingly; but if the person infringing acted innocently and without the intention of defrauding any one, he usually has only to pay the costs of the action and submit to an injunction against him, preventing any further infringement.

COUNTERFEITING. The forgery of a trade mark (which includes the making of a spurious trade mark so nearly resembling an existing mark as to be likely to deceive) is a criminal offence, punishable with fine or imprisonment. It is for the person charged to prove that he acted without intent to defraud. Persons who sell, or use in trade, goods with forged trade marks are also guilty of an offence, unless they can prove that they acted without guilty knowledge, and that on demand they gave all the information they could as to the persons from whom they obtained such goods.

WARRANTY. On the sale of goods to which a trade mark or trade description has been applied, the vendor is held, by Statute, impliedly to warrant that the trade mark or trade description are genuine. Any person who represents a trade mark as registered which is not so is liable for every offence on summary conviction to a fine not exceeding £5.

UNAUTHORISED ASSUMPTION OF ROYAL ARMS. By the Act of 1905 if any person, without the authority of His Majesty, uses in connection with any trade, business, calling, or profession, the Royal Arms (or arms so closely resembling the same as to be calculated to deceive) in such a manner as to be calculated to lead to the belief that he is duly authorised so to use the Royal Arms, or if any person without the authority of His Majesty or of a member of the Royal Family uses in connection with any trade, etc., any device, emblem or title in such a manner as to be calculated to lead to the belief that he is employed by or supplies goods to His Majesty or such member of the Royal Family, he may be restrained by injunction from continuing to use the same at the suit of any person authorised to use such arms, emblems, etc., or at the suit of any person authorised by the Lord Chamberlain to take proceedings.

THRIFT AND TRADE ORGANIZATIONS.

1. TRADE UNIONS.

OBJECTS OF TRADE UNIONS. A Trade Union is a combination of a number of persons engaged in the same trade for certain purposes described more or less generally in the "Objects and Rules" of the Union. The following are two typical descriptions:

(1) A systematic organization, formed with desire of creating a bond of brotherhood and sympathy throughout the trade, in order that those who by honest labour obtain a livelihood in this particular branch of industry may in their combined capacity compete more effectively against the undue and unfair encroachments of capital than could possibly be the case by any number of workmen when acting individually.

(2) Any organization to secure to all its members the fair reward of their labour: to provide for the settlement in a conciliatory manner of disputes between employer and employed, so that a cessation of work may be avoided: to secure the enforcement of the Factory Acts or other legislative enactments for the protection of labour: to afford pecuniary assistance to any member who may be victimised or without employment in consequence of a dispute or lock-out or when disabled by accident.

The above descriptions by no means exhaust the objects of Trade Unions, for those of other Unions include (1) the abolition of piece work, (2) the obtaining of equal pay for equal work irrespective of the sex of the worker, (3) the exercising of a control over the supply of apprentices, (4) the provision of sick, accident, and burial funds, (5) the establishment of healthy workshops, etc.

THE ANCIENT GUILDS. Less than a century ago trade unions, as we now know them, were non-existent. Long before that time there were combinations of workmen, or as they were then termed, craftsmen. These ancient combinations were called "Guilds." In the City of London they were styled "Companies," a name under which these corporations still exist, although their rights and powers are now vastly different from those enjoyed in the 15th and 16th centuries. At that time, some of these Guilds were empowered to seek out and prosecute any person practising their trade, if that person was not an admitted member of the Guild. The members of the Guild were master craftsmen employing and training apprentices who in due time, having fulfilled certain stringent conditions, became themselves master craftsmen and members of the Guild. Each member of the Guild worked at his trade, and only in very rare instances did he employ another master craftsman, so that the modern relationship of employer and employed was almost unknown. Economic conditions changed with the years, machinery was introduced, crafts were sectionized, the capitalist

became necessary to the workmen, and now we have the employing few and the employed many. The employed finding that they as individuals could not effectively resist any tyrannous acts of the employers, formed themselves into Trade Unions. On the other hand, the employers have found it necessary to combine to protect their interests against the attacks of the Unions; so that to-day there exist the Workmen's Unions and the Employers' Associations.

TRADE UNION STATISTICS. Trade Unionism to-day is a mighty force. In 1906 there were more than 1100 trade unions with a membership exceeding 2,100,000. And since then there has been a great increase. The metal-workers, in particular, have grown immensely, having in 1904-8 doubled their numbers. The financial returns from 100 unions, which include over 60 per cent. of the total membership of the unions, give over £5,000,000 as their accumulated funds.

TRADE UNION ACT, 1871. By the Common Law of England (as distinguished from the Statute Law) it is illegal to restrain any person, master or workman, from carrying on his trade according to his discretion, for his own best advantage. This general Common Law rule was in full force prior to 1871, and rendered illegal all the combinations which included among their objects any restraint of the individual in the exercise of his trade. It is necessary to make clear what was the effect of this illegality. There was no power which had authority to compel the dissolution of the combination or Union, but such combination or Union could not be recognised for any purpose as legal entity. For instance, the Unions could not be recognized as property-owners, their officers could embezzle funds with impunity, and generally the difficulties surrounding the management and organization of these bodies were so great as to render it almost impossible to carry them on successfully. In 1871, the Legislature determined to legalize Trade Unions under certain conditions, which are dealt with in the following paragraphs.

REGISTRATION OF TRADE UNIONS. The Act of 1871 applies only to such Unions as are registered, so that an unregistered Union is still an illegal combination. Any seven persons can apply for registration as a Union. The application must be made to the Registrar of Friendly Societies, and upon a Form which can be obtained from the Registrar. This form must be signed by seven members of the Union and be accompanied by a copy of the rules, the names and titles of the officers, and (if the Union is already in existence) a memorandum stating generally its position respecting membership, funds, etc.

COMPULSORY RULES. The Statute is very explicit as to what the rules must include, before any Union can be recognised as a legal body. The rules must include statements as to:—

(1) The location of the office of the Union and place where its business meetings are to be held. (2) The objects of the Union, and a limitation preventing the disbursement of any funds of the Union except in furtherance of such objects. (This limitation will be enforced by the Courts, if necessity arise). (3) The conditions under which members become entitled to benefit, and also the condition affecting fines and forfeiture of membership. (4) The mode of making or amending the rules. (5) The method of appointing the officers, committees and trustees. (6) The mode of investing the funds. (7) The conditions under which all persons interested in the funds of the Union may inspect the books and the membership roll.

If the Registrar is satisfied with the rules, he will issue the Certificate of Registry on the payment of his fee (£1), and so long as that certificate is not withdrawn, any Court is bound to recognize the Union as a body entitled to sue or prosecute and also as liable to legal process which may be brought against it. Should there be any change in the Rules or in the personnel of the officers, such changes must be notified to the Registrar before the 1st June in each year. Annual returns must be made to the Registrar before the same date, and must comprise the following particulars:—

(1) The assets and liabilities at the date of the return. (2) The receipts and expenditure for the year. (3) The expenditure on the several branches of the Union work.

Every officer of a Union not making this return is liable to a penalty not exceeding £5 for each offence.

DISABILITIES OF TRADE UNIONS. Although the Act of 1871 legalized Trade Unions for certain purposes, it must be made clear that the Act had not the effect of placing a Trade Union in the same legal position as a body which does not include among its purposes the "restraint of trade." Section 3 of the Act says:—"The purposes of any Trade Union shall not, by reason merely that they are in restraint of trade, be unlawful so as to render void any agreement or trust."

LIMITED POWERS. The rules of all Trade Unions have provisions affecting subscriptions and benefits. An agreement by a member to pay his subscription is not enforceable in a court of law, so that in this respect the Union stands where it did before the Act of 1871. Nor can a member compel (by action-at-law) his Union to pay him benefits under the Rules. This rule applies not only to pecuniary help during strikes, but also to sick, accident, funeral, tool and other benefits. The Courts cannot in any way assist a Trade Union in enforcing any rule or order which prescribes hours of labour, rates of wages, or place of employment. The Appeal Court decided, in 1908, that it is not competent for a Trade Union to provide for Parliamentary representation by means of a compulsory levy. This decision was upheld by the House of Lords when the matter came up on appeal in 1909.

TRADE DISPUTES. In what is known as the Taff Vale case, a Railway Company sued a Union and its secretaries for "instigating and conducting a strike of the railway workmen in August, 1900, in the course of which contracts were broken, violence and intimidation took place, and great loss was occasioned." The jury found a verdict in favour of the Company, and the Union funds were mulct in damages and costs. The House of Lords upheld this interpretation of the law, but their judgment has practically been reversed by the Trade Disputes Act, 1906. This Act exempts Trade Unions, whether of workmen or masters, from actions against them in respect of "tortious" acts (see *Torts*) alleged to have been committed by them or on their behalf "in contemplation or in furtherance of a trade dispute."

STRIKES. In 1875 it was enacted by the Conspiracy and Protection of Property Act, that: "An agreement or combination of two or more persons to do or procure to be done any act in contemplation or furtherance of a trade dispute between employers and workmen, shall not be indictable as a conspiracy if such an act by one person would not be punishable as a crime." Prior to 1875, a strike usually brought its participators within the meshes of the criminal law by rendering them liable to indictment for conspiracy. In 1867 Baron Bramwell, in Regina *v.* Druitt, said:—"An agreement for co-operation against liberty of mind and freedom of will, irrespective of any intimidation or physical coercion, is a criminal conspiracy." A comprehensive dictum which ably summarised the law as it then existed, and led to the appointment of a Commission, the report of which brought about amendments of the law, which as shown by the extract from the Act of 1875 (quoted above) exempted peaceably conducted strikes from the operations of the Criminal Law.

PICKETING. In the course of a strike or a lock-out, the workmen usually endeavour to further their aims by preventing their employers from obtaining the services of other persons. One of the means employed is picketing, that is, a watching of the premises of the employer with a view to dissuading any person from accepting service in the "picketed" premises. By the Conspiracy Act, 1875, it is an offence, rendering the offender liable to a fine not exceeding £20, or imprisonment of not more than three months, if he endeavour to compel any other person to do any act which he has a right to abstain from doing or to abstain from any act which he has a legal right to do. But it is specially provided that it is not an offence to picket a place in order merely to obtain or communicate information. Thus, so long as the pickets do not intimidate, annoy, or use any physical force, they are acting within their rights, and not creating grounds upon which can be

based successful criminal proceedings. It should be made clear that "intimidation" in this connection has been held to mean a threat or threats of physical violence.

2. FRIENDLY SOCIETIES.

THEIR NATURE. A "Friendly Society" is a voluntary association formed by its members with a view to helping each other in old age, sickness, etc., and for other similar purposes. The Legislature has passed from time to time many enactments dealing with these societies, but these have been finally consolidated into the Friendly Societies, Act, 1896, which, with the Collecting Societies and Industrial Assurance Companies Act, 1896, contains the bulk of the law on the subject.

REGISTRATION. The Friendly Societies' Act, 1896, allows the following societies to be registered with the Registrar of Friendly Societies, who is a paid official of the Treasury:

(*a*) Societies for the purpose of providing by voluntary subscriptions of their members, with or without the aid of donations, for:—

(1) The relief or maintenance of the members and their families during sickness, old age, or widowhood, or for maintaining their orphan children.

(2) Insuring money to be paid on the birth of a member's child, or on the death of a member, or for the funeral expenses of his family.

(3) The relief or maintenance of members in search of employment, or when in distressed circumstances.

(4) The endowment of members or their nominees at any age.

(5) The insurance against fire to an amount not exceeding £15 of the implements of a member's trade.

(*b*) Societies for the purpose of insurance to any amount against loss of neat cattle, sheep, lambs, swine, horses, or other animals.

(*c*) Societies for any benevolent or charitable purpose, or for purposes of social intercourse, mutual helpfulness, mental and moral improvement, and rational recreation.

But no society will be registered unless it consists of seven persons or more, nor will any friendly society be registered which contracts for the assurance of any annuity exceeding £52 per annum or of a gross sum exceeding £300.

CONDITIONS OF REGISTRATION The method of registration is for an application for registration to be sent to the Registrar, signed by seven members and the secretary, together with copies of the rules and a list of the names of the secretary and of all the trustees and authorised officers of the society. A society cannot be registered under a name which is either identical with that of another registered society, or so similar thereto as to be likely to deceive the public. If the Registrar refuses to register a society, an appeal will lie to the High Court. If a society has branches, a list of the branches, with their responsible officials, must accompany the application for registration. Again, notice of the establishment of every new branch must be sent to the Registrar.

DUTIES OF REGISTERED SOCIETIES. Every registered society and branch must have a registered office and one or more trustees. The trustees are appointed by the resolution of a majority of the members present, and entitled to vote at a meeting of the society. A copy of such resolution, signed by the secretary and by the trustees appointed, must be sent to the Registrar. The accounts of every registered society must be audited annually, and a return of the receipts and expenditure, funds and effects of the society or branch, as audited, must be made to the Registrar before the 1st of June in every year. Every five years the assets and liabilities must be valued, and a return made, of every registered society other than a benevolent society, working men's club, cattle insurance society, or authorised society.

RULES OF THE SOCIETIES. The rules of registered societies must set forth:—

(1) The name and situation of the society. (2) The whole of the objects of the society, the conditions of membership, the fines which may be imposed on the members, and the consequences of not paying fines or subscriptions. (3) The mode of holding meetings the right of voting and the manner of making or altering the rules. (4) The appointment and removal of the officers of the society and, in the case of a branch, the conditions under which it may secede from the parent society. (5) The investment of the funds, the keeping of the accounts, and the annual audit. (6) The annual returns of the accounts to the Registrar. (7) The inspection of the books by every person having an interest in the society's funds. (8) The manner of settling disputes. (9) The keeping of separate accounts of all moneys received or paid in respect of funds, benefits, expenses of management, and contributions. (10) A quinquennial valuation, with the exceptions already mentioned under *Duties of Registered Societies.*

There must be rules also relating to the dissolution of the society, and to an application to the Registrar for an investigation of the affairs of the society, or for winding up the same.

RIGHTS OF MEMBERS. Any person is entitled to a copy of the rules of any society on payment of a sum not exceeding one shilling. Every member and every person interested in the funds of a society or branch is entitled to be supplied gratuitously with a copy of the last annual return or a balance sheet duly audited. Members and persons interested in the funds may at all reasonable times inspect the books of the society; but they may not inspect the loan account of another member without his consent, unless they are officers of the society or specially authorised by a resolution of the society. Militiamen, yeomanry, and volunteers, members of Friendly societies, cannot be fined for non-attendance at meetings where it has been occasioned by the discharge of their duties.

SETTLEMENT OF DISPUTES. In the event of disputes arising between members, or persons claiming under the rules of a society, and the society, such disputes are generally decided in the manner directed by the rules of the society. There can be no appeal from such a decision, and if disobeyed the decision may be enforced on an application being made to a County Court. But unless the rules expressly forbid it, the parties to a dispute may by consent refer the matter to the Registrar. Where the rules contain no directions as to disputes, or where no decision is made within forty days, the person aggrieved may apply either to the County Court or to a Court of Summary Jurisdiction to hear and determine the matter in dispute.

3. BUILDING SOCIETIES.

THEIR NATURE. The Building Societies' Act, 1874, permits any number of persons to establish under that Act a society, either terminating or permanent, for the purpose of raising by the subscriptions of its members a stock or fund for making advances to members out of the funds of the society upon security of freehold, copyhold, or leasehold estate, by way of mortgage. These societies are called Building Societies, and have the power of holding land and of raising funds by the issue of shares.

THE MEMBERS. The members of a Building Society fall naturally into two great classes, those who lend and those who borrow. The Act of 1874 provides that the liability of any member of a building society under that Act, in respect of any share upon which no advance has been made, is limited to the amount payable thereon under any mortgage or other security, or under the rules of the society.

The several members of a Building Society, and all persons claiming on account of such members, are bound by the rules of the society, and the law will presume that they are acquainted with them.

OFFICERS OF A SOCIETY. Every officer of a Building Society having the receipt or charge of any money belonging to the society must, before taking upon himself the execution of his office, become bound with at least one surety, or give the security of a guarantee society, or such other security as the Building Society may direct, binding

him and his executors or administrators to account for all the society's money passing through his hands.

RULES. The rules of every Building Society established since 1874 must set forth :—

(1) The name and chief office or place of meeting of the society. (2) The purposes to which the funds are to be applied, and the manner in which they are to be invested. (3) The manner of making, altering, or rescinding the rules. (4) The manner of appointing, remunerating, and removing the board of directors or committee of management, auditors, and other officers. (5) The manner of calling meetings. (6) Provision for an annual or more frequent audit. (7) Whether disputes are to be settled by reference to the court, or to the Registrar, or to arbitration. (8) Provision for the custody and use of the seal of the society, which in all cases must bear the registered name thereof. (9) Provision for the custody of the mortgage deeds and other securities of the society. (10) The powers and duties of the board of directors or committee of management, and other officers. (11) The fines and forfeitures which may be imposed on members. (12) The manner in which the society, whether terminating or permanent, may be dissolved. (13) The manner in which the stock or funds of the society are to be raised. (14) The terms upon which shares are to be issued and the manner in which the contributions are to be paid and withdrawn, with separate tables for principal and interest. (15) The limits within which preferential shares may be issued. (16) The manner of making and repaying advances, the deductions for premiums, and the conditions of redemption, with tables. (17) The manner of ascertaining and providing for losses. (18) The manner in which membership is to cease. (19) Within what limits the society intends to borrow, if at all.

REGISTRATION. All societies formed under the Building Societies' Acts, 1874 to 1894, must obtain a certificate of incorporation from the Registrar of Friendly Societies, whose duty it also is to act as registrar to Building Societies. If any society commences business without first obtaining a certificate of incorporation, the person or persons responsible will be liable on summary conviction to a penalty not exceeding £5 for every day business is carried on. Provision is made by the Act of 1874 for granting certificates of incorporation to Building Societies founded before that date.

Persons intending to establish a Building Society must transmit to the Registrar two copies of the rules signed by three of such persons and the intended secretary. If the Registrar approves the rules, he returns one copy to the secretary, with a certificate of incorporation, and retains the other copy. Every society on receiving a certificate of incorporation becomes a body corporate, with a registered name, a common seal, and perpetual succession until it is dissolved.

POWER TO BORROW MONEY. Building Societies may receive deposits or loans at interest from the members or other persons, or from corporate bodies, joint stock companies, or from any terminating building society, to be applied to the purposes for which they have been established. In a *permanent* society the total amount so received on deposit or loan, and not repaid by the society, must not at any time exceed two-thirds of the amount for the time being secured to the society by mortgages from its members. In a *terminating* society the total amount so received and not repaid may either be a sum not exceeding such two-thirds as above, or a sum not exceeding twelve months' subscriptions on the shares for the time being in force.

TERMINATION OF A SOCIETY. There are four principal ways in which a building society may come to an end :—

(1) By dissolution in the manner prescribed by its rules. (2) By dissolution with the consent of three-fourths of the members holding not less than two-thirds of the number of shares in the society. (3) By winding up either voluntarily or under the supervision of the Court, or by the order of the Court, on the petition of any member authorised by three-fourths of the members present at a general meeting called for the purpose, or on the petition of any judgment creditor for not less than fifty pounds. (4) On an award of dissolution made by the Registrar after investigation.

4. SAVINGS BANKS.

A Savings Bank may not receive any deposit which makes the sum standing in the name of any depositor exceed £200, and when that sum is reached no interest is to be allowed on the excess. (Such excess may arise from the accumulation of interest on the moneys deposited). The maximum amount which a person may deposit in one year is £50. If any person has a deposit in more than one savings bank in the United Kingdom, or has more than one deposit in the same savings bank (as is possible by entering a second deposit under another name), he is liable to forfeit the amount illegally deposited. There are two principal classes of Savings Banks : (1) Post Office Savings Banks, (2) Trustee Savings Banks.

POST OFFICE SAVINGS BANKS. These were established by the Post Office Savings Bank Act, 1861, to grant facilities for the deposit of small savings, to make the General Post Office available for the purpose, and to give the direct security of the State to every depositor. Depositors are entitled to repayments not later than ten days after they have demanded it. The moneys deposited are devoted to the reduction of the National Debt. The rate of interest payable to depositors is $2\frac{1}{2}$ per cent. per annum on every complete pound, that is to say, sixpence on every pound left on deposit for a complete year. It should be remembered that interest is paid only on the pounds (not the odd shillings), and that it is reckoned from the first day of the month following the day of deposit, and ceases on the first day of the month of withdrawal.

TRUSTEE SAVINGS BANKS. These banks cannot now be formed except with the approval of the National Debt Commissioners. The rules and regulations for the management of these banks must provide :—

(1) That none of its trustees or managers shall receive any remuneration beyond their actual expenses, and that the other officers shall only receive such remuneration as is fixed by the rules. (2) That at least two trustees, managers or officials, shall be parties to the bank's transactions, so as to form a double check. (3) That the depositors' pass book must be compared with the ledger on every transaction of repayment, and on its first production at the bank after each 20th November. (4) That depositors must produce their deposit books for the above purpose at least once a year. (5) That no money be paid to or received from depositors except at the office and during business hours. (6) That there be a half-yearly audit, and at least half-yearly meetings of the management, and that minutes thereof be kept.

Trustee Savings Banks must make weekly returns to the National Debt Commissioners. The officers of these banks entrusted with the receipt and custody of money must give security for the just and faithful execution of their duties. No trustee or manager is personally liable except for moneys actually received by him and not paid over, or for neglect or omission in complying with the rules and regulations, or for neglecting to take security from the officers of the bank. Trustees must invest all the money belonging to the savings bank in the Bank of England or of Ireland only. No trustee savings bank may be designated or described in any manner which imports that the Government is responsible or liable to depositors for money placed in the safe keeping of the bank.

PREFACE.

AS a glance at the next page will suffice to show the full scope of this Commercial Guide, when taken in connection with that part of the Legal Guide which deals with Commercial Law, we need only point out here the purposes it is designed to serve.

In this Guide we have kept especially in view the wants of the man of business, who, though an expert in his own particular calling, is sure at various times to require information on matters that lie beyond the range of his own special occupation. In the section on Commercial Law (pp. 564–607) the business man will find a clear statement of the law in its bearing on commercial matters. In the Commercial Dictionary, which immediately follows, he will find a concise explanation of every important commercial term current in any branch of trade. And in the articles on Banking and other forms of financial business, as well as in those relating to the carriage of merchandise by means of Shipping and Railways, he will find a well-arranged stock of information on a variety of commercial topics ready to his hand. The remaining portion, also, we believe, will prove extremely useful to men of affairs in their correspondence and accounts, containing, among other matters, postal regulations, a long list of commercial terms in four languages, and a variety of tables, some as aids to calculation, and others (such as those of Excise Licences and Stamp Duties) which are sure to be in constant requisition for instant reference.

Whilst providing especially for the requirements of men in business, we aim also in this Guide at being of service to persons of all ranks and occupations, since all alike have constant dealings, either as buyer or seller, in some form or other. Even those who derive their income mainly from dividends, and have no definite business to attend to, would find it to their advantage to possess a little sound knowledge on business matters. Many of the subjects here treated of—for instance, Insurance, Banking, Stock Exchange, and the Money Market—are such as closely concern all persons who have money to invest. And in the Commercial Dictionary, which comes first in this Guide, all such persons can easily ascertain the meaning of any commercial term or transaction in which they may happen to take an interest. We need scarcely add that this section will also be found of much service to the youth entering on a business career, as it will enable him to gain a general acquaintance with commercial subjects, and thus to take a more intelligent view of his own particular business by viewing it in relation to many others.

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A COMMERCIAL GUIDE.

A DICTIONARY OF COMMERCIAL TERMS.

ABANDONMENT. Where an insured ship has sustained such damage that it would not pay a prudent owner, even if uninsured, to repair it, the vessel, though it may still be in existence, is said to have become a "constructive total loss." So, too, the cargo may be in such a damaged condition as to be practically valueless. In such a case the owner *abandons* the adventure to the underwriters, or to the company in which the vessel is insured, that is, he transfers to them the whole of his interest in the cargo or the ship with all the profits that may possibly arise from it, in return for which the owner demands payment of the whole amount for which the venture was insured.

ABOVE PAR. When the price of stocks or shares is above their nominal value, they are said to be at a premium or above par.

ABRASION OF COIN. The loss in weight which takes place in coined money, and which is due to its being in circulation for a length of time. It is reckoned that in eighteen years a sovereign loses so much in weight as to make it fall below the standard required by law, and ought therefore to be withdrawn from circulation. A coin which is below the standard weight and which is given in payment to any person, may be cut, broken or defaced by him, the loss falling on the person tendering it in payment.

ACCEPTANCE of a bill of exchange signifies that the drawee agrees to the order of the drawer. After it has been accepted the bill is called an *Acceptance.*

ACCEPTANCE FOR HONOUR. Where a bill of exchange has been dishonoured for non-acceptance, or or better security, and is not overdue, an outsider may intervene and accept the bill for the honour of any person liable on it. (See under *Negotiable Instruments.*)

ACCEPTANCE, GENERAL. The acceptance of a bill of exchange is said to be general when the acceptor writes his signature across it without any qualification as to the time, place, or amount of payment. (See "Acceptance" under *Bills of Exchange.*)

ACCEPTANCE, QUALIFIED. In regard to a bill of exchange, a drawee may not be willing to comply with the exact terms of the drawer's request. He may choose to alter or vary those terms and to accept the bill thus altered. (See "Acceptance" under *Bills of Exchange.*)

ACCOMMODATION BILL. An accommodation bill is one to which a person puts his name to oblige another without receiving any consideration or value for so doing. For instance, A is in want of money and he draws a bill of exchange on his friend B, who, though he has received no consideration for doing so, accepts the bill on the understanding that when the bill falls due A will meet it. A having obtained B's acceptance, gets the bill discounted, and thus obtains the cash of which he is in need. When the bill falls due, A pays its amount to the discounter, but should he not do so, B, who received nothing, will have to pay. It is therefore unwise to lend one's name to a "fictitious bill." No one is, however, liable on the bill, until value has been given for it, which is, usually speaking, when the bill is discounted. This method of raising money is known as "kite-flying."

ACCOUNT. A statement relating to goods supplied or to services rendered, or to pecuniary transactions, showing the amount due from one person to another.

ACCOUNT, CAPITAL. An account which shows the amount of capital embarked in any business and the way in which it has been expended.

ACCOUNT, CURRENT. An open or running account which shows how persons between whom business transactions are being carried on for a definite period stand to one another.

ACCOUNT, PROFIT AND LOSS. An account which shows on the debit side all moneys, charges and expenses paid out, and all losses incurred through bad debts, depreciation of property and the like. The credit side shows all moneys received. If the amount on the credit side exceeds that on the debit side, there is a nett gain, but if the debit exceeds the credit there is a loss. Thus a business man is enabled to see how his affairs stand.

ACCOUNT, SALES. An account furnished to a principal by his agent, giving details of the sale of a consignment of goods. It states the quantities sold, the price paid for each lot, the total proceeds, the deductions made for the agent's commission, and for expenses incurred by him for freight, insurance and the like, and, lastly, the nett proceeds.

ACCOUNT, STATED. Where parties dispute or are in doubt as to the exact amount owing from one to the other, they may agree that a certain sum shall be settled as the amount actually owing. From this admission that the money is due, the law implies a promise to pay the amount.

ACCOUNT, STOCK EXCHANGE. The settlement of the transactions between buyers and sellers which takes place periodically, or the period between one settlement and the next. It takes place twice a month, but in the case of consols once a month. The settlement extends over three days, in the mining market four days. The first day is the "carrying-over" or making-up day; the second is the "ticket day." The last day is the "pay day" or settling day, when the stock has to be delivered, or the "differences" have to be paid. (See *Backwardation* and *Contango.*)

ACCOUNT, SUSPENSE. An account to which items with which it is not proposed to deal at the moment are transferred. For example, where a payment is made which through some legal or other difficulty may have to be refunded, the person to whom the payment is made enters in it his suspense account until the matter is finally adjusted, and it is ascertained whether the money is to be refunded or not. If this were not done, the books in case the money had to be refunded would show a fictitious gain.

ACCOUNTABLE RECEIPT. A written acknowledgment of the receipt of money or of goods which have to be accounted for afterwards, e.g., pawnbroker's ticket, an entry in a bank pass-book.

ACCOUNTANT. The chief work of accountants is in preparing, investigating and auditing accounts. They are frequently employed as trustees, liquidators, and receivers in bankruptcy, and in the winding up of limited companies. When a business is to be sold, or turned into a limited company, the services of an accountant are engaged to ascertain the profits or earning capacity of the business in order to be able to estimate the price to be paid for it. Any one may call himself an accountant, but the name is usually applied to a class of men who have been trained to the work, and who have a special knowledge of business affairs. These belong to one of two great bodies, the Institute of Chartered Accountants and the Incorporated Society of Accountants and Auditors. These hold periodical examinations for admission to their membership.

ACQUITTANCE, a release or discharge from any legal liability.

ACTIVE BONDS, bonds on which interest is paid in full from the date of issue.

ACTIVE CIRCULATION, the notes of a bank actually in the hands of the public. (See "Bank Return" in *Index.*)

ACT OF BANKRUPTCY. An act which if committed by a debtor will render him liable to bankruptcy proceedings.

ACT OF GOD. Any event which arises from natural causes outside human control and which could not reasonably be foreseen and provided against, e.g., tempest, lightning, sudden and severe frost. No one can be made liable for loss arising through an act of God.

ACT OF HONOUR. Where a bill is dishonoured for non-acceptance or non-payment, a person not liable on it may accept it or pay it to save the honour or reputation of the drawer or some other person liable on the bill.

ACTUARY. A person skilled in calculating the value of life interests, annuities and life insurances. The manager of an insurance company is often called an actuary. The Institute of Actuaries is composed of Fellows, Associates, Students, Honorary Members and Corresponding Members. (Refer to "Actuary" in *Index.*)

ADJUDICATION ORDER. An order made by the Court, when bankruptcy proceedings have been taken against an insolvent debtor, by which he is adjudged bankrupt and his property vested in a trustee. (See under *Bankruptcy.*)

ADJUSTMENT. In marine insurance average adjustment consists in determining, when a general average has occurred, what amount of contribution must be paid by those whose interests have been benefited by a sacrifice of some interest

on behalf of all so as to make good the loss of the persons whose property has been sacrificed. This is determined when the vessel has reached her destination. When a particular average occurs the work of adjustment determines what items of loss or of expense should be borne by the shipowner and the merchant, and what should be borne by the underwriter. This work is done by a class of professional men known as 'average adjusters" or "average staters," and it involves a great amount of technical knowledge and skill.

AD VALOREM. In proportion to value. An *ad valorem* duty is a duty of so much per cent. on the value of the goods. Such duties are not levied in the United Kingdom, where all duties on goods are according to their weight or quantity. *Ad valorem* stamp duties are in proportion to the value of the subject matter of the document, e.g., the stamp duty on bills of exchange, bills of sale and the like.

ADVANCE. Money paid before it is legally due: especially used to denote money paid to the consignor of goods, on receipt by the consignee of the bill of lading or the invoice.

ADVANCE FREIGHT, payment made in advance for carriage of goods by sea. It is due as soon as the goods are shipped, and cannot be recovered should the goods be destroyed by fire, or the ship lost, and the goods, consequently, not delivered.

ADVANCE NOTE. A master on engaging a seaman at a port in the United Kingdom may advance him not more than a month's wages when he signs the articles of agreement. It is illegal to advance more than this sum, but this restriction does not apply where the master engages the seaman at a foreign port.

ADVENTURE, BILL OF. A writing, signed by a person to the effect that goods shipped on board in his name really belong to another, and are at that other's risk, the person signing the document being liable to account only for their produce, i.e., for the price which they realise after deducting expenses.

ADVICE. Information or instructions on some business matter, especially in regard to the drawing of bills or the forwarding of goods. Thus, if a merchant wishes to draw a bill upon a person, he writes a "letter of advice," advising that person of the fact, giving full particulars as to the amount, the date, the time which the bill has to run, and the name of the person to whom the bill is payable. If the advice is not sent, the bill on being presented for payment or acceptance may be dishonoured for *want of advice.*

AFFIDAVIT. A written statement on oath sworn before a Commissioner for Oaths, and used in cases where oral evidence is not required; e.g. in support of an application for injunction. It usually requires to be stamped with a half-crown stamp.

AFFREIGHTMENT. The contract of a ship owner to carry goods for payment called the freight. This contract may be embodied either in a bill of lading or a charter party.

AFTER DATE. When this phrase is written on a bill of exchange or a promissory note, it means after the date of the bill.

AFTER SIGHT. When a bill is drawn at so many days after sight, it means that the bill will fall due at the expiration of that time, reckoning from the date when the bill was first presented to the drawee for his acceptance. The acceptor inserts on the bill the date of his acceptance, in order that the holder of the bill may know when to present it for payment.

AGE ADMITTED, an indorsement on a life policy stating that the insurance company is satisfied with the proof of age furnished by the person insuring.

AGENDA. The programme of business to be gone through at a meeting.

AGIO. The term agio is used to express the difference between the values of the metallic and the paper money of a country, or between one sort of metallic money and another.

ALLONGE. A slip attached to a bill of exchange for the purpose of providing space for additional indorsements, when there is no further room on the bill itself. It forms part of the bill and requires no additional stamp.

ALLOTMENT. The distribution of shares in a limited company to those who have applied for them on the invitation contained in the prospectus.

ALLOTMENT NOTE. A note by which a seaman authorises the ship owner to pay over a part of his wages, not exceeding one-half, to some near relative or to a savings bank. The payment to the relative cannot be made until the expiration of a month from the date of the agreement; if to a savings bank, the payment cannot be made for three months. The note must be in the form approved by the Board of Trade. The term near relative includes wife, parents, grandparents, child, grandchild, brother or sister.

ALLOTTEE. The person to whom shares in a limited company have been allotted, in response to his application for shares based on the invitation contained in the prospectus.

ALL RIGHTS RESERVED. A phrase used to denote that the copyright in a book must not be infringed without the permission of the person possessing the copyright, otherwise proceedings will be taken against the person so infringing.

ALLROUND PRICE. Same as "*Overhead Price.*"

AMORTISATION, the method of extinguishing loans by a gradual repayment spread over a specified number of years. This is done by setting aside at stated intervals a specific sum to pay the interest on outstanding bonds, and to pay off a certain number of the bonds themselves, the bonds to be paid off being determined by the numbers drawn at the times fixed for the purpose.

ANCIENT LIGHTS. Refer to *Index.*

ANNUITY. An annual payment made during the life of an individual, or for a given time, or in perpetuity. Persons who are unable to give security frequently borrow money, in return for which they give the lender an annual payment. Again, a person who has no relatives or others whom he may wish to benefit, may desire to obtain the greatest amount of enjoyment out of what capital he possesses. In that case he will sink his capital in purchasing an annuity, either from an Insurance Company or from Government.

ANTE-DATE, to date a document before the proper time.

APPRAISER. A person who values goods and property of all kinds, repairs, labour and the like. He must take out an annual license, for which the payment is £2. For the duty on valuations refer to "Stamp Duties" in *Index.*

APPRENTICE. One who by a deed called *indentures* agrees to serve for a number of years a master who is bound to instruct him and make him a master of his craft. The master must provide his apprentice with food and clothing, failure to do which is a criminal offence. If the apprentice leaves his master without permission he may be imprisoned for fourteen days without hard labour. The apprenticeship ends on the death or bankruptcy of the master, or if he abandons his trade. It may also terminate by mutual consent, and in some cases by the misconduct of the apprentice. The master may not deduct anything from the wages of the apprentice unless the indentures permit it. [The stamp duty on the indentures is 2s. 6d.]

ARBITRAGE is the system of equalising prices in different markets by buying in the cheaper and selling in the dearer at one and the same time, chiefly in regard to stocks and shares, bullion and foreign exchanges. It is carried on between London and New York and the various Continental capitals. It frequently happens that the same stock is quoted at slightly different prices at the same time in two different places, say London and Paris. If a slightly higher price rules in Paris, the operator buys in London as much of the stock as he can, and at the same time telegraphs to his correspondent in Paris to sell the same quantity of stock. In this way, if the difference in the prices permit, the two operators contrive to make a profit after deducting the necessary expenses. If prices were higher in London than in Paris, the operator would sell in London and buy in Paris. This traffic in stocks and shares is known as "arbitrage." It manifestly tends to equalise prices, and thus to promote stability of the market.

ARBITRATION. Where a matter is in dispute between two or more persons, they may agree not to go to law about it, but to refer the dispute to some competent person for his decision. (See *Award.*)

ARBITRATION OF EXCHANGE. Sometimes a merchant finds it to his advantage to pay his debts due in one country by a bill of exchange payable in another. For example, A wants to remit money to his creditor in Paris, but owing to the fact that many others wish to do the same, the price of bills payable in Paris is slightly higher than their face value. A, however, finds that for the opposite reason the price of bills in Berlin is slightly lower than their face value. A therefore finds it cheaper to pay his debt due in Paris, by a bill payable in Berlin. This is called "arbitration of exchange," and is analogous to arbitrage in stocks and shares.

ARREARS. Money unpaid after the proper time of payment.

ARTICLES OF ASSOCIATION. The rules and regulations for carrying on the business of a limited company. They are the terms on which the shareholders agree amongst themselves as to how the business shall be carried on.

AS PER ADVICE, in accordance with a previous letter giving information or instructions.

ASSETS. The term may mean the property of a deceased or of an insolvent person, or the property of a deceased person which is available to pay his debts, or the entire property of every sort belonging to a trading concern.

ASSIGNEE. The person to whom any property or any right is assigned.

ASSIGNMENT. The transfer of any right or property. Liabilities cannot, as a rule, be assigned without the consent of the party for whom the contract is to be performed. *Land* is assigned by means of a deed known as a conveyance. *Choses in possession,* e.g., ordinary chattels and goods, can be assigned by mere delivery. *Choses of action,* that is rights to a thing, e.g., a debt, must be assigned in writing, and notice must be given to the debtor or other person from whom performance is due.

"A" STOCK, deferred stock of a railway company.

AT SIGHT. These words written on bills of exchange or promissory notes signify that they are payable on demand.

Days of grace are not allowed in the case of bills payable at sight.

ATTACHMENT. A writ of attachment authorises the seizure of a person's goods and chattels in order to compel him to comply with the wishes of the court.

ATTESTATION CLAUSE. A clause in a will or other legal document, stating that the witnesses necessary to its validity have duly witnessed the execution of the document, and appended their signatures.

ATTORNEY, POWER OF. A deed whereby one person authorises another to act on his behalf. A general power of attorney is one by which the agent has power to act for him in all matters, or in all matters of a particular business. A special power of attorney is an authority to do some particular act.

AUCTION. A public sale of property by biddings which increase the price. Where land is sold by auction, the particulars of sale should state whether the land is to be sold without reserve, or subject to a reserve price, or that a right to bid is reserved. If sold without reserve, the seller or any one on his behalf is not allowed to bid. This also applies to goods sold by auction.

AUDIT, an examination of the accounts of any concern to see if they truly represent its position.

AUDITOR. A person who examines the accounts of a business so as to ascertain its exact financial position. He must not certify what he does not believe to be true. The law now requires that the accounts of local governing bodies must be audited, as must also be the accounts of all bodies entrusted with public funds. The mere fact that an auditor certifies the accounts to be correct, and that the books have been properly kept, is no guarantee that the business has been prudently managed, or that its funds have been judiciously expended or invested. It is only in the case of local authorities that the auditor's certificate is a guarantee that the funds have not been improperly expended.

AVERAGE. In marine insurance the word average means loss. In the phrase "general average" it means (*a*) the *loss* to be borne in common by all the interests benefited by the sacrifice of some interest for the good of all, as when the masts are cut away to save the ship and the cargo, or when a part of the cargo is jettisoned to save the ship and the rest of the cargo; and (*b*) the *contribution* to be paid by each party concerned, towards making good the sacrifice incurred for the benefit of all. (Refer to "Average" in *Index.*)

AVERAGE BOND. Where the owner of a ship has incurred a loss or has been put to expense in order to save the ship and the cargo from destruction he is entitled to a contribution from the cargo-owners. This contribution is known as average: and he may enforce it by getting the consignees of the cargo to enter into a bond for the due payment of their share of the contribution when ascertained.

AVERAGE CLAUSE. In fire insurance, where a policy contains an average clause, the effect is that if the value of the property at the time of the fire exceeds the sum for which the property is insured, the owner, unless the property is totally destroyed, will only receive a fraction of the insurance money corresponding to the proportion which the sum insured bears to the value of the property. For instance property worth £4,000 is insured for £1,000 A fire causes damage to the extent of £1,800. The owner will not recover the whole of the insurance money, but only one-quarter of the loss actually incurred, that is, £450, this being the ratio which the amount for which the property is insured bears to the value of the property.

In a policy of marine insurance, the average clause states that in regard to certain commodities the underwriters will not be liable for any loss unless the loss be total, or the ship be stranded. Other commodities are free from average, that is, the underwriters will not be liable for any loss which does not amount to a certain percentage of the value of the goods insured, unless the ship be stranded, sunk or burnt.

AVERAGE, GENERAL. "All loss which arises in consequence of extraordinary sacrifices made, or expenses incurred, for the preservation of the ship and cargo, and must be borne proportionally by all who are interested." The amount of the contributions is determined by a class of men called average adjusters. See under *Shipping.*

AVERAGE, PARTICULAR. A loss which happens through an accident, as when goods are damaged by the perils of the sea, or when the masts are blown overboard. The loss falls on the person whose property has been injured, and he cannot claim contributions from the other persons who have an interest in the ship or the rest of the cargo. Of course, if he is insured, the underwriters will bear the loss when its amount has been ascertained. It is the business of an average adjuster to ascertain the amount of this loss. When a person puts in a claim for particular average, the underwriter requires him to give full details of the actual cash value of the goods in their damaged state, the policy of insurance, the bills of lading and various other matters. (See under *Shipping.*)

AVERAGE STATER OR AVERAGE ADJUSTER. A person whose business it is to settle the amount of contributions to be paid in connection with marine losses. (See *Adjustment.*)

AWARD. The decision of an arbitrator on a disputed matter which is referred to him for decision. Where the parties agree in writing to submit their dispute to arbitration, the agreement must bear a 6d. stamp, except where the matter in dispute does not exceed in value £5. The award must be in writing and must be given within three months from the time that the matter was submitted to arbitration. It must be final and unconditional on all the matters submitted, or else it is void. Where an award is partly good and partly bad, the good part will be valid if it can be separated from the bad. The arbitrator must be impartial, and must exercise all the care and skill which he can be reasonably expected to exercise, though he is not liable for want of skill or for negligence. He cannot sue for his fees, but he can withhold his award until his fees are paid. As a general rule the finding of an arbitrator is final and conclusive, and the courts will not alter or amend it, but the court will set aside an award for any of the following reasons:—

(1) If there is corruption or misconduct on the part of the arbitrator, or if he makes a mistake going to the root of the matter in dispute.

(2) If any of the parties is guilty of fraud or conceals facts, or wilfully deceives the arbitrator.

(3) If fresh facts are discovered throwing new light on the matter in dispute.

(4) If the award is uncertain or inconclusive, or is in excess of the powers conferred on the arbitrator.

Formerly the value of the stamp ranged from 3d. to £1 15s. 0d., according to the amount or value of the award. But by the Finance Act, 1906, a uniform duty of 10s. has been substituted for the *ad valorem* duty formerly chargeable. (See "Stamp Duties," p. 682.)

BACK-BOND. A deed by which the owner of property constitutes himself a trustee of the property. It may be given for a loan, and when this is paid off, the owner is restored to his former position.

BACKED NOTE, a note issued by a ship-broker authorising goods to be received from a barge and put on board ship.

BACK-FREIGHT. Where goods cannot be delivered at their port of destination owing to causes beyond the control of the ship owner, the master may carry the goods back to the place from which they were shipped, if such a course is really the best for the interests of the owner of the goods. The owner of the goods must in that case pay freight for the return voyage, which is called return freight or back-freight.

BACKING A BILL. A phrase usually but not necessarily employed with reference to accommodation bills. Where a person presents such a bill to a bill-discounter, the discounter may not put much faith in the persons whose names appear on the bill, and will, therefore, not cash it, unless some person of known solvency writes his name on the back of the bill, thereby making himself liable if the bill is not met at maturity.

BACKWARDATION. When a dealer in the Stock Exchange agrees to sell a certain quantity of stock which he does not possess, he may, if the price of the stock rises before account day, find that he will sustain a serious loss. The bargain is not really to deliver stock, but to pay the difference between the price at which he agreed to sell and the price to which the stock has risen. In the hope, therefore, that the price of the stock will fall before the next account day, he pays to the purchaser a certain rate of interest on the amount in order to be allowed to defer the delivery of stock (or rather to defer the payment of the difference). This payment of the interest is called backwardation, and is paid by the "bears." The process of deferring delivery is called "carrying over." (See *Bear.*)

BAILIFF. (1) One in charge of the management of an estate, a land-steward; (2) a legal officer who acts as the sheriff's agent in levying an execution or distraining for rent.

BAILMENT. Goods or chattels are said to be bailed, when they are delivered by one person to another for some specific purpose or object; as where goods are lent, or pawned, or deposited with a person for safe custody, or let on hire, or delivered to a carrier for the purpose of being conveyed, or where they are entrusted to a person for the purpose of having some work done to them. The person who delivers the goods is called the *bailor:* the person to whom they are delivered is called the *bailee.* The rights and liabilities of the different kinds of bailees are discussed in their appropriate places, under the headings of Carriers, Innkeepers, Pawnbrokers, and Warehousemen or Wharfingers. It may, however, be said that where goods have been deposited for safe custody with a person who receives no reward for his services, such person will be liable only for damage arising from his gross negligence or wilful misconduct. In the case of a hirer he must take reasonable care of the thing hired, and will be liable for ordinary negligence but not for unavoidable accident.

BALANCE OF TRADE. A phrase which denotes the difference between the value of the imports and the exports of a country. The balance is said to be against a country when the imports exceed the exports, for then the country is supposed to be owing more to other countries than is due from those countries to it. The

country is, as it were, in the position of a debtor, and if the balance of trade persist in remaining against that country, it would, if this theory were true, be on the verge of bankruptcy.

That this is not the case may be seen from the position of England. For years the value of the imports into the United Kingdom have very greatly exceeded the value of the exports, and yet this country is very far from being impoverished. The explanation lies in the fact that the exports of a country really pay for its foreign liabilities, and if the imports exceed the exports, the reason is that other countries owe more to it than it owes to foreign countries. This is the position of England. On account of the large amounts of English capital invested abroad, large sums of money in the shape of interest and dividends are due to this country. Again, most of the sea-borne trade of the world is carried by British ships, and so a large amount of money is due to England for freight. It must be remembered, too, that foreign loans are contracted through the agency of London Banks, and the work done by them in this connection must be paid for.

What the balance of trade chiefly affects is the foreign exchanges, i.e., the rate at which foreign bills of exchange can be bought and sold in this country. If more money is due to a country than is owing by it, the price in that country of bills payable abroad will be slightly less than their face value. Such bills are said to be at a discount. If, on the other hand, merchants of a country have to remit more money abroad than is due to them from foreign countries, the price of foreign bills will be slightly higher than their face value, and they are then said to be at a premium. (See *Bill Broker.*)

BALANCE SHEET. A document showing the accounts of a business. It is the same as a statement of affairs, with this difference, that it is the result of the books being balanced. A proper balance sheet should show

1. On the Dr. side: (1) Capital of the business. (2) The debts and liabilities. (3) The reserve fund set aside to meet contingencies. (4) The profit and loss.
2. On the Cr. side: (1) The property owned by the business, stock in trade, plant, buildings, etc. (2) The debts owing to the business. (3) The cash and investments (if any).

BALANCING BOOKS. The reckoning up of the accounts in the ledger for the purpose of seeing how a business stands, and of ascertaining the gain made or the loss sustained in a given period.

BANKS AND BANKING. See *Index.*

BANK BILL. A bill of exchange drawn by one bank on another bank.

BANK CREDIT. The credit given by a bank to a person, who gives security to the bank. The bank allows the person to draw on it up to a certain amount agreed upon. If the person does not repay the loan, the bank may realise the security, or have recourse to the person (if any) who has agreed to become responsible for the loan.

BANK OF DEPOSIT. A bank which receives money and pays interest on it, on condition that the money cannot be withdrawn without notice.

BANK OF ISSUE. A bank that issues its own notes.

BANK HOLIDAYS. In England and Ireland they are Easter Monday, Whit Monday, the first Monday in August and Boxing Day, the 26th December, but if Boxing Day falls on a Sunday, the following Monday. In Scotland, the Bank Holidays are New Year's Day, Good Friday, the first Monday in May and in August, Christmas Day. If New Year's Day or Christmas Day falls on a Sunday, then the Monday following is a bank holiday. In addition to these, other days may be appointed by royal proclamation as bank holidays.

BANK, JOINT STOCK. A bank, of which the capital is subscribed by the shareholders, who are members of a company, usually, but not necessarily, with limited liability. If a joint stock bank has the power to issue notes, the liability of the shareholders in respect to such notes is unlimited. (Refer to "Banks, Joint Stock" in *Index.*)

BANK NOTES. Bank notes are promissory notes issued by a bank, payable to bearer on demand. They differ from ordinary promissory notes, in that after being met, they may be re-issued, a practice very common with Scotch and Irish Banks, but not with the Bank of England, which never re-issues notes once they have been returned to it. Bank notes of less than £5 cannot be issued or circulated in England, though Scotland and Ireland seem to thrive on one-pound notes. Bank of England notes are legal tender for all sums above £5, except by the bank itself or its branches. This means that debts may be lawfully discharged by the payment of Bank of England notes, and if a creditor refuses them and afterwards sues the debtor, he will probably lose the costs of his action; but the Bank itself cannot compel its creditors to accept its notes in discharge of its liabilities. Notes of the Bank of England are exactly on the same footing as coined money. Notes of other banks are not legal tender, but they are good tender if not objected to at the time of tender.

People in sending notes through the post often, for the sake of security, cut them in half, sending on one half first, and then the second half. The property in the whole note remains in the sender until he sends on the second half, and if he changes his mind and refuses to post the second half, he can recover the first half back. If a note is lost, the bank cannot be compelled to pay it unless an indemnity is given.

Bank notes are negotiable instruments, and therefore whoever takes them in good faith and gives value for them becomes the absolute owner of them, even if the person transferring them is not the owner. If notes are lost or stolen, and the finder or the thief pays them away say to a shopkeeper, in order to discharge a debt, and the shopkeeper takes the notes in good faith not knowing they were lost or stolen, such shopkeeper becomes their owner, and the bank cannot refuse to cash the notes for him.

BANK PAPER, bills accepted or endorsed by a bank (same as "*Bank Bills*").

BANK POST BILL. A bill of exchange which can be purchased from a bank, for the purpose of remitting money to a distance. The bank is itself the acceptor of the bill, which is usually payable so many days after sight; in the case of Bank of England post bills, the period is seven days. It is said that no days of grace are allowed. The following is an example of such a bill.

"Union Bank Post Bill."

London, 1*st October*, 1904.

No.——

At seven days after sight, I promise to pay this my Sola Bill of Exchange to John Green, or order, the sum of one hundred and fifty pounds, value received of William Brown.

A. B.———

Director of the Union Bank of England.

£150.

In this example, William Brown wished to remit £150 to John Green. He therefore deposited that sum with the Union Bank, and received in return the bill payable by the bank to John Green. Of course, if William Brown had an account at the Union Bank, he would simply have drawn a cheque on the bank, and post-dated it. The word "sola" means that the bill is single, and is not one of a "set."

BANK, PRIVATE. A private bank is a bank carried on either by a single owner, or by several persons, not exceeding ten in number, forming an ordinary partnership. Most of the old private banks have been amalgamated with modern joint stock banks.

BANK RATE. This is the advertised minimum rate per cent. of discount charged by the Bank of England. (Refer to "Bank Rate" in *Index.*)

BANK RETURN. A report issued weekly by the Bank of England, showing its financial condition. (Refer to "Bank Return" in *Index.*)

BANK STOCK. The capital of a bank.

BANKER'S CHEQUES. A banker's cheque is a cheque drawn by one bank on another bank.

BANKRUPT. A person who is insolvent, that is, unable to pay his debts in the ordinary course of business, or as they become due. Strictly speaking, the term should only be applied to an insolvent debtor who has been adjudged bankrupt by the court.

BANKRUPTCY. Refer to *Index.*

BARGAIN AND SALE. The phrase is by legal usage restricted to contracts for the sale of lands, though there is no reason why the phrase should not be applied to contracts for the sale of goods or other personal property.

BARRATRY. The term comes from an Italian word signifying to cheat. Common barratry consists in *habitually* stirring up or maintaining quarrels or law suits, or in continually disturbing the peace by brawls, or in taking or detaining possession of property the right to which is in dispute. Habitually breeding discord between neighbours is also barratry. It is a crime punishable with fine or imprisonment. A common barrator may also be required to find sureties for good behaviour.

In marine insurance and in contracts relating to shipping generally, the term barratry means any fraud or knavery or wilful wrong-doing on the part of the master or the crew, by which the interests of the owners of the ship or cargo are injured, e.g., scuttling the ship, or abandoning it without just cause, pilfering the cargo and the like. In contracts of sea-carriage, the ship owner is liable to the owners of the cargo if any loss happens to their property from this cause, unless the ship owner expressly inserts in the contract a clause exempting himself from this liability. (See *Bill of Lading* and *Charter Party.*)

BEAR. A stock exchange dealer, who, having agreed to deliver stock *which he does not possess*, at a certain price, hopes that the price will fall before the next account, for then he will be able to buy the stock at the lower price and sell it at the agreed price, thereby making a profit. As the contract is frequently not one to deliver stock, but to pay "difference," the seller would in this case receive from the purchaser the difference between the actual price and the agreed price. Had the stock risen in price, the seller would have had to purchase the stock and deliver it at the agreed price which is lower, or to pay the difference in price to the purchaser. It is therefore to the interest of a person who has agreed to deliver at a certain price stock which he does not possess, that the

stocks should fall. Hence he is called a "bear," because he endeavours to pull down prices. (See *Backwardation* and *Bull*.)

BEAR ACCOUNT. Where a "bear account" exists in any stock, the amount of stock sold for the settlement is greater than the sellers are able to deliver, and if the bear is not able to find the stock which he has agreed to deliver, he may have to pay "backwardation" so as to be allowed to "carry over" to the next account, in other words, he may have to pay interest for postponing delivery of the stock.

BEARER BOND. A bond for the repayment of money borrowed. The ownership of it can be transferred by simple delivery, and the bearer or holder of the bond becomes entitled to the payment of the interest and the principal guaranteed by the bond.

BELOW PAR. When the nominal or par value as it is called of shares exceeds their selling price, the shares are said to be at a discount or below par.

BENEFICIAL INTEREST, an interest giving a person the right to enjoy property or to derive some benefit from it, in cases where such person may not be the legal owner of the property, e.g. a mortgagor has a beneficial interest in the property mortgaged, though in law he is not the owner, the legal ownership being vested in the mortgagee.

BEQUEST the name given to personal property, such as goods and chattels, and leaseholds bestowed by will on a person.

BILL BOOK. In practice, bill books are merely used as memorandum books, and do not form part of the book-keeping system of a firm. They contain information of the bills of exchange payable to the firm (bills receivable), and of the bills payable by the firm, bills which they have to meet. The following items are entered · (1) Date of the bill and the length of time it has to run. (2) Name of the acceptor (if it is a bill receivable) and the name of the drawer (if it is a bill payable). (3) Amount of bill and where payable. (4) Date when it becomes due.

BILL BROKER. A person whose business it is to buy and to sell bills of exchange. Those who wish to remit money to a foreign country purchase from the broker bills payable in that country, the broker having previously purchased the bills from persons who have to receive money from the country in question. Should it happen that it is necessary to remit more money to a country than is to be received from it, the price which the broker will charge for bills on that country will be slightly higher than their face value, because more bills are wanted than are in the market, and the bills are then said to be at a premium. If, on the other hand, there is to be received from a country more money than has to be remitted, the price charged will be slightly less than the face value of the bills, which are then said to be at a discount. The price, however, cannot rise above or fall below a certain point called the "specie point." If the price of bills went too high, persons wishing to remit money would not buy the bills, they would send specie (gold or silver) instead. If the price of the bills fell too low, they would not sell bills to the broker, they would prefer to wait and have the specie transmitted to them. The specie point is therefore determined by the cost of transmitting gold, and the expense of insuring it in transit.

N.B.—Bill brokers must not be confused with bill discounters, that is, persons who cash bills (less discount) and hold the bills until they mature, when they receive an amount corresponding to the face value of the bill.

BILL OF CREDIT. A letter frequently termed a "letter of credit" written to a person requesting him to advance to a third person named therein, money up to a certain amount. The person making the request undertakes to re-imburse the person making the advance. (See *Circular Note.*)

BILL OF ENTRY. A certificate delivered to the Customs authorities by merchants who are exporting or importing goods, giving particulars of the nature, amount and value of the goods, and the port or place to which the goods are to be exported, or from which they have been imported. When this certificate has been signed by the collector of customs, the goods can then be shipped or unloaded, as the case may be. Goods exported are "entered outwards," goods imported are "entered inwards" (See also *Bill of Sight.*)

BILL OF EXCHANGE. A bill of exchange is a written order addressed by one person to another requesting him to pay to a specified person or bearer a sum certain at a specified time. (Refer to "Bills of Exchange" in *Index.*)

BILL OF HEALTH. A document given to the master of a ship by the authorities of the port from which the ship comes. It describes the health and sanitary conditions of the port, and according as there is no contagious or infectious disease existing or is feared to exist, or is actually existing at the time of the ship's departure, the bill is clean, suspected or foul. If the bill is clean, the passengers and goods are not quarantined, but if the bill is suspected or is foul, they may be subjected to quarantine. (Refer to "Ship's Papers" in *Index.*)

BILL OF LADING. A document which is given by the master or the ship's agent stating that the goods sent by a consignor have been received on board ship, and the terms on which the goods will be carried. It also serves as a document of title to the goods. (Refer to "Bill of Lading" in *Index.*)

BILL OF PARCELS. An account given by the seller to the buyer, containing particulars of the goods bought and their price.

BILL OF SALE. A grant by deed, by which the ownership of personal chattels, but not the possession thereof, is transferred from one person to another. (Refer to "Bills of Sale" in *Index.*)

BILL OF SIGHT. When the importer of goods is not able for want of information to make a perfect entry of the goods, i.e., to fill up a bill of entry, he signs a document called a bill of sight, giving the best description of the goods that he can. The goods are then allowed to be landed, but before they can be actually delivered to the importer a perfect entry must be made.

BILL OF STORE. When goods of British origin have been exported and are afterwards re-imported within five years of exportation, they are entered by a bill of store, which gives full particulars regarding them. This document permits them to be landed free of duty, though they would be liable to duty if of foreign origin.

BILL OF SUFFERANCE. A permit authorising coasting vessels to trade from one English port to another without paying customs dues, even though there are dutiable articles on board. Of course, these goods cannot be landed until the duty is paid, unless they are stored in a bonded warehouse.

BILL, VICTUALLING. Goods carried on board ship for the necessary purposes of the voyage are exempted from customs due, by means of a permit called the victualling bill.

BIMETALLISM. The system of currency in which there are two metals gold and silver, which are both standards of value and both legal tender, and in which the values of the two metals are settled in a fixed ratio one to another. The advocates of this system say that if a bimetallic currency were established, there would be a greater stability in prices. The great difficulty, however, is in determining the relative value to be given to gold and silver. At the present time (1906) pure gold is about thirty-seven times the value of silver, but the supporters of the bimetallic theory would not adopt this proportion. Even suppose they did, and a bimetallic currency were to be established, there is no guarantee that the two metals would remain fixed in value. There might be discovered enormously rich gold mines. The supply of gold might be so great, that gold would fall greatly in value and yet in a bimetallic currency, provision could not be made for this. Suppose a bimetallic currency were established, and that one gold piece should be equal in value to thirty-two silver pieces, each of the same weight. In process of time it might happen that owing to a diminution in the supply from the mines, gold would become more valuable, say that as bullion, one piece of gold would be equal to forty pieces of silver. What would happen is that people would refuse to bring gold to the mint to be coined, because as coin it would be worth less in silver than as bullion. For the same reason, people would melt down their gold coin into bullion, because in the shape of bullion it would buy more silver than it would as coin, and as bullion exchange it in the open market for silver. Then they would bring the silver to the mint to be coined. And as under a bimetallic system both metals would be legal tender, every debtor would pay his debts in silver, the cheaper metal. Thus the bimetallic currency would become practically a mono-metallic currency.

BLACK LIST. A list of persons against whom it is necessary to warn the public, because their credit is so bad that it is unwise to enter into contracts with them. Such lists are published by the various trade protection agencies to their subscribers for their private information, in order to protect them from the risk of bad debts. The list contains the names of persons who are bankrupt, or have suspended payment, or who have raised money on their goods and chattels by means of bills of sale, or who have a number of unsatisfied County Court judgments against them.

BLANK ACCEPTANCE. Where a person affixes his signature to a stamped bill as acceptor without mentioning the amount for which it is drawn. The drawer can afterwards fill up the bill for any amount that the stamp will cover.

BLANK INDORSEMENT. Where a person indorses his name on a bill of exchange or a bill of lading or other document, without inserting the name of the person to whom the document is given. A bill of exchange indorsed in blank is payable to bearer. (See under *Bills of Exchange.*)

BLANK TRANSFER. A document transferring the stock or shares in a Company without the name of the transferee being filled in. It is resorted to when the holder of the shares wishes to raise money on them, and it empowers the lender to deal with them as he thinks fit, in case the money is not repaid. The borrower remains on the list of shareholders until the lender realises them, to do which, he, the lender, must have his name entered on the register of shareholders. A blank

transfer cannot be by deed, for a deed that does not specify both the name of the transferor and the transferee of the shares is void.

BOARD OF TRADE. The Board of Trade was originally, and still is in theory, a committee of the Privy Council, for the consideration of all matters relating to trade and foreign plantations. Its work was at first to give information and advice to the other government departments when they required it in matters of trade. It also collected and revised statistics relating to trade. The name "Board of Trade" was first officially recognised in the Harbour Transfer Act, 1862. Since 1872, the Board of Trade has become almost purely administrative, regulating and supervising all matters concerning the mercantile marine, trade, navigation, railways, bankruptcy, the registration and the winding up of companies, patents, copyright and trade marks. The work of the Board is conducted through the following departments:—

1. Marine. This department administers the Mercantile Shipping list which deals with the engagement and discharge of seamen, the examination of masters, mates and engineers, regulations for the health of the crews, survey of ships, inquiries into wrecks, and into misconduct of officers and engineers.

2. Statistical, Commercial and Labour. The duty of this department is to supply other offices with information when asked. It prepares returns relating to shipping and navigation, and compiles statistics relating to railways, emigration, and labour, particularly with regard to the state of the labour market, the hours of labour, wages, the condition of the workers, trades unions and strikes and the price of commodities. It edits the Board of Trade Journal, dealing with information likely to be useful to business men. This department administers the Conciliation Act, which was passed for the purpose of settling and of preventing disputes between employers and employed.

3. Railway. This department inspects railways and tramways before they are opened for traffic, and inquires into accidents when they occur. It reports on tolls and rates proposed in railway and dock bills. Bye-laws of railway and tramway companies have to obtain its approval; and it has power to revise the maximum rates charged by railways for goods traffic. In regard to electric lighting it has power to make rules for the protection of the public. It supervises the registration of Joint Stock Companies, and deals with copyright, trade marks and patents.

4. Bankruptcy. The head of this department is the Inspector-General in Bankruptcy. Its work is to see that trustees and liquidators who administer bankrupt estates, or who deal with the winding up of companies, discharge their duties honestly and efficiently.

5. Finance. This department deals with the accounts of lighthouses, of the superintendents of marine offices and of receivers of wrecks. It administers the merchant seaman's fund, seamen's savings banks, seamen's money orders, wages and effects of deceased seamen, and relief to distressed seamen, etc. It examines the accounts of Life Insurance Offices and lays them before Parliament.

All moneys produced by the realisation of bankrupt estates and the compulsory liquidation of limited companies are in the custody of this department.

6. The Harbour and Fisheries Department have the care of the foreshores belonging to the Crown, and see that no injury is done to navigable harbours and channels; the registration of British Ships and the preservation of fisheries are also in their hands.

BONA FIDE. In good faith, without fraud, deceit or non-disclosure of the truth.

BOND. A bond is a writing signed and sealed by a person who is called the obligor, by which he acknowledges that he owes a certain sum of money to another, or that he is bound to do some act for the benefit of that other, who is called the obligee.

A bond usually contains a condition that if the obligor pays so much money, or does a specified act, the contract will be void. The condition is that if the debtor performs the specified act or pays the creditor on a given day a sum of money (usually half the amount which he acknowledges that he owes, and which is called the penalty), the bond shall be void, and the debtor be released from his obligation. The law will not, however, compel the payment of the whole penalty, on failure of the debtor to perform the condition. All that the creditor can recover is the amount really owing; and if the arrears of interest, together with the money actually borrowed, exceed the penalty, then in that case the creditor can recover the amount of the penalty only.

Where a person gives his bond not to do a certain thing under a penalty, he will not be allowed to do the thing and pay the penalty. The Court may not only compel him to pay the penalty, but will issue an injunction to restrain him from doing the act which he undertook not to do. Thus where a bank manager gave a bond to his employer that he would not under a penalty of £1,000 enter the service of any rival bank in the same district within two years after leaving his service, it was held that the bank manager could not by paying the £1,000 to his employer claim the liberty of entering the service of a rival bank. And as he had become engaged to another employer, the Court compelled the bank manager to quit his service.

Money due under a bond can be recovered within twenty years after it has become due, whereas in the case of simple contract debts, the right to recover is barred at the end of six years from the last acknowledgment in writing of the debt, or the last payment of any portion of the principal or interest.

The following is an example of a common money bond for the repayment of £1,000:—

"**Know All Men** by these presents that I, William Brown, of 409 Cheapside, in the City of London, am bound to Henry Green, of 761 Wallbrook, in the City of London, in the sum of two thousand pounds, to be paid to the said Henry Green, his executors, administrators or assigns, or to his or their attorney or attorneys, for which payment I bind myself, my heirs, executors and administrators by these presents. Sealed with my seal.

Dated this 1st day of October, 1904.

Signed, sealed and delivered by the said William Brown in the presence of
Thomas Jones,
628 Cheapside, City of London.
Merchant."

Now the Condition of the above-written bond is such that if the above-bounden William Brown, his heirs, executors, or administrators should on the 1st day of March, 1905, pay to the above-named Henry Green, his heirs, executors, administrators, or assigns the sum of one thousand pounds with interest for the same, from the date of the above-written bond at the rate of four per cent. per annum, without any deduction. Then the above-written bond shall be void, otherwise the same shall remain in full force and virtue.

Bonds for the repayment of money are stamped as follows:—

	£	s.	d.
Not exceeding £10	0	0	3
„ £25	0	0	8
„ £50	0	1	3
„ £100	0	2	6
„ £150	0	3	9
„ £200	0	5	0
„ £250	0	6	3
„ £300	0	7	6
Exceeding £300, then for every £100 or part of £100 ..	0	2	6

BONDED DEBT. The money owing by a corporation for the repayment of which it has given bonds.

BONDED GOODS. Goods liable to duty are not required to pay the duty so long as they are not intended to pass into the hands of the consumer. Until such time they are stored in bonded warehouses, which are under the control of Customs or Excise Officers, and cannot be removed until the duty has been paid, unless they are removed for exportation. These goods are "in bond" because the owners enter into a bond for the payment of the duty when the goods are removed for consumption.

BONDED WAREHOUSE. A building where dutiable goods can be stored free of duty, until removed for consumption, when the duty on them is paid. The warehouse is under the absolute control of revenue officers, whose duty it is to see that the taxes on the goods are paid before they are removed for consumption.

In order to obtain permission to keep a bonded warehouse, a person must satisfy the Customs Authorities that the warehouse is necessary for the locality, and must enter into a bond for the proper keeping of the warehouse. After the permission has been obtained, the revenue officers have charge of the warehouse, and no goods can be removed or dealt with in any way except by the permission and in the presence of these officers.

BOND NOTE. A permit to remove goods from a bonded store for exportation, or for removal from one store to another.

BOOK DEBTS. Debts due to a trader in the ordinary course of his business, and which are entered in his account books. These debts can be assigned, but the assignment must be in writing, the assignee must give consideration or value for the debt being assigned to him, and notice of the assignment must be given to the debtor. If notice is not given to the debtor, he may pay the debt to the original creditor, and in that case the assignee can not make him pay over again. Any defence which the debtor may have to the creditor's claim will be equally good against the assignee of the creditor. If a trader becomes bankrupt, his book debts can be claimed on behalf of his creditors, unless prior to the bankruptcy he had validly assigned them to another.

BOTTOM. In commercial language the term bottom signifies a ship.

BOTTOMRY BOND. "A contract by which in consideration of a loan of money advanced for the necessities of a ship to enable it to proceed on its voyage, the ship is made liable for the repayment of the money in the event of the safe arrival of the ship at its destination." (Refer to "Bottomry Bond" in *Index*.)

BOUGHT DAY BOOK, the book in which credit purchases are entered from day to day.

BOUGHT NOTES AND SOLD NOTES. Notes exchanged between two merchants, embodying the terms of a contract of sale entered into between them. The bought

note (bought of you) is given to the seller the sold note (sold to you) is given to the buyer; but where a broker is employed, the bought note is given to the buyer, and the sold note to the seller. (See *Broker's Contract Notes.*)

BOUNTIES. When the government of a country wishes to foster the manufacture and export of goods, it sometimes pays money to the manufacturers or the exporters, so as to enable them to sell their commodities cheaply to foreign customers, and thus undersell their foreign rivals. These payments are called bounties, and are paid according to the quantities exported.

BOURSE. An exchange where merchants meet for business, but the term is most commonly applied to the Stock Exchange.

BRAND, a mark indicating the quality of goods, or the manufacturer by whom they are made.

BRITISH SHIP is a ship which is registered as such, and which is entirely owned by British subjects, unless registered as the property of a limited company. (See under *Shipping.*)

BROKER. A broker is "an agent employed to make bargains in matters of trade or navigation, for other people in return for a compensation called brokerage." He is in short a mercantile agent. A broker is not in possession of the goods which are the subject of the contract. He cannot as a rule buy or sell in his own name, when acting for other people, and he is not liable to be sued on the contract which he enters into on behalf of others, unless he appears on the contract to be a principal. When a broker makes a contract for others, he enters the terms of the contract in his own book, and then sends a copy of the entry to both parties. The bought note (bought for you) is sent to the buyer, the sold note (sold for you), is sent to the seller. These notes should be identical in terms, otherwise there may be no contract at all, especially, as often happens, when the broker has not entered the terms in his book.

Insurance Brokers are employed to effect policies of insurance. The underwriter is paid the premium by them, and they in turn look to the insured for the premium. He receives the policy of insurance from the underwriter, and it is his duty to see that the policy is drawn up. He must use all diligence in obtaining adjustment and recovering the loss for the insured. If the broker pays the full loss to the insured, not knowing one of the underwriters to be bankrupt, he is prevented by trade custom from recovering it back.

A Ship Broker is employed to effect the charter of a ship. He is usually paid a commission of five per cent. on the freight by the ship-owner. (Refer to "Charter Party" in *Index.*)

A broker must act in accordance with his instructions, else he will lose his right to brokerage. If he makes any secret profits over and above the agreed remuneration, he can be compelled to hand them over to his principal.

BROKERAGE. The payment made to a broker for carrying out the sale or the purchase of property.

BROKER'S CONTRACT NOTES. The records of a transaction which a broker sends to his principal. The bought note (bought for you) is sent to the buyer, the sold note (sold for you) to the seller. Both notes are identical in terms. Where the notes refer to the sale of stock or other securities from the value of £5 to £100, they must bear a penny stamp, over £100 the stamp is a shilling. The penalty for not stamping or for not transmitting the notes is £20. If the broker transmits an unstamped note he cannot recover his commission, but if he transmit no note at all, he can recover his commission.

Contract notes for the sale of goods do not require a stamp, but contract notes for the sale or purchase of stock or marketable securities must be stamped as follows:

When the stock is of the value	£	s.	d.
of £5 and under the value of £100 .. the stamp—	0	0	1
When the value exceeds £100 the stamp—	0	1	0

The stamps used are adhesive, and when the stamp is one shilling, a **Special Stamp** used only for contract notes must be purchased. The penalty for evading this duty is £20; and if a broker transmits an unstamped contract note, he forfeits his right to brokerage.

BROKER'S ORDER, the same as "*Backed Note.*"

BROKER'S RETURNS, lists supplied to ship brokers showing all the goods which have been received as cargo on board ship. These lists afford proof as to whether the goods have been received on board or not, and are available where a mate's receipt has not been given.

"B" STOCK, a name given to the preference stock of certain railway companies.

BUCKET SHOP. A name given to the offices of brokers who are not members of the Stock Exchange. These outside brokers are not allowed to carry out the sale or the purchase of stocks and shares. For this purpose they must employ brokers who are members of the "House," a name given to the Stock Exchange.

BUILDING SOCIETIES. A building society advances to its members loans for the purpose of acquiring houses, or of acquiring land for building purposes. In return for the loan, the house or land so acquired is mortgaged to the society. When the loan is repaid, the house becomes the absolute property of the member. The fund out of which the society grants the loans is provided by the subscription of the members themselves. The members may be *investing* members, who merely pay subscriptions to the society, receiving interest on their subscriptions; or they may be *borrowing* members, who obtain from the society loans on mortgage.

Building Societies are of two kinds—Terminating and Permanent.

1. In a terminating society each member takes a share, for which he usually pays by instalments. Out of the fund thus provided, loans are made to the members up to the value of the share. The members ballot among themselves as to the order in which each shall obtain his loan, and when he receives his advance he mortgages to the society the property which he has purchased with the loan, as a security that he will pay all the instalments. When the last member receives his share, by which time all the instalments due by him and the other members will have been paid, the society terminates.

2. In a permanent society, which may last for an indefinite time, the members take shares for which they can pay either in a lump sum or by instalments, receiving interest on their payments. Advances are made to members on mortgage of the property purchased with the advance. These loans are paid off by instalments which cover both principal and interest. (Refer to "Building Societies" in *Index.*)

BULL. A person who agrees to buy at a certain price stocks and shares *which he does not want,* in the hope that before the account the price will rise. The seller will then have to buy them at the higher price and sell them at the lower, and as the contract is usually a contract to pay differences, he, instead of delivering the stock, pays the difference to the purchaser, who thus makes a profit. It is therefore to the interest of "bulls" that the price of stocks should rise, and their energies are directed towards keeping up prices. (See *Bear, Backwardation* and *Contango.*)

BULL ACCOUNT. Where buyers have bought more stock for the settlement than they are able to take up, they pay interest to be allowed to postpone the taking up of the stock until the next account. This payment made by the "bulls" for carrying over is called contango.

BULLION. Uncoined gold and silver; the precious metals viewed solely as merchandise and not as money.

BUREAU DE CHANGE. A money-changer's place of business.

BUYERS OVER, a phrase indicating that in a given market there are no sellers, or that there are more buyers than sellers.

BUYING IN. When a seller does not deliver the stock to a purchaser at the appointed time, the purchaser may buy the stock in the market and charge any extra expenses incurred to the seller. Usually certain "days of grace" are allowed the seller in which to make delivery, and if at the end of this period delivery has not been made, the purchaser may instruct the officials of the Buying-in and Selling-out Department to buy the stock for him, any extra expense incurred being charged to the seller.

BYE-LAWS. Originally the word bye-law meant a law made by the local authority for the regulation of a town. Now-a-days it means any law, rule or regulation affecting the public, made by any corporation or company in pursuance of powers conferred by Act of Parliament. These bye-laws must not contravene the law of the land, and in making them the corporation or the company must not exceed the powers conferred on it by Parliament.

CALL MONEY, a money-market term to signify loans made by a bank to bill-brokers and others, repayable on demand.

CALLS. 1. The instalments by which the capital of a limited company is paid up. Usually the shares are issued on the terms that so much of the value of the shares shall be paid on allotment, the remainder to be paid by instalments at stated intervals, or when the directors shall think fit. It is the payments made when "called for" by the directors that are termed calls.

2. In stock exchange transactions, a "call" gives one dealer the option of calling or buying from another a certain amount of securities or shares at a fixed price within a certain period. For this option of buying or not as he thinks fit, he pays a price agreed upon between the parties. (See *Options.*)

CALLED BOND. See *Drawn Bond.*

CALL OPTION. See *Options.*

CAMBIST. A money-changer; a person who buys and sells bills of exchange.

CAPITAL. Capital is defined by Adam Smith as "that part of a man's stock which he expects to afford him a revenue." Another view is that capital is wealth in process of exchange, before it reaches the hands of the consumer. Thus the loaf which a family eats is not capital, but the same loaf in the baker's shop forms part of the baker's capital, because out of the sale of it he expects to make a profit. Again, the jewels which a lady wears cannot be said to be capital, but the jewels in a jeweller's shop are capital. Whether wealth is or is not capital depends on the use to which it is put. If wealth is intended for consumption it is not capital, but if it is employed for the purpose of making a profit it is capital. The true

functions of capital in an economic sense are to assist the labourer with tools and materials, and to enable the capitalist to accumulate a stock which he can dispose of at a time when it is most convenient to him. Viewed in this light, it will be seen that the functions of capital is not to maintain the labourer; in short, wages are not paid out of capital, but out of the product which the labourer has himself been employed to make.

Capital is sometimes described as being either fixed capital or circulating capital. Fixed capital is in a more or less permanent form, and it means such wealth as is not exhausted by a single act of production, e.g., buildings, machinery, railways, and the like. Circulating capital consists of such things as raw materials which have not reached their final stage, and which are intended to be worked up into new forms. The distinction, though somewhat convenient, is based on an erroneous idea, and has led to many wrong conclusions in the theory of the production and the distribution of wealth.

In commerce, capital is regarded as the entire property of a business undertaking which is devoted to the carrying on of its affairs for the purpose of earning profits and of liquidating its liabilities. In a Limited Company, the capital is that sum subscribed by the shareholders for carrying on the undertaking. The sum authorised to be raised by the Memorandum of Association of a limited company is called the "nominal" or "authorised" or "registered" capital of the company. The sum actually subscribed in return for the allotment of the shares is called the "subscribed" capital, and is frequently far smaller in amount than the authorised capital. The portion unpaid is called the "unpaid" or "uncalled" capital, and may afterwards be demanded in the shape of "calls" from the shareholders, either for the purpose of carrying on the business or for the purpose of liquidating the liabilities of the company.

CAPITAL ACCOUNT. The account which in great industrial undertakings, like railways, deals with the capital provided for carrying on the undertaking. It is kept quite separate from the revenue account, which deals with the earnings of the enterprise.

CAPITAL STOCK, the share capital contributed by the shareholders of a limited company.

CARRIER. A common carrier is one who carries goods as his regular business, and who holds himself out as ready and willing to do so for any person who may wish to engage him. (For his liabilities refer in *Index* to "Common Carrier," "Ship-Owner as Carrier," and "Railway Company as Carrier.")

CARRYING OVER. When a person has agreed to sell at a stated price stock which he does not possess, he may find it inconvenient to deliver the stock on settling day. He accordingly pays interest on the amount of stock which he agreed to deliver in order to be allowed to defer the delivery to the next settlement. This payment is called backwardation, and the process of deferring delivery is called "carrying over." Similarly when a dealer has agreed to buy at a stated price stock which he does not want, he makes a payment called contango, in order to be allowed to defer acceptance of the stock until the next settlement; in other words to have his account "carried over" until the next account day. (See *Backwardation* and *Contango.*)

CART NOTE. When dutiable goods which are not intended for immediate consumption in the country itself, or are intended for exportation, are carried from one bonded warehouse to another, or from the bonded warehouse to the docks for shipment abroad, they must be carried in bonded carts, so that they may not be tampered with. Permission to carry them in this way is given by a document called a cart note.

CASE OF NEED. Sometimes a drawer or an indorser may insert in a bill of exchange the name of a person to whom the holder of the bill may resort in case of need, i.e., if the bill is dishonoured by non-acceptance or non-payment. Such person, who is called the referee, in case of need will meet the bill if it is dishonoured. The holder may resort to him or not, as he thinks fit.

CASH. Strictly speaking, the term cash means coined money or any other medium which is legal tender, such as Bank of England notes; but the term is frequently used with reference to things which can be readily converted into money, e.g., bank notes, cheques, bills of exchange, exchequer bills, and the like.

CASH ACCOUNT. An account in which all the cash received is entered on the debit side, and all the cash paid out is entered on the credit side. When the debit side exceeds the credit, there is a balance of cash in hand; when the credit side exceeds the debit, there is a deficiency of cash.

CASH BOOK. Where a cash account is not kept, the Cash Book is used instead and serves precisely the same functions. The Cash Book and not the Cash Account is adopted in modern book-keeping. A petty cash book is kept for small payments, the totals of which are afterwards entered in the Cash Book.

CASH CREDIT. See *Bank Credit.*

CASTING VOTE. A vote given by a chairman of a public meeting, when the meeting is equally divided, so that a decision may be made one way or another. It is usual to confer this power on a chairman, otherwise he would not be entitled to a casting vote in addition to his ordinary vote.

CAVEAT EMPTOR. See under *Sale.*

CERTIFICATED BANKRUPT. A bankrupt who has obtained his discharge.

CERTIFIED CHEQUE OR MARKED CHEQUE. A cheque recognised by a banker and marked by him, that it is a valid cheque, and will be paid on presentation. Where a banker certifies a cheque, he is bound to meet it, and the drawer of the cheque is no longer liable in it, after it has been certified at the request of the holder. Most of the legal decisions on marked cheques are American, for in that part of the world they are frequently met with, but in this country the practice of certifying cheques is seldom resorted to.

CERTIFICATE OF INCORPORATION. A certificate granted by the Registrar of Joint Stock Companies, showing that a company has been duly registered.

CERTIFICATE OF ORIGIN. A document showing the place of origin of goods, where they have grown or have been manufactured.

CERTIFIED TRANSFER. See *Marked Transfer.*

CHAMBER OF COMMERCE. An association of merchants, manufacturers, financiers and others engaged in mercantile pursuits for the purpose of promoting and fostering trade interests in general, and the commercial interests of its own district in particular. For this purpose these associations collect information relating to all matters affecting trade and discuss such measures as are likely to promote their interests. Legislative measures tending to affect commercial interests are keenly debated, and united action is taken regarding them, either by petitioning Parliament, or by putting pressure on private members. In addition, they play an important part in trade and labour disputes.

For the most part, chambers of commerce have sprung into existence during the past fifty or sixty years; but several were founded during the last quarter of the 18th century, the earliest being that of Glasgow, founded in 1782, followed at short intervals by Dublin, Manchester, Belfast and Birmingham. The Liverpool Chamber of Commerce was founded in 1851, that of London being the latest, 1881. There are now over 100 in the United Kingdom, ten of which are in Scotland and ten in Ireland. Two or three of these bodies, notably that of Glasgow, are incorporated under Royal Charter, but the greater number are incorporated under the Companies' Acts, and as they are not formed for purposes of gain, they are entitled by a license from the Board of Trade to omit the word "limited" after their names.

A new development, which has strengthened the hands of Chambers of Commerce, is the formation of the Association of Chambers of Commerce founded in 1860. The Association holds an annual congress, usually during the month of September, at one or other of the provincial towns. To this congress are invited delegates from foreign chambers, and officials from the Board of Trade, to discuss and promote measures likely to further the interests of trade and commerce.

CHAMPERTY. A criminal transaction in which one person lends money to another in order to carry on a lawsuit for the recovery of property, on the understanding that should the lawsuit be successful, the party lending the money shall share in the proceeds.

CHARGES FORWARD OR CARRIAGE FORWARD. A term which means that the person to whom goods are sent will pay the cost of carriage on delivery of the goods.

CHARTERED ACCOUNTANT. A person who holds a certificate from the Institute of Chartered Accountants to the effect that he is able to do accountancy business. The certificate may be obtained by passing the examinations held by the Institute.

CHARTERED COMPANY. A company which has been granted a charter from the Crown, authorising it to carry on a certain business or undertaking. Companies of this nature have in some cases had considerable governing powers granted them under their charter, by which they were able to conquer and rule vast territories. Such for instance was the old East India Company, and the Chartered Company which rules Rhodesia.

CHARTER-PARTY. A contract by which a ship owner places a ship or a part of a ship at the disposal of a merchant for the carriage of goods by sea. In return the merchant, who is called the charterer, agrees to pay a sum of money called freight. (See under *Shipping.*)

CHATTELS. See under *Bills of Sale.*

CHEAP MONEY. Money is said to be cheap when it can be obtained easily and at a low rate of interest; in other words, when the bank rate is low so that bills of exchange are discounted at a price a little less than their face value, and loans on stocks and other securities are secured on very favourable terms.

CHEQUE. A bill of exchange drawn on a banker payable on demand. (Refer to "Cheques" in *Index.*)

CHEQUE-BOOK. A book containing blank cheques supplied by a bank to its customers, that is, to those who have an account at the bank.

CHEQUES, CROSSED. Refer to "Cheques" in *Index*.

CHEQUE TO BEARER. A cheque which is payable without the necessity of indorsement by the payee.

CHEQUE TO ORDER. A cheque which has to be indorsed by the payee before payment of it can be obtained.

CHOP. A term used in the China trade as equivalent to brand.

CHOSE IN ACTION, the *right* to a thing, as distinct from the thing itself. The term includes all rights arising out of contracts, e.g. debts, negotiable instruments, policies of insurance, and the like. The term is also used in a wider sense to include personal property of an intangible nature, e.g. copyright.

A chose in action can be assigned only in writing signed by the assignor, and where the chose in action is a right arising out of a contract, notice must be sent to the person liable on the contract. Consideration or value in return for the assignment must also be given to the assignor, except in the case of negotiable instruments, where consideration is presumed. In this latter case, the assignment is made by simple delivery of the instrument, and need not be in writing.

The assignee of a chose in action (other than a negotiable instrument) can have no better title to it than the assignor had, and any defence which the party liable on the contract might have had against the assignor will be equally good against the assignee.

CHOSE IN POSSESSION, a term employed to denote goods and chattels. It is equivalent to a thing actually in one's possession.

CIRCULAR NOTE. When a person going abroad wishes to avoid the risk and trouble of carrying large sums of money, he obtains from his banker "circular notes," in each of which the banker requests his foreign correspondents to pay to the person named in an accompanying letter a certain sum. This letter is called "a letter of indication," and is signed by the banker and by the payee, in order to lessen the risks of personation and of forgery. It contains a list of the foreign banks at which the circular notes can be cashed. These notes are of no value without the letter of indication and *vice versa*.

CIRCULATING MEDIUM. Anything which serves the purposes of coined money in effecting sales and purchases, and in discharging debts and other obligations.

CLEAN BILL. A clean bill of health is a bill which states that the place from which a ship comes is free from infectious or contagious diseases.

A clean bill of lading is one where the captain states that the goods were received in good order and condition, without any qualification whatever. As between the shipowner and the owner of the goods, the phrase indicates that the shipowner has no claim against the goods, except for freight.

CLEARANCE. The permission to sail given to the master of a ship by the officers of customs on his complying with the necessary formalities and paying port dues, light dues, and other charges.

In regard to goods, clearance means that the necessary formalities have been complied with, and the duties (if any) have been paid, in order to have the goods passed by the customs officers.

CLEARING A BILL, to get cash for a bill of exchange.

CLEARING BANK. A bank which is a member of the London Bankers' Clearing House.

CLEARING HOUSE (Banking). The house in which bankers meet in order to settle their obligations to one another. By means of this institution, cheques and drafts which the customers of the various banks have drawn on their respective banks, and which have been paid into banks other than their own, are set-off against one another, so that on the whole very little gold passes between the banks. For instance, at the close of the day's business, bank A may have paid into it cheques to the value of £10,000 drawn on bank B. If now, bank B has an equal amount of cheques drawn on bank A, it is manifest that the two banks will not have to transfer any gold to each other. The transfer of the cheques will do equally well. (Refer to "Clearing House" in *Index*.)

CLEARING HOUSE (Railways). An association of which nearly all the railways in England and Scotland are members. It deals with through traffic, that is, where passengers and goods are carried in one journey over lines belonging to two or more companies. It settles what portion of the fares and charges should be allotted to each of the companies over whose lines the goods and passengers are carried. The Clearing House also deals with inquiries as to lost luggage and goods. (Refer to "Clearing House" in *Index*.)

CLOSING PRICES. The prices which prevail in a market at the end of the day's operations.

COASTING TRADE. All trade carried on by sea from any one part of the United Kingdom to any other part thereof. No goods can be carried in a coasting ship except such as shall be laden to be carried coast-wise at some port of the United Kingdom. The master of a coasting ship is liable to a penalty of £100 if, when at sea, he takes in or puts out goods, or if he deviates from the voyage, unless forced by unavoidable circumstances, or if, having touched at some place over sea, he does not make known this fact to the proper authorities at the first port in the United Kingdom where the vessel arrives. The master must keep a proper cargo book, stating his name, the port of destination, and the port to which the ship belongs. Before leaving the port of lading, a copy of a "transire" or pass for the goods must be furnished to the Customs authorities, and this transire must be given up to the proper Customs Officer within twenty-four hours of the ship's arrival at the port of discharge.

N.B.—Coasting vessels are exempt from compulsory pilotage.

COINAGE. In the United Kingdom the standard of value is the sovereign, which when issued from the Mint must not exceed 123·47447 grains in weight, or be less than 123·27447 grains, this allowance for variations in the weight being known as the "remedy" or margin within which the coin will be regarded as of correct weight. The gold of which sovereigns are made (standard gold) consists of eleven-twelfths pure gold and one-twelfth alloy (copper). This admixture of alloy is for the purpose of making the coin more durable. Twenty pounds weight troy of standard gold are coined into 934 sovereigns and one half-sovereign.

When it is said that the sovereign is the standard money, it is meant that the value of the sovereign corresponds exactly to the value of the material of which it is made. The silver and the copper coins are *token* money, that is, the nominal value of a silver or a copper coin is vastly greater than the material of which it is composed. Token money is in this country legal tender to a limited amount—forty shillings in the case of silver, and twelve pence for copper. That is to say, a debt of more than forty shillings cannot be discharged by a payment in silver, and a debt of more than a shilling cannot be paid in copper money, unless the creditor agrees to accept the payment. The amount of silver and copper coinage to be issued is arranged by consultation between the Mint and the authorities of the Bank of England.

A pound troy of silver is coined into sixty-six shillings, and as the cost of a pound of silver is considerably less than £1 10s., it will be seen that the Mint makes a considerable profit on the coinage of silver; in the case of the copper coinage the profit is even greater.

COMBINATION or **COMBINE.** The term "combine" is applied to a union of the leading manufacturers or dealers in any line of business for the purpose of protecting their trade interests, which usually means the keeping up of prices, and the doing away of competition amongst themselves, at the expense of the community at large. (See *Trusts*.)

COMMANDITE. Strictly speaking, *commandite* is a loan to a person engaged in business, but in its ordinary sense it is equivalent to a share in a partnership business, the liability on which is limited in amount. In French commandite companies there are two kinds of partners, one called *associés en nom collectif*, who are like partners in English law, and whose liability for the debts of the firm is unlimited. The other called *commanditaires*, who take no part whatever in the business, but embark their money in it, and whose liability is limited like the members of a limited company in England.

COMMERCIAL BILL. See *Trade Bill*.

COMMERCIAL CRISIS or **PANIC.** When a great number of trading concerns suspend payment, a feeling of distrust prevails amongst bankers and others whose business it is to lend money to those engaged in mercantile pursuits, and accordingly they refuse to advance loans, except at high rates of interest, and on securities that can be quickly realised. The result is that many undoubtedly solvent concerns are unable to procure the advances necessary to meet their current liabilities, though, if given time, they could pay more than twenty shillings in the £. Hence these businesses come to grief, and involve many others in their fall, and in the end there is panic all round. This sudden contraction of credit which precipitates the crisis generally follows an undue expansion of credit. When trade is brisk and prices high, banks are only too ready to make advances to traders, either by allowing them to over-draw, or by discounting bills drawn against the proceeds of consignments of goods, which proceeds are reckoned on the basis of the high prices prevailing. This easiness of obtaining credit in the shape of loans enables traders and manufacturers to enlarge their business. Goods are produced for which there is no market, and prices therefore fall. Through the sudden fall in prices, the more shaky firms are unable to repay their over-drafts or to meet as they become due the bills drawn against consignments of goods when prices were high. Accordingly the banks which before were only too ready to give credit, now refuse to give credit except under stringent conditions, with the result that reputable firms cannot get the necessary advances and so have to suspend payment.

To prevent, if possible, the recurrence of these crises, the Legislature has considerably restricted the power of banks to issue notes (see under *Banking*). It is evident, however, that this restriction does not go to the root of the evil. For while banks are limited in their power of making loans by the issue of paper money, there is no limit to their power of making advances in the shape of over-drafts, or of discount-

ing bills on easy terms; and it is in this latter manner that banks do make advances to their customers. This branch of the subject is dealt with in full detail in the article on Banking.

COMMISSION AGENT. A person who is employed as his regular business to buy or to sell property on behalf of others. He is entitled to a commission, usually of so much per cent., on the value of the property which he is employed to buy or to sell.

The relations of commission agents to their employers and others are governed by the law of agency. (Refer to "Principal and Agent" in *Index*.) But a word or two may be said in regard to their remuneration, which is often the subject of dispute between them and their principals, these disputes relating to such points as, whether the agent has earned his commission, or where several agents are employed to negotiate a sale or a purchase of the same property, which of them is entitled to be paid commission. A few examples will suffice to illustrate the nature of these disputes, and the law as to the points involved.

The agent must do the work himself, and the work must be done properly. If the transaction is completed by another who is not his sub-agent, he is not entitled to receive commission. Thus, where an agent introduced a purchaser who did not come to terms, but afterwards bought the same property at an auction conducted by another agent, it was held that the first agent could not claim commission. The work must be done in a reasonable time. For instance, an agent was employed to negotiate the sale of a public-house, the terms stating that commission should be paid him on a sale at "any future time." Nearly two years later the house was sold, but not through his agency, and it was decided that he could not recover anything. Where the contract of agency expressly stipulates the amount of remuneration, the agent is not entitled to commission if the work is only partially done. Thus, where an agent was employed to negotiate a sale of property on the terms that he would receive 2½ per cent. if he procured a purchaser for £19,000. The purchaser whom he introduced failed to carry out the purchase, and a part of the property was afterwards sold at £7,000. In this case the agent was not entitled to any payment. If, through the fault of his principal, the sale falls through, the agent is entitled to damages amounting usually to the commission he would have earned had the transaction been completed. Where several agents have been employed to carry out a sale, the agent through whose introduction the sale was effected will alone be entitled to payment. To prove this, the purchaser must be called upon to show through which agent he made his offer.

COMMITTEE OF INSPECTION. In bankruptcy, the committee of inspection consists of a number of the creditors appointed by the rest, to watch over and supervise the proceedings of the trustee. In the winding-up of a limited company, the committee is appointed by the creditors and the contributories to look after the liquidator.

COMPANY, LIMITED LIABILITY. A company, the capital of which is divided into shares. The liability of the shareholders is limited to the amount unpaid on their shares. If these are fully paid up, the shareholders are under no further liability should the company come to grief

COMPOUND OPTIONS. (See "Call Option," the "Put of More," and the "Put and Call," under *Options*.)

COMPOUNDING WITH CREDITORS. An agreement by which all the creditors of an insolvent person agree to accept so much in the £, and to give to the debtor a full discharge from all his liabilities to them.

COMPROMISE. Where a matter is in dispute and the parties agree not to go to law about it, but to settle it between themselves by a give and take arrangement.

COMPULSORY WINDING UP. Where the Court has decreed that the Company shall be wound up by the Court itself.

COMPUTING A BILL, reckoning the date upon which a bill of exchange falls due.

CONCESSION. A term used to describe a grant of land made by a public authority to a company or to a private person, for the purpose of using the land for railways and the like, or for working mines.

CONDITIONAL ADVANCE NOTE. A note given by a master of a ship promising to pay to the order of a seaman named therein, a sum of money after the expiration of a certain number of days from the time the ship has sailed, upon the condition that the seaman goes to sea in the ship. If the seaman is shipped in a port of the United Kingdom the advance must be for not more than a month's wages, but if he is shipped in a foreign port there is no limit to the amount of the advance.

CONDITIONS OF SALE. These state the terms of sale when property is to be sold by auction, e.g., the property to be sold with or without reserve, the mode of bidding, the payment of deposit, auctioneer's fees, the date and place of completing the contract.

CONFIRM. To set out in writing the particulars of a verbal agreement, or to refer to a letter previously sent.

CONSIDERATION. See under "Contracts" in *Legal Guide*.

CONSIGNMENT. The sending of goods from one town to another, either at home or abroad. The person sending the goods is called the consignor and the person to whom they are sent is called the consignee. The term is often applied to the goods themselves.

CONSOLIDATED FUND. Formerly, when Government raised a loan, a particular part of the revenue was assigned for its repayment. This part of the revenue was called the "fund" for that loan, and every loan had its appropriate fund. Towards the end of the 18th century these funds were consolidated, and the total debts were payable out of the total revenue. The consolidated fund is, therefore, the account of the Exchequer kept at the Bank of England, into which all the revenue collected is paid, and out of which all payments of interest on the National Debt, and payments for carrying on the government, and for maintaining the army and the navy are made. This revenue consists of customs, excise stamps, income tax, property tax, receipts from the Post Office, Crown lands, and a host of miscellaneous taxes. It is paid into the Bank mainly through the Inland Revenue office.

CONSOLS. A term first applied to the various government loans which in 1751 were consolidated into one, bearing interest at three per cent. Prior to that date, there were nine different government loans at different rates of interest. The interest on consols was reduced in 1888 from 3 per cent. to 2¾, and in 1902 it was further reduced to 2½ per cent. It may be of interest to state that the lowest price Consols has reached was in 1797, when, owing to the Mutiny at the Nore, the price fell to 47¾. The highest price was a few years ago, when it rose to 114. During the Boer war the price fell considerably, and since then it has never risen to par, seldom indeed going above 86 or 87.

CONSTRUCTIVE TOTAL LOSS. In marine insurance "constructive total loss" means a loss which entitles the insured to claim the whole of the insurance money, on abandoning the ship and its contents to the underwriters. The ship may still be in existence, but in such a damaged condition that it would not pay a prudent owner, even though uninsured, to repair it; or the ship may be in such a position as to make its total destruction highly probable. (See *Abandonment*.)

CONSUL. An official appointed by the government of a country to reside at some place abroad, in order to protect its commercial interests, and the interests and welfare of its subjects residing there. He may be a subject of the State appointing him or a subject of the State in which he exercises his functions, or a domiciled foreigner residing in that country. Before taking up his duties he must receive an "exequatur" from the government of the country in which he is to act. This exequatur is the recognition of his official position, without which he will not be allowed to act on behalf of the State appointing him.

To the end that he may efficiently perform his duties, a consul enjoys certain immunities and privileges which, however, fall far short of those granted to ambassadors and others engaged in the diplomatic service. If arrested for a crime, he ought, pending the trial, to be admitted to bail, or confined to his residence, so that he may be able to perform his consular duties. His official residence, the consulate as it is called in most countries, is, though not in the United Kingdom, exempt from the payment of rates and taxes. For some purposes it is regarded as part of the territory of the State which the consul represents, e.g. registering the births and deaths of the subjects of that State, and of recording certain contracts entered into between its subjects. In time of war, the troops of a belligerent must not, except in case of urgent military necessity, molest the consulate, for that would be regarded as a grievous insult to the State whose agent the consul is, and its archives, i.e. the official papers, must be kept inviolate. In countries exposed to frequent revolutions like the South American Republics, the foreign consulates are a refuge for foreigners during troublous times.

In Mohammedan and other non-Christian states, consuls, by virtue of treaties concluded with those States, enjoy a quasi-diplomatic position. Their powers are much wider than in Christian countries, for the consular courts have sole jurisdiction in all disputes, civil or criminal, in which Europeans are involved. The reason for this peculiar power is that the system of morality and the laws prevailing in those countries differ widely in many material respects from those prevailing in European States. Further, there is not sufficient confidence in the impartiality and integrity of the native officials to permit of their exercising jurisdiction over Europeans. One Eastern country, Japan, has made such strides in recent years, that the various European States possessing consular courts there, agreed to withdraw them a few years ago.

The various grades in the consular service are consuls-general, consuls, vice-consuls, and consular agents, some of whom are wholly engaged in the consular service, whilst others are principally engaged in trade on their own account, and give only a limited time to their public duties.

A British consul watches over the rights of British subjects who may be in his

district. He is required to assist them if tried for offences, and to see that they are not inhumanly treated on being convicted. He has power to make inquiry upon oath concerning all offences committed by British seamen on the high seas, and to assist shipwrecked and unemployed seamen and other destitute persons, and to provide them with the means of returning home. He issues passports to British subjects, celebrates marriages between them, and generally does his best to further British interests. Some of his most important work consists in collecting information regarding the trade and the commercial needs of his district, so that British traders may be able to develop trade with that district. In business transactions he has the powers of a notary public and of a commissioner for oaths.

CONSULAGE. The fees which a consul receives for discharging his official duties.

CONSULAR INVOICES. Certain countries, notably the United States, require that goods exported to them shall be accompanied by an invoice describing the quantity, quality and the nature of the goods, in order that the customs duties should not be evaded. The truth of the statements contained in the invoice must be sworn to by the merchant exporting them.

CONTANGO. When a dealer on the Stock Exchange agrees to buy at a stated price stock which he does not really want, he does so in the hope that the price will rise before the "settling day." If the price should rise he will make a profit, because the stock has to be delivered to him at the price agreed upon, and he can then sell it at the higher price. The contract is, however, usually not one for the delivery of stock, but for payment of the "difference" between the contract price and the market price, and in this case this difference would be paid to the buyer. Should, however, the price of the stock fall before the settling day, the buyer will lose, for he will have to pay the contract price for the stock which is higher than the market price, and consequently, if he desired to sell, he would suffer a loss. If he does not want the stock, he will have to pay the "difference." This, however, may be inconvenient, and accordingly he asks the seller to postpone to the next settlement the delivery of the stock for which he (the buyer) bargained, or the payment of the difference for which he is liable. For postponing or "carrying over" this settlement the buyer will have to pay interest, and this payment is called contango. (See *Backwardation*, *Bear* and *Bull*.)

CONTANGO DAY. Accounts between buyers and sellers on the Stock Exchange are settled twice a month, except in the case of Consols and one or two other securities, where the settlement is monthly. The settlement usually extends over three days, the first day of which is known as "contango day," "making-up day," or the "carrying-over day." It is on this day that the transactions for delivery of stock or for payment of differences are adjusted. (See *Ticket Day* or *Name Day*, and *Pay Day*.)

CONTINGENT ANNUITY, an annuity payable on the happening of a given event.

CONTINUATION, the same as "*Carrying Over*."

CONTINUATION RATES, the rates charged for carrying over bargains. (See *Backwardation* and *Contango*.)

CONTRABAND. Any foreign trade forbidden by the laws of a State. The term is usually applied to the smuggling trade, which seeks to evade the customs regulations.

CONTRABAND OF WAR. Any articles supplied by a neutral to a belligerent for the purpose of enabling him to carry on the war. Some commodities are *absolutely* contraband, because in themselves they are of direct use in warlike operations, e.g., arms and ammunition, and machinery for making them, military and naval stores of all kinds, ships and parts of ships, and the like. Other articles which are innocent in themselves, but which may be employed in military or naval warfare, are said to be *conditionally* contraband. Whether or not they are contraband, depends upon the use for which they are destined. Provisions, liquor, money, telegraph materials, coal, timber and the like are contraband if destined for the use of the fighting forces, but are not contraband if intended for the use of the ordinary civil population.

CONTRIBUTORIES. Those persons who have to contribute to the assets of a limited company on its being wound up. The sums which they may be called upon to contribute are limited to the amount which is unpaid on the shares. The contributories are either those who are shareholders at the time of the winding up, or those who have been shareholders within a year of the winding up.

CONVERTIBLE PAPER CURRENCY. A currency that can be exchanged on demand for its full value in coin when presented to the bank or the authority which issued it. Bank notes are a good example.

CONVERTIBLE SECURITIES. Securities which find a ready market, and therefore can be easily sold and turned into ready money, e.g., government securities of all kinds.

CO-OPERATION. The term co-operation embraces two distinct ideas, co-operation in consumption and co-operation in production.

(1) **Co-operation in Consumption** is more familiar to ordinary people, and is the system by which the worker seeks to spend his income to the best advantage, the system in which the proprietors of a shop are its customers, thus doing away with the middle-man and enabling the consumer to get his commodities cheaper. This kind of co-operation has met with a fair amount of success.

(2) **Co-operation in Production,** on the other hand, has been an almost unqualified failure. Under this system, the agents in production—capital and labour—are united in such a way that the employer is got rid of. The workers, either by means of their own or of borrowed capital, are their own employers. The profits which would otherwise be annexed by the employer go to swell the wages of the labourer, who is thus stimulated to exert himself to his utmost. Further, it is contended that co-operation would make employment more stable, because where an employer ceases to carry on his business as soon as it ceases to be profitable, if the labourers were their own employers they would still go on producing, and sell their product for what it would fetch. In spite of these apparent advantages, co-operation in production has never been a success, not merely because of the selfishness and laziness inherent in human beings, but because an industrial undertaking carried on under one head is more likely to be well managed than where each worker has a voice in the management. Moreover, a large body of men would be quite incapable of gauging the wants of far distant markets, or of markets where the demand was constantly fluctuating, and consequently would never be able to make the supply of a commodity correspond with the demand for it; so that the conditions of production would be more unstable than ever. Co-operation in production is possible only in an industry which can be carried on by a small body of workmen who are on a level of strength and skill, and in which the initial expenditure for tools and materials is small, and the manufactured articles are produced merely for a local market. In these days of Combinations and of Trusts these conditions are not, however, likely to be fulfilled.

COPYRIGHT, the sole right of printing and publishing the work of an author. (Refer to "Copyright" in *Index*.)

CORNER. The process of what is known as "cornering" can only take place when people speculate in "futures," i.e., agree to buy or sell commodities which they don't possess, and probably don't want to possess, and which are not yet in existence. Take for instance wheat or cotton, or any similar product in general demand. Before the harvest has been gathered in, speculators begin to study the harvest prospects. Their calculations may lead them to think that there will be an abundant harvest. Accordingly they determine to sell. They contract with other speculators to sell to them at a fixed price any agreed quantity of the commodity at a future date, say when the harvest is gathered in. This they do in the hope that the harvest will be abundant, and that therefore prices will fall. If this calculation turns out correct, they will reap a profit, because they can get the wheat at market price and sell it at the agreed price, which is much higher. It may happen that they miscalculated the prospects of a good harvest. The harvest may turn out scanty, and prices will therefore rule high, and so those who agreed to sell at the fixed price will have a bad time.

But they will have a still worse time if any of the other speculators to whom they agreed to sell possess a large capital and buy up as much of the forthcoming supply of wheat as they can, for by so getting hold of or "cornering" the available supply, they force the unhappy speculators into a tight place. The sellers cannot in that case get the commodity which they agreed to sell, except by buying it from those to whom they had agreed to sell it, and these having the advantage will naturally exact high terms, with the result that the unfortunates who agreed to deliver the commodity at a fixed price will have to pay huge sums to be freed from their bargains, for frequently the contract to deliver the wheat is like the contract to deliver stock and shares on the Stock Exchange, a contract to pay "differences" only, viz., the difference between the agreed price and the market price. It is the old game of "bulls" and "bears" over again, and is nothing but gambling.

The evils inflicted on the producer, on the consumer, and on trade generally by this system of gambling in "futures" can hardly be estimated. When men deal in futures they are really betting on future fluctuations in prices, and in order to bring about the desired rise or fall in prices, they do not hesitate to influence the market so as to bring about the rise or the fall on which they have made their bets. If the bears succeed in pulling down the prices of grain or cotton or other commodity below what they would have been had the markets not been influenced, the producer may be badly hit, the bulls may be ruined, while the gain to the consumer may be inappreciable. On the other hand, if the bulls succeed in forcing up prices, the consumer has to pay the increase, while the producer, if he agreed to sell his crop before it came to maturity, will not participate in the rise

in price. The whole gain goes into the pockets of the successful speculators.

COST AND FREIGHT. The phrase denotes that the price quoted will cover the cost of the goods and carriage.

COST BOOK MINING COMPANIES. A cost book mining company consists of several men called "adventurers," who form themselves into a partnership for working a mine. They receive permission from a landowner to search for ore, and if successful they take a lease of the ground, paying to the landowner a certain share of the output. The terms of the agreement amongst the members are entered in the "cost book," which contains, among other items, particulars of all moneys received and paid out and a list of the members. Any member can be sued by a creditor who has supplied necessaries for working the mine, and this whether the creditor knew or did not know at the time of supplying the necessaries that he was a shareholder. Members are liable for unpaid calls on the winding up of the company, unless they had ceased to be members two years previously.

COST, FREIGHT AND INSURANCE. The price charged for goods when it covers not only the cost but the expense of insuring and of carrying them.

COUNCIL BILL or **DRAFT**, a bill or draft drawn by the Secretary of State for India upon the Government of India, payable at the Bank of England. Such bills are negotiable instruments.

COUNSEL'S OPINION, an opinion in writing given by a barrister on a case or a point of law submitted to him by a solicitor, for the guidance and information of a client of the solicitor or of the solicitor himself. The value of such an opinion depends entirely on the skill and knowledge of the counsel giving it. It has no binding force, and is not in any way recognised by the Courts, save in this respect, that a solicitor acting in accordance with counsel's opinion cannot be sued by a client who accuses him of negligence or incompetence in the matter in question.

COUNTRY CLEARING. The system by which each country bank sends to its London agent the cheques and drafts on other banks which have been paid into it in the course of the day. The various London agents present to each other the cheques so received, which are then transmitted to the banks on which they have been drawn. (See under *Banking.*)

COUPON. Debenture bonds or other documents for the repayment of money, with interest at stated intervals, have a slip attached to them stating that a certain amount by way of interest will be paid at a specified time. When payment of interest is due, the slip is cut off and delivered to the payer. Such coupons, when attached to a debenture bond, are called "dividend warrants." There is no stamp duty on a coupon, which is one of a set of coupons, whether issued with the security or subsequently issued in a "sheet of coupons." But a coupon attached to a scrip certificate must be stamped.

COVER. Security given for a loan so as to ensure that the lender shall not lose in case the borrower makes default. Stock brokers frequently require their clients to deposit "cover," that is, money or securities, when undertaking speculative ventures for them, because in Stock Exchange transactions the brokers are personally liable on any engagements entered into by them on behalf of their clients, and the "cover" protects them in case the clients fail to pay.

CRANAGE. The charge for using cranes for loading or unloading goods on board vessels.

CREDIT. LETTER OF. A letter addressed by a bank or a firm to another, requesting that other to pay to a person named in the letter a specified sum of money, for the repayment of which the bank or the firm making the request becomes responsible. (See *Circular Note.*)

CREDIT NOTE. When a purchaser receives goods which are defective in quality or quantity, or has been overcharged, the seller grants him a reduction in the price, and this reduction is embodied in a *credit note.*

CREDIT SLIP. Same as *Paying-in Slip.*

CUM DIVIDEND. The word *cum* means "with" or "together." When stocks and shares are sold "cum dividend," the buyer not only gets the stock or the shares, but also the dividend that is accruing or which may then be due.

CUM DRAWING. When bonds for the repayment of money borrowed with interest are sold at a time when the drawing of the bonds is near, the buyer, if the bonds are sold "cum drawing," takes any profit which may accrue at the drawing.

CUM NEW. When a company increases its capital, it very often gives to its shareholders a right to take up the new issue of shares on more advantageous terms than are offered to the public. If, when this is about to take place, the shares are sold "cum new," the buyer participates in these advantages.

CUMULATIVE PREFERENCE SHARES. These are shares upon which a dividend is guaranteed, and if the dividend remains unpaid in any one year. or any number of years, it accumulates until it can be paid. Dividends on such shares must be paid before any other dividends can be paid, though of course, they are postponed to interest on debentures, for that is interest on money borrowed, and not interest on capital invested in the company, and the creditors must be paid before the shareholders will be allowed to receive dividends.

CURRENCY. The currency of a country consists of anything which is used as a medium of exchange in effecting sales and purchases, and in discharging debts and other obligations.

CURRENCY QUESTION. The question whether the present single-standard countries such as the United States and Great Britain should adopt a double-standard currency of gold and silver, making silver as well as gold legal tender to any amount. (See *Bi-metallism.*)

CURRENCY BONDS. Bonds for the repayment of money borrowed, together with interest, and which repayment is made in the currency of the country in which the loan is raised.

CURRENCY OF A BILL. The period which a bill has to run before it becomes due for payment. When a bill is drawn payable at so many days after date, the currency of the bill is the time between the date of the bill and the date on which it has to be met. In the case of a bill payable after sight, the acceptor, when he puts his signature on the bill, must also put the date of his acceptance; the currency of the bill is in that case the time between the date of acceptance and the date for payment.

CURRENT ACCOUNT. A current account at a bank is an account of money deposited by a person at a bank. It is the account on which a customer draws cheques. He can add to this account, or withdraw the whole or part of the amount without giving any notice. As a rule, banks give little or no interest on a current account.

CUSTOM, a usage prevailing in a particular trade or a particular locality, or common throughout the community. The custom of a particular trade does not form part of the law of the land, but may be given in evidence in legal proceedings. A general custom, i.e. a custom prevailing throughout the community, becomes law the moment that it is recognised and enforced by the Courts. The Law Merchant, which affects commercial contracts, e.g. in regard to the negotiability of bills of exchange and other written instruments, had its origin in the customs prevailing in commercial circles.

CUSTOM HOUSE. This institution supervises the export and the import trade of a country, and collects the duties which the government may impose on the importation or the exportation of commodities. It sees that nothing is admitted which the law forbids, or allows only on certain conditions being fulfilled, e.g., false coins, obscene literature, books, pamphlets, etc., which infringe foreign copyright, explosives, and other dangerous materials, and animals suffering from contagious diseases. To the customs officers are entrusted also the duty of inquiring into the health of every ship which arrives at any port in the United Kingdom.

CUSTOMS BILLS OF ENTRY. These are published daily by the Customs authorities, giving information of the different kinds of goods imported and exported, and of the ships arriving and leaving English ports and of those loading there.

CUSTOMS DEBENTURE. A certificate issued by the customs authorities entitling a person to receive drawback of duty on the exportation of certain goods on which duty had been previously paid. Where goods which have paid duty on importation are exported within a certain time. the government pays back the duty to the real owner of the goods. This payment is called "drawback"; and the customs debenture is a document entitling the owner to receive payment of the drawback (see *Drawback*). The stamp dut on such a certificate is one shilling where the amount to be returned does not exceed £10. If it does not exceed £50, the stamp duty is 2s. 6d. In all other cases the stamp duty is 5s.

CUSTOMS DECLARATION. When parcels are posted to any place outside the United Kingdom, the sender must make a written declaration of the nature, value and weight of the parcel, for the information of the customs authorities of the place to which the parcel is posted.

CUSTOMS ENTRY. Written particulars of the nature, weight and value of goods imported or exported, furnished to the customs authorities by the importer or the exporter of the goods, or by the ship owner.

CUSTOMS DUTIES AND CUSTOMS TARIFF. The customs duties are the taxes levied on goods imported into a country. The list of articles that are liable to pay duty, and the scale of duties is known as the tariff.

In this country, the collection of the customs duties is entrusted to a Board of Commissioners. These duties are imposed solely for revenue purposes, and not for the purpose of fostering home manufactures. They are levied solely on goods which cannot be produced or which are not allowed to be produced in this country, or on imported goods, which if manufactured here are taxed for revenue purposes, so as to put these goods on the same level as the home-produced article. An example of this class is spirits and other liquids containing alcohol.

Prior to 1840 there were about 1,200 articles liable to import duty. In that year Sir Robert Peel considerably reduced the list, and in 1860 the list was still

further reduced to 142 articles. Now-a-days the list consists of about a dozen divisions, embracing, roughly speaking, about fifty articles, the more important being tea, coffee, cocoa, dried fruits, alcohol in every shape, and tobacco in its various forms.

The duties on these articles are not *ad valorem*, but according to quantity or weight, and are due the moment they are landed here; but as a matter of convenience, and for the purpose of not restricting trade, the duty is not paid immediately unless the articles are destined for immediate consumption. Where the goods are not so intended, they can be stored in bonded warehouses, duty free, and the duties are not payable until the goods are removed for home consumption. If removed for exportation, the duty is not paid at all.

DANDY NOTE. A delivery order authorising the removal of goods from a bonded warehouse, when intended for exportation or to be used as ship's stores. The document is filled in by the exporter and sent to the Controller of Accounts. (See *Pricking Note.*)

DAY BOOK. In book-keeping, most business concerns keep two books for entering credit transactions as they occur. One book, called the "Bought Day Book," is devoted to purchases on credit, the other, called the "Sales Day Book," to sales on credit.

DAY TO DAY LOANS. Money lent by banks to stockbrokers and others for one day at an agreed rate of interest. These loans can be renewed from day to day, if both parties agree to this course.

DAYS OF GRACE. The three days added to the period which a bill or a promissory note has to run, so as to extend the time of payment (see under *Bills of Exchange*). In insurance it is the time allowed for payment of the premiums after they have become due. In stock-exchange transactions, bargains for the delivery of stock must be settled at the appointed day, but usually an extended period, called days of grace, is allowed in order for the delivery to be completed.

DEAD ACCOUNT. An account of money, stocks, etc., standing in the name of a deceased person.

DEAD FREIGHT. The rate charged for the empty space when the charterer of a ship having undertaken to load a full cargo fails to do so.

DEAD RENT. A fixed annual rent payable on a mining lease whether the mine is worked or not. It differs from a royalty rent, in that the latter is paid according to the quantity of minerals or ore extracted.

DEAD WEIGHT. Cargo such as coal or minerals which pays freight according to its weight, and not according to the space which it occupies.

DEAR MONEY. Money is said to be dear when the rate of interest charged on loans is high even when good security is given for repayment.

DEATH DUTIES. The taxes levied on the estates of deceased persons, and paid by those who benefit by their death. They include Probate Duty, Legacy Duty, Account Duty, Succession Duty, and Estate Duty. (Refer to *Inder.*)

DEBENTURE. A written promise, usually under seal, given by a company to repay with interest at a specified time, money lent to the company. Debentures are of two kinds (*a*) mortgage debentures, which gives a charge on all or a part of the company's assets, or (*b*) debentures which merely promise to repay the money advanced to the company.

DEBENTURE BONDS. Bonds issued by a company, or a government, or a corporation for the repayment of money at a specified time.

DEBENTURE STOCK. Stock issued by a company in return for a loan. The rate of interest on debenture stock is fixed and perpetual. Such interest is paid after the interest on mortgages and bonds created prior to the issue of the debenture stock has been paid, but must be paid before any dividends can be paid on any shares or stock of the company, whether such stock or shares are ordinary, preferred, or guaranteed.

DEBIT NOTE. When goods sent to a purchaser are defective in quality or quantity, or when the purchaser has been overcharged, he sends a debit note to the seller claiming a reduction from the contract price.

DEBT. Refer to *Index.*

DECIMAL SYSTEM. The system by which numbers, weights, measurements, and quantities are calculated by divisions of ten. The best example of the decimal system is that adopted by France, which has been followed by many European countries (see *Metric System*). There is no doubt that the system has many advantages, notably that of easiness of calculation, and were the system universally adopted it would facilitate the course of business in international trade, and would enable England to compete more successfully with her foreign rivals in commerce.

In regard to coinage, the Decimal system has made more headway than in regard to weights and measures, for great commercial countries like Canada and the United States have practically a decimal coinage, while still adhering to the system of weights and measures prevailing in England. The dollar, equal to 4s. 2d. of English money, is the standard coin, and is divided into ten dines and the dine is equal to ten cents., so that a cent. is the equivalent of the English halfpenny. Many schemes have been suggested for placing the English coinage on a decimal basis, the most feasible being to make the sovereign the standard, retaining the florin as its tenth part, and sub-dividing the florin into ten equal parts, each of which would as nearly as possible be the equivalent of 2⅛d. Other coins could be made either multiples or sub-multiples of 2⅛d.

DECK CARGO. Cargo stowed on deck. The ship-owner is not liable for damage resulting to goods stored on deck, unless he has expressly agreed to be liable. Similarly the underwriter is not liable for average when deck cargo has been injured or lost unless in the policy of insurance he agrees to be liable. *Prima facie*, the deck is not the place for cargo, which ought to be stowed below deck.

DEEDS OF ARRANGEMENT take various forms, the most common of which are (1) Deeds of Assignment, (2) Deeds of Composition, (3) Deeds of Inspectorship. (See under *Bankruptcy.*)

DEFAULTER. On the Stock Exchange, when a member is unable to fulfil his engagements with other members, or becomes bankrupt, or is notoriously insolvent, he is said to be a defaulter. Insolvency means "inability to pay debts in the ordinary commercial sense, and in the ordinary course of business." When a member is in this position, notice of the fact is given, by the waiter striking the rostrum three times with a wooden hammer to call the attention of the House, and announcing to the members that the person in default is unable to comply with his bargains. The defaulter who is thus "hammered" ceases to be a member. Provided he has no creditors outside the Stock Exchange, his estate is taken over by official assignees who are members of the House. These official assignees call in what debts may be owing to the defaulter from other members, and when the estate is realised, distribute the assets among the creditors. In this way the defaulter is saved from the disabilities under which an ordinary bankrupt labours; but if he has creditors who are not members of the House, the ordinary bankruptcy law applies to his case and the above procedure cannot be resorted to.

A defaulter may be re-admitted as a member if he pays 6s. 8d. in the pound, provided his conduct is approved of by the Committee of the Stock Exchange, but he is in no way relieved from his liabilities to his fellow-members by his being re-admitted. In fact he is bound to discharge his debts to them, if his means permit, and he may be called upon to furnish an annual statement of his affairs until his debts are discharged. A member is not allowed to deal with a defaulter or to carry on any business for his benefit before he is re-admitted, unless the permission of the Committee of the Stock Exchange has been obtained.

DEFERRED ANNUITY. An annuity payable after the expiration of a certain agreed period. Such annuities may be purchased from the government at any Post Office. Should the person for whom the annuity is purchased die before the expiration of the agreed period, the purchase-money is not refunded.

DEFERRED BONDS. Bonds issued by a company or a corporation or by government, entitling the holder to a gradually increasing rate of interest, until a certain rate is attained, when they are converted into active bonds bearing a fixed rate of interest.

DEFERRED STOCK OR SHARES. The holders of these stocks and shares are not entitled to any dividends until the preference, guaranteed and ordinary shareholders have received a fixed rate of dividend.

DEFICIENCY. In the customs and excise a certain percentage of the total measurement or weight of dutiable goods is not subject to the duty, so as to allow for wastage. This allowance is called deficiency.

DEFICIENCY BILL. When the expenditure temporarily exceeds the revenue, the deficiency is met by the government borrowing from the Bank of England, giving in return bills for short periods.

DEL CREDERE AGENT. A del credere agent is a mercantile agent, who in return for an extra commission undertakes that the person to whom he sells goods will pay his employer for them. In effect he guarantees his principal against losses through the insolvency or bankruptcy of the persons to whom he sells his employer's goods. Apart from this his position is determined by the ordinary law of agency (see *Agency*).

DELIVERY BOOK. When goods are sent by railway or by carrier, particulars of them are entered in a book. These entries are signed by the person to whom the goods are delivered, thus serving as receipts to show that the goods have been received by the persons to whom they were consigned.

DELIVERY ORDER. An order written by the owner of goods requesting the person who has charge of them to deliver the goods to the person named in the order. The term sometimes means that the person (warehouseman, dock-owner, or wharfinger) who has the custody of the goods undertakes that he himself will deliver them. A delivery order like a bill of lading, or a dock-warrant, is not really a negotiable instrument, for the person

who takes it has no better title to the goods mentioned in it than his transferor had. It is, however, a "document of title" to goods, and is therefore frequently used as a means of raising money. Where the goods are of the value of £2 or upwards, the order must bear a penny stamp, to be paid by the person to whom the order is delivered. A delivery order is not rendered invalid by being unstamped unless the holder of it was trying to evade the duty.

DEMAND DRAFT. A bill of exchange payable on demand.

DEMISE, a term employed to denote the granting of a lease.

DEMONETIZE. To remove coins from the rank of standard money.

DEMURRAGE. (1) The payment made by the shipper of goods to the ship-owner, as compensation for delay in loading or unloading a ship. It is the converse of despatch money. (2) A charge made by railway companies for delay in removing goods carried by them.

DEPOSIT ACCOUNT. An account of money lodged at interest with a banker, and which, as a rule, cannot be withdrawn without notice to the banker. Such money is described as "money on deposit," and the receipt given for it by the banker is called a "deposit note." If the depositor is a customer of the bank, payments made into the deposit account are not entered in his pass book, which refers to his current account. The deposit account must be kept separate from the current account. No stamp is required for the "deposit note" or receipt.

DEPOSIT NOTE or **DEPOSIT RECEIPT.** (See *Deposit Account.*)

DEPRECIATION. The amount by which property has been diminished in value. In every well-conducted business a certain amount is allowed for depreciation of the buildings, plant and stock, so that when the books are made up, the balance sheet will show the real value of the property at the moment.

DERELICT. A ship abandoned at sea by those in charge of it, who have given up all hope of returning to it or of recovering it. Every master of a ship who has seen a derelict on the high seas must report it to the Lloyd's agent at his next port of call, or if there is no Lloyd's agent there, he must report to Lloyd's direct. Persons bringing derelicts into safety are entitled to salvage amounting, as a rule, to not less than one-third the value of the property, and not more than one-half.

DESPATCH MONEY. In chartering a ship a certain number of days called working days is allowed for the loading or unloading of a ship. Should the charterer load or unload in a shorter time, he is given by the ship-owner a sum of money for every hour less than the allotted time. Despatch money is the converse of demurrage.

DESPATCH or **DESPATCH NOTE** A Customs document which is sent with goods liable to duty at their place of destination, and must be produced to the customs officers at that place.

DEVIATION. A mercantile term signifying that the vessel has deviated from the course usually followed, or from the route expressly agreed to by the parties. Conditions as to deviation are found in policies of marine insurance, in bottomry bonds, and in contracts of affreightment, i.e. in bills of lading and charter parties. The only deviations allowed in these various contracts are for the purpose of avoiding perils of the sea, capture, getting provisions, etc., and saving life.

DEVISEE. The person to whom lands are given by will.

DEVISOR. The person who makes a will of lands.

DIES NON. A phrase signifying a day on which business cannot be transacted.

DIFFERENCES. An agreement to pay "differences" is nominally a contract for the sale of stock or commodities at some future date at a fixed price. At the time the contract is made, the seller does not possess the stock, nor does the buyer want it. In fact the parties do not intend that there shall be any transfer of the stock from one to another. The buyer merely agrees that if the price of the stock should fall by the time the account is to be settled, that he will pay to the seller a sum of money equal to the difference between the price agreed upon and the actual market price. Hence it is to the interest of the seller that the price should fall, and as he does his utmost to pull down prices, he is called a "bear." On the other hand, if the price should rise by "settling day," the seller agrees to pay to the buyer the difference between the contract price and the market price. It is to the interest of the buyer that prices should go up, and therefore he does his best to force up prices, hence he is called a "bull." An example will make this clear. A, a dealer on the Stock Exchange, agrees to buy for the next account (which takes place twice a month) 100 shares at £1 per share from B, another dealer. If, when the settlement takes place, the price of the shares has risen to 21s. per share, the seller will hand to the buyer 100 shillings. If, on the other hand, the price falls to 17s. 6d. per share, the buyer will hand to the seller 100 half-crowns, £12 10s. in all.

Contracts to pay "differences" are purely gambling contracts unenforceable by law.

DIRECTOR. The person who manages the business of a limited company.

DISCLAIMER. A renunciation of rights and liabilities. (See "Trustee" under *Bankruptcy.*)

DISCHARGE. In legal phraseology the term "discharge" means a release from liability.

DISCOUNTING A BILL. The price which a banker or a money-lender gives for a bill of exchange which has yet some time to run is something less than the face value of the bill. The deduction thus made is called discount, and represents the banker's profit on the transaction. The amount of the discount depends on three things, the length of time the bill has to run before it becomes due, the bank rate, and the financial standing of the parties to the bill. Suppose it is desired to discount a bill for £648 payable three months hence, that the parties to the bill are all of good credit, and that the bank rate is five per cent. The banker will in that case calculate the interest on £648 for three months at five per cent., which comes to £8 2s. and deducts the £8 2s. from the amount of the bill, giving the holder £639 18s. At the expiration of the three months the banker presents the bill to the acceptor for payment, and receives from him £648, making a profit of £8 2s. on the transaction. It is by transactions such as these that banks derive a great part of their profits. (See under *Banking.*)

It will be observed that the discount thus calculated is not true discount; it is really interest on the amount actually advanced by the banker, and is greater than the rate nominally charged by him. An example will make this more striking Suppose the bill is for £100, payable a year hence, and that the parties to the bill are of somewhat shaky credit. In this case a money-lender may charge a very heavy rate, say forty per cent. This he deducts from the amount of the bill, giving the holder £60, and at the end of the year the money-lender will receive £100 for the £60 which he advanced, making a profit not of 40 per cent. but of 66⅔ per cent. on the loan. This helps to explain the enormous profits which money-lenders realise on the advances made by them. In the foregoing case the true discount would be arrived at by reckoning what sum would amount at the end of the year to £100 when the rate charged is 40 per cent. £1 at 40 per cent. would at the end of a year amount to £1 8s., and therefore the calculation is worked out as a sum in simple proportion, in this way :—£1 8s. : £100 : : £1 : x. The result being £71 8s. 6d., which represents what the borrower ought to have received instead of the £60 advanced to him.

DISHONOUR. The refusal to accept a bill when presented for acceptance, or the refusal to pay it when it falls due.

DISSECTION. The separation of accounts and invoices in order that the various items of sales and purchases may be entered to the account of the special department of the business to which they belong.

DISTRESS or **DISTRAINT.** Seizing goods and chattels for rent or payments due. (Refer to "Landlord and Tenant" in *Index.*)

DISTRINGAS. A notice served upon a bank or a company, forbidding the transfer of certain shares or stock in that company or bank, or the payment of any dividends on the same. The object is to prevent certain persons from dealing with these shares or receiving interest on them, because others have a claim on the stock or the shares.

DIVIDEND WARRANTS. A written order to a banker requesting him to pay the amount of the dividend to the person named therein. Dividend warrants are negotiable instruments and must be stamped as bills of exchange.

DOCK DUES. Payments made to the owners of docks by the owners of ships using them, according to the tonnage of the ships. The term includes payments made by the shippers of goods to the dock owners.

DOCKET. A summary of the contents of a document.

DOCK MASTER. The person who has authority to control the movements of all vessels entering, using, or leaving the docks owned by his employers.

DOCK WARRANTS. Warrants issued by a dock company entitling the person named therein to take possession of goods in the custody of the company. The warrants are delivered by the dock company to any person named by the owner of the goods. A dock warrant is a "document of title" to goods, and a pledge of it is deemed to be a pledge of the goods, and its lawful transfer to a buyer who takes it in good faith puts an end to the sellers' lien, or the sellers' right of *stoppage in transitu* (see under *Sale*). It is not, however, a negotiable instrument, for the person to whom it is transferred cannot have a better title to the goods than his transferor had.

Persons who own goods stored with a dock company can easily raise money on them, by causing the company to issue a dock-warrant in favour of the lender. Dock warrants must bear a 3d stamp.

DOCUMENTARY BILLS. A bill of exchange to which are attached certain documents, such as the bill of lading and a copy of the policy of insurance. The bill of lading and the policy of insurance relate to the goods for which the bill of exchange is given in payment. In the event of the bill of exchange being dishonoured, the

seller of the goods having the bill of lading in his possession can claim the goods.

DOCUMENTS OF TITLE. Documents which serve as proof that the person named therein is the owner of the goods to which the documents refer. The following is the list given by the Factors' Act—bills of lading, dock warrants, warehouse-keepers' certificates, delivery orders or other warrants for the delivery of goods.

DOMICILED BILL. A bill of exchange made payable at a place other than the place of business or residence of the drawee is said to be domiciled at the place where it is payable. Where a bill accepted generally and without any qualification as to the place of payment, has the place of payment inserted *without* the consent of the acceptor, the bill becomes void, for such an insertion is a material alteration of the bill.

DONATIO MORTIS CAUSA. A gift made in contemplation of death.

DOUBLE ENTRY. The system of book-keeping invented by the Italians, in which every transaction is entered in two different accounts, one relating to the giver or creditor, the other to the receiver or debtor. In one account the transaction is entered on the debit side, and in the other account it is entered on the credit side, thus ensuring greater accuracy, in which respect it is greatly superior to book-keeping by single entry.

DRAFT. A name often given to a bill of exchange, but the term has various other meanings, especially an order on a bank, and the first rough copy of a document.

DRAIN OF BULLION. The term is applied to a diminution in the reserves of bullion in the Bank of England, caused by the necessity of having to make foreign payments, which, if it went on unchecked, would seriously hamper the trade of the country. In order to check this flowing away of the reserves, the Bank authorities usually raise the Bank rate. (See under *Banking.*)

DRAWBACK. When goods which on importation have paid duty are intended for exportation, and not for use in the country levying the duties, the whole or a part of the duty is returned to their owner when the goods are re-exported. In England the payment of drawback is largely obviated by the adoption of the warehousing system (which see). There is only one case now in which payment of drawback is made, and that is where raw materials subject to duty are imported to this country to be worked up in the manufacturer's own premises, and when finished the product is exported to other countries, as for instance, tobacco leaf manufactured into tobacco or cigars, coffee berries converted into coffee, and the like.

DRAWEE. The person upon whom a bill of exchange is drawn, and who, when he has signed it, will have to pay it. He is not liable to pay until he has put his signature to it, when he is called the acceptor. (See under *Bills of Exchange.*)

DRAWER. The person who draws a bill of exchange upon another.

DRAWN BONDS. Sometimes a corporation or other governing body when borrowing money, issues bonds of its repayment, on the understanding that every year a certain number of the bonds will be paid off, until all are redeemed. The order in which the bonds are redeemed is determined by the drawing of lots, and the holders of the bonds so drawn are entitled to immediate payment, but are not entitled to the payment of any further interest on the bonds.

DRUG IN THE MARKET. Goods which are practically unsaleable, because the supply greatly exceeds the demand.

DUE DATE, date when Bills of Exchange and Promissory Notes are due.

DUNNAGE. Mats, planking, and the like, used in the stowage of cargo for the purpose of protecting it.

DUTCH AUCTION. In a Dutch auction the article is put up at a certain price, which the auctioneer gradually lowers until a purchaser is found.

DUTY. A tax levied on the exportation or the importation or the manufacture of goods. A duty levied on the importation or the exportation of merchandise is called a customs duty. An excise duty is a tax levied on manufactures in the home country.

EARNEST. A small sum of money given by the buyer to the seller to bind the bargain between them. It may be the most insignificant coin of the realm. In the case of contracts for the sale of goods of the value of £10 or upwards, the giving of earnest money obviates the necessity of having the contract in writing.

EASEMENT, a right enjoyed by a person over land or a tenement of which he is not the owner, in virtue of his ownership of other lands or tenements. The most common examples are rights of way and rights to light. (See *Ancient Lights.*)

EJECTMENT. Refer to "Landlord and Tenant" in *Index.*

EMBARGO. The detention by a state of vessels within its ports, or the prohibition of trade between certain ports. The detaining of ships is usually an act of hostility adopted by a belligerent in time of war, but it may be a measure adopted in the public interest in time of peace, as when a government lays an embargo on vessels belonging to its own citizens for the purpose of preventing their carrying certain products out of the country, e.g., on all vessels carrying coal. In this country it is illegal for the government to lay an embargo on vessels laden with wheat.

EMBLEMENTS, growing crops which may be produced within a year. An outgoing tenant has in most cases a right to these emblements, when he is compelled to quit his holding, or in lieu thereof he is entitled to a year's notice expiring with a current year of his tenancy.

ENDORSEMENT. See *Indorsement.*

ENDOWMENT POLICY. See "Varieties of Policy" under *Life Insurance.*

ENFACED RUPEE PAPER. Promissory notes issued by the Indian government as a means of borrowing money. On the face of these notes is written a notification that interest on them is payable in London by draft on Calcutta. Persons wishing to remit money to India purchase these notes readily.

ENTERED AT STATIONERS' HALL. These words appearing on the title-page of a book mean that the book has been registered at Stationers' Hall, for copyright purposes. Any person pirating the book will be liable to legal proceedings. Before a book can be entered at Stationers' Hall it must be printed and published. (Refer to "Copyright" in *Index.*)

ENTRY. Written particulars of goods exported or imported, supplied by the ship-owner to the Customs' authorities. These particulars have to be furnished whether the goods are liable to duty or not.

ENTRY FOR WAREHOUSING. When dutiable goods are imported not for immediate consumption, but for the purpose of being stored in a bonded warehouse, written particulars of the goods must be furnished to the Customs' authorities.

EQUITY OF REDEMPTION, a phrase which denotes the rights remaining in a mortgagor when he has mortgaged his property.

ERRORS AND OMISSIONS EXCEPTED. The letters E. & O.E. are placed at the foot of accounts to denote that the person sending the account or the invoice shall not be liable for any omissions or errors, but shall be entitled to correct them.

ESTATE DUTY. Refer to *Index.*

EVEN. A stock exchange term to denote that an account is carried over to the next settlement, without any payment of contango or of backwardation.

EX ALL. When securities are sold "ex all," the seller retains the rights to any dividend or bonus that may be due, and the right to claim any new stock or shares that may be offered on advantageous terms to the holders of the old stock or shares.

EXCHEQUER BILLS. Bills issued by the Treasury in virtue of an Act of Parliament authorising such issue. They are for the purpose of borrowing money for temporary emergencies, when it is not desired to add to the National Debt. The rate of interest is so much per cent. per day, but it must not exceed 5½ per cent. per annum, payable half-yearly. They may be paid off at the end of the year, or may be renewed, but they cannot be current for more than five years.

Exchequer Bills form a very convenient way for locking up money, because they bear interest, and because when the holder is in want of ready cash he can quickly turn them into money. They are negotiable instruments, and are received by the revenue authorities in payment of the taxes. The following is the form of an Exchequer Bill.

No.—— £. By virtue of an Act for raising the sum of by Exchequer Bills for the service of the year this Bill entitles or order to one thousand pounds, after the rate of threepence per cent. per diem out of the and this Bill is to be current and pass in any of the public revenues, aids, taxes, or supplies, or to the account of His Majesty's Exchequer at the Bank of England after the day of

Dated at the Exchequer this day of

If the blank is not filled up this Bill will be paid to bearer. The cheques must not be cut off.

EXCHEQUER BONDS are bonds issued by the Treasury for the repayment of money borrowed by the government. They are issued by the authority of an Act of Parliament, which also states when they are to be redeemed. Exchequer bonds are payable to bearer, and are not received in payment of taxes.

EXCISE. Duties in commodities manufactured and consumed in the country (Refer to "Excise" in *Index.*)

EX-DIVIDEND. When stocks and shares on which a dividend is just due are sold "ex dividend," the buyer is not entitled to the dividend. (See *Cum Dividend.*)

EX-DRAWING. When bonds which are about to be drawn are sold "ex-drawing," the purchaser does not get any benefit accruing from the drawing.

EXEQUATUR. The recognition by the government of a state of the official position of a consul appointed to take up his duties in that state. Until he receives his exequatur he is not allowed to perform his consular duties. In England, the exequatur is given to consuls and consuls-general, but very seldom to vice-consuls; it takes the form of a Letter Patent issued by the Foreign Office and signed by the King, and the grant of the exequatur is advertised in the Gazette. In Austria,

the word "exequatur" is merely stamped on the consul's commission in token of recognition of his position. The Russian and Danish Governments merely notify to the consul that he is duly recognised.

EX NEW. When a company wishes to increase its capital it does so by issuing new shares, which are sometimes allotted to the old shareholders in proportion to the number of the shares they hold. But such shareholders must claim them within a reasonable time, after which the old shares are quoted "ex new," that is, the purchaser of the old shares is not entitled to claim in virtue of such purchase, any right to the new shares issued. The phrase also means that if, when the new shares are to be issued, the old shares are sold "ex new," the seller reserves to himself the right of taking up his proportion of the new issue.

EX-OFFICIO. "By virtue of his office." The mayor of a city is frequently, in virtue of his office, a member of the various local governing bodies of the city.

EX PARTE. An ex parte proceeding is in legal matters a proceeding taken in the Court by one party when the other party is not present, and has not received notice of the proceeding.

EXPECTED TO RANK. In bankruptcy proceedings a debtor is required to make out a statement of his affairs which amongst other things contains the amount of his liabilities which it is expected will rank against the estate for dividend; in other words, the amount owing by the debtor, and which can be proved against his estate.

EXPECTATION OF LIFE. In insurance, the term denotes the number of years which a person of any given age may in the ordinary course of things expect to live. For example, a man of twenty-one years of age may expect to live to a trifle under sixty years of age, a woman under similar circumstances, may expect to live nearly a couple of years longer. (See p. 704.)

EX SHIP. When goods are sold "ex ship," the purchaser has to bear the expenses of removal, after they have been unloaded from the ship.

EX WAREHOUSE. Goods sold "ex warehouse" must be removed at the expense of the purchaser.

FACE VALUE. The nominal amount for which bonds, notes, debentures, and the like are issued, or the amount for which a bill of exchange is drawn. This amount appears on the face of the document, and in many cases differs from its real value. When the real value is above the nominal or par value, the property which the document represents is said to be at a premium; when the real value is below the face value, the property is said to be at a discount.

FACTOR. An agent employed to buy or sell goods on behalf of a principal, but acting as if he were himself the principal.

FAIR TRADE. In regard to international trade, the phrase means treating other countries as they do our own country. Where foreign countries levy duties on English products, we ought in "fair trade" to tax theirs, and generally speaking, admit their products on the same terms as they admit ours.

FAVOUR. In business correspondence, the term favour is used for a letter received. The payee of a cheque, or of a bill of exchange, is described as the person in whose favour the cheque or the bill is drawn.

FIDELITY GUARANTEE. See under *Insurance.*

FIDUCIARY LOAN. A loan granted without security being required from the borrower.

FIDUCIARY NOTE ISSUE. A paper currency depending for its value not on gold or silver, but on securities or on the confidence of the public that the notes will be met by the authority or the bank issuing them.

FI. FA. An abbreviation of *Fieri Facias.* The writ of Fieri Facias enables a judgment creditor to seize the goods and chattels of his judgment debtor in satisfaction of the judgment.

FINANCE. The term is used with reference to the raising and the expenditure of the revenues of a state, and also to the business of getting the public to subscribe money for loans to governing bodies, or for industrial and commercial undertakings. The persons who are skilled in such matters are described as financiers.

FIRE INSURANCE. Refer to *Index.*

FIRM. Another name for an ordinary partnership business. A partnership must not consist of more than twenty persons, and in the case of a banking partnership the number must not exceed ten. (For the rights and liabilities of partners, refer to "Partners," in *Index.*)

FIRM OFFER. An offer made by a person who has made up his mind not to increase it.

FIRST CLASS PAPER. A name given to negotiable instruments of which there is no doubt that they will be met when they become due. Such for example as bills which have been accepted or indorsed by men whose financial stability is unquestioned, or exchequer bills and exchequer bonds the payment of which is guaranteed by government.

FIRST OF EXCHANGE. One of the copies of a bill which is drawn in a set. (See under *Bills of Exchange.*)

FIRST OPEN WATER. This phrase is used in charter parties with reference to ships trading with the Baltic ports, to mean "immediately after the ice breaks up"; for during the winter this sea is frozen over.

FITTER. In the north of England, a fitter is an agent who sells and ships coals on behalf of a particular mine. His commission is known as fittage.

FIXTURES. The term denotes chattels permanently attached to land or to buildings on the land.

FLASH POINT. The temperature at which the vapour of an oil will ignite. In this country oil must not be sold if it bursts into flame on being raised to a temperature of 73°, but in some other countries, the "flashing point" is much higher. It is a question whether the numerous lamp explosions which take place are due to the low flash point adopted in this country, or are due to the defective nature of the lamps used.

FLOATERS, a term in the money-market signifying Bearer securities on which loans are raised by bill-brokers, e.g. bonds of the London County Council, Consol certificates, and other securities of the highest class. They are so called from the fact that they float from bank to bank, as one bank calls in its loans on these securities and another lends on them.

FLOATING CAPITAL. That portion of a trader's capital which is not locked up in a permanent investment, but which is actually available for carrying on his business.

FLOATING POLICY. In marine insurance, a floating policy is one in which the vessel is not named, but which covers the goods by whatsoever ship they may be carried. (Refer to "Marine Insurance" in *Index.*)

FLOATING SECURITY or **FLOATING CHARGE.** It is usual when a limited company obtains a loan to give as security for its repayment a charge on the assets of the company. This charge is not enforced so long as the company continues to be a working concern, so that the company can deal with the property just as if there were no charge upon it, unless, indeed there is default made in payment of the principal or interest, or the company is wound up, in which case the person having the security can seize the property.

FLOTSAM. When a ship is sunk or wrecked and the goods float upon the sea, they are called flotsam.

FOLIO. A sheet of paper doubled. In law writing a folio means seventy-two words, in parliamentary writing a folio means ninety words. In printing folio means the number appended to each page, and in book-keeping two opposite pages.

FOOLSCAP. A sheet of paper having formerly for its water mark the device of a fool's cap and bells. Foolscap is of varying size: in printing it is 17 inches by 13½ inches; in writing paper, 16½ inches by 13½ inches.

FORECLOSE. An action of foreclosure is brought to compel a mortgagor to pay off the mortgage debt or be deprived for ever of his right to redeem the mortgaged property. The Court then fixes a day for re-payment, and if the mortgagor fails to pay up at the appointed time, the mortgagee becomes the absolute owner of the property.

FORM OF APPLICATION. When the public is invited to take shares in a limited company, each applicant for shares must fill up a form, stating the number of shares he desires and the amount he has deposited with the company's bankers as proof of his *bona fides.* Attached to this form of application there is a form of receipt, which, when the applicant takes the form to the company's bankers and pays the deposit, is filled up by the bank as a receipt for the deposit paid. This receipt does not require a stamp.

FOR MONEY. On the Stock Exchange, sales of securities and shares are either "for money" or "for the account." In a sale "for money" the securities are at once delivered by the selling broker and paid for immediately by the broker for the buyer. Transactions of this kind are chiefly confined to consols.

FOR THE ACCOUNT. Most transactions on the Stock Exchange are for "the account," that is, the seller agrees to deliver and the buyer agrees to pay for the securities on the next settling day. The settling day occurs every fortnight, except in the case of consols, when it takes place once a month. (See "Account" under *Stock Exchange.*)

FORWARDING AGENT. A person who is employed to collect and deliver goods on behalf of others.

FOUL BILL. A document granted to the master of a ship by the authorities of a port from which a ship has come, showing that the port in question has an infectious or contagious disease prevailing there. (See "Ship's Papers" under *Shipping.*)

FOUNDERS' SHARES. Shares issued as fully paid up to persons who have contributed to the preliminary expenses of forming the company, or who have taken an active part in its formation as a remuneration for their services. These shares sometimes entitle their holders to divide among themselves an aliquot portion, such as one-sixth or one-third of the profits; but in many cases the holders of founders' shares are entitled to the surplus profits after a certain fixed rate of dividend has been paid on all the other shares, ordinary, preferred, and guaranteed.

FREE ALONGSIDE SHIP. Goods delivered free alongside a ship or wharf must be carried there at the expense of the seller, and are at his risk until arrival alongside the ship.

FREE OF ALL AVERAGE (F.A.A.). This clause inserted in a policy of marine

insurance means that the underwriter is liable only in case the thing insured suffers a total loss. He is not liable either for particular average, i.e., a partial loss or deterioration of the things insured, or for general average, i.e., where the interest insured is liable to contribute to the loss sustained by some other interest for the benefit of the whole venture.

FREE OF CAPTURE AND SEIZURE (F. C. & S.). This signifies that the underwriter is not liable for any loss arising from the capture and seizure of the thing insured.

FREE OF EXPENSE TO SHIP. This clause in a charter-party makes the charterer and not the ship-owner liable for loading and unloading the ship.

FREE OF GENERAL AVERAGE. In marine insurance, where a policy contains this clause, the underwriter is not liable for general average contributions due from the thing insured to some other interest insured, where that other interest has sustained some loss or incurred some sacrifice for the common good.

FREE OF PARTICULAR AVERAGE. This clause is an extension of the Memorandum in Lloyd's Policy (*q. v.* under Insurance), and was adopted in its present shape by marine insurers in 1883. Its effect is that the insurer is not liable for any *partial* loss sustained by the thing insured, unless such partial loss arises from the ship being stranded, sunk, burnt, or in collision with another ship.

FREE ON BOARD (F. O. B.). This means that goods are sold at a price which includes the cost of delivery on board ship. The moment they are shipped they are at the buyer's risk, and he must pay the cost of freight and the insurance.

FREE OVERSIDE. This signifies that the moment the goods are unshipped they are at the buyer's risk, and he must pay the cost of their removal.

FREE TRADE. By free trade is meant that a country does not tax imports in order to protect or foster home industries. The phrase does not imply that no duties are levied on imports, but if levied they are imposed for the purpose of raising a revenue only, and on goods which the country is itself incapable of producing, or on goods which, if produced at home, would be liable to taxation.

The policy of taxing imports for the sake of revenue only was initiated by Pitt, who derived his ideas from Adam Smith's "Wealth of Nations," but this policy was completely put an end to by the war with Revolutionary France, and by the prohibitory Corn Laws passed during the period 1791–1815.

A revival of free trade principles took place on Huskisson's accession to office, 1823. That statesman greatly modified the Navigation Acts, and reduced the duties on raw materials, such as silk and wool. A further step towards a free trade policy was taken by Peel in his budget of 1842, when the import duties on hundreds of articles were abolished or reduced, and in 1846 he carried the repeal of the Corn Laws, reduced the duties on silk, cotton manufactures, and foreign spirits, and withdrew the protective duty on sugar, while the duties on meat, live stock, and vegetables were abolished. The reduction or the abolition of import duties on many other articles during the period 1846–1860 made England a free trade country.

FREIGHT. Originally the term freight meant the load or cargo, but now it means the payment for carriage of goods by sea. (Refer to "Freight" in *Index.*)

FREIGHT NOTE. A note embodying the payments due for freight.

FREIGHT RELEASE, an order authorising the master of a ship to give up possession of a consignment of goods, the freight having been paid. A freight release is necessary only when goods have been shipped freight forward, i.e. when the consignee is supposed to pay the freight.

FRIENDLY SOCIETIES. A friendly society is one formed for the mutual benefit of its members, who subscribe to its funds, and are relieved when in distress. Usually their objects are to afford relief or give maintenance to members in sickness or bodily or mental infirmity, or in old age (i.e., after fifty), or when out of employment. These societies also make payments on the birth of a member's child or on the death of a member or of any of his family. Payments are also made when a member loses by fire his tools or implements of trade, not exceeding in value £15.

Where a friendly society grants annuities to its members, the amount of each annuity must not exceed £50, or if a lump sum is paid to a member, it must not exceed £200.

The term "friendly society" is now extended to *Working Men's Clubs* formed for the recreation or the improvement of their members. Refer in *Index* to "Clubs" and "Friendly Societies."

FUNDED DEBT. The debt of the Government which it is not bound to repay, or which is repayable only after a long period from the date when the loan was raised, e.g., consols. It is contrasted with the unfunded debt, i.e., money borrowed by Government for short periods on Exchequer Bills, and the like.

FUNDS. See *Consolidated Fund* and *Consols.*

FUTURES. See *Corner.*

GARNISHEE ORDER. This is a notice sent by the Court to persons who have in their custody money or goods belonging to judgment debtors, or who owe money to such debtors, ordering them not to part with such money or goods. The object of this notice is to prevent the judgment debtor from obtaining possession of the money or the goods and applying them to his own purposes, instead of paying his judgment creditors. Such notices are frequently served on banks which have funds belonging to those of their customers who have been ordered by the Court to pay money either by way of debt, or as damages to others. The person on whom the order is served is called the "garnishee." (Refer to "Attachment of Debts" and "Garnishee Order" in *Index.*)

GAZETTE. The "London Gazette" is a government newspaper published every Tuesday and Friday. All royal proclamations, government notices, appointments and promotions in the Army and the Navy, and in the various departments of the State, are published in the Gazette, as well as such public matters as bankruptcies, winding-up of companies, dissolution of partnerships, and the administration of the estates of deceased persons. In lawsuits, a copy of the Gazette is good evidence of the truth of any government or official notice, but in such actions the whole copy of the Gazette, and not a mere cutting from it, must be furnished to the Court.

GENERAL ACCEPTANCE. See *Acceptance, General.*

GENERAL AVERAGE. See *Average, General.*

GILT-EDGED. In commercial slang the phrase is applied to paper, i.e. to bills or securities of exceptionally high value. Securities which are described as gilt-edged being of high price, are considered as absolutely safe investments. Such, for example, are the stock, shares, and securities of any of the great British railways.

GLUT IN THE MARKET. A market is said to be glutted when the supply of any commodity is in excess of the demand.

GODOWN, a name given to a warehouse or store for goods in India and in other parts of the Far East.

GOLD BONDS. Bonds which are payable in gold.

GOOD MERCHANTABLE QUALITY. In contracts for the sale of goods, the phrase denotes that the goods are in a sound condition and up to the average quality.

GOODWILL, every advantage or benefit that has been derived from the reputation that a firm or a business has acquired through being established for a length of time. Such goodwill may be a very valuable asset, and may be sold or transferred, but only if the premises in which the business is carried on are sold or transferred at the same time. The person who acquires the goodwill of a business is entitled to represent himself as the person carrying on that business, and to restrict the competition of the person from whom he has acquired the goodwill. This competition may be restrained by an agreement between the parties, and provided the restraint is reasonable, and is just sufficient to protect the interests of the person to whom the goodwill is transferred, the law will enforce it. In the absence of an express agreement, the person transferring the goodwill will be restrained from soliciting the patronage of the old customers.

When a partnership is dissolved, it is usual to transfer the goodwill of the partnership business to one or more of the partners of the old firm. When this is done, the other members will not be permitted to solicit the patronage of the customers of the old firm. If, however, no arrangement in regard to the matter is arrived at, each member who carries on a business similar to that carried on by the old firm can invite the customers of the old firm to do business with him.

GREENBACKS, legal tender notes of the United States, first issued in 1862, during the Civil War. They were so called from the devices printed in green ink on the back. The term is now applied to notes issued by a National Bank in the United States.

GROUNDAGE, dues paid by ships for being allowed to occupy space in a port.

GROUND RENT. When land is leased for building purposes, the owner of the ground is entitled to a rent during the period which the lease has to run. At the end of that period, the buildings erected on the land become the property of the person who owns the land.

GUARANTEE SOCIETY, a company which, in return for the payment of a premium, undertakes to make good to an employer any losses which he may sustain through the dishonesty of those he employs. (See "Fidelity Guarantee," under *Insurance.*)

GUARANTEED STOCK is stock the interest on which is guaranteed. Sometimes not only the interest but the principal also is guaranteed. The interest may be guaranteed by government or by the company issuing the stock, or by another company.

GUILD, an association or a company of men for the purpose of protecting the commercial interests of its members. Prior to the Reformation these guilds were numerous throughout the country, and in addition to looking after trade interests, attended to their spiritual and material needs. At the Reformation these guilds were swept away, with the exception of the Guilds of the City of London.

HALL MARK, the mark placed on gold or silver articles to indicate the quality of the gold or silver contained therein; for example, in the case of gold, a crown and the number 22 indicates that the article is 22 carat gold, that is, that the article contains 22 parts of pure gold out of 24. Eighteen carat gold is marked with a crown and the figure 18. On silver ware the marks of Britannia and a lion *passant* indicate respectively that the articles are of 11 oz. 10 dwts. and 11 oz. 2 dwts. fineness, these weights showing the proportion of pure silver in 1 lb. (=12 oz.) of the metals thus marked.

HAMMERED, a term used on the Stock Exchange to denote a defaulter, i.e. a member who is unable to fulfil his contracts or to meet his liabilities towards his fellow members. Such a member is then expelled, or is suspended for a period of time, during which he is not allowed to transact business with other members of the "House." If, however, the member is able to pay 6s. 8d. in the £ he may be re-admitted, provided his conduct in business has been satisfactory in other respects. Re-admission does not free him from his liabilities; and if at any time he is in a position to pay in full his liabilities to his fellow-members, he may be called upon to do so. (See *Defaulter*.)

HANSE TOWNS, a league of the great commercial towns in north Germany and adjacent countries, formed in the 13th century, for the purpose of putting down piracy and of protecting trade and commerce. During the 15th century the league decayed, and in recent times the only survivors were the towns of Hamburg, Bremen, and Lubeck. These have now been deprived of their distinctive privileges.

HAWKER, a person travelling about with a horse or other animal drawing merchandise or goods for the purpose of selling them in a place in which he does not usually reside or carry on business. Annual licence £2.

HEREDITAMENT, any property whatsoever which descends to the heir, as distinguished from property which devolves on the next of kin, e.g. lands descend to the heir, but personal property, such as money, stocks and shares, and leaseholds go to the next of kin.

HIGH SEAS, that part of the sea which is outside the three-mile limit from the shore. Inside that limit the sea belongs to, and is under the jurisdiction of, the country on which it borders.

HIRE PURCHASE. When goods are purchased on the hire system, the arrangement is that the goods are to become the property of the person who hires them on his making a specified number of payments periodically. Until all the payments have been made, the goods belong to the person who lets them out, though, of course, possession of the goods is given to the person hiring them. Should default be made in the payments, the owner of the goods may resume possession of them. Great care should be taken in drawing up a hire-purchase agreement, otherwise the owner may find himself deprived of his right to re-take the goods. In such agreements it is usual, therefore, to state that when the payments have been completed, the hirer shall have the option of purchasing the goods on payment of a further sum, usually a sum equal in amount to one instalment. A condition should be inserted that the hiring agreement should be capable of being terminated at the option of either party, or in the breach of any of the terms of the agreement. The object of these various provisions is to prevent the ownership of the goods from passing to the hirer until the whole of the terms of the contract have been fulfilled. The hirer has merely an option to purchase, and is not a purchaser until the period of hiring is at an end. Consequently he is not the owner of the goods during the period of hiring, and cannot, therefore, sell them or pledge them. Should he sell or otherwise deal with them, the owner can recover them from any person into whose hands they may have come. Were these provisions not inserted in the agreement, the hirer would be the purchaser from the moment the hiring agreement was signed, and when the hirer came into possession he could dispose of them as he pleased, and the true owner could not recover the goods from any person to whom the hirer had sold or pledged them, provided that such person had received them in good faith. Goods let on the hire-purchase system may be seized by a landlord for arrears of rent, but the owner of the goods can recover their value from the person who has hired them.

A properly drawn hire purchase agreement should contain the amount of each instalment, and the date on which it is payable. The number of instalments should be stated. There should be inserted a stipulation that at the end of the agreed period of hiring the hirer should have the option of purchasing the thing hired, on payment of a further sum, with a proviso *that the article shall not become the property of the hirer* until such purchase and payment be made. Provision should be made that in case the hirer make default in paying any one of the instalments, the hirer shall on demand return to the owner the thing hired, and that the latter shall be entitled to enter on the premises of the hirer, and seize and re-take the thing hired.

HOLDER IN DUE COURSE. See under *Bills of Exchange*.

HOLDER OF A BILL OF EXCHANGE, the person to whom a bill of exchange or a cheque has been transferred.

HOLDING OVER, a phrase denoting that a tenant refuses to give up possession of premises after he has himself given notice to quit, or, in the case of a lease, after the landlord has given him notice to quit on the expiration of his lease. In the former case the tenant is liable to pay double rent; in the latter, he is liable for double the yearly value.

HOME USE ENTRY, a document which has to be filled up when it is necessary to remove from a bonded warehouse goods liable to duty, where such goods are to be consumed within the country, and are not intended for export.

HONOUR, a term denoting the duly fulfilling of a monetary obligation, e.g. to honour a bill is to accept the bill on presentation, or after being accepted, to pay it when it becomes due.

HORSE POWER, the standard employed for indicating the driving power of a steam engine. It is reckoned that a horse is capable of raising 33,000 lbs. weight through one foot in a minute, or 550 lbs. through one foot in a second. In reality this is about 1½ times the power of an ordinary horse.

HOTCHPOT. "A term signifying the mingling of property in certain cases, in which a person claiming to share in a common fund is bound as a condition of so doing to bring into the fund other property deemed in law to have been previously advanced to him in anticipation of his final share in the fund."

HYPOTHEC. In Scots law, a hypothec corresponds roughly to a mortgage in English law, with this difference, that mortgages deal with lands or interests in lands, whereas a hypothec may relate to goods and chattels. The term signifies a security given to a creditor over the goods and chattels of the debtor while they are allowed to remain in the possession of the debtor.

IMPERSONAL ACCOUNTS, in book-keeping, accounts which deal with goods and not with persons, as e.g. wine account. Sales to a person are put to the debit side of the buyer's account and are put on the credit side of the seller's goods account. When the personal and impersonal accounts tally, the accounts are correct.

IN ADVANCE OF CALLS, payments made by shareholders on the amount due upon their shares before any call on the shares has been made. Such payments in advance can be made only if the regulations of the company permit them, and if it is for the benefit of the company that they should be made. Interest may be paid on such advances, even though no profits have been made by the company.

INCOME TAX. Refer to *Index*.

INCONVERTIBLE PAPER CURRENCY, paper money for which the holder cannot demand coin from the Bank or the Government issuing such notes. Bank of England notes were from 1797 to 1820 inconvertible, that is, the holders of such notes could not compel the Bank to give gold in exchange for them.

The great danger of an inconvertible paper currency is its tendency to depreciate in value as a consequence of the temptation to a government to increase the issue of the paper money as an easy way of paying its debts and obligations. People cannot be certain that the government will ultimately redeem such notes, and hence they exhibit an increasing reluctance to accept the paper from their debtors, or in exchange for goods. The real value of inconvertible paper money, therefore, may fall to an insignificant fraction of its nominal value.

INDENT. An order for goods received from abroad by a merchant.

INDENTURE. A deed between two or more parties. Formerly the duplicates of the agreement were written on one parchment. The parchment was then cut by a zig-zag or indented line, so that the duplicates could be fitted into one another, and thus proof was furnished that they were counterparts of the same agreement.

INDORSEE, the person to whom a bill of exchange is transferred by the holder writing not only his own name on the back, but the name of the person to whom the bill is transferred. (See under *Bills of Exchange*).

INDORSEMENT, INDORSER. See under *Cheques*. and *Bills of Exchange*.

IN FORMA PAUPERIS. Where a person who is very poor wishes to embark on a lawsuit, he may be allowed to sue as a pauper, provided he can swear (make an affidavit) that his possessions are not worth £25, not including his wearing apparel and the subject matter of the action. He must satisfy the Court that he has a good cause of action, and this is done by obtaining a written and signed opinion from a barrister that the cause of action is *prima facie* good. On being allowed to sue *in forma pauperis*, he is excused the payment of court fees, and the Court may assign him a solicitor and counsel to assist him in the conduct of his case. These are not permitted to charge for their services, but they may be reimbursed for out of pocket expenses.

INLAND BILL OF EXCHANGE. A bill of exchange drawn and payable within the United Kingdom, or drawn within the United Kingdom upon some person resident in it. All other bills are foreign.

INLAND REVENUE. Refer to *Index*.

IN RE. In the matter of.

INSCRIBED STOCK or **REGISTERED STOCK.** Where a loan is raised by a State or a Company, and bonds for its repayment are not issued, but the lenders are allotted shares or stock, and have their names registered or entered in a list at the head office of the Company, or at the seat of government of the State issuing the stock, such stock is called Inscribed or Registered Stock, and can only be transferred by the owner, or his agent, signing an entry to that effect in the said register.

INSPECTING ORDER, an order permitting an intending buyer to inspect the goods of the seller, where such goods are stored at a dock or a bonded warehouse.

INSURABLE INTEREST, a pecuniary interest in the subject matter of the insurance.

INSURANCE. Refer to *Index.*

INTER ALIA. Among other things.

INTERBOURSE SECURITIES. Where a State raises a loan simultaneously in several countries, as e.g. Russian Loans, the bonds for the repayment of the loans, if they are transferred from a person in one of the lending countries to a person in another lending country, are negotiated at a fixed rate of exchange.

INTEREST WARRANTS. See *Dividend Warrants.*

INTERIM DIVIDEND, a dividend paid on shares before the whole amount of the nett profits of an undertaking for a given period has been ascertained.

IN TRANSITU. On the way; in course of transit.

INVENTORY, a list or schedule containing a true description of goods, chattels, furniture, and the like.

I. O. U., an abbreviation of the words "I owe you." This is a document of very little value save as evidence of indebtedness between the parties, though it is not conclusive evidence of the actual amount owing by one party to the other. It is not an agreement, or a receipt, or a negotiable instrument, and therefore a person cannot sue upon it. It does not require a stamp, and the affixing of a stamp to it does not increase its value or importance. The following is an ordinary form of an I. O. U.

October 12th, 1904.

I. O. U. £67 (sixty-seven pounds).

JAMES SMITH.

To R. OWEN.

INVOICE, a written account giving full particulars as to the quantity, quality, and prices of goods sent to a purchaser.

JETSAM. Where a ship is in danger of being sunk, and to lighten the ship goods are cast into the sea and remain under water, such goods are jetsam (cf. *Flotsam*).

JETTISON, casting goods or the ship's tackle overboard for the purpose of saving the ship or the rest of the cargo. (See under *Marine Insurance.*)

JOBBER. The members of the Stock Exchange are divided into two classes, brokers and jobbers, or dealers. These latter deal in securities which they buy from or sell to the public through the medium of the brokers. (Refer to "Jobbers" in *Index.*)

JOINT ACCOUNT. Where two or more persons subscribe the money for carrying on a particular undertaking, the account of the transactions is kept in their joint names. The profits are shared and the losses borne in a proportion agreed upon by the parties themselves.

JOINT STOCK COMPANIES, companies whose liability may be either limited or unlimited, and whose capital is subscribed by more than 20 persons (the maximum number allowed by law for a partnership).

JOINT STOCK BANK. A bank owned by a corporate body. (Refer to *Index.*)

JOURNAL. In book-keeping, the items from the Waste Book are posted into this book, in which the position of the parties as debtor or creditors is clearly shown, from thence the items are transferred to the ledger.

JUDGMENT CREDITOR, a person who brings an action in a court of law for a debt due to him, or for damages for some wrong done to him, and obtains judgment in his favour.

JUDGMENT DEBTOR, a person against whom a judgment in a court of law in an action for debt or for damages has been obtained, and who has not satisfied the judgment. A judgment debtor is liable to be made bankrupt if the amount of the debt is not less than £50, or he may be committed to prison for contempt in not obeying the order to pay, no matter what the amount of the debt may be.

KEELAGE, charges that have to be paid for permission to keep a ship in port.

KEEPING HOUSE, confining oneself at home for the purpose of delaying or defeating creditors. The debtor must deny himself to a creditor when the creditor calls for payment and asks to see him personally, otherwise the debtor cannot be said "to keep house," and thereby render himself liable to be made bankrupt.

KENTLEDGE, permanent ballast such as pig-iron or other weighty material which on account of its superior cleanliness is preferred to ordinary ballast.

KITE, the same as *Accommodation Bill.*

KNOCK-OUT. A number of dealers agree among themselves that they will not bid against each other at a particular sale, and that one of their number shall bid for the whole body. After the sale they meet and hold an auction between themselves. If, for instance, a lot has been bought for £20, and one of the party is willing to give £30 for it, the advance of £10 on the sale price is then divided among the dealers.

KNOT, a nautical mile, equal roughly to 2,027 yards.

LAC, a term signifying 100,000 rupees, equal to £6,666 13s. 4d.

LAGAN, goods thrown overboard from a ship which is sinking, and being weighty, are buoyed so that they may be recovered.

LAME DUCK, a defaulter on the Stock Exchange. A member who is not able to meet his liabilities to his fellow-members. (See *Defaulter.*)

LAND WAITER or **SEARCHER,** an officer of customs whose duty it is upon the landing of merchandise, to examine, weigh, and measure it, and to keep an account thereof, for the purpose of assessing the amount of duty to be paid on it.

LANDING ACCOUNT, a document stating information regarding goods landed at a wharf, and the charges for warehousing them.

LANDING ORDER, a permit authorising goods to be landed from a ship, after the duty, if any, has been paid.

LAW MERCHANT that part of the law which deals with commercial transactions. It was originally founded on the general customs of merchants of all nations, and gradually was incorporated into the common law. The law relating to negotiable instruments and to partnerships is derived largely from the custom of traders.

LAY DAYS, the time allowed in charter-parties to ships for the purpose of loading or unloading while staying at a port. (See "Demurrage," under *Shipping.*)

LEAKAGE, an allowance made to merchants for the leakage of casks, or the wasting of liquors.

LEAKAGE AND BREAKAGE. The words "leakage and breakage excepted" when inserted in a charter-party or a bill of lading, renders the ship owner free from liability for any damage caused in this way to the goods which he has agreed to carry. If, however, the damage has been caused by the negligence of the crew in handling or stowing the goods, the ship owner will be liable.

LEDGER. In book-keeping this is the book of accounts into which the entries from the other books are finally posted, so as to show at a glance the state of the trader's affairs.

LEEMAN'S ACT, an Act of Parliament passed in 1867 for the purpose of preventing the sale of shares in banks by persons who did not possess the shares. It provides that contracts for the sale or transfer of bank shares shall be void unless the numbers by which such shares are distinguished or set forth in the contract, or unless the name of the registered holders of such shares is inserted. This Act is evaded by the rules of the Exchange, which compels its members to fulfil contracts for the sale of bank stock or shares, even though the numbers of such shares, or the names of the holders of such shares, are not inserted in the contract.

LEGACY DUTY. Refer to *Index.*

LEGAL DAY. Twenty-four hours, reckoned from midnight to midnight. If, therefore, a payment is due on a given day, there cannot be any default in paying until the end of that day, which expires at midnight.

LEGAL TENDER, any currency or money by which a debtor can legally discharge his debt, or which a creditor is bound to receive in final discharge of an obligation to him. Gold is legal tender for debts up to any amount; silver where the debt is two pounds or under; and copper up to one shilling. Bank of England notes are legal tender except so far as the bank itself and its branches are concerned. This means that the Bank cannot compel its creditors to take payment in its own notes.

LESSOR, the person who grants a lease of land or premises to another.

LESSEE, the person to whom a lease is granted.

LETTER OF ALLOTMENT. When invitations are issued to the public asking them to apply for shares in a company, those who succeed in obtaining the shares are informed by a letter of allotment stating the number of shares which have been allotted them. The stamp duty is a penny where the amount does not exceed £5. Over £5 the stamp duty is sixpence.

LETTER OF ATTORNEY, the same as *Power of Attorney.* (See *Attorney, Power of.*)

LETTER OF CREDENCE, the letter given to an ambassador by his sovereign, which he delivers to the sovereign to whom he is sent. This letter requests the sovereign to whom the ambassador is accredited, to give credence to any communications which the ambassador may make on behalf of his government.

LETTER OF CREDIT or **BILL OF CREDIT,** an open letter or request whereby a merchant or a banker requests some other person to advance money, or to give credit to a third person named therein, and promising that he will repay the same to the person advancing the money, or that he will accept bills drawn upon himself for an equal amount. A letter of credit is not a negotiable instrument, and therefore only the person named in it is entitled to the amount. Letters of credit, except those payable in the United Kingdom, must be stamped on the same scale as Bills of Exchange.

LETTER OF INDEMNITY, a letter guaranteeing a person against any claim or loss.

LETTER OF LICENCE, a document by which creditors allow an insolvent debtor a longer time for the payment of his debts, promising not to take any steps against him or his property until the expiration of that time.

LETTER OF REGRET, a letter sent to a person who has applied for shares in a public company, stating that shares cannot be allotted to him.

LETTER OF RENUNCIATION, a document attached to a letter of allotment, which on being signed by the person to whom the shares have been allotted, enables him, on sending it to the directors, to renounce his right to take up the shares. He is then in no way liable on the shares which had been allotted to him.

LETTERS OF ADMINISTRATION, authority given to a person to administer the estate of one who has died intestate. This authority is usually given to the next of kin, and in some cases to a creditor of the deceased. The duties of an administrator is to call in the estate and collect the assets of the deceased, to pay the debts of the deceased, and to distribute the residue among the next of kin.

LETTERS OF MARQUE, permission given in time of war by a State to its subjects, authorising them to fit out ships for the purpose of preying on the commerce of the enemy.

LETTERS PATENT, a document issued by the government granting to a subject some "dignity, office, privilege, monopoly, or the like." It is addressed "to all to whom these presents shall come," and are not sealed up but are left open, and are recorded in the Patent Rolls, so that all subjects of the realm may read them, and be bound by their contents. Being left open they are called letters *patent* (L. *patere*, to be open). Letters patent for inventions are sealed with the seal of the Patent Office.

LIEN, the right which a person has of retaining property in his possession which belongs to another, until certain demands of his are satisfied; e.g. a pawnbroker has a lien on goods pledged to him, that is, he is entitled to retain them until the pledgor repays the loan with interest. Similarly, an unpaid seller has in certain cases a lien on the goods sold, so long as such goods remain in his possession. But the term lien has been extended to cases where the person having the lien has not got possession of the property over which the lien is exercised. The unpaid seller of land has a lien on the land even though the land has been conveyed to the purchaser. So, too, where the contract for the sale of land falls through, the intending purchaser has a lien on the land, for the amount of any deposit he may have paid to the vendor. Such liens are described as "equitable liens," to distinguish them from "possessory liens," in which the person exercising the lien has possession of the property. There is a third class of liens called "maritime liens," e.g. the seaman's lien for unpaid wages. Such a lien can be enforced by arrest of the ship under an order of the Admiralty Division of the High Court of Justice.

LIGHTERAGE, a charge made for conveying goods in a barge or a lighter.

LIFE ANNUITY, an annuity that terminates at the death of the recipient.

LIFE INSURANCE. Refer to *Index.*

LIGHT DUES, dues levied on ships for the purpose of maintaining the lighthouses, beacons, and the like, necessary to warn and to guide those who are navigating ships round the British coasts. These dues are levied by Trinity House.

LIMITED AND REDUCED, a phrase applied to a limited company whose capital has been reduced by permission of the Court.

LIQUIDATED DAMAGES. When the amount claimed by a plaintiff in an action can be definitely ascertained by calculation or in accordance with a fixed scale of charges, it is said to be liquidated or "made clear." Thus in an action to recover arrears of rent, or the amount of a cheque, such amount can be reckoned up, and the plaintiff, should he succeed in the action, is entitled to that amount. He cannot be awarded a smaller sum. When, however, the amount depends on all the circumstances of the case and has to be estimated by the jury, the damages are said to be *unliquidated.* Thus in an action for libel or for personal injuries, the jury may award the plaintiff any sum or nothing at all. No one can determine beforehand what amount the jury will award.

In a contract, the parties frequently fix the amount which is to be paid on breach of the contract. Where this is the case, such amount will be regarded as liquidated damages. Thus in building contracts, a penalty is often exacted for delay in completion, at the rate of so much per day or per week. Such a penalty for delay is in the nature of liquidated damages.

LIQUIDATED DEBT, a debt, the precise amount of which is capable of being calculated. (See *Liquidated Damages.*)

LIQUIDATOR, the person appointed to settle the affairs of a limited company, which is being wound up.

LLOYD'S, an association of underwriters and other persons engaged in marine insurance. It took its name from the fact that the members formerly met at Lloyd's Coffee-house in Lombard Street. The Society was incorporated by Act of Parliament in 1871, which states the objects of the Society to be "the carrying on of the business of marine insurance by members of the Society, the protection of the interests of the members of the Society in respect of shipping, and cargoes and freight: the collection, publication, and diffusion of intelligence and information with respect to shipping."

Members must deposit with the committee (1) gilt-edged securities to the value of £5,000, or (2) a guarantee policy of £5,000. (See "Lloyd's Form of Policy" under *Marine Insurance.*)

LLOYD'S BOND, a device for the purpose of enabling railway companies and other corporations to borrow to a greater extent than the law allows them. Thus, though the Company may not borrow in excess of its powers, it may incur debts for work done or materials supplied, and give a bond for its due repayment. The following is an example of such a bond:—

The X Railway Company.

No. Bond for £.

The X Railway Company do hereby acknowledge that they stand indebted to in the sum of £ for money due and owing from the Company to the said And the Company for themselves, their successors and assigns, covenant with the said his executors, administrators and assigns, to pay the said sum of with interest thereon, at the rate of £5 per cent. per annum, from the date hereof, until payment. Such interest to be payable half-yearly upon the day of and the day of in each year. Given under the common seal of the Company, the day of

A. B., Secretary.

N.B.—On the production of this bond, the interest will be paid at the office of the Company.

LLOYD'S REGISTER, an association established in 1843 to compile an accurate classification of the shipping of the United Kingdom of the foreign vessels trading to this country. The register issued annually contains the names of vessels arranged and classified according to their construction, nature of materials, state of repair, and the like. These statistics are obtained by the surveyors. When a vessel is registered A1 at Lloyd's, the A denotes that the ship is built in the very best manner. The 1 indicates the first-rate condition of the stores, tackle, and the like. A ship may remain in this class for fifteen years, and if she remains in a completely efficient state, her registration as A1 may be renewed.

LOCK-OUT. When an employer shuts the gate of his factory or place of business so as to prevent his workmen entering and continuing their work, he is said to "lock out" his workmen.

LOCOMOTIVE CHARGES, charges made by a railway company for the use of an engine and of the line in conveying a trader's trucks from the line into the trader's private siding. These charges do not cover the cost of loading or unloading the trucks.

LOCUM TENENS, holding a place or doing duty for another.

LOCUS STANDI, the right of a party to appear and be heard on the question under discussion before a tribunal or at a meeting.

LOG-BOOK. The book in which the master of a ship enters all the events of any importance occurring during the voyage.

LONG-DATED BILL, a bill of exchange which has a long time to run before it falls due.

LONG-EXCHANGE. A money market term meaning the rates of exchange quoted for bills having three months to run.

LONG OF STOCK, an American term signifying that a person holds stock in the expectation of a rise in its price. Such a person is in the same position as a "bull" on the London Stock Exchange. (See *Bull.*)

MADE BILL. A bill of exchange payable abroad and negotiated in the first place in England.

MAINTENANCE, the act of giving assistance to a person who is instituting legal proceedings in which the person giving the assistance has no valuable interest, or in which he acts from an improper motive. Maintenance is a crime. "Champerty" is maintenance in which the motive for giving the assistance is that in case the action be successful, the plaintiff shall divide the proceeds of the action with the person giving the assistance. This is also a crime.

MAKING A MARKET. Refer to *Index.*

MAKING A PRICE, the two prices of any given security which the jobber quotes to the broker, one at which he will sell, the other at which he will buy.

MAKING-UP DAY, the first day of the fortnightly or monthly settlement on the Stock Exchange. (See *Contango Day.*)

MAKING-UP PRICE, the price at which the various securities which are the subject of Stock Exchange transactions is fixed at each settlement. Usually it is the actual market price at a given moment. This price is fixed for the purpose of enabling the members to settle their contracts, or to "carry over" in case they wish to postpone taking up or delivering stock. (See under *Stock Exchange.*)

MALUM IN SE, an act which is wrongful in itself; one which violates not only the law of the land but the moral law, e.g. murder, theft, and the like.

MALUM PROHIBITUM, an act which is wrongful because it violates the law of the land, but which is not generally recognised as a breach of the moral law, e.g., refusing to pay the education rate, breaches of the Vaccination Acts, and the like.

MANIFEST, a document which describes in detail the various packages and consignments constituting the ship's cargo. (See "Ship's Papers," under *Shipping*.)

MARGIN, in Stock Exchange transactions, a sum of money or securities deposited by a speculator with his broker against loss on speculations. In this sense it is equivalent to "cover." The margin is usually reckoned at ten per cent. of the par value of the stocks.

MARINE INSURANCE. Refer to *Index*.

MARKED CHEQUE. See *Certified Cheque*.

MARKED TRANSFER or **CERTIFIED TRANSFER.** Where a shareholder sells part only of the stock or the shares which he holds in a company, the transfer is indorsed by the secretary of the company with a statement that a share certificate to meet the transfer has been deposited at the offices of the company.

MARKET OVERT, an open market; a place recognised by law or custom as a public market for the sale of articles usually sold there. The term also includes a shop in the *City of London*. By shop is meant any part of a building to which the public have free access for the purpose of buying articles usually sold there, but not, of course, the counting house or any other room to which the public have not free access.

MARKET RATE OF DISCOUNT, the rate charged by bankers for discounting bills, and the rate charged by bill brokers when buying bills. The market rate is usually lower than the bank rate (the rate fixed at short intervals by the Bank of England.) (See under *Money Market*.)

MARKING PRICES. On the Stock Exchange, the prices at which securities have been bought and sold are supposed to be recorded on a board by one of the parties to the transaction. This is seldom done, owing to the rush and hurry of business.

MATE'S RECEIPT. When goods are brought alongside a ship to be placed on board, the mate gives a receipt for them. (See under *Shipping*.)

MATURITY. A bill is said to mature when the day has arrived on which it becomes payable.

MEMORANDUM OF ASSOCIATION. The document which sets out the objects for which a limited company is formed, the amount of capital, the shares into which it is divided, and one or two other matters. It defines the scope of the company's business, and outside that scope the company cannot undertake any other business without the leave of the Court.

METALLING CLAUSE, a clause in a policy of marine insurance stating that the underwriter is not liable for loss arising from the ordinary wear and tear to which a steamer is subjected during the course of the voyage.

MIDDLE PRICE, the price mid-way between the prices at which a dealer or a jobber offers to buy or sell; e.g. a dealer on the Stock Exchange when asked the price of a certain security may state $3\frac{1}{2}$—$3\frac{3}{4}$, meaning that he will buy the security at $3\frac{1}{2}$ and sell at $3\frac{3}{4}$. The middle price will in that case be $3\frac{5}{8}$, and after a little haggling the bargain may be arranged on those terms.

MINUTE BOOK, the book containing a summary of the transactions taking place at a meeting of any society.

MIXED POLICY, a policy under which a ship is insured for a fixed period of time in its voyages from a certain place to a certain place. (See under *Marine Insurance*.)

MONEY MARKET. All dealings in money, such as the rate of discount, the business of bankers, bill-brokers, money changers, and the like, are included under this term. (See *Money Market*, p. 655.)

MONOMETALLISM, the system prevailing in the United Kingdom and in other countries of having a single metal as the standard of value, and as the medium of exchange in making bargains, and in fulfilling obligations. (See *Bi-Metallism*.)

MONTH. In mercantile transactions, the term month means calendar month, unless otherwise stated. In regard to bills of exchange, half a month is reckoned as fifteen days.

MORTGAGE, a means of raising a loan on the security of land or of interests in land.

MORTGAGEE, the person who lends money on the security of land.

MORTGAGOR, the person who borrows money on the security of land.

MORTMAIN, a contraction for *in mortua manu*, "in the dead hand." When land was given to a monastery or other corporation, it was said to come into the dead hand, because, as a corporation is perpetual, the King lost his rights of escheat, wardship, marriage, and the other rights incident to land owned by an ordinary person.

MUSTER, a pattern or sample serving as a specimen of the whole bulk. It is used in this sense in the phrase "to pass muster" (to pass inspection).

MUSTER ROLL. A register containing full particulars of the members of a ship's company.

MUTUAL LIFE INSURANCE SOCIETY. An insurance company in which there are no shareholders to annex the profits, which are divided amongst the persons insured. (See under *Life Insurance*.)

NAME DAY or **TICKET DAY**, the second day of the settlement on the Stock Exchange.

NATIONAL DEBT, the money owing by a government. During a war, a State often finds it inconvenient to meet the expenses out of the current taxes. It therefore resorts to borrowing for the purpose of carrying on the war, pledging the revenue as security for the due repayment of the loan. In England, the National Debt, in 1906, amounted to 743 millions. It is composed of the *funded debt*, amounting to 634 millions, which is not bound to be repaid at any fixed time; *terminable annuities*, amounting to over 43 millions; and the *unfunded debt*, which consists of loans for short periods to meet temporary deficiencies, and is raised by means of Exchequer Bills and Treasury Bills. The unfunded debt, in 1906, reached nearly 66 millions.

NAVY BILLS, bills of exchange drawn on by officers in the navy against pay due to them. Formerly, navy bills were drawn by the Admiralty for the payment of contractors who had supplied stores and provisions for the navy. This latter kind of navy bill is now no longer used.

NEGOTIABLE INSTRUMENTS AND NEGOTIABLE PAPER. The commonest examples of these instruments are bills of exchange, cheques, promissory notes, dividend warrants, exchequer bonds, and other documents which by the usage of trade are regarded as negotiable. The peculiarity of these documents is that they are in one great respect exactly on the same footing as coined money, viz. that whoever takes them in good faith and gives value for them, becomes their absolute owner, provided that they are in such a condition that the true owner could, by simple delivery of them, transfer the ownership of them. (Refer to "Negotiable Instruments" in *Index*.)

NET, the clear amount of anything after making all allowances or deductions.

NET WEIGHT, the actual weight of anything without reckoning the weight of the packing or the wrapper in which it is enclosed; or the actual weight after allowing a deduction for waste and the like.

NEXT FRIEND. When an infant is sued in a court of law, or when he brings an action, he must have a person who will sue and be sued in his name. This person is called the next friend. The father of an infant is usually the next friend.

NISI PRIUS, a name given to civil cases tried in the King's Bench Division of the High Court. In former days, all civil cases, in all parts of the country, had to be tried at Westminster, unless before (*nisi prius*) the date of the trial the judge went down to the assizes in the locality to try the case.

NO FUNDS. In connection with cheques, the phrase means that the drawer of the cheque has no funds at his bank to meet it.

NOMINAL PRICE. A term employed on the Stock Exchange with reference to securities in which business is seldom done. In regard to such securities, it is difficult to state what is the actual market price, but an estimate may be given at which business might or might not be done in the security in question.

NON-SUIT. Strictly speaking, there is now-a-days no such thing as non-suiting a plaintiff in a law-suit. But the term is sometimes used when the judge withdraws a case from the jury and directs judgment for the defendant.

NOTARY PUBLIC. In England, the chief duties of a notary public consists in the noting, presenting, and protesting of dishonoured bills of exchange, certifying acts of honour in regard to such bills, and in authenticating copies of documents going abroad.

NOTE OF HAND, a promissory note (which see).

NOTING A BILL. Where a bill of exchange has been dishonoured by non-acceptance or by non-payment, such facts are recorded on the face of the bill. In these circumstances the holder requests a notary public to present the bill a second time, and if it is then dishonoured, the notary notes the facts upon the bill; then if the bill be a foreign bill, the notary protests it. In the case of an inland bill, protest is not necessary. It may, however, be noted for the purpose of obtaining acceptance or payment for honour. (See under *Bills of Exchange*.)

NOT NEGOTIABLE. These words written across the face of a cheque or a bill or other negotiable instrument seriously affect the position of a holder for value. They imply that the holder can have no better right to the instrument than the person from whom he took it had. Thus, suppose a cheque bearing these words has been obtained by fraud, and the wrong-doer transfers it to a person who takes it in good faith and for value, such person has no better right to the cheque than the wrong-doer had. In other words, he cannot compel the drawer of the cheque to meet it. (Refer to "Cheques" in *Index*.)

NOVATION, the substitution of a new debtor in place of the old. Though a man may assign his rights to another, he cannot assign his liabilities without the consent

of all the parties to the original contract. A good example of novation is where a Life Insurance Society transfers its business to, or becomes merged in, another Life Insurance Company.

NUDUM PACTUM, an agreement or a promise made without any consideration being given for it. Such an agreement or promise is not enforceable in English law, unless it is made by deed.

NURSE AN ACCOUNT. A banker sometimes keeps a customer's account going when the customer has overdrawn it. For the banker realises that were the account to be closed, the customer might never be in a position to meet his liabilities. Whereas by giving him an extension of credit, and allowing him further to overdraw, he may be able to tide over his difficulties and to pay his debts to the banker with interest.

OBSCURATION, the difference between the actual and the apparent strength of spirits.

OFFICIAL ASSIGNEE OF THE STOCK EXCHANGE, a member of the House, appointed by the Committee of the Stock Exchange, to wind up the business of a defaulter.

OFFICIAL BROKER, a broker nominated by the Committee of the Stock Exchange to effect the buying in and the selling out of securities. (See *Buying in* and *Selling out.*)

OFFICIAL LIST OF PRICES, the list of prices of securities and of business done on the Stock Exchange, issued daily under the authority of the Committee of the Stock Exchange.

OFFICIAL RECEIVER. He is appointed by the Board of Trade to take charge of an insolvent debtor's estate from the time a receiving order has been made against the debtor until the trustee in bankruptcy is appointed. An official receiver is also appointed in the preliminary stages of the winding-up of a limited company. (See under *Bankruptcy.*)

OFFICIAL REFEREE, an official of the High Court whose duty it is, among other things, to hear and to decide actions in regard to accounts, the amount of which or the items in which are disputed.

OMNIUM STOCK, a stock which can at a certain time be divided into proportional parts of two or more other stocks. Thus where a loan has been raised by a Company on the security of certain stock issued by the Company, it may have been raised on the condition that when the stock is fully paid up, the holders of the stock may divide their holding into proportionate parts of Preference Stock and Ordinary Stock. The stock thus capable of division is called omnium stock.

ON APPRO, on approbation; a term used in the jewelry and other trades with reference to goods left on approval. The whole or any part can be returned, if so desired.

ON CALL or **AT CALL.** Money lent "on call," or at short notice, is repayable on demand, or at a few days' notice. Such money is lent by the banks to bill-brokers who deposit as security for such loans, first class trade bills, or "floaters," i.e. Consol certificates, bonds of the Corporation of London, bonds of the London County Council, and the like. (See *Floaters.*)

ON DEMAND. These words written on a bill of exchange imply that the bill will be paid on presentation. A bill drawn in this way requires no acceptance.

ONE MAN COMPANY. A limited company in which all or the bulk of the shares are held by one man, save the one necessary share held by each of the other six members of the company.

ONE MAN MARKET. Where the shares or stock of a business is held by a group outside the Stock Exchange, and this group transacts dealings in the shares through one jobber to the exclusion of all other jobbers.

OPEN ACCOUNT, an account which is not settled or closed. Sometimes used in the sense of a running account.

OPEN CREDIT. See *Letter of Credit.*

OPEN POLICY. In marine insurance, an open policy is one in which the value of the thing, or the amount at which it is insured, is not definitely stated. In case of loss, such value has subsequently to be determined. It is a policy in which the insured may insert the amount as soon as he learns that property of the kind insured is in transit, whether such property is at the time lost or not. Of course, he must not be aware that it is actually lost.

OPTION. An option is the right which a person has of either buying or selling a certain amount of stock or of shares at a fixed price on a certain day. For this option the person has to pay a price. Options are of three kinds. A "put" option is the right to sell; a "call" option is the right to buy the stock or shares; a "put and call" option or a "double" option, is the right to buy or to sell so much stock or shares at a fixed price on a certain day. (Refer to "Options" in *Index.*)

ORDINARY STOCK OR SHARES, stock or shares on which is paid the residue of the profits after interest has been paid on the debentures and preference shares, and after providing for the amount to be set aside towards the reserve fund.

ORIGINAL BILL. Foreign Bills are usually drawn in duplicate or in a set of three, to ensure that one at least, if not all, will reach its destination. The first one drawn is called the original bill, but if, as sometimes happens, it does not reach its destination, then whichever does arrive first, and is, of course, negotiable, is called the original bill.

OUTSIDE BROKERS. Stock Brokers who are not members of the Stock Exchange.

OVER-CAPITALISED. In the case of a limited company, it is said to be over-capitalised when the company has paid for the business which it undertakes more than the real value of such business. Many genuine businesses which, if bought for their real value, would yield fair dividends to the shareholders, are in this way over-capitalised, with the result that the earnings of the business yield no appreciable dividends to the shareholder.

OVERDUE BILL, a bill of exchange remaining unpaid after it becomes due.

OVERHEAD PRICE, a price including all items usually charged as trade extras. It is sometimes called *All Round Price.*

OVERTRADING, purchasing goods that cannot be advantageously disposed of, or beyond a trader's power of paying.

PAID-UP CAPITAL, the actual cash paid on the shares or stock of a limited company. Frequently when a company is floated, the terms are that so much of the nominal value of the shares shall be paid on allotment, the balance to be paid at stated intervals if called up. Very often in prosperous undertakings this unpaid balance is never called up, except perhaps to extend the business of the company.

PAID-UP SHARES, the shares of a company upon which the full nominal value has been paid.

PANIC, A COMMERCIAL, is said to occur when traders and the public lose confidence in the banks, and hasten to withdraw their money therefrom.

PAPER CREDIT, credit given on the strength of written acknowledgments of indebtedness, where such acknowledgments answer the purpose of money; for instance, where goods are sold and payment is made by bills of exchange, or promissory notes and the like.

PAPER CURRENCY, legal tender paper, i.e. paper which can be used in full payment of debts, and in final discharge of obligations. It is not quite identical with paper money, for many kinds of paper, e.g. cheques, bills of exchange, notes of Scotch and Irish banks, fulfil the purposes of coined money without being legal tender. Where a paper currency is convertible, that is where coin can be obtained for it on demand, its face value always is the same as its purchasing power. Bank of England notes are an example of this kind of currency. But where the paper currency is inconvertible, there is always a tendency for its purchasing power, or its power to discharge obligations, to fall considerably below its face value.

PAR, the market price of shares or stocks when it is equal to the nominal value.

PAR OF EXCHANGE, equality of exchange. The amount of currency of one country which is equal in value to a certain amount of the currency of another country, reckoning the currencies of both countries to be of the same fineness of the precious metal. Thus an English sovereign is of the same value as 25·22 francs.

PAROL EVIDENCE, evidence given by word of mouth as opposed to documentary evidence.

PARTICULAR AVERAGE. See *Average, Particular.*

PASS BOOK. In banking, the pass-book shows usually on the left-hand side the amount paid into the bank by the customer, and on the right-hand side the amounts paid out by the bank on behalf of the customer, who has drawn cheques against the money which he has placed in the hands of his banker.

PASSING A NAME. When stocks or shares are sold, then for the purpose of the transfer at the settlement the name of the purchaser must be given by his broker to the various other people in the transaction. (See under *Stock Exchange.*)

PASSIVE BONDS, bonds which do not entitle the owner to any interest.

PASSPORT, a document issued under the authority of the Foreign Office, requesting foreign governments to afford aid and protection to its holder. Passports are granted to all persons known to the Foreign Secretary, or recommended by some person known to him; or upon the application of any banking firm in the United Kingdom; or upon the production of a certificate of identity signed by a mayor, magistrate, justice of the peace, minister of religion, physician, surgeon, solicitor, or notary resident in the United Kingdom. In the case of naturalized British subjects, the certificate of naturalization must accompany the letter of recommendation.

Applications for passports must be made in writing to the Passport Department, Foreign Office, London. The charge is 2s., however few or many the persons named in it. If the applicant does not reside in London, the passport may be sent by post, but in that case a postal order for two shillings must accompany the application.

The passport should be signed by its holder as soon as he receives it. British subjects entering most of the European countries do not require a passport, but it is always well to have one, as a ready means of identification. Persons wishing to enter Russia, Turkey, or Roumania must have a passport, and before leaving London are required to have their pass-

ports endorsed at the Russian Consulate General, 17 Great Winchester Street, London, E.C.; the Consulate General of the Sublime Porte, 29 Mincing Lane, London, E.C.; the Roumanian Consulate General, 65 London Wall, E.C.; or at the various consulates throughout the kingdom respectively.

Passports for Venezuela, Persia, and Hayti must be endorsed at the Venezuelan Consulate, Finsbury House, Finsbury Pavement, London, E.C.; the Persian Consulate General, 120 Victoria Street, London, S.W.; the Haytian Consulate, 32 Fenchurch Street, London, E.C., respectively; or at any of the various consulates throughout the kingdom.

PAWN or PLEDGE. This name is applied to goods or chattels delivered by one person to another as a security that the transferor will repay a debt to the transferee, or fulfil some obligation to him. The person transferring the goods is called the pawner or pledger; the person to whom the goods are delivered is called the pawnee or pledgee. The property is retained by the pledgee until the debt is discharged, or the engagement is fulfilled.

PAWNBROKER. A pawnbroker is a person who is licensed to lend money on goods pledged with him. (Refer to "Pawnbrokers" in *Index*.)

PAY DAY. Account Day or Settling Day. The last day of the settlement on the Stock Exchange, when stocks and shares bargained for must be delivered and paid for, or the differences paid. Instead of doing this, the stocks and shares may be "carried over." (See *Carrying Over*.)

PAYEE, the person to whom a cheque or a bill of exchange is payable.

PAYING DIFFERENCES. Contracts to pay "differences" are purely gambling contracts unenforceable by law. (See *Differences*.)

PAYING-IN SLIP, the document which contains particulars of the amount of money in cash, notes, and cheques which a customer pays into his account at a bank. These slips are usually contained in a book, each page of which is perforated with a dotted line from top to bottom. The particulars are entered on each half—one part being torn off and handed to the cashier, the other half being initialled by the cashier and retained by the customer.

PEDLAR, a petty dealer that carries his wares with him. He is required to obtain a certificate costing 5s., from the chief police officer of the district in which he has resided during one month previous to application; and this he is required, on demand, to show to any officer of police or to any person to whom he offers goods for sale.

PEPPERCORN RENT, a rent of no money value; a merely nominal rent.

PER CONTRA. On the other side. The term is used in book-keeping.

PERMIT, a permission given by a revenue officer to remove goods on which the duty has been paid, or to remove dutiable goods from one specified place to another specified place.

PER PROCURATION. A person having a power of attorney from a firm signs on behalf of the firm, writing per pro. or p.p. before the name of the firm, and then signing his own name and position; thus, per pro. The Patent Leather Co. James Smith, Cashier.

PERSONAL ACCOUNTS, in book-keeping, the accounts headed by the names of the persons or firms with whom a merchant has dealings, and which show their financial position towards him.

PERSONAL PROPERTY or PERSONALTY. Under this term are included goods and chattels, and movable property of every kind, choses in action such as bills of exchange, debts, and the like; leases of land or houses are regarded as personalty, though they can hardly be said to be movable property.

PERSONAL SECURITY, a term employed to denote that a person becomes security for the payment to another of a certain sum of money. The payment of the money is not secured on property, but merely on the personal undertaking of the individual guaranteeing the payment. Where money is lent on a person's note of hand, the security is merely personal, and does not give the lender any rights over the borrower's property.

PETITIONING CREDITOR. The creditor who petitions the Court of Bankruptcy to make his debtor a bankrupt. (See under *Bankruptcy*.)

PETTY CASH BOOK, a book containing an account of small payments, the totals of which are afterwards entered in the cash book.

PIECE GOODS, textile fabrics, which are sold by the piece.

PLACING SHARES. Where a broker employed by a company to get its shares quoted in the official list of the Stock Exchange procures persons to take shares in the company so about to be formed, the shares so taken are said to be placed by him.

PLANT, a name given to the machinery, tools, and other appliances in a manufactory for the carrying on of its business.

POLICY, the document containing the terms of a contract of insurance between the insurer and the insured. The term policy is derived from an Italian word signifying a *promise*. The policy holder is the person possessing the policy, and he may be the person who effects the insurance, or a person to whom he has assigned the policy.

POLICY PROOF OF INTEREST. In marine insurance the insured must possess an insurable interest in the thing insured, not only at the time the insurance is effected, but also at the time that the insurance is claimed, but where this clause is inserted, the production of the policy will be recognised by the underwriters as sufficient proof of the interest, without calling for the production of any further proof.

POOL. Sometimes several persons combine to deal in a large number of shares, on the understanding that the profits or the losses will be divided in proportion to the amount they subscribe; forming such a combination is termed making a pool.

POST DATE, to insert in a document a date subsequent to the time on which the document was drawn up. Cheques are frequently post-dated, as a protection against loss in transmission through the post, or because the drawer of the cheque hopes to have sufficient funds in the bank to his credit when the cheque is duly presented. To negotiate a post-date cheque before the proper time may render the drawer liable to a penalty for evading the stamp duty; for such a cheque is not a bill of exchange payable on demand, and if, therefore, the amount of the cheque exceeds £5, the duty is more than one penny, which is the duty on a bill payable on demand.

POST ENTRY. Where an importer of goods has wrongly entered them at the Custom House, by misdescribing them, or erroneously stating their quantities, a post entry must be made for the necessary corrections.

POST NOTE, a bank note made payable not to bearer but to order. Such notes must, therefore, be endorsed by the persons to whom they are payable. They are intended for transmission to a distance.

POST OBIT BOND, a money bond by which a person binds himself to pay a certain sum on the death, or at a fixed period after the death, of a person from whom he has expectations. Improvident and reckless persons who have expectations often borrow money in this way, and, of course, the amount of the bond covers the loan with a high, if not extortionate, rate of interest. Sometimes the Court will, if there has been unconscionable over-reaching, set aside the bond, and allow the lender only the actual amount of the loan with a reasonable rate of interest.

POSTE RESTANTE. When letters or packages bearing these words are sent through the post, they remain at the post office of the town to which they are sent until the persons to whom they are addressed calls for them.

POSTING, transferring entries from the journal into the ledger.

POUNDAGE, a charge or an allowance of so much in the £.

POWER OF ATTORNEY. See *Attorney, Power of*.

PRATIQUE, a licence to the master of a ship to traffic in certain ports upon a certificate that the place he came from is not suffering from infectious disease.

PRÉCIS, a summary of the contents of a document or a series of documents. It should contain all that is important in the documents or letters, and nothing that is unimportant, and should be in the form of a brief but complete *narrative*.

PREFERENCE BONDS. See *Preference Shares*.

PREFERENCE STOCK AND PREFERENCE SHARES, stock or shares which receive a fixed dividend before any dividend is paid on the ordinary shares. Sometimes these shares give a preferential right to the assets of the company in the event of its being wound up. (See *Cumulative Preference Shares*.)

PREFERENTIAL PAYMENTS IN BANKRUPTCY. In the bankruptcy of a person, or in the winding-up of a limited company, certain creditors must be paid before the ordinary creditors can receive a penny. (See under *Bankruptcy*.)

PREJUDICE, WITHOUT. Sometimes when parties are in dispute, in the course of negotiations to settle the dispute, one party makes to the other statements "without prejudice," relating to the matter in dispute. Then if the matter is not settled amicably, and the parties have to resort to litigation, such statements cannot be put in evidence against the person making them.

PREMIUM, an additional rise above par value, e.g. if shares of the nominal value of £5 are bought and sold for £6, they are said to be at a premium of £1.

PRESENTMENT, the formal act of bringing a bill of exchange to the notice of the drawee for the purpose of getting him to accept it, or having been accepted by him, to obtain payment from him. (See under *Bills of Exchange*.)

PRICE, CURRENT, lists of goods and merchandise with their prices.

PRICKING NOTE, a document obtained from the Custom House by the shipper of goods and delivered by him to the chief officer of a ship authorising him to receive the goods on board. It was so called from the practice of pricking holes in the paper corresponding with the number of packages received on board. (See *Dandy Note*.)

PRIMAGE, a small payment formerly paid to the master of a ship by those who shipped goods on board. By arrangement with the master, the ship owner now receives this payment, which is in addition to the freight.

PRIMAGE AND AVERAGE ACCUSTOMED. In bills of lading this phrase means, that in addition to the freight, a charge will be made for primage (which see). The fee for average is not now separately assessed, but included in the charge for primage.

PRIVATE ARRANGEMENT, an agreement between an insolvent debtor and his creditors, by which they agree to accept a composition from him, or to allow him to carry on his business under certain conditions. The debtor is thus spared the publicity, and the creditors are saved the expense of bankruptcy proceedings. The agreement must be by deed and must be registered. (See "Deeds of Arrangement," under *Bankruptcy.*)

PRIVATE COMPANY, a limited company composed of a small number of persons, who subscribe the necessary capital among themselves, without inviting the public to take shares in the enterprise.

PROBATE, the proof of a deceased person's will.

PROBATE DUTY. Refer to "Death Duties" in *Index.*

PROCURATION, allowing one person to act on behalf of another, and to sign documents in his name. The person who thus signs prefixes the words "per pro." or "p.p."

PROCURATION FEE, a commission usually paid to solicitors for effecting or procuring loans for others.

PROFIT AND LOSS ACCOUNT, an account which shows on the debit side all moneys, charges, and expenses paid out, and all losses incurred through bad debts, depreciation of property, and the like. The credit side shows all moneys received. If the amount on the credit side exceeds that on the debit side, there is a net gain; but if the debit exceeds the credit there is a loss. Thus a business man is able to see how his affairs stand.

PRO FORMA, for form's sake.

PROHIBITED GOODS, goods which by law must not be imported into, or exported from, a country.

PROMISSORY NOTE, an unconditional written promise made and signed by a person, to pay at a certain time a sum certain in money to, or to the order of a specified person, or to bearer. (Refer to "Promissory Notes" in *Index.*)

PROMOTER, the person who does all the preliminary work necessary to form a limited company. He engineers the flotation of the company.

PROMPT, a limit of time given for payment of merchandise purchased. The time given for payment is fixed by a prompt-note, and the length of credit varies, of course, in different trades.

PROOF OF DEBTS IN BANKRUPTCY. In bankruptcy proceedings, every creditor must bring sufficient evidence of the debt which he alleges that the bankrupt owes him.

PROPERTY ACCOUNT. See *Impersonal Account.*

PROPRIETARY COMPANY. Where a company owns mining lands which it does not work itself, or of which it works only a part, it frequently leases or sells the part not worked to other companies. There are numerous examples of these proprietary companies in the South African Gold Fields.

PRO RATA. At a certain rate; according to scale.

PROSPECTUS. The document issued to the public by those who are interested in the formation of a limited company, inviting the public to take shares in the company.

PROTECTION, that commercial system by which a country seeks to foster its home industries either by prohibiting the importation of the products of similar industries, or by levying very high duties upon them so that the home manufacturer may be able to undersell his foreign competitor (cf. *Free Trade*).

PROTEST. Where a foreign bill of exchange has been dishonoured by non-acceptance or by being unpaid, a notary public, on being requested by the holder, makes a formal attestation of the fact of dishonour. (See under *Bills of Exchange.*)

PROXIMO. The next; with reference to dates it means the next month.

PROXY, one who acts for another. The document by which a person is appointed to act for another, where the proxy authorises a person to do one act, must bear a penny stamp: if to act generally, a ten shilling stamp.

PUBLIC COMPANY, a limited company, the shares of which can be sold by their owners without the consent of the other shareholders.

PUT. On the Stock Exchange, a put option is the right to sell at a fixed price so much stock on a certain day. The person having the option must pay to the person who has agreed to buy from him a certain premium. (See *Option* and *Calls.*)

PUT AND CALL, the same as double option. (See *Options.*)

PUT OF MORE, a single option which gives a person the right to sell a given amount of stock at a fixed price at a fixed date, with the further privilege of selling double that quantity. (See *Opti ns*).

PYX, a box in which specimen coins of the Mint are deposited. These coins are annually tested by a jury of goldsmiths, in order to see if they are of the requisite weight and fineness. This is known as the "trial of the pyx."

QUALIFIED ACCEPTANCE. See *Acceptance, Qualified.*

QUANTUM MERUIT, so much as he has earned. The term is employed to signify what a plaintiff recovers as the worth of his work, when he brings an action on an express contract to pay him a specific sum, and fails to obtain that specific sum.

QUARANTINE, the period of forty days or less during which the crew, passengers, and cargo of a ship coming from a place suffering from an infectious disease are required to remain on board after their arrival, before they can be permitted to land. Quarantine is derived from a Latin word signifying forty, because originally that was the period of isolation; but the period now-a-days is regulated by the Board of Trade, whose orders are carried out by the various medical officers at the ports.

QUARTER DAYS. The English Quarter Days are—Lady Day (March 25th); Midsummer Day (June 24th); Michaelmas (September 29th); Christmas Day (December 25th).

The Scotch Quarter Days are—Candlemas (February 2nd); Whitsun (May 15th); Lammas (August 1st); Martinmas (November 11th).

QUIT RENT, a rent paid by a tenant to a lord of the manor, in substitution for all other services.

QUORUM, the number of members of an administrative body whose presence is necessary at any meeting for the purpose of transacting business.

QUOTATION, a list of prices at which dealings in goods or in stocks and shares can be effected.

RACK RENT, the utmost rent attainable.

RAILWAY ADVICE, a document sent by a railway company to a consignee, stating that goods consigned to him are in the company's warehouse, and are awaiting his disposal. If the goods are not taken away within a given time, a charge for demurrage is made.

RAILWAY CLEARING HOUSE. Refer to *Index.*

RATEABLE VALUE. The value at which property is assessed for the levying of rates. It is the supposed ordinary yearly rent of property less the cost of repairs, insurance, and the like, necessary to keep the premises in a fit condition to command the rent.

RATE OF EXCHANGE or **COURSE OF EXCHANGE.** The price at which a bill of exchange drawn in one country upon another may be sold in the former country. The amount of the currency of one country which on any given date is required to obtain a certain amount of the money of another country.

RE, in the matter or the affair of.

REAL ESTATE or **REALTY,** land and freehold property generally. Leases of land or houses are, however, regarded as personal property.

REAL SECURITIES. Mortgages of real property.

REBATE, an allowance or discount made in consideration of prompt payment, or because the goods sold are deficient in quantity or quality.

RECEIPT, a written acknowledgment of having received a sum of money. A receipt is *prima facie* evidence of payment, but it is not conclusive evidence. The mere fact that a person has signed a receipt for money which, as a matter of fact, he has not received, will not prevent his suing for the money in a court of law. So if a man has received payment by cheque, he need not insert on the receipt the words "received by cheque," for if the cheque be dishonoured, he can legally recover the amount, notwithstanding he has signed the receipt without the words "received by cheque." Again, a receipt which has been given in mistake, or has been obtained by fraud or by misrepresentation, will not debar the person giving the receipt from suing for the money for which he has given the receipt.

Where the sum paid is £2 or more, it must bear a penny stamp, which must be cancelled at the date of the receipt. If a receipt for £2 or more is not duly stamped, the person giving the receipt is liable to a penalty of £10. It is, moreover, of no legal value, i.e. the person to whom it is given, if afterwards sued for the amount cannot put in evidence the unstamped receipt to prove that he actually did pay the money. But where money is paid to a person otherwise than in payment of a debt, e.g. where it is paid as a voluntary contribution, the receipt need not be stamped.

An unstamped receipt may be stamped with an *impressed* stamp—(1) within fourteen days after it was given, on paying a penalty of £5. (2) After fourteen days and within a month, on paying a penalty of £10. It cannot in any other case be stamped with an impressed stamp.

If any person, where the sum paid is £2 or more, gives a receipt for less, or divides the amount so as to evade the duty, he is liable to a penalty of £10. Where a receipt would be liable to duty, and the payee refuses to give a receipt duly stamped, he is liable to a penalty of £10. It will, therefore, be borne in mind that apart from this provision of the law, no one can be compelled to give a receipt, and in the case of a payment of less than £2, there is no power to compel a payee to give a receipt.

RECEIVER, a person appointed to take care of property and to control it pending litigation in regard to the property.

RECEIVING NOTES, written requests from a shipper to the officer in charge of a ship, desiring him to take on board goods specified in the notes.

RECEIVING ORDER. When a creditor petitions the Court to make his debtor a bankrupt, the Court, if satisfied with the petition and the other matters necessary, will make a receiving order against the debtor whose property is then taken care of by the Official Receiver. (See under *Bankruptcy.*)

RECOGNISANCE, an acknowledgment of a debt due to the Crown, with a condition that the debt shall be cancelled if the person acknowledging the debt (entering into the recognisance) shall do some particular act, as, e.g. appear for judgment when called upon.

REDEMPTION OF A MORTGAGE, paying off the loan for which the mortgage was created.

RE-DRAFT. Where a bill has been protested, the holder may draw a new bill on the person liable for the amount of the bill and costs incurred on protesting it. (See *Re-Exchange.*)

RE-EXCHANGE, the loss arising from the dishonour of a bill in a country other than the country in which it was drawn or indorsed.

REDUCING INTO POSSESSION, taking the necessary steps to convert a chose in action into a chose in possession. For instance, a promissory note is a chose in action, but when the holder has obtained the money due on the note or has taken the necessary steps to recover the money, he is said to have reduced the chose into possession (see *Chose in Action* and *Chose in Possession*). Similarly, when the holder of a bill of sale enforces his security, he is said to have reduced it into possession. (See under *Bills of Sale.*)

REGISTERED BOND, a bond on which is written that it belongs to a particular person, and which is registered in that person's name at the head office of the company, or at the seat of the government issuing the bond. As the bond is thus rendered not-negotiable, the holder of the bond is protected against loss or theft.

REGISTERED STOCK, stock of which the name of the holder is entered in a register at the head office of the company issuing the stock. Such stock can be transferred only by the holder entering in the register the name of the person to whom he has assigned the stock.

RE-INSURE. When an insurer finds that the thing insured is likely to be a total loss, he tries to insure himself against that loss, by insuring with other persons, who in consideration of a greatly enhanced premium, consent to bear the whole risk or to share it with him. In this way the original insurer minimises the loss on the risk which he has undertaken. But he is still liable to the person originally insured for the whole amount of the insurance. (See under *Marine Insurance.*)

REMEDY, the greatest variation in weight of a coin from the fixed standard that is allowed at the mint without the coin being condemned as unfit for circulation.

RENEWAL OF A BILL. When an acceptor is unable to meet a bill when it falls due, he may accept a new bill in favour of the holder, and thus obtain a further extension of time in which to meet his obligation. Unless all the parties—drawer, and indorsers—liable on the bill in case of the acceptor's default, assent to the renewal of the bill, they will be freed from all liability on the previous bill. (See under *Bills of Exchange.*)

RENTES, the French Government Funds, corresponding to English Consols. A *rentier* is a person who is a fund-holder, or who has an income from personal property.

REPLEVIN, an action taken to recover possession of goods wrongfully seized under a distraint for arrears of rent. The owner of the goods may have the goods re-delivered to him by the Registrar of the local County Court, on his giving security that he will bring an action to try the validity of the distress. Although this action is usually confined to goods seized under a distress, it may be brought for all goods unlawfully taken.

REPUTED OWNERSHIP. When a person is made bankrupt, all property of which he is at the commencement of the bankruptcy proceedings the real owner, and of which he is the reputed owner, will go to his creditors. He is the reputed owner of all goods which are in his possession, order, or disposition in his trade or business by the consent and permission of the true owner under such circumstances as lead others to believe that he is the owner thereof. (See under *Bankruptcy.*)

REQUEST NOTE. Where an importer wishes to remove dutiable goods from one place to another, he fills up a "request note," giving particulars of the goods, the name of the place to which the goods are to be removed, and such other information as the customs authorities require.

REQUISITIONS ON TITLE, questions and inquiries made by an intending purchaser of land regarding the title of the vendor.

RESERVE CAPITAL, unpaid capital of a limited company which cannot be called in except in the event and for the purposes of the winding up. A limited company may by special resolution declare any portion of its capital, which has not been already called up, to be reserve capital.

RESERVE FUND. That portion of the profits of a business not divided amongst the partners or shareholders, but set aside to meet contingencies.

RESPONDENTIA, a means of borrowing money on the security of the cargo of a ship, for the purpose of enabling the ship to reach its destination. If the ship fails to arrive safely, the money is not repaid. (See under *Shipping.*)

REST. In the weekly returns of the Bank of England, the rest signifies the balance of assets over liabilities.

RESTRAINT OF TRADE. When a person sells his business to another, and the buyer insists that the seller shall covenant not to carry on a similar business within a certain radius or for a specified time. The restraint must be reasonable and just, sufficient to protect the interests of the purchaser; otherwise it will be wholly void, and the seller will be allowed to trade as he pleases.

RESTRICTIVE INDORSEMENT. An indorsement which renders a bill of exchange not-negotiable either by prohibiting its transfer or by authorising the indorsee to deal with it in a particular way only. (See under *Bills of Exchange.*)

RETAINER, the fee given to counsel by solicitor, in order to retain his services in a particular action. Also the right of an executor to retain out of the property of a deceased person a debt due to him from the deceased.

RETIRING A BILL. When an acceptor meets a bill when it falls due, he is said to retire it, in other words, to pay it, and no one is any longer liable on the bill. But when any party to the bill—drawer or indorser—other than the acceptor, meets the bill at maturity, though the bill is said to be retired (withdrawn from circulation), such person can sue all parties prior to him on the bill, for the amount of such bill.

REVENUE ACCOUNT, the account of a business which shows on one side the total income for a given period, and on the other side the expenditure which is properly chargeable against that income, what is left after meeting this expenditure being nett profit. Such expenditure covers wages, expenses of management, maintenance, and repair of the buildings and plant of the business, rates, and other expenses.

REVERSION, the residue of an estate left in a man after he has granted a certain interest out of that estate, e.g. where the owner of land grants a lease of it for a term of years, what is left in him is called his reversion. At the expiration of the term of years, the possession of the land reverts to the person granting the lease.

REVERSIONARY INTEREST, an interest that does not come into possession until after a certain period, or till the decease of a person, or some other future event. The term is usually but not necessarily, applied to interests in money or other personal property, e.g. reversionary or deferred annuities.

RIDER, a clause added to a resolution or a verdict.

RIGGING THE MARKET. This is a phrase used to indicate a process by which an artificial rise in the price of any commodity, or of stocks and shares, is effected. On the Stock Exchange, those wishing to rig the market buy the securities secretly, thus causing the demand to exceed the supply, thereby forcing up prices. The public thus imagine that these securities are worth buying, and accordingly buy the securities from those who have rigged the market, and who thereby realise a profit. The term denotes that the rise in prices is not caused by a genuine public demand.

RING, a combination of speculators for the purpose of obtaining the control of any given commodity. Having got the available supply in their own hands, they hope to exact what price they please: for by withholding a part of the supply from the market they are able to force up prices.

ROYALTY, the price paid to the owner of a patent by a person who uses the patent, the payment being at a rate of so much for each article manufactured. The word is also used to denote a payment on sales, as where a publisher pays an author a payment at a certain rate on each copy sold.

ROLLING STOCK, the engines, carriages, waggons, trucks, and the like belonging to railway and tramway companies.

RUMMAGING A SHIP, searching a vessel to see whether it contains prohibited goods or goods liable to duty.

RUNNER, a person who brings clients to a stock-broker's office. He receives a share of the profits on the business he introduces, and has to bear a share of whatever losses may be incurred.

RUNNING DAYS, days counted in succession without any allowance for holidays. The phrase is used in bills of lading and charter-parties in reckoning the demurrage.

RUN ON A BANK, an unusual rush by people on a bank to withdraw their deposits, or to have gold in return for the notes of the bank. This rush is caused by the fear that the bank is likely to suspend payment.

RUN WITH THE LAND. In a lease, a covenant is said to "run with the land," when the lessee or his assigns are bound to perform it, or can take advantage of it. A covenant is said "to run with the reversion" when the lessor or his assigns are bound to perform it, or can take advantage of it. Both classes of covenants

are covenants affecting the land itself, or something in existence on the land.

RUPEE PAPER. Notes issued by the Indian Government payable in rupees (See *Enfaced Rupee Paper.*)

SAGGING MARKET, a market in which the prices keep dropping or falling.

SALE. Refer to *Index.*

SALE FOR THE COMING OUT, dealings in the shares of a company which is being floated, the sale not being effected for the purpose of obtaining a quotation on the Stock Exchange, but for the time when the share certificates shall be issued.

SALE OR RETURN, goods sold on this principle can be returned to the seller in case the purchaser himself does not re-sell them. It is on this principle that most newspapers and periodicals are ordered by the news-agent from the publisher.

SALES DAY BOOK. In book-keeping it is the book in which sales on credit are entered from day to day, as they occur.

SALVAGE, the reward paid for saving a ship or its cargo from shipwreck, capture or other similar danger. The salvor must not have been under any duty to save the ship, but must have acted voluntarily; he must have shown skill, and but for his services the ship would have been lost. There is no salvage for saving life. (Refer to "Salvage" in *Index.*)

SALVAGE LOSS. Where insured goods have been saved from total destruction, the value which they are estimated to be worth is deducted from the amount of the insurance money, the difference representing the amount of the loss which the underwriters will have to bear.

SAMPLING ORDERS, orders given by a merchant to a warehouse keeper authorizing him to give samples of the merchant's goods stored at the warehouse.

SANS RECOURS. Without recourse. When an indorser affixes these words to his indorsement on a bill of exchange, he cannot be sued on the bill.

SCRIP, a provisional certificate issued by a government, or a company or corporation, to those who have lent money to such government or company. It entitles the holder to the bonds or the shares when they are issued. The term also applies to any Certificate of Shares.

SEA LETTER or SEA BRIEF, a passport granted by a State in time of war, declaring that a ship sails under the flag of such State.

SEARCHER, a customs officer whose business it is to search ships, baggage, and goods for the purpose of discovering prohibited goods, or goods liable to duty.

SEARCH WARRANT, a written authority issued by a magistrate to a police officer permitting him to search a house for stolen property, or for property unlawfully concealed by a bankrupt.

SEAWORTHY, the fitness of a vessel to proceed on her voyage. "She must be fit in design, structure, condition, and equipment to encounter the ordinary perils of the voyage, and have a competent master, and a sufficient and complete crew." In contracts for the carriage of goods by sea there is, on the part of the ship owner, an implied and absolute warranty that the ship is seaworthy; this warranty only refers to the condition of the ship at the time of loading and the time the ship sails. In contracts of marine insurance there is also an implied warranty that at the time the ship starts on her voyage she is seaworthy.

SECOND CLASS PAPER. Bills of Exchange and the like documents, where the parties to such documents and who are liable on them are not of the highest credit in financial matters.

SECURED CREDITOR, a creditor who holds a security sufficient to cover the amount of the debt due to him, e.g. mortgagees, grantees of bills of sale, persons with whom stocks and shares have been deposited in return for a loan.

SECURITIES, a term employed in business to signify written documents which entitle the holder to money or goods, e.g. stocks, shares, dock warrants, bills of exchange, and the like.

SEIGNIORAGE, the charge made for coining bullion into money.

SELLERS OVER, a term meaning that in a market there are more sellers than buyers, or that there are no buyers.

SELLING OUT. Where at the "settlement" on the Stock Exchange a purchaser does not take up the securities which he agreed to buy, the seller may instruct the "official broker" to sell such securities. Any loss or expense which may result will have to be borne by the defaulting purchaser (cf. *Buying In*).

SEQUESTRATION, the taking possession of goods and chattels, of the rents and profits of lands of a person who has been guilty of contempt by disobeying an order or a judgment of the Court.

The estate of a bankrupt is sequestered for the benefit of his creditors, i.e. his entire property is taken over by the trustee in bankruptcy and realised, and the proceeds divided amongst the creditors.

SETTLEMENT. On the Stock Exchange the term means the last three days of the "account." In the mining market the settlement extends over four days.

SETTLING DAY. See *Pay Day.*

SHARES, the equal portions into which the capital of a limited company is divided. The shares held by a shareholder represent the proportion of the company's assets to which he is entitled, and of the company's liabilities which he may have to bear.

SHARE CERTIFICATE, a document, usually under seal, issued by a public company to a shareholder, stating that the person named therein is the registered owner of so many shares. The numbers of the shares, and the fact that they are fully paid up, and if not fully paid up, the amount that has been so paid are set forth. The following is a common form of a share certificate:—

The X Company, Limited.

This is to certify that William Jones, of 589 Cheapside, is the holder of fifty shares of £5 each, numbered 100 to 149 inclusive, and that upon each of the said shares the full amount of £5 has been paid up. Given under the common seal of the said company, this 24th day of January, 1905.

SHARE WARRANT, a document under seal issued by a limited company, stating that the bearer is entitled to the shares mentioned therein. Such a document can be issued only when the *shares are fully paid up.* The holder of a share warrant can transfer his rights by simple delivery of the warrant, that is, a share warrant is a negotiable instrument. The stamp duty on a share warrant is 30s. per £100; but no further duty is payable on a transfer of shares specified in a share warrant.

When a share warrant is issued to a shareholder, his name is struck off the list of shareholders, because the person (whoever he may be) who holds the warrant is entitled to the dividends, and the company has no means of knowing who that person is. Accordingly, when a share warrant is issued, "coupons" are attached to it. These coupons bear the dates on which the dividends are payable during a given number of years subsequent to the issue of the warrant. The dividend for a given date is payable to the person presenting the coupon bearing that date. When all the coupons on the sheet have been presented, a fresh sheet of coupons is issued to the person holding the share warrant.

The holder of a share warrant is usually entitled to attend and vote at meetings of the company, but before doing so, he must produce his share warrant to the company. He is not, however, a member of the company, for his name is not on the register of shareholders.

SHIP BROKER. The person who transacts business between the owners of vessels and the merchants who send cargoes.

SHIP CHANDLER, a merchant who deals in ropes, cordage, and other articles necessary for the furnishing of ships.

SHIPPING. Refer to *Index.*

SHIPPING ARTICLES. An agreement in writing between the master of a ship and the seamen, setting out the wages, the scale of provisions, the duration of the voyage, and various other things.

SHIPPING BILLS. Invoices or manifests of goods put on board ship.

SHIPPING NOTE. A delivery note or a receipt note of particulars of goods forwarded to a wharf for shipment.

SHIP'S CLEARANCE INWARDS. When a ship is unloaded after the performance of the necessary customs formalities, a certificate of clearance inwards is given by the customs authorities.

SHIP'S CLEARANCE OUTWARDS, a certificate issued by the customs, showing that the vessel in it has complied with the customs requirements, and is authorised to proceed to sea. This permission is given only when all dues and charges have been paid.

SHIP'S MANIFEST, the document containing full particulars of the cargo and the destination of the ship. It is one of the ship's papers.

SHIP'S PAPERS, the papers which a ship is bound to carry, and which show her nationality, and the nature and the destination of her cargo. They consist of (1) The Ship's Certificate of Registry, (2) the Agreement with the Seamen, (3) the Charter Party or the Bills of Lading, (4) the Manifest, (5) the Official Log, (6) the Bill of Health.

SHIP'S PASSPORT. See *Sea Letter.*

SHIP'S PROTEST, a sworn declaration made before a notary, giving particulars of injuries to the ship or the cargo.

SHIP'S STORES BOND, a bond given by the owner of a ship, where dutiable goods like wine and spirits are placed on board ship for consumption thereon, that the goods will not be used in any other way.

SHIP'S STORES, articles used on board ship, which if used on land would be liable to duty, e.g. wines, tobacco, spirits, and the like. In a wider sense it means the entire provisioning of a ship, and the goods necessary to make repairs.

SHORT BILLS, Bills of Exchange which have but a short time (ten days) before they mature. They include bills at sight or payable on demand, bills drawn for less than ten days, and bills drawn for any length of time when within ten days of becoming payable. Such bills will not, as a rule, go to the banker's creditors in case he is adjudged bankrupt, but will remain the property of the person who has deposited them with the banker, for the banker to collect the proceeds of the bills from the parties liable on them. Much, however, depends upon the circumstances of the case.

SHORT EXCHANGE, the rates of exchange quoted in the Money Market for cheques, and for bills on sight or within ten days.

SHORT LOANS, loans for short periods.

SHORT OF STOCK. Dealers on the Stock Exchange when they sell for a fall, often sell what they do not possess. In such a case they are said to be "short of stock." (See *Bear.*)

SHORT SHIPMENT, a phrase signifying that goods have been shut out of a ship, i.e. have not been received on board either through accident or want of room.

SHUNTING, same as *Arbitrage* (which see).

SHUT FOR DIVIDEND. This phrase indicates that the transfer books of limited companies are closed, during which period transfers of shares or of stock in the company cannot be registered. This closing of the transfer books is for the purpose of issuing the dividend warrants.

SIGHT BILLS, bills payable on presentation to the drawee. No days of grace are allowed on sight bills.

SINE DIE. "Without a day," i.e. postponed indefinitely.

SIMPLE AVERAGE, same as Particular Average. (See *Average, Particular.*)

SINKING FUND, a fund collected by setting aside a certain portion of the revenue of a government, corporation or business for the purpose of paying certain debts already incurred.

SLANDER OF TITLE OR OF GOODS, defamatory words which deny a man's title to certain property, or which disparage the goods that he makes or sells, without casting any slur on his moral character. But in certain cases slander of goods may amount to a slur on a man's character, e.g. to say of a fish-monger that he is in the habit of selling decomposed fish. A slander of this character is actionable without its being necessary for the plaintiff to prove that he has sustained actual damage through the defamation.

SLEEPING PARTNER, one who invests his money in a partnership firm, but has nothing to do with the working of the business.

SLIDING SCALE, a method of fixing the wages of workmen according to the rise or fall in the price of the commodities which they produce. For instance, suppose a miner agrees to receive 5s. for every ton of coal he extracts when the price of coal is 16s. per ton, then if the price of coal were to rise to 20s. per ton, his wages would be increased to 6s. 3d. per ton. If the price fell to 14s. per ton, his wages would be reduced to 4s. 4½d. per ton.

SLIP. When a ship owner wishes to insure his ship, he employs a broker, who writes on a printed form short particulars of the ship and the nature of her voyage. He then brings the slip to an underwriter, who, if he agrees to accept the risk, initials the slip. (See under *Marine Insurance.*)

SOFT GOODS, textile fabrics, such as woollen goods, flannels, silks, cotton, and the like.

SOLA. When this word appears on a bill of exchange, it denotes that there is only one copy in existence, as distinguished from a bill drawn in a set.

SPECIAL ACCEPTANCE, same as Qualified Acceptance (which see).

SPECIAL DAMAGE, a particular loss arising from the commission of a wrongful act for which a jury will award extra damages apart from the general damages given to remedy the wrongful act itself.

SPECIAL INDORSEMENT, an indorsement on a bill of exchange stating the name of the person to whom the indorser has transferred the bill (see under *Bills of Exchange*).

SPECIFIC PERFORMANCE. As applied to contracts, the phrase means the literal carrying out of the terms of a contract. Generally speaking, the Courts will not enforce a specific performance of a contract, except in cases where, owing to the nature of the contract, damages would not be an adequate remedy for its breach, e.g. contracts relating to the sale of land or of interests in land, contracts for the sale of shares in private but not in public companies, and contracts relating to rare and curious articles. As a rule, the Courts will not specifically enforce commercial contracts, or contracts for personal services, because in these cases damages is the only possible remedy, or is an adequate remedy. But in the case of contracts for personal services, where a person enters the employment of another and expressly agrees that for a certain period he will not work for any one else, the Courts will prevent him from working for any one else during that period.

SPECIAL SETTLEMENT. When it is desired to place the shares and securities of a limited company on the official list of the Stock Exchange, the Committee appoint a day by which all previous dealings or bargains in its shares are to be completed.

SPECIE PAYMENTS, payments made in bullion or in coin, and not by means of paper money.

SPECIE POINT, THE, is the point above which the price of first-class foreign bills of exchange cannot rise or the price below which they cannot fall. For if the price rose above this, the person who wished to make payments abroad would not buy such bills, he would prefer to send bullion, and pay the cost of transmission and the cost of insuring it. On the other hand, if the price fell below this point, the person who had to receive money from abroad would not sell his bills payable in a foreign country, he would prefer to wait for the gold to be sent to him. The cost of transmitting gold and insuring it in transit determines the specie point.

SPOT GOODS. Goods available for delivery. "For spot," for immediate delivery.

SPREAD EAGLE. See *Straddle.*

SQUEEZING THE BEARS. When "bears" are unable to deliver stock which they have agreed to deliver at a certain price, because the buyers have themselves got hold of the stock, the buyers will compel the bears to deliver, which they can do, only by buying the stock from the persons to whom they had agreed to sell it. They are, of course, compelled to buy at an enhanced price. This operation is known as "squeezing the bears."

STAG, a person who applies for shares in a new company which is being floated, not for the purpose of investment, but with the sole object that after allotment the shares should go to a premium, and then he will be able to sell out at a profit. This explains that when a government loan is raised, the price of the loan, though it may be at a premium when it was issued, steadily falls in price during the few months following. The fall is caused by the selling of the Stags.

STALE CHEQUE, a cheque that has remained unpaid for a considerable time. Most banks will refuse to cash a cheque that is six months old. If a holder of a cheque does not present it for payment within a reasonable time, and the banker in the meantime becomes bankrupt, the drawer of the cheque is no longer liable; for instance, if he had paid a debt by means of the cheque, he could not in that case be sued for the debt. The holder, however, can prove in bankruptcy for the amount of the cheque against the banker's estate.

STAMP DUTIES. Refer to *Index.*

STANDARD GOLD. English gold coins are made from an alloy consisting of 22 parts of pure gold and 2 parts of copper.

STANDARD SILVER. English silver coins are made from an alloy consisting of 37 parts of pure silver and 3 parts of copper.

STAPLE TRADE, the chief articles manufactured in a given district, or the chief articles which form the subject of the trade of a district.

STATUTE BARRED, a term applied to debts when, after a certain period, payment of them cannot be recovered in a Court of Law. In the case of a simple contract debt, such as an ordinary trade debt, if no payment has been made for six years, or no written acknowledgment containing a promise to repay has been made during that period, the creditor cannot bring an action for payment. The creditor does not lose his right to receive payment, but he does lose his remedy for enforcing payment. In the case of a debt due under a bond or other deed, the period is twenty years. A judgment debt is statute-barred after twelve years. Statute-barred debts may be revived by the debtor's giving a written acknowledgment of the debt, coupled with an *unconditional* promise to repay. Hence a written promise to pay "if and when I can," would not be sufficient to revive a statute-barred debt. Part payment will also revive a debt which is statute-barred.

STATUTE OF LIMITATIONS. Acts of Parliament which have been passed by the Legislature in its desire to put an end to litigation, so that a person shall not be under continual fear of being threatened with a lawsuit in regard to disputed rights or liabilities, or of having a criminal prosecution hanging over his head.

Actions for debt or the recovery of money for arrears of rent, trespass, and libel, must be brought within six years from the time the cause of action arose, or from the time of the last payment of any portion of the debt, or a written acknowledgment was given. Actions of slander must be brought within two years. Actions to recover compensation for assault must be brought within four years. Where the money is due under a bond or other document under seal, the time limit is twenty years.

Actions for the recovery of land must be brought within twelve years. If a person enters into possession of land, say under a lease, and remains in possession for twelve years without acknowledging his landlord's right, or without paying him any rent, he (the tenant) will become the absolute owner of the property.

It should be remembered that in the case of debts, the right to receive payment is not destroyed by lapse of time, it is merely the remedy for recovering the debt is taken away. Thus a creditor whose debt has become statute-barred, if at any time any money belonging to the debtor should come into his hands, may pay himself out of that money. But in the case of land, not merely does lapse of time destroy the remedy, it destroys the right itself. For example, in the case of the tenant mentioned above, the tenant becomes the absolute owner of the property, and should his former landlord be allowed to take possession as tenant, he will not become the owner of the property once more.

STATUTORY MEETING, a general meeting of the shareholders of a limited company which *must* be held within not less than one month and not more than three months from the date at which the company is entitled to commence business. A report enabling the shareholders to ascertain the exact position of the company must be sent to all the shareholders seven days before this meeting. If the proper notices are not sent out before the

statutory meeting, the company is liable to be wound up.

STAY OF EXECUTION, a period during which a judgment of the Court will not be executed. As a rule, when judgment in an action is given to a plaintiff, he can immediately carry it into effect by seizing the property of the defendant and keeping it until the judgment of the Court has been satisfied. But in cases where the defendant is desirous of appealing, or for other sufficient cause, the execution of the judgment may be stayed.

STERLING, a name applied to standard English money.

STERLING BONDS. Bonds which are payable, both interest and principal, in English currency only.

STET. Let it stand. When a writing has been crossed out in mistake, the word "stet" denotes that the writing should be read as originally written.

STEVEDORE, one who is experienced in the loading or unloading of ships. The stowage of cargo requires skilful handling lest there should be a shifting of the cargo during the voyage, thus endangering the safety of the ship. Hence stevedores are employed to superintend the loading of vessels.

STIFFENING ORDER, an order made by the customs authorities permitting ballast or heavy cargo to be taken on board ship before the whole of the inward cargo is discharged. This is to prevent the ship being too light.

STOCK. There are certain differences between stock and shares of a company. Stock is always fully paid up, shares need not be. Stock can be divided into fractional parts, a share cannot be.

STOCK-BROKER, a broker who negotiates for the purchase or the sale of securities on the Stock Exchange. When any person wishes to buy or to sell shares or stock, he employs a broker, who in turn sells the shares to, or buys the shares from a stock-jobber.

STOCK EXCHANGE, the place where stock and shares are bought and sold. (Refer to "Stock Exchange" in *Index*.)

STOCK JOBBER. A member of the Stock Exchange who deals in securities on the Stock Exchange.

STOCK-TAKING, a valuation of all the goods and stock-in-trade and the machinery and plant of a business, so that the owner's assets may be correctly ascertained for the purpose of preparing the periodical balance sheet.

STOPPING A CHEQUE OR NOTE. This is done by giving an order to the banker not to pay a cheque, note or other instrument in cases where such instrument has been lost or stolen. The stopping of a bank note may be of little use save for the purpose of tracing the persons through whose hands the instrument has passed, for a banker cannot refuse payment of one of his own bank notes to a *bona fide* holder for value. Should a lost cheque fall into the hands of such a holder, stopping payment would be of no avail unless the lost cheque had been marked "Not Negotiable." The Bank of England charges a fee of 2s. 6d. for recording the numbers of lost notes.

STOP ORDER. A stop order authorises a broker to sell out stocks or shares when they reach a certain price, but the price must be made by a third person, and the broker himself cannot offer that price for them. If, however, when the stock reaches that price, the broker is unable to find a buyer, he may, by the custom of the American markets, sell at the next figure below that price. A stop order may also direct a broker to buy certain stock when it reaches a certain price.

STOPPAGE IN TRANSITU. This is the right of an unpaid seller of goods on hearing of the insolvency of the buyer, to stop the goods on their way to the buyer, before they reach the buyer or his agent (see under *Sale*).

STRADDLE or **SPREAD EAGLE,** a "put and call" option, i.e. an option which gives its holder the right either to buy or to sell a given quantity of stock at a fixed price on a given date.

SUBPŒNA, "under a penalty." A writ ordering a person to attend a Court on pain of paying a penalty for non-attendance.

SUBSCRIBED CAPITAL, that part of the authorised capital for which shares have been taken up, that is, the amount for which the shareholders are responsible, though not called upon, at present, to pay up in full.

SUCCESSION DUTY. Refer to *Index*.

SUFFERANCE WHARF, a wharf on which goods may be landed before any duty on them is paid. Such wharf is licensed by the customs authorities.

SUPERCARGO, an official in a merchant ship whose business it is to superintend all the commercial concerns of the voyage, such as the sale of the cargo, and the bringing back of a fresh cargo. Supercargoes are seldom employed now-a-days.

SURRENDER VALUE. When a person has effected an insurance on his life, it may happen that after a few years he may be unable to continue paying the premiums. In that case, most Life Offices will pay him a lump sum down, in return for his giving up the policy and having no further claim upon them. This lump sum is known as the surrender value of the policy. The longer the policy has been in force the greater will be its surrender value. Insurance Companies will not, as a rule, give any surrender value for a policy that has not been three years in force. A number of offices publish a surrender value of their policies.

SUSPENSE ACCOUNT. See *Account, Suspense.*

SUSPENSION OF PAYMENT. When traders and others engaged in business find that they are unable to pay their debts as they become due, they cease to pay *any* of their debts, or, as it is called, "suspend payment" as a preliminary to having their business wound up in bankruptcy.

SWEATING COINS, the practice of shaking gold coins in a bag until some portion of the metal is worn off. In this way a considerable amount of gold dust can be collected.

TAKE IN, to receive backwardation.

TAKING IN SHARES. When a speculator for a rise has bought more shares than he is able to take up at the settlement, he endeavours to get some one who, for a price, will take up the shares for him, paying for them and holding them until a subsequent settlement.

TAKING UP A BILL. A person is said to take up a bill of exchange or to retire it when he meets the bill. Should it be the acceptor who takes up the bill, the bill is discharged, and no one has any further liability on it; but should it be taken up by an indorser, he can sue any party prior to himself on the bill for the amount of the bill.

TALE QUALE, a term in the grain trade, signifying that the goods as sold are of the same quality as the sample, but that the risk of damage to them during the voyage is to be borne by the buyer.

TALLY TRADE, a system of selling goods on credit, the customers agreeing to pay weekly or monthly.

TALON, a document attached to the coupon sheet of a bearer bond, entitling the holder, when the last coupon has been presented and paid, to a fresh sheet of coupons. (See *Share Warrants.*)

TAPE PRICES, the prices of stocks and shares received through the medium of the Exchange Telegraph Company, by permission of the Committee of the Stock Exchange.

TARE. A deduction on the gross weight of goods sold in boxes, barrels, bags, or packages for the weight of the box or other material enclosing the goods. Tare is said to be *real* when the true weight of box or wrapper is known and deducted. *Average* tare is when the deduction is estimated from similar instances. *Customary* tare is reckoned at a uniform rate.

TARIFF, a list of fixed charges. A list of dutiable articles issued by the customs authorities, with the scale of duties charged upon them.

TASTING ORDER. When an intending buyer of wines or spirits wishes to see what the goods are like, he receives an order from the owner of the wines, requesting the warehouse keeper to permit the bearer of the order to taste the wines or spirits mentioned therein.

TELEGRAPHIC MONEY ORDERS. Refer to "Post Office" in *Index*.

TELEGRAPHIC TRANSFER. By means of T.T's, as they are called, a person in London is able to pay a house say in Bombay, a certain amount in rupees *on any particular day;* for on his paying to his Banker an equivalent in gold, at the transfer rate of the day, the Bank would cable to their branch in Bombay to pay the nominee the sum specified.

TELLER, the cashier in a bank who receives and pays out money over the counter.

TENANT'S FIXTURES, fixtures attached to property by a tenant. If these fixtures are put up solely for ornament or convenience, the tenant may at the expiration of his tenancy remove them, provided that the removal does not injure the landlord's property.

TERMINAL CHARGES, charges which a trader has to pay a Railway Company on whose lines goods belonging to or consigned to the trader have been carried. These charges are quite distinct from the charges made for carrying the goods, and are made in respect of loading, unloading, covering and uncovering, the merchandise. They include the cost of labour, machinery, plant, stores and sheets. Where the trader is not permitted by the Company to perform for himself these services, and a dispute arises as to the amount charged, the matter is referred to the Board of Trade.

TENDER. In the sense in which it is used here, tender is an offer by a debtor to pay the debt, such payment being refused by the creditor. When tender has been refused, the debtor must still remain ready and willing to pay the debt, for the debt is not extinguished. After tender the creditor cannot claim any interest from that time; and if he sues for the debt, and the debtor pays the money into court and proves that he had previously tendered the money, the creditor will have to pay all the costs of bringing the action.

A tender, in order to be valid, must fulfil all the following conditions:—

(1) It must be in the current coin of the realm or in notes of the Bank of England, and the money must be actually produced and shown to the creditor, unless the creditor dispenses with production.

(2) It ought to be the exact amount due, for an offer to pay a smaller sum is not a valid tender. Tender of a larger

amount is valid, provided that no change is demanded; suppose, for instance, a person who wishes to buy postal orders to the value of, say £4 17s. 6d., tenders to the post office clerk a £5 Bank of England note, the clerk may demur to receive the note, or may ask the purchaser to write his name on the note. The customer may, however, refuse to write his name, and he can compel the clerk to receive the note in exchange, because the note is legal tender, but he cannot insist on getting his change.

(3) It must be unconditional. Thus, if a debtor offers to pay a certain sum provided that the creditor admits that no more is due, and will give him a receipt in full, the offer is not a valid tender.

(4) The tender must be made before the creditor brings an action for the debt, for if not made before action, the debtor will have to pay the costs of the suit.

(5) The tender must be made to the creditor himself, or to his agent duly authorised to receive payment. Where a bailiff distrains for rent, a tender of the rent and the costs is valid if made either to the landlord or the bailiff, for the bailiff, the distress warrant being addressed to him, is duly authorised to receive payment. But tender to a man left in possession by the bailiff is not a valid tender, unless such man in possession has been expressly authorised to receive payment. (Refer to "Legal Tender" in *Index*.)

TERM OF A BILL, the length of time for which a bill is drawn, as sixty days after date.

TERMINABLE ANNUITIES, annuities given by a government or by a life insurance office in return for a lump sum down. These annuities may be for life, or for a period of years.

THIRD CLASS PAPER. Bills of Exchange the parties to which are of an inferior financial standing.

TICKETS, the document prepared by the purchaser's broker, setting forth the number of the shares, the price, and the name and address of the purchaser. On the ticket is written the name of the paying broker and the name of the jobber to whom he gives it. The jobber endorses on the ticket the name of the person to whom he delivers it, and the name of every person through whose hands it passes is indorsed until it reaches the seller's broker. In this way persons who own shares and desire to sell them are brought into touch with people who wish to buy them. (See under *Stock Exchange*.)

TICKET DAY or **NAME DAY,** the second day of the settlement on the Stock Exchange. The day on which the name of the purchaser of shares is passed to the seller by means of a "ticket," in order that the purchaser's name may be inserted in the deed of transfer.

TIDE WAITER or **TIDESMAN,** an officer of the customs who boards ships on their arrival, and remains on board until the cargo is discharged and the duties have been paid.

TIME BARGAIN, a contract to buy and to sell a given quantity of stocks or merchandise at a fixed price at some future date. Usually the contract really means to pay the difference between the price of the thing when the bargain is made, and the price at the time fixed for delivery. (See *Differences*.)

Such a contract to pay differences is really a wagering contract, and is therefore void. It sometimes means, however, a contract to sell something, the amount or value of which cannot at the time be ascertained, to be delivered at a future date. Such a contract is not a wagering contract, and is, therefore, not void.

TIME POLICY, in marine insurance, a policy in which property in transit is insured for a certain period of time.

TOKEN MONEY, coins of which the value marked on them is greater than the real value of the metal composing them, but which can legally be exchanged at their nominal value for standard money.

TONNAGE. The "register tonnage" of a ship is that on which dock, harbour, light, and other dues are based. A "gross register ton" is 100 c. ft. of internal volume. The "net register tonnage," which is that actually inscribed on the register of British Shipping, is obtained by deducting from the gross register tonnage the space for the crew's quarters, engine room, etc. This registered tonnage does not represent the carrying capacity of the ship, for of course all above the load-line must for this purpose be excluded. What is called "Freight Tonnage" is taken as two-fifths of register tonnage.

TONTINE, a term derived from the name of the Italian who invented the system of borrowing money, the lenders receiving an annuity from the borrowing State. On one annuitant dying, his annuity goes to the survivors, and so on to the last survivor, who receives until his death the whole amount of the annuities that had been payable to his fellows.

TRADE BILL, a Bill of Exchange founded on a real transaction, the drawer of the bill having previously sent goods or given credit to the person on whom he has drawn the bill.

TRADE FIXTURES, fixtures attached to property by a tenant for the purposes of his trade or business. These may be removed at the expiration of the tenancy, under the same conditions as tenant's fixtures.

TRADE MARK. A device, symbol, word, label, picture, or the like affixed or attached to manufactured goods by a trader or a manufacturer, so as to distinguish them from goods of a similar nature dealt in or manufactured by other persons. (Refer to "Trade Marks" in *Index*.)

TRADE PRICE, the price at which goods are sold by the wholesale trader or the manufacturer to the retailer.

TRADES UNION. A combination of workmen for regulating the relations between masters and workmen, or between workmen and workmen. (Refer to "Trade Union" in *Index*.)

TRAFFIC RETURNS, the weekly or monthly statements issued by railway and other carrying companies.

TRANSFER, the document prepared by the seller's broker transferring to the purchaser the shares or stock in consideration of the money paid for such shares. On transfers of stock, the Bank of England charges a fee of 9s. where the transfer is less than £25 stock, and 12s. if the value of the stock exceeds £25.

TRANSFER DAY, the days on which the Bank of England enters transfers of stock in their books.

TRANSIRE, a warrant from the Custom House to let goods pass. A permission given to a ship to proceed on her voyage, given by the customs authorities on their requirements being complied with.

TREASURE-TROVE, money, gold and silver plate or bullion found hidden in the earth or other private place, the owner thereof being unknown or unfound. Treasure-trove belongs to the Crown, and any person concealing it commits a crime. In order to constitute treasure-trove, the valuables must originally have been hidden by their owner. If they had been merely abandoned by him or had been lost, they would become the property of the finder.

TREASURY BILLS. When the Government wants money to meet a temporary deficiency, it borrows money for short periods, giving the lenders treasury bills, payable in three, six, or twelve months. These bills are negotiable instruments. The following is the form of such a bill:—

B. 0901. Due April 25th, 1905. B. 0901.

£

By virtue of an Act, 49 Vic., c. 2.

London, *January* 25th, 1905.

This Treasury Bill entitles* or order, to payment of pounds at the Bank of England out of the Consolidated Fund, on the 25th of April, 1905.

Signed, A. B.,

Comptroller and Auditor General.

*If this blank is not filled up, the bill will be paid to bearer.

TREASURY BOND. See *Exchequer Bond*.

TRET. An allowance formerly made to purchasers of certain kinds of goods on account of their being obliged to transport their purchases. It is now never allowed.

TRINITY HOUSE. This is a corporation whose duties are the licensing and appointing of pilots, the erection and regulation of lighthouses, buoys, and beacons around the coast, for which they are empowered to levy dues on merchant ships. Any surplus of revenue is distributed in pensions to old and decayed merchant seamen and those dependent upon them. They also act as nautical advisers to the High Court of Admiralty.

The Corporation of the Elder Brethren of the Holy and Undivided Trinity consists of thirteen elder brethren elected by the younger brethren. Of the elder brethren, two are taken from the Royal Navy and eleven from the Merchant Service, and consist of men who have had a great experience in the naval and merchant service, and it is they alone who discharge the duties of the corporation. There are also honorary elder brethren admitted on account of their eminence in the State. The address of the Corporation is Trinity House, Tower Hill, E.C.

TRUCK SYSTEM, the system of paying workmen their wages not in money but in goods. It is now illegal.

TRUST. In a commercial sense, a trust is formed when a number of firms or trading corporations in the same kind of business combine for the purpose of doing away with competition amongst themselves, and of getting control of the market so that they may dictate what prices they will for their wares. The method of combining is for the various firms to be valued, and then their property and goodwill transferred to trustees who control the combination. In return, each firm that joins has a right to a share of the earnings of the combine, in proportion to the value of the business which it brought.

Where the trust is strong enough, it speedily wipes out its rivals. For owing to underselling, their rivals have to retire from business. Then the trust advances its prices and so levies an exorbitant tax on the community. The United States affords many examples of this iniquitous method of carrying on trade.

TRUSTEE IN BANKRUPTCY, the person appointed by the creditors of a debtor who has been adjudged bankrupt. The trustee takes over the property of the bankrupt and realises it for the benefit of his creditors. (See under *Bankruptcy*.)

TURN OF THE MARKET, the difference between the selling price and the buying

price of stocks and shares at the same time. When a jobber is asked to name a price, he mentions two—one the price at which he will buy, the other the price at which he will sell. The difference between the two prices is called the "turn of the market," and represents the jobber's profit. For instance, if the jobber names a price for Canadian Pacifics of 135, 135¼. The difference between the two prices is half a sovereign on each share, and is the "turn of the market."

TURN OVER, the value of the trade done by any firm or business during a given period.

UBERRIMAE FIDEI. A name given to contracts like that of insurance, in which both parties must exercise the utmost good faith toward each other. (See under *Insurance.*)

ULLAGE, leakage, waste.

ULTRA VIRES, a phrase applied to corporations, trading or otherwise, when they exceed the powers conferred on them by law. Anything done "ultra vires" is absolutely void.

UNDER PROTEST. Money may be paid under protest when it is illegally demanded or more is demanded than is lawfully due, for the purpose of avoiding some penalty that is threatened.

UNDERWRITER. The name in marine insurance of the person who subscribes or writes his name at the foot of a policy, thereby guaranteeing that in return for a share of the premium he will be answerable for a proportionate share of any loss that may occur to the property insured. (See under *Marine Insurance.*)

The term is also applied to a person who, in return for a certain commission, undertakes that if the public do not take up shares in a company that is being floated, he himself will take up and pay for a certain number of the shares. (See under *Limited Liability Companies.*)

UNCLAIMED DIVIDENDS. Government Stock on which no dividend has been claimed for ten years is transferred, together with the dividends, to the National Debt Commissioners.

UNFUNDED DEBT or **FLOATING DEBT,** loans contracted by Government for short periods. In 1905, for example, these loans exceeded 70 millions. They are raised by means of Exchequer Bills, Exchequer Bonds, and Treasury Bills, which have to be paid off at a given date.

UNIFIED STOCK. Where a company has raised loans at varying rates of interest and has issued stock representing such loans, when these different kinds of stock are united into one bearing a uniform rate of interest, the amalgamated stocks are described as "unified stock."

UNMERCHANTABLE QUALITY, a term applied to goods which are not up to the usual standard, or which on account of inferiority cannot be sold except at a sacrifice.

UNSEAWORTHY, the condition of a ship which it is unsafe to load with a cargo and send on a voyage. This condition may arise from various causes, such as insufficiency or incompetency of the crew, incompetency of the master, or the unsatisfactory state of repair of the ship.

UPSET PRICE, the lowest price at which property can be started at a sale by auction. If the bidding cannot be made to start at this figure, the property is withdrawn. If the bidding starts at this figure and no higher bid can be obtained, the property must be sold to the person making the bid. Upset price is a reserve price disclosed before the bidding begins.

USANCE, the time allowed by custom in certain countries for the payment of a bill of exchange. It applies to foreign bills. When the time is a month, half usance is reckoned as fifteen days. But the term is hardly ever employed at the present day.

USURY, an excessive and unconscionable rate of interest charged by money-lenders on loans. After the abolition of the Usury Laws in 1854, which punished severely money-lenders and others who exacted exorbitant rates of interest, many poor and ignorant borrowers were harshly dealt with and robbed by money-lenders. Accordingly, in 1900, the Money-Lenders Act was passed, and came into operation in the November of that year. (Refer to "Money Lenders" in *Index.*)

VALUE, a term used in transactions relating to bills of exchange, e.g. "we have valued upon you at three months," meaning that they had drawn a bill for three months on the person to whom the letter is addressed.

VALUE RECEIVED, a term written on bills of exchange implying that the drawee has received from the drawer either money or money's worth. It is not really necessary to write these words, as the law presumes that value has been given for the bill.

VALUED POLICY, a policy of marine insurance, in which the amount for which the property is insured is stated.

VENDOR'S SHARES are shares in a company allotted to a person who sells his business to that company.

VENTURE, goods sent at the consignor's risk to be sold for what they will fetch at the place of destination.

VICTUALLING BILL, a customs document authorising the master of a ship to take on board bonded goods as stores for the outward bound voyage.

VOUCHER, a document stating the fact that a money payment has been made.

VOYAGE POLICY, a policy insuring a ship during its voyage from a specified place to a specified place.

WAGES, the weekly payment made to a workman. In the case of the bankruptcy of an employer or of the winding-up of a company, the labourers and workmen must be paid before any other creditors of the bankrupt can be paid. The amount so paid must not exceed two months' wages up to £25. Further, the wages earned by the personal labour of a bankrupt will not go to his creditors. Wages must be paid only in money.

WALL STREET, the name given to the New York Stock Exchange, from the street in which it is situated.

WAREHOUSE KEEPER or **WAREHOUSEMAN,** one whose business it is to receive goods for the purpose of storage, and for which he charges a rate. He is bound to use reasonable diligence in preserving the goods, and has a lien on the goods until his charges are paid, i.e. he can keep the goods until he receives payment for warehousing them.

WAREHOUSING SYSTEM, the system by which goods liable to duty may be stored in bonded warehouses, and are not made to pay the duty until they are taken out of the warehouse for home consumption. If taken out for exportation no duty is paid. Such goods, when in the warehouse, are said to be in "bond."

WARRANT, a written authority issued by a magistrate to a police officer commanding him to arrest an offender. In commerce, a warrant is a document entitling its holder to certain rights or to money or other property, e.g. dock warrants, share warrants, and the like.

WARRANT OF ATTORNEY, an instrument in writing given by a client to an attorney, empowering him to appear on behalf of the client in an action, or to suffer judgment to be given against the person giving him the authority.

WARRANTY, a promise that in case there is a failure to perform any of the terms of a contract, the party injured by such failure shall be entitled to compensation. The breach of warranty does not entitle the party injured to repudiate the contract; damages are all that he is entitled to. (Refer in *Index* to "Caveat Emptor" and "Warranty.")

WASTE BOOK. In book-keeping, this is a book in which all business transactions are entered as they occur. Thence they are transferred to the Journal, and from that they are entered into their proper accounts in the Ledger.

WATERING STOCK, the practice of increasing the nominal capital of a company, for the purpose, among others, of keeping down the apparent rate of interest on the stock and shares of the company.

WATER-LOGGED, a term applied to a ship when through a leak or a collision she receives so much water in her hold as to become unmanageable, though still keeping afloat.

WAY-BILL, a list of the passengers who are carried in a public conveyance, or the description of goods sent with a common carrier by land.

WET GOODS, liquids such as wines, oils, paints, and the like.

WHARFAGE, the charge for accommodating goods at a wharf.

WHARFINGER, the person who owns or keeps a wharf for the purpose of receiving and shipping merchandise. His position is analogous to that of *a warehouseman* (which see).

WHARFINGER'S RECEIPT, a receipt given by a wharfinger for goods received at his wharf for shipment.

WINDING UP, the process by which the business of a limited company is brought to an end. The winding up may be voluntary, in which case the company may not be insolvent, or winding up under the supervision of the Court, or compulsory winding up by the Court.

WITHOUT ENGAGEMENT, without binding force.

WITHOUT PREJUDICE. See *Prejudice, Without.*

WITHOUT RECOURSE (The same as *Sans Recours,* which see).

WITHOUT RESERVE. When property is to be sold without reserve, it means that the property will be knocked down to the highest bidder, and that neither the seller nor any person in his behalf shall bid at the auction.

WORKING PARTNER, a partner who takes an active part in the business of the firm.

WRIT, a written order issued by the authority and in the name of the sovereign of a State, for the purpose of compelling the person named therein to attend at a certain place, or to do some act named therein.

YEAR'S PURCHASE, a term denoting that property is worth so many times its annual rent.

ZOLLVEREIN, a customs union of the German States, of which Prussia was the head, founded in 1819. By this union the different States were regarded as one for the purpose of levying customs dues, instead of dutiable goods paying these dues at the borders of each State through which the goods had to be transported. This union was superseded on the establishment of the German Empire, the Federal Council of which has taken the place of the Zollverein.

COMMERCIAL TERMS IN FOUR LANGUAGES.

English.	French.	German.	Spanish.
Abandonment (Marine Insurance)	Abandon, délaissement	Abtretung	Abandono.
Above Par	Audessus du pair	Ueber Pari	Arriba la par.
Acceptance (of Bill of Exchange)	Acceptation.	Annahme	Aceptacion.
Acceptor	Accepteur	Acceptant	Aceptante.
Accommodation Bill	Billet de Complaisance	Gefälligkeitswechsel	Letra de acomodación.
Account	Compte	Conto	Cuenta.
Account, Capital	Compte de Capital	Kapital Conto	Cuenta de capital.
Account, Current	Compte courant	Conto-Corrent	Cuenta corriente.
Account, Profit and Loss	Compte des Profits et Pertes	Gewinn-und Verlustconto	Cuenta de ganancias y pérdida.
Account Sales	Comptes des ventes	Kommissions Abrechnung	Cuenta de ventas.
Account Stated	Relevé	Vereinbarte Abrechnung	Cuenta cerrada.
Account, Stock Exchange	Compte Liquidation	Börsendifferenzabrechnung	Liquidación.
Account, Suspense	Compte en suspens	Interimsconto	Cuenta en suspenso.
Accountant	Comptable	Bücherrevisor	Contador.
Act of Bankruptcy	Acte de Faillite	Konkurs-Vergehen	Acto de quiebra.
Act of God	Force Majeure	Naturereigniss	Fuerza mayor.
Active Partner	Associé gérant	Aktiver Theilhaber	Socio industrial.
Adjustment (Marine Insurance)	Dispache	Aufmachung einer Havarie	Ajuste.
Advance	Avance, hausse.	Vorschuss	Anticipo.
Advance Note	Bordereau d'avance	Vorschussquittung	Vale de adelanto.
Adventure, Bill of	Compte de spéculation	Spekulations-Conto	Recibo provisorio.
Advice	Avis	Aviso	Aviso.
Affreightment	Affrètement.	Befrachtungscontract	Fletamento.
After Date	A (3 mois) d'échéance	Ab Dato	Después de la fecha.
After Sight	„ de vue.	Nach Sicht	A' vista.
Agent	Agent, commissionnaire.	Agent, Kommissionär, Vertreter	Agente.
Allonge	Allonge (appendice d'un chèque)	Allonge	Allonge.
Allotment	Répartition	Antheil	Decreto.
Allotment Note	Avis ou lettre de répartition	Antheil Vormerkung	Distribución.
Allottee	Souscripteur	Antheil Besitzer	Suscriptor.
All Rights Reserved	Tous droits réservés	Alle Rechte vorbehalten	Derechos de propiedad.
Annuity	Annuité, rente viagère	Jahresrente	Anualidad.
Arbitrage	Arbitrage	Arbitrage	Arbitraje.
As per Advice	Suivant avis	Laut Bericht	Según aviso.
Assets	Actif	Aktiva (Guthaben)	Activo, Fondos testamentarios.
Assignment	Cession, abandon	Uebertragung	Asignación.
At sight	A vue.	Nach Sicht	A la vista.
Attorney, Power of	Procuration, Pouvoir.	Vollmacht	Poder.
Auction	Vente aux Enchères	Versteigerung	Subasta.
Audit	Vérification des comptes	Untersuchung	Ajuste de cuentas.
Auditor	Vérificateur des compte.	Auditor (Rechnungsrevisor)	Contador Público.
Average (in Marine Insurance)	Avarie	Havarie	Avería.
Average Bond „	Garantie d'avarie	Havarie Verschreibung	Obligación de avería.
Average Clause „	Clause d'avarie	Havarie Klausel	Claúsula de avería.
Average, General „	Avarie moyenne	Allgemeine Havarie	Avería general.
Average, Particular „	Avarie particulière	Havarie des Einzeln	Avería parcial.
Average Stater or Adjuster	Dispacheur	Dispache (Dispacheur)	Comisionado de averías.
Award	Jugement arbitral.	Schadenersatz	Decisión.
Balance of Trade	Balance Commerciale	Umsatz-Saldo	Balance de Importación.
Balance Sheet	Bilan	Bilanzbogen	Balance.
Bank Bill	Effet de banque	Bankwechsel	Letra de cambio.
Bank Credit	Crédit en Banque	Bankkredit	Crédito bancario.
Bank of Deposit	Banque de dépôts.	Depositenbank	Banco de Depósito.
Bank of Issue	Banque d'émission	Zettelbank	Banco de Emisión.
Bank, Joint Stock	Banque par actions	Vereinsbank	Banco Anónimo.
Bank Notes	Billets de Banque.	Banknoten	Billetes de Banco.
Bank, Private	Banque privée	Privatbank	Banco local.
Bank Rate	Taux officiel de l'Escompte	Bankzinsfuss	Tipo bancario.
Bank Stock	Actions de Banque	Bankvermögen	Seguridades bancarias.
Banker's Cheque	Chèque de Banque	Bankanweisung	Talonarios de Banco.
Bankrupt	Failli, en faillite	Bankerott	Fallido.
Barratry	Baraterie.	Baratterie	Barateria.
Bear (on Stock Exchange)	Baissier (à la Bourse)	Baissiers (Börsen-)	Bajista.
Below Par	Au-dessous du pair	Unter Pari	Abajo la par.
Bill Book	Livre de traites	Wechselbuch	Talonario de Letras.
Bill Broker	Courtier de change	Wechselmakler	Corredor de Letras.
Bill of Credit	Billet de crédit.	Kreditbrief	Letra de crédito.
Bill of Entry	Déclaration d'entrée.	Einfuhrdeklaration	Declaración.
Bill of Exchange	Lettre de change	Wechsel	Letra de cambio.
Bill of Lading	Connaissement.	Connoissement	Conocimiento.
Bimetallism	Bimétallisme	Bimetallismus	Bimetalismo.
Blank Acceptance	Acceptation en blanc.	Blanco accept	Aceptación en blanco.
Blank Indorsement	Endos en blanc.	Blanco-Giro	Endoso en blanco.
Blank Transfer	Transfert en blanc	Blanco Uebertragung	Transferencia en blanco.
Bond	Obligation	Verschreibung	Reconocimiento de deuda.
Bonded Debt	Dette d'entrepôt	Obligations-Schuld	Deuda reconocida.
Bonded Goods	Marchandise en entrepôt	Unverzollte Waaren	Mercaderías en depósito.
Bonded Warehouse	Entrepôt.	Entrepot	Depósito de almacenaje.
Bottomry Bond	Contrat à la grosse	Bodmerei Brief	Hipoteca del buque.

English.	French.	German.	Spanish.
Bought Notes and Sold Notes	Contrats de vente et d'achat	Kauf und Verkaufs-Vertrag	Notas de contrato.
Bounties	Primes d'exportation	Ausfuhrprämien	Bonificación de exportación.
Broker	Courtier	Makler	Corredor.
Brokerage	Courtage	Courtage	Corretaje.
Broker's Contract Note	Contrat du courtier	Makler's Abrechnung	Certificado de Corredor.
Bucket Shop (Stock Exchange)	Maison de bourse suspecte	Winkelbankgeschäft	Bolsin.
Bull "	Haussier	Bull (Haussier)	Alcista.
Bullion	Espèces métalliques	Metallvorrath	Oro y plata sin acuñar.
Buying In	Acheter, Racheter	Aufkauf	Comprar.
Calls	Appels de versement	Option der Einzahlungen	Derechos de compra.
Capital	Capital	Kapital	Capital.
Capital Account	Compte du capital	Kapital Conto	Cuenta de capital.
Case of Need	Cas de besoin	Zahler im Bedarfsfalle	En caso necesario.
Cash	Comptant, en espèces	Kassa, Baar	Caja.
Cash Account	Compte au comptant	Kassa Conto	Cuenta de caja.
Cash Book	Livre de caisse	Kassenbuch	Libro de Caja.
Certified Cheque	Chèque certifié	Attestirter Cheque	Cheques visados.
Certificate of Origin	Certificat d'origine	Ursprungszeugniss	Certificado de origen.
Chamber of Commerce	Chambre de commerce	Handelskammer	Cámara de Comercio.
Cheap Money	Argent bon Marché	Wohlfeiles Geld	Moneda barata.
Cheque	Chèque	Cheque (Bankanweisung)	Cheque.
Cheque Book	Carnet de chèques	Chequebuch	Libro Talonario.
Cheque, Crossed	Chèque barré	Durchkreuzter Cheque	Cheque cruzado.
Cheque to Bearer	Chèque au porteur	Auf den Inhaber lautender Cheque	Cheque al portador.
Cheque to Order	Chèque à l'ordre	An die Ordre des . . . lautender Cheque.	Cheque á la órden.
Clean Bill	Une patente nette	Gesundheitszeugniss	Patente de Sanidad.
Clearance (in shipping)	Passer en douane	Clarirung	Despachos.
Clearing House	Chambre de règlement	Clearing house	Casa de liquidación.
Closing Prices	Cours de clôture	Schlusspreise	Precios de última hora.
Combine (in business)	Fusion	Vereinigung	Asociación.
Commercial Crisis	Crise commerciale	Handelskrise	Crisis comercial.
Commission Agent	Remisier	Provisionsagent	Agente comisionista.
Company, Limited Liability	Société anonyme, à responsabilité limitée	Gesellschaft mit beschränkter Haftung, G. m. b. H.	Sociedad Anónima.
Consignment	Consignation	Consignation	Consignación.
Consols	Consolidés	Konsols	Consolidados.
Consular Invoice	Facture consulaire	Konsular Faktura	Facturas consulares.
Contango	Taux de report	Contango (Fristtundung)	Contango, Reporte.
Contraband of War	Contrebande de guerre	Kriegskontrebande	Contrabando de guerra.
Convertible Paper Currency	Papier-monnaie convertible	Volle Bankwert	Papel convertible.
Corner (in commerce)	Accaparement	Spekulationsring	Acaparamiento.
Cost, Freight and Insurance	Coût, frêt et assurance	Kost, Fracht und Versicherung	Costo, flete y seguro.
Cover (Stock Exchange)	Couverture	Deckung (Börsendeckung)	En cubierto.
Credit, Letter of	Lettre de crédit	Kreditbrief	Carta de crédito.
Credit Note	Note de crédit	Nachlassnote	Nota de crédito.
Cum Dividend	Dividende inclus	Unter Hinzurechnung der Dividenden	Dividendo incluso.
Cum New	Emissions inclues	Unter den neuen Bedingungen	Nueva emisión inclusa.
Cumulative Preference Shares	Actions privilégiées, cumulatives	Kumulative Prioritäten	Acciones de preferencia acumulativas.
Currency	Monnaie Courante	Valuta (Währung)	Moneda Legal.
Currency of a Bill	Cours d'une traite	Valuta eines Wechsels	Transcurso de una Letra.
Custom House	Douane	Zollamt	Aduana.
Customs Declaration	Déclaration en douane	Zolldeklaration	Declaración de Aduan.
Customs Entry	Entrée à la douane	Eingangszoll	Declaración de entrad.
Customs Tariff	Tarif douanier	Zolltarif	Arancel aduanero.
Day Book	Journal	Kladde or Strazze	Libro Diario.
Day to Day Loan	Emprunt ou prêt au jour le jour	Darlehen auf unbestimmte Zeit	Préstamos de día en día.
Days of Grace	Jours de grâce	Respekttage (Lauftage)	Días de gracia.
Dead Account	Compte dormant	Todtes Conto	Cuenta imaginaria.
Dead Freight	Frêt sur vide	Fautfracht	Flete muerto.
Debenture	Obligation hypothecaire	Debentur (Rückzolls-Certifikat)	Obligación.
Debenture Bonds	Titre obligation	Debentur-Obligation	Obligaciones amortizables.
Debenture Stock	Titre nominatif	Debentur-Effekten	Obligaciones irredimibles.
Debit Note	Note de débit	Debetnote	Nota de débito.
Debt	Dette	Schuld	Deuda.
Deck Cargo	Chargement sur le pont d'un navire	Deckladung	Cargamento del Puente.
Defaulter	Défaillant	Wortbrecher (wortbrüchig Gewordener)	Rebelde.
Deferred Bond	Obligation différée	Hinausgeschobene Verschreibung	Títulos diferidos.
Deferred Stock	Action différée	Hinausgeschobene Effekten	Capital diferido.
Delivery Order	Ordre de livraison	Ablieferungsordre	Orden de entrega.
Demurrage	Indemnité pour surestarie	Liegegeld	Estadías.
Deposit Account	Compte de dépôt	Depositen Conto	Depósito en cuenta.
Deposit Note	Note de dépôt	Depositen Note	Nota de depósito.
Depreciation	Dépréciation	Entwerthung	Depreciación.
Despatch Money	Argent d'expédition	Ausfertigungsgeld	Dinero de expedición.
Despatch Note	Note d'expédition	Ausfertigungsschein	Nota de expedición.
Deviation	(Déviation) Egarement ou écart	Abtrifft (Versegelung)	Absolvencia.
Differences	Différences	Zahlungen im Differenzgeschäft	Diferencias.

English.	French.	German.	Spanish.
Director	Administrateur	Direktor	Director.
Discounting a Bill	Escompte d'un effet	Einen Wechsel discontieren	Descontar un pagaré.
Dishonour	Déshonorer une traite	Zurückgewiesen	Deshonrar.
Dissolution of Partnership	Dissolution d'une association	Auflösung der Theilhaberschaft	Disolución de Sociedad.
Dividend Warrants.	Coupons de dividende	Dividenden-Coupon	Cédula de dividendos.
Dock Warrant	Certificat de marchandises en docks	Dock Auslieferungsschein	Warrants de dique.
Domiciled Bill	Traite domiciliée	Domicilirte Tratte	Letra domiciliada.
Double Entry	En partie double	Doppel Buchführung	Partida Doble.
Draft	Traite.	Tratte (gezogene)	Libranza.
Drawback	Drawback, Prime d'exportation.	Rückzoll	Rebaja.
Drawee	Le Tiré	Der Bezogene einer Tratte	Aceptador.
Drawer	Tireur.	Der Aussteller einer Tratte	Girador.
Drawn Bonds	Obligations sorties au tirage	Gezogene Obligationen	Bonos sorteados.
Drug in the Market	Drogue sur le marché	Marktüberfüllung	Cosa invendible.
Dry Goods	Nouveautés, lingerie	Manufacturwaare	Géneros.
Duty	Droits.	Zoll	Impuesto.
Earnest (money)	Garantie, Arrhes	Angeld	Seña.
Endowment Policy	Police au bénéfice d'un tiers	Stiftungspolice	Póliza de dote.
Entry for Warehousing	Enrégistrement pour l'emmagasinage	Im Lagerhaus verbucht	Guías de almacenaje.
Errors and Omissions Excepted	Sauf erreurs et omissions	Irrthum vorbehalten	Salvo Error ú Omisión.
Ex All	Ex de tous privilèges	Alle Rechte vorbehalten	Sin reserva.
Exchequer Bill	Bon sur le Trésor	Tresorschein	Vale de Tesoreria.
Exchequer Bond	Obligation du Trésor.	Tresorobligation	Bonos de Tesoreria.
Excise	Accise (octroi)	Accise	Sisa.
Ex Dividend	Ex dividende	Ohne Dividende	Cupón suelto.
Ex Drawing	Ex tirage	Ohne Ziehung	Sin sorteo.
Ex Now	Ex nouvelle omission	Ex "Neue Emission"	Sin privilegio.
Ex Ship	Ex navire	Ex Schiff	Libre hasta puerto.
Ex Warehouse	Ex magasins	Ex Lagerhaus	En almacén.
Face Value	Valeur nominale	Nennwerth	Valor nominal.
Factor	Facteur	Faktor (Vertreter)	Agente.
Favour	Faveur	"Geehrtes" (Schreiben)	Carta.
Firm Offer	Offre ferme	Festes Anerbieten	Oferta firme.
First Class Paper	Devise de premier ordre.	Primapapier	Papel de primera.
First of Exchange	Première de change	Primawechsel	Primera de cambio.
First Open Water	Port ouvert, glaces disparues	Sobald die See eisfrei ist	Primeras aguas mansas.
Floating Capital	Capital flottant	Flüssiges Kapital	Capital flotante.
Floating Policy	Police flottante ou courante	Blanco-Police	Póliza flotante.
Forgery	Faux	Fälschung	Falsificación.
For Money	Au comptant	Zu baar	Al contado.
Forwarding Agent	Expéditeur	Spediteur	Agente expedicionario.
Foul Bill	Traite sans valeur	Unreiner Gesundheitspass	Patente bruta.
Founders' Shares	Parts de fondateur	Gründer Aktien	Acciones de fundadores.
Free on Board	Franco-bord	Frei an Bord	Franco á bordo.
Free Overside	Franco-sous palans	Frei nach dem Ausladen	Franco fuera de buque.
Free Trade	Libre échange	Freihandel	Libre cambio.
Freight	Fret	Fracht	Flete.
Funds	Fonds.	Fonds	Fondos.
Garnishee Order	Saisie-arrêt	Beschlagnahme	Orden de secuestro.
Glut in the Market	Surabondance sur un marché	Ueberfüllung des Platzes	Abundancia en plaza.
Good Merchantable Quality	Bonne valeur marchande	Gut verkäufliche Qualität	Mercaderías de buena calidad,
Goodwill	Bon vouloir, Clientèle	Kundschaft	Clientela. [Vendibles.
Guarantee Fund	Fonds de garantie.	Garantie Fonds	Fondo de reserva.
Guarantee Society	Société de garantie	Garantie Gesellschaft	Sociedad de garantía.
Guaranteed Stock.	Actions ou valeurs garanties	Garantirte Effekten	Valores garantidos.
Hall Mark	Poinçon	Stempel der Goldschmiede	Marca de Gremio.
Hammered	Déclaré en faillite en bourse	Zahlungsunfähig erklärt	Insolvente.
High Seas	Haute mer	Die offene See	Alta mar.
Hire Purchase	Achat à tempéraments	Ankauf mittelst Miethe	Compra á plazos.
Holder of a Bill of Exchange.	Porteur d'une traite	Der Inhaber (eines Wechsels)	Tenedor de una Letra de
Horse Power	Cheval-vapeur	Pferdekraft (Pf. St.)	Caballos de fuerza. [cambio.
Hypothec	Créancier hypothécaire	Hypotheke	Hipoteca.
Impersonal Accounts	Comptes impersonnels	Sachen Conto	Cuentas ficticias.
Inconvertible Paper Currency.	Papier-monnaie inconvertible	Nichtverwerthbare Papier Valuta	Papel Moneda inconvertible.
Indorsee	Porteur (bénéficiaire par endos)	Der Indossat	Portador.
Indorsement	Endos	Das Giro	Endoso.
Indorser	Endosseur	Der Girant	Endosante.
Inscribed or Registered Stock.	Actions ou valeurs nominatives	Eingeschriebene or registrirte Effekten	Valores inscritos.
Insurable Interest	Intérêt assurable	Versicherbare Zinsen.	Intéres asegurable.
Interest Warrant	Bordereau d'intérêt	Zinscoupon	Warrants de interés.
Interim Dividend	Dividende intérimaire	Interimsdividende	Dividendos provisorios.
Jettison	Jet à la mer (du cargo)	Seewurf von Deckladung	Echado á la mar.
Jobber	Agioteur	Jobber	Corredor de Bolsa.
Joint Account	Compte commun	Gemeinschaftliches Conto	Cuenta de Sociedad.
Joint Stock Bank	Banque par actions en commandite	Commandit Bank auf Aktien	Banco Anónimo.
Joint Stock Company	Société anonyme	Commandit Gesellschaft auf Aktien	Compañía Anónima.
Journal	Journal	Journal	Libro del Diario.
Lay Days	Jours de planche	Liege Tage	Días de plancha.
Leakage	Coulage	Abgänge	Merma.

English.	French.	German.	Spanish.
Ledger	Grand Livre	Hauptbuch	Libro Mayor.
Legal Tender	Monnaie légale, cours légal	Gesetzmässige Valuta	Moneda Legal.
Letter of Allotment	Lettre de répartition.	Antheilsbrief	Carta de repartición.
Letter of Credit	Lettre de Crédit	Kreditbrief	Carta de crédito.
Letter of Renunciation	Lettre de renonciation	Verzichtschreiben	Carta de renunciación.
Letters Patent	Brevet d'invention	Patent (Erfindungspatent)	Patentes, Ejecutoria.
Life Insurance	Assurance sur la vie	Lebensversicherung	Seguros sobre la vida.
Light Dues	Droits de phare	Leuchtthurm Abgaben	Derechos de Faro.
Limited and Reduced	Limité et réduit	Limitirt und reduzirt	Limitado.
Locomotive Charges	Frais de locomotion	Lokomotive Abgaben	Gastos de locomoción.
Log-Book	Livre du lock	Logbuch (Schiffsjournal)	Diario de navegacion.
Making-up Day	Jour des compensations.	Schluss-Tag	Día de arreglo.
Making-up Price	Cours de compensation	Schluss-Preis	Curso de la liquidación.
Manifest	Manifeste	Ladungsverzeichniss	Manifiesto.
Margin	Marge, agiotage	Margin	Margen.
Marked Cheque	Chèque certifié	Attestirter cheque	Cheques visados.
Market Rate of Discount	Taux du marché d'escompte	Markt Disconto Zinsfuss	Tipo de descuento.
Maturity	L'Echéance.	Fälligkeit	Vencimiento.
Minute Book	Registre des Procès verbaux	Kladde	Libro de minutas.
Mixed Policy	Police mixte	Gemischte Police	Póliza de doble fin.
Money Market	Marché monétaire.	Geldmarkt	Bolsa.
National Debt	Dette publique.	Nationalschuld	Deuda Pública.
Negotiable Instruments or Paper	Documents ou papiers négociables	Verausserliche Dokumente (Werthpapiere)	Instrumento o papel negociable
No Funds	Sans fonds	Ohne Fonds	No tiene fondos.
Notary Public	Notaire	Notar	Notario público.
Not Negotiable	Non-négociable	Nicht veräusserlich	No negociable.
Note of Hand	Billet à ordre	Schuldschein	Pagaré.
Official Broker	Courtier officiel.	Angestellter Börsenmakler	Corredor oficial.
On Demand	A présentation.	Auf Begehr	A presentación.
Open Account	Compte ouvert.	Offenes Conto	Cuenta en descubierto.
Open Credit	Crédit à decouvert	Offener Kredit	Crédito abierto.
Open Policy	Police Courante	Offene Police	Poliza abierta.
Option	Option, prime	Option	Privilegios.
Ordinary Stock or Shares	Actions ordinaires.	Gewöhnliche Effekten (Aktien)	Acciones comunes.
Original Bill	Première de change	Originalwechsel	Letra original.
Over Capitalise	Sur-capitaliser	Uebermässig Kapitalisirt	Demasiado capitalizada.
Overdue Bill	Traite en souffrance	Ueberfälliger Wechsel	Pagaré vencido.
Paid-up Capital	Capital versé	Volleingezahltes Kapital	Capital pagado.
Paid-up Shares	Actions libérées	Volleingezahlte Aktien	Acciones libradas.
Panic, Commercial	Panique	Handelspanik	Pánico comercial.
Paper Credit	Crédit en papier	Offener (Wechselkredit)	Efectos de crédito.
Paper Currency	Papier-monnaie	Papier Valuta	Papel Moneda.
Par	Au pair	Alpari or Pari	A la par.
Par of Exchange	Parité.	Gleicher Gegenwerth	Par de cambio.
Pass Book	Livre de Banque	Contobuch	Libro bancario.
Passing a Name	Enrégistrement	Einen Namen verbuchen	Mencionar los nombres.
Passport	Passeport	Pass (Geleitsbrief)	Pasaporte.
Pawn or Pledge	Gage	Pfand	Préstamo.
Pawnbroker	Mont de Piété	Pfandleiher	Prestamista.
Pay Day	Jour de règlement	Zahltag	Tercer día de liquidación.
Payee	Porteur	Inhaber	Portador.
Payer	Payeur	Einzahler	Pagador.
Perils of the Sea	Perils de la mer	Die Gefahren auf hoher See	Riesgos de fuerza mayor.
Permit	Permis	Permit	Vales personales.
Personal Account	Compte personnel.	Persönliches Conto	Gastos personales.
Personal Property	Propriété mobilière	Persönliches Eigenthum.	Seguridades personales.
Petty Cash Book	Livre de petite caisse	Kassenbuch für kleine Ausgaben	Libro de gastos menores.
Piece Goods	Marchandises en pièces	Stückgüter	Géneros vendidos por pieza.
Placing Shares	Placements d'actions.	Aktien placieren	Colocar acciones.
Policy	Police.	Police	Póliza.
Pool	Syndicat de spéculants	Ring (mehrerer Spekulanten)	Colocar fondos en común.
Post Date	Post-date	Späteres Datum	Posdata.
Poste Note	Déclaration supplémentaire	Anweisung auf Sicht	Letra de Banco.
Poste Restante	Poste Restante.	Postlagernd	Poste Restante.
Preference Bonds	Obligations privilégiées	Preferenz-Obligationen	Bonos de preferencia.
Preference Stock or Shares	Actions privilegiées	Preferenz-Effekten	Acciones privilegiadas.
Prejudice, Without	Sans préjudice	Ohne Prejudiz	Sin perjuicio.
Premium	Prime.	Prämie	Premio.
Presentment	Présentation	Präsentieren	Presentación.
Pressure on the Money Market	Pression sur le marché monétaire	Pression auf dem Geldmarkt	Presión en el mercado financiero.
Price, Current	Prix courant	Laufender Preis	Precio corriente.
Primage	Chapeau	Primage	Prima ó Capa.
Procuration	Procuration.	Procura	Procuración.
Profit and Loss Account	Compte des Profits et Pertes	Gewinn und Verlust Conto	Cuenta de ganancias y pérdidas.
Prohibited Goods	Marchandises prohibées.	Vebotene Waaren	Géneros prohibidos.
Promissory Note	Billet	Schuldschein, Solawechsel	Pagaré.
Promoter	Promoteur	Unternehmer, Gründer	Promotor.
Prompt	Prompt, immédiat	Prompt	Tiempo de pago.
Prospectus	Prospectus	Prospekt	Prospectos.
Protection	Protection	Schutz, Schutzzoll	Protección.
Protest	Ptotêt ou protestation	Protest, Einspruch	Protesto.
Proxy	Procuration, Fondé de pouvoir	Stellvertreter, Vollmacht	Poder, Apoderado.
Qualified Acceptance	Acceptation sous réserve	Bedingte Annahme	Aceptación especificada.
Quarantine	Quarantaine	Quarantäne	Cuarentena.
Quarter Days	Terme	Quartalstag	Trimestrales.

English.	French.	German.	Spanish.
Quotation	Côte	Geldkurszettel	Cotización.
Railway Clearing House	Bureau central de chemins de fer	Eisenbahn Abrechnungsstelle	Inspección de liquidación.
Rate of Exchange	Le Cours	Wechselkurs	Tipo de cambio.
Real Estate	Fortune immobilière	Grundeigenthum	Bienes inmuebles.
Real Securities	Garantie en Immeubles	Garantie durch Grundbesitz	Fianza efectiva.
Receipt	Reçu, Récépissé	Empfangsschein	Recibo.
Re-Draft	Traite de retraite	Rücktratte	Giro renovado.
Registered Bond	Obligation nominative	Eingetragene Obligation	Obligaciones certificadas.
Registered Stock	Action Nominative, capital nominatif	Eingetragene Effekten	Valores certificados.
Re-insure	Réassurer	Rückversicherung	Asegurar nuevamente.
Renewal of a Bill	Renouvellement d'une traite	Wechsel-Erneuerung	Prolongación de una Letra.
Reserve Capital	Capital de réserve	Reserve Kapital	Capital de reserva.
Reserve Fund	Fonds de réserve	Reserve Fonds	Fondos de reserva.
Restraint of Trade	Restriction en commerce	Handelsbeschränkung	Contratos leoninos.
Restrictive Indorsement	Endos limité	Eingeschränktes Giro	Endoso restringido.
Retiring a Bill	Retirement d'un effet	Eine Tratte einlösen	Retirar una Letra.
Revenue Account	Compte des revenus	Einnahme Conto	Renta Pública.
Rigging the Market	Agitation des cours à la bourse	Kurstreiberei	Jugar al alzar y baja.
Ring	Groupe d'opérateurs	Ring	Liga.
Rolling Stock	Matériel de roulement	Wagenpark	Material de explotación.
Royalty	Prime	Abgabe (Lizens)	Derechos de autor ó inventor.
Running Days	Jours de Cours	Laufende Tage	Días de trabajo y de fiesta.
Run on a Bank	Panique	Bestürmung der Bank	Retiro de fondos en caso de pánico.
Rupee Paper	Papier-roupie	Rupien Papiergeld	Pagarés de India.
Sale or Return	En dépôt, vente à condition	Verkauf	Consignacion.
Salvage	Le sauvetage	Bergegeld	Salvamento.
Salvage Loss	Perte de sauvetage	Bergeverlust	Pérdida neta.
Sans Recours	Sans recours	Ohne weitere Verpflichtung	Sin recursos.
Scrip	Certificats provisoires	Interimsaktie	Certificado provisorio.
Sea Letter	Lettre maritime	Schiffspass	Permiso de navegación.
Seaworthy	Capable de prendre la mer	Seetüchtig	Navegable.
Second Class Paper	Devise de second ordre	Effekten zweiter Güte	Valores de segunda clase.
Secured Creditor	Créditeur couvert	Sichergestellter Gläubiger	Acreedor garantizado.
Seignorage	Seigneuriage	Das Regal	Señoreaje.
Selling Out	Vente à tout prix	Zwangsverkauf	Deshacerse.
Settling Day	Dernier jour de la liquidation	Schlusstag (ultimo)	Diá de liquidación.
Shares	Actions	Aktien	Acciones.
Share Certificate	Certificat d'actions	Aktien-Bescheinigung	Certificado de títulos.
Share Warrant	Coupons d'actions	Aktien-Coupon	Acción garantida.
Ship Broker	Courtier Maritime	Schiffsmakler	Corredor marítimo.
Ship Master	Capitaine	Schiffskapitain	Capitán.
Shipping Bills	Frais de chargement	Verzeichniss der ausgeladenen Waaren	Manifiesto de embarque.
Shipping Note	Note d'expedition	Note über die verschifften Waaren	Vales de buque.
Ship's Papers	Les papiers d'embarquement	Schiffspapiere	Documentación de buque.
Ship's Protest	Protestation	Schiffsprotest	Protesta.
Ship's Stores	Provisions de marine	Schiffsvorrath	Víveres sujetos á impuesto.
Short Bills	Devises à courte échéance	Wechsel auf kurze Sicht	Letras á plazo corto.
Short Loans	Emprunts ou prêts à courte échéance	Darlehen auf kurze Zeit	Préstamos á plazo corto.
Sight Bill	Traite à vue	Sichtwechsel	Letra á la vista.
Sinking Fund	Fonds d'amortissement	Schuldentilgungfonds	Caja de amortización.
Sleeping Partner	Commanditaire	Stiller Theilhaber	Socio comanditario.
Special Acceptance	Accéptation spéciale	Bedingte Annahme eines Wechsels	Aceptación especial.
Specie Payments	Paiements en espèces	Zahlungen in klingender Münze	Pagos en Especias.
Stale Cheque	Chèque sans valeur	Werthloser Cheque	Cheque caducado.
Stock	Fonds publics, Rente	Effekten	Capital.
Stock Broker	Agent de change	Makler der Effektenbörse	Bolsista.
Stock Exchange	Bourse	Effektenbörse	Bolsa.
Stock Jobber	Agioteur	Effektenjobber	Negociante de acciones.
Stock-taking	Inventaire	Inventur (Inventur-Aufnahme)	Inventario.
Stopping a Cheque	Arrêter un chèque	Einen Cheque sperren	Suspender el pago de un cheque.
Subscribed Capital	Capital souscrit	Gezeichnetes Kapital	Capital suscrito.
Surrender Value	La valeur d'abandon	Rückkaufs-Werth einer Versicherungs Police	Valor de renuncio.
Taking in Shares	Prendre en Report	Spekulations-Zeichnung von Aktien	Tomar acciones.
Taking up a Bill	Honorer une traite	Einen Wechsel honorieren	Satisfacer una Letra.
Tally Trade	Commerce à temperaments	Abzahlungsgeschäft	Comercio temporario.
Tape Prices	Cours télégraphiques	Telegraphischgemeldete Preise	Precios telegráficos.
Tariff	Tarif	Tarif	Tarifa.
Teller	Caissier	Kassirer	Cajero.
Terminal Charges	Bilan final	Schlussforderung	Gastos convenidos.
Tender	Soumission	Submission	Apuesta.
Term of a Bill	Echéance d'un effet	Fälligkeits-Termin (eines Wechsels)	Duración de una Letra.
Terminable Annuity	Annuité à termes	Annuität auf bestimmte Zeit	Anualidades terminables.
Time Bargain	Une opération à terme	Zeitgeschäft	Mercado de término.
Time Policy	Police à termes	Zeitpolice	Póliza de término.
	Marques monétaires	Verkehrsmünzen	
Tonnage Dues	Droits de tonnage	Schiffstonnagenzoll	Tonelaje registrado.
Trade Bill	Traite de fabrique	Tratte	Letra comercial.

English.	French.	German.	Spanish.
Trade Mark	Marque de fabrique	Handelsmarke, Waarenzeichen	Marca de fábrica.
Trade Price	Prix de fabrique	Engros Preis	Precio arreglado.
Trades Union	Syndicat ouvrier	Gewerkverein	Unión Obrera.
Traffic Returns	Rapport périodique des recettes pour transports.	Betriebsbericht	Estadísticas de tráfico.
Transfer	Transfert	Uebertragung	Transferencia.
Transfer Day	Jour des transferts	Uebertragungstag	Diás de registro de transferencias.
Treasury Bill	Bon de Trésor	Schatzbon	Cédulas de Tesorería.
Treasury Bond	Obligation du Trésor.	Schatzamtsschein	Bonos de Tesorería.
Truck System	Système du Truck	Trucksystem	Pago de mercancías.
Trustee in Bankruptcy	Syndic	Konkursverwalter	Síndico de la quiebra.
Turn of the Market	Revirement du marché	Kauf und Verkaufs-Preise	Diferencia.
Turn Over	Chiffre d'affaires faites	Umsatz	Total.
Under Protest	Sous protêt	Unter Protest	Bajo protesta.
Underwriter	Assureur	Versicherer	Asegurador.
Unclaimed Dividends	Dividendes non réclamés	Nicht behobene Dividende	Dividendos no reclamados.
Unfunded or Floating Debt	Dette flottante.	Schwebende Schuld	Deuda flotante.
Unified Stock	Rente unifiée	Einheitliche Effekten	Deuda Unificada.
Unmerchantable Quality	Qualité non-vendable	Unverkäufliche-Qualität	Mercaderías de mala calidad
Unseaworthy	Incapable de prendre la mer	Seeuntüchtig	En mal estado. [Invendibles.
Usance	Usance	Usance	Usanza.
Usury	Usure	Wucher	Usura.
Value Received	Valeur reçue	Werth erhalten	Valor recibido.
Valued Policy	Police évaluée	Abgeschätzte Police	Póliza fija.
Vendor's Shares	Part de fondateur.	Verkäufer Aktien	Acciones del vendedor.
Venture	Entreprise, Spéculation	Spekulations-Verkauf	Consignación.
Victualling Bill	Le compte de ravitaillement d'un navire	Zolldeklaration für Schiffsproviant	Lista de provisiones sujetas á impuesto.
Voucher	Preuve, Pièce justificative	Quittung	Comprobante.
Voyage Policy	Police de voyage	Schiffsversicherungspolizze	Póliza de viaje.
Warehouse Keeper	Gardien de magasin	Lagerhaus-Aufseher	Guarda Almacén.
Warranty	Cautionnement.	Garantie	Garantía.
Waste Book	Brouillon	Kladde	Libro Borrador.
Wharfinger	Gardien du quai	Werftbesitzer	Encargado del muelle.
Winding-up	Dissolution, Liquidation	Gesellschafts-Auflösung	Liquidación.
Without Engagement	Sans engagement	Ohne Verpflichtung	Desocupado.
Without Prejudice	Sans préjudice	Ohne Verbindlichkeit	Sin perjuicio.
Without Recourse	Sans recours	Ohne Rekurs	Sin recursos.
Without Reserve	Sans réserve	Ohne Reserve	Sin reserva.
Working Partner	Associé gérant d'une entreprise	Aktiver Theilhaber	Socio activo.

ABBREVIATIONS OF COMMERCIAL TERMS.

A 1—A mark indicating a first-class vessel (see p. 629 under "Lloyd's Register").
@—At.
a.a.r.—Against all risks (insurance).
A/C—Account current.
a/c—Account.
a/d—After date.
a.m.—Ante-meridiem (before mid-day).
a/o—Account of.
A/S—Account sales.
B/E—Bill of Exchange.
B/L—Bill of Lading.
B/P—Bills of Exchange which have to be met.
B/R—Bills of Exchange of which payment has to be received.
B/S—Bill of Sale.
C/A—Capital Account.
C/P—Charter party.
c. & f.—Cost and freight.
c.i.f.—Cost, insurance, and freight (all these charges are included in the price quoted).
C.P.—Charter Party.
C.O.D.—Cash on delivery.
c/o—Care of.
cp. or cf.—Compare.
cr.—Creditor.
c/s—Cases.
cum div.—With dividend.
current—The present year or month.
d/d—Days after date.
dft.—Draft (Bill of Exchange).
div.—Dividend.
do.—Ditto.
dr.—Debtor.
d/s—Days after sight.
d/y—Delivery.
E. E.—Errors excepted.
E. & O. E.—Errors and omissions excepted.
e.g.—For example.
ex—Out of or without.
ex div.—Without dividend.
f.a.a.—Free of all average (insurance).
f.a.q.—Fair average quality.
f.g.a.—Free of general average (see Insurance and Shipping).
f.o.b.—Free on board (the price quoted to include all the expenses of putting goods on board ship).
f.o.r.—Free on rail.
f.o.—Folio.
f.o.w.—First open water (Baltic Trade).
f.p.a.—Free of particular average.
ib.—In the same place.
id.—The same.
i.e.—That is.
inst.—The present month.
inv.—Invoice.
I.O.U.—I owe you.
J/A—Joint Account.
£E.—Pounds Egyptian.
£T.—Pounds Turkish.
Ltd.—Limited.
M/C—Metalling Clause (in policy Marine Insurance).
m/d—Months after date.
m/s—Months after sight.
MS—Manuscript.
N/A—No advice.
n/a—Non-acceptance.
N.B.—Take note.
N.E.—No effects (banking).
N.F.—No funds (do.).
No.—Number.
N.S.—Not sufficient (banking).
N.S.—New Style (calendar).
O/a—On account.
O/d—On demand.
%—per cent.
O.S.—Old Style (Calendar as used in Russia).
p.m.—Post-meridiem (after mid-day).
P/N—Promissory Note.
P.O.—Postal Order.
P.O.O.—Post Office Order.
P.p. / P. pro. / per pro.—Per Procuration (which see in *Commercial Dictionary*).
P.P.I.—Policy Proof of Interest.
Pro tem.—Pro tempore—for the time being.
prox.—Proximo (next month).
P.S.—Postscript to a letter.
q.v.—Which see.
R.—Rupee: plural Rs.
R.D.—Referred to drawer (of a cheque).
R.M.S.—Royal Mail Steamer.
$—Dollars.
S.N.—Shipping note.
S.P.—Supra protest.
S.S.—Steamship.
T.L.O.—Total loss only (insurance).
T.T.—Telegraphic transfer.
U.K.—United Kingdom.
ult.—Ultimo (last month).
U.S.A.—United States of America.
U-w—Underwriter.
v.—versus—against.
via.—by way of, through.
viz.—Namely.
X.c—Ex coupon.
X.d—Ex dividend.
X. int.—Ex interest.
X. new—Ex new.

THE STOCK EXCHANGE.

The Stock Exchange is "the market for stocks and shares." Most commercial cities of importance have now their stock exchange, and in the main their features are alike. The principal of these, the London Stock Exchange, is situated in Throgmorton Street, near the Bank of England. Here are bought and sold stocks and shares in public companies, such as railway, mining, and the great industrial undertakings, debentures, consols, and all the securities for the repayment of loans issued by governments, municipal corporations, and trading corporations. To show the extent and variety of the business done in the "House," as the institution is familiarly called in which it is carried on, it may be mentioned that there are about four thousand different kinds of stocks, shares, and money securities of the nominal value of about nine thousand millions sterling generally quoted in the Official Price List of the Stock Exchange. The dealers in these securities, i.e. those whose business it is to buy from and sell them to the public through the medium of brokers, confine their operations to a small section or group of these securities, and do not deal in any others. Each section constitutes "a market," and it is to the market for any particular class of securities that a broker who deals on behalf of a client who wishes to purchase or to dispose of any shares or securities of this class resorts. Among the principal markets may be mentioned the Consol Market, for the sale of securities issued by the government, the American Railroad Market, the Foreign Market, which concerns itself with foreign securities, the "Kaffir Circus," for the transaction of business relating to the South African mines, the "Jungle," where the dealers in West African securities do business, and the Industrial Market for the sale of shares and stocks in industrial undertakings.

THE HOUSE.

1. THE PROPRIETORS. The building in which these various operations are carried on belongs to the shareholders or proprietors, who are not necessarily members, but as time goes on the proprietors and the members will become one and the same body, for after the 23rd November, 1904, every new member must become a proprietor by acquiring a certain number of shares; and, except in the case of a few proprietors who acquired their shares before 1875, the shares must be in the hands of members, for where shares come into the hands of persons who are not members, or when they are in the hands of a person who has ceased to be a member, they must within twelve months be transferred to a member.

2. TRUSTEES OR MANAGERS. The proprietors draw their income from the entrance fees and annual subscriptions of the members and their clerks, and from the rent of offices in the building. Their interests are looked after by a body of nine Trustees or Managers, each of whom must have been a proprietor for at least five years before his appointment, and must hold at least ten shares. Their duty is to provide accommodation for the members, to look after everything that relates to the building, and to fix the rates of admission and subscriptions of members and their clerks.

3. THE COMMITTEE FOR GENERAL PURPOSES. The committee looks after the interests of the members, and in general regulates and deals with the professional conduct of the members. It decides disputes between members, fixes the days of settlement, i.e. the days on which the various market transactions must be completed, and declares what securities shall appear in the Official Price List. Its powers are practically absolute, for it can inquire into the conduct and the books of every member, and suspend or expel any member guilty of unprofessional dealings.

The committee consists of thirty members elected annually, seven of whom may form a quorum; and in order to be elected to the committee, a person must have been a member for five years. Its principal officers, besides the secretaries, are the Official Assignee, the Manager of the Settlement Department or Clearing House, and the Manager of the Buying-in and Selling-out Department.

(1) **The official assignee** deals with the assets of defaulters and with the estates of insolvent members in so far as their relations with the other members are concerned. He administers the assets, pays in what may be due to the defaulter, and after realising the estate, pays the creditors.

(2) **The settlement department** or clearing house renders the operation of passing tickets from the buyer to the seller much simpler than it otherwise would be.

(3) **The buying-in and selling-out department** deals with those cases where the seller is unable to deliver the stock which he agreed to sell, and leaves the buyer to buy the stock from other people. The seller who has made default has to pay the expenses incurred in the buying-in, and if the buyer has had to pay a higher price, the seller must make good the difference. Similarly, where a buyer has not taken up the stock which he agreed to buy, the department will help the seller to sell the stock, the delinquent buyer being made to pay all expenses and loss that may be incurred.

4. ADMISSION OF MEMBERS. Every applicant for admission to the House must have served at least two years as authorised clerk, unauthorised clerk, or settling room clerk. If a foreigner, he must have resided in the United Kingdom for at least seven years, and have been naturalised at least two years. An applicant who has more than once been a bankrupt, or an insolvent, or compounded with his creditors, is not eligible, and in case he has not been so more than once, he must have paid 20s. in the £. With the exception of applicants who have for four years or more been clerks in the House or the Settling Room, every applicant must be nominated by a member willing to retire in his favour, or be nominated by a former member, or by the legal personal representative of a deceased member.

An applicant must be recommended by three members of not less than four years' standing who have fulfilled all their engagements. Each recommender must have a personal knowledge of the applicant and of his past and present circumstances, and each must engage to pay £500 to the creditors of the applicant, should he at any time within four years of his admission be declared a defaulter. Each recommender must not be indemnified by the defaulter, or expect to be indemnified. An applicant who has been a clerk for four years must have two recommenders, each of whom will pay £250 to his creditors should he become a defaulter within four years of his admission. No member can be surety for more than two new members. Every member elected after November 23rd, 1904, must, within six months of his admission, become a proprietor in the Stock Exchange to the extent of three shares, or cease to be a member. In the case of a clerk elected as member, he must acquire one share.

The entrance fee for members is 500 guineas, and the annual subscription 40 guineas for those elected since 1899. Members elected since 1879 pay an annual subscription of 30 guineas. For those elected before 1879 the annual subscription is 20 guineas.

5. RE-ELECTION OF MEMBERS. Members are elected for a year only, and in the month of March must apply for re-election. In the case of a former member, who is not a defaulter, bankrupt, or insolvent, having discontinued his subscription for more than a year, he must have two recommenders should he apply for re-election, but security is not required. Should he have discontinued his subscription for two years, he is in the same position as an applicant for admission.

6. RE-ADMISSION. A defaulter may be re-admitted who has paid to his creditors out of his own resources, independently of what may have been paid by his sureties, 6s. 8d. in the £. Where a defaulter knew at the time of his passing or retaining a ticket that he was insolvent, then if loss was incurred by his so passing or retaining the ticket, and he was declared a defaulter on that account, he shall not be eligible for re-admission for at least one year from the date of such default. His re-admission in any case depends upon the report of the Committee, and if his conduct has not been satisfactory, or if he has not done all in his power

to assist the official assignees, he will not be re-admitted. Although a defaulter may be re-admitted if he has discharged one-third of his liabilities, he is not, therefore, freed from those liabilities. He is expected to pay the remaining two-thirds as soon as he can; and every year the committee inquires into the state of his affairs until he has paid his creditors 20s. in the £.

7. CLERKS. Every member on his application for admission or re-election must state the names of the clerks, not exceeding five in number, whom he intends to employ. This does not refer to the clerks whom he may employ in his office, but to the clerks who have admission to the House. There are three kinds of clerks:—

(1) **An authorised clerk**, so called because he can transact business and make the same bargains just in the same way as his employer, who is bound by the contracts made by the clerk on his behalf. Each member is allowed one such authorised clerk, who cannot deal in any securities except those in which his employer deals.

(2) **Unauthorised clerks**, of whom a member may employ two. These have no authority to deal in securities, and are employed for running messages and the like services.

(3) **Settling Room clerks**, who check bargains and do the clerical work in connection with the settlement of bargains. Of these, a member may employ two. A firm consisting of two or more members may have nine clerks—two authorised, three unauthorised, and four Settling Room clerks. As members now have to be clerks for two years before they can be admitted as members, it is in the capacity of one of these clerks they must serve their time. No one can be a clerk until he is seventeen years of age, nor can he be authorised to transact business until he is twenty years of age.

The entrance fee for an authorised clerk is 50 guineas, and the annual subscription 30 guineas; for an unauthorised clerk the entrance fee is 10 guineas and the annual subscription 12 guineas. Settling room clerks pay an annual subscription of 8 guineas.

8. BROKERS AND JOBBERS. The members of the Stock Exchange must not carry on any business outside the Stock Exchange. They fall into two groups—brokers and jobbers, or dealers, a division which is peculiar to the London Stock Exchange. The broker acts as agent on behalf of any person who wishes to employ him, either to buy shares on his account or to sell shares, in return for which the broker receives a commission varying in amount, according to the nature of the securities bought or sold. The jobber is always ready either to buy shares from or to sell shares to the outside public, the broker acting as the go-between. The outsider buys from or sells to the jobber through the medium of the broker (see below). A member cannot act as broker and jobber at the same time, but there is nothing to prevent his changing from one class to the other.

9. PARTNERSHIP. A broker may not have a jobber as partner, nor can a member of the Stock Exchange be a partner with an outsider; but there is no partnership existing when a broker agrees with an outsider who introduces business to him to give such outsider, who is called a "runner," a share of the commission earned on the business introduced, on the understanding that the runner shall bear a corresponding proportion of any losses that may ensue. Accordingly, such agreements are very frequent. A "runner" is more usually described as a "half-com. man," or as having "a seat in the broker's office."

10. FAILURES ON THE STOCK EXCHANGE. When a member of the Stock Exchange is unable to fulfil his engagements to his fellow-members, he is "hammered," or declared a defaulter, and ceases to be a member. If he becomes a bankrupt, or is proved to be insolvent, even though he may not be a defaulter on the Stock Exchange, he ceases to be a member. As, however, a member is not allowed to carry on any other business, it is seldom that he is made bankrupt, because, generally speaking, the bulk of his debts is due to his fellow-members, who, of course, are forbidden by the rules of the Stock Exchange to take bankruptcy proceedings against him. Nor are his fellow-members allowed to tide him over his difficulties. It is the duty of his creditors (to whom he cannot fulfil his Stock Exchange engagements) to inform the Committee at once, and the insolvent member is thereupon declared a defaulter.

The member who is declared a defaulter has his Stock Exchange assets taken over by the Official Assignees. All his bargains which have not been completed are reversed at the prices current before the member was declared as a defaulter, the price being known as the "hammer-price" and is fixed by the Official Assignees. Thus, suppose the defaulter had agreed to deliver £1,000 of stock to A at £82 per £100 of stock, and the hammer price was £85, A would have to sell the stock back at 82, and would claim as a creditor for the difference of £30 against the estate of the defaulter. If, on the other hand, the defaulter had bought from A £1,000 stock at 82 and the hammer price is 85, A must buy back the stock at 82 and hand over the difference of £30 to the Official amount of the claims. Should the defaulter's estate realise a good dividend, he may be re-admitted to the Stock Exchange (see above).

A Jobber in default. Where a jobber is in default, his liabilities to an outsider are usually met by the outsider's broker. Thus, suppose a jobber had agreed to buy from a member of the public £100 stock at 85. The transaction, of course, must be done through a broker. At the time the jobber is declared a defaulter the price is 79. Here the jobber owes the outsider the difference of £6, and this debt will probably be discharged by the outsider's broker with whom the jobber has made the bargain, for though the broker is in no way liable, he may prefer to discharge the debt rather than lose a good client. The outsider thus loses nothing, and in any case all that he does lose is the loss of his bargain, for he still keeps the stock for which the defaulter was unable to pay.

A Broker in default. Where a broker becomes a defaulter, the bargains between the jobber and the broker's client are completed, unless the client is himself in default to the defaulting broker. The client may himself personally complete the bargain, or another broker may be employed to do so.

CONDUCT OF STOCK EXCHANGE BUSINESS.

1. OFFICIAL LIST OF PRICES. This is the record of the prices of securities ruling on the Stock Exchange. It is issued twice a day under the authority of the Committee, and no member is allowed to publish a list himself. The list contains the names of over 4,000 securities. The first edition appears at one o'clock, and the second at three o'clock; but much business is transacted after the latter hour, and, therefore, the official list is not to be depended upon to give the actual market price of a particular security at a given moment. At best it gives the public a rough idea (sometimes accurate) of the market prices, and enables an outsider to check bargains done for him with other bargains in the same security done for others on the same day. From the official list one may see whether the security is at a premium or at a discount, or at par. One pound shares quoted at 1⅝-1¾ are at a premium of from 12s. 6d. to 17s. 6d.—£1 12s. 6d. being the jobber's buying price and £1 17s. 6d. his selling price. Where the quotation is the same as the nominal value of the shares, the price is at par; when it is below the nominal value, the shares are at a discount.

Sometimes the letters *x.d.* appear in the quotation. In that case the dealings in the shares or securities are "ex dividend," that is, the price does not entitle the buyer to the dividend that has just been declared or is about to be paid on the securities. Where these letters do not appear the security is sold "cum dividend," that is, the price paid for the stock enables the buyer to claim any dividend which is about to be paid on them.

Similarly the shares may be quoted "ex new," "ex rights," "ex all." In that case the seller retains whatever rights or privileges are included under these terms—"new" generally means the right of a shareholder to subscribe on favourable terms for new shares in his company, when the capital is being increased. "Rights" may mean the privilege of a shareholder of subscribing for shares in a new company, of which his own company is the parent. "All" includes these rights, and the right to an accruing dividend.

2. HOW TO OBTAIN A QUOTATION. In order that the stocks and shares of a company, or that any other security should obtain a quotation on the official list, it must possess certain features, and the persons who wish the security to obtain the quotation must observe certain rules. If it is the shares of a company, the company must be *bona fide* and of sufficient magnitude, usually £50,000 is the minimum capital required for an official quotation. Two-thirds of the nominal capital must have been unconditionally allotted to the public, that is, the public must get two-thirds of the shares, while the vendor and others cannot get more than one-third. The following documents amongst others must be deposited with the committee—the prospectus, the articles of association, the allotment book, certified copies of contracts and agreements, the banker's pass-book, and a certificate from the bankers stating the amount of deposits received. It will be seen that companies which do not issue a prospectus may not be able to obtain a quotation on the official list, and, as owing to the stringency of the Companies Act of 1900, many companies do not issue a prospectus, they might find a difficulty in getting the public to take up shares but for the process known as "making a market."

3. MAKING A MARKET. This operation is carried out before the shares have been allotted to the public. The promoters of the company instruct brokers to buy the shares on the market, bidding a price a little above their nominal value, in return for which he receives his commission. The promoters who hold the shares arrange with a jobber to sell them, and the jobber, knowing that he can get from the promoters any number of the shares at a fixed price, carries out the deal, because any price which he can get for them above the fixed price is so much profit to him. Other brokers are then instructed to buy from and to sell to the jobber or jobbers, and the price is artificially stimulated, so that the shares are soon at a premium. Then the outside public, thinking that the deal is good, apply for shares to be allotted them, thinking that after allotment they will be able to sell them at a premium. Of course, if they rush to sell, a slump in the price ensues, and their loss may be heavy, but the promoters have gained a large amount at their expense.

4. SPECIAL SETTLEMENT. With the object of getting a quotation on the official list the Committee appoints a special settlement with regard to the dealings in the stocks and shares of a new company. Bargains made concerning the securities and shares of a new company are not enforced by the Stock Exchange until a special settlement has been made. Until that time members who have agreed to sell and to buy such securities cannot so far as the Stock Exchange is concerned be compelled to pay for the securities or to deliver such securities. To meet this state of affairs, the Committee appoints a special settling day, but before fixing this day, the Committee have to be satisfied that certain conditions have been complied with. These conditions are practically the same as for obtaining a quotation on the official list.

5. BUSINESS OF A BROKER. Members of the London Stock Exchange are divided into brokers and jobbers. By this arrangement an outsider can employ the skill and experience of a broker, who is trained in all the ways of Stock Exchange transactions, to assist him in carrying out his dealings with the jobber. He is thus enabled to get better terms from the jobber than he otherwise would. Further, the broker has to do many other things besides the mere negotiation of sales and purchases. He gives advice as to the best investments, informs his clients when they can buy or sell to the best advantage, sees to the transfers of stocks, obtains share certificates for his clients who have bought shares, and where the client is unable to take up stock or shares which he has agreed to buy and to pay for them at the settlement, arranges for the "carrying over" of the shares to the next settlement. The commission which he receives covers the payment for all these services. The amount of this commission varies, and frequently on the same class of business different clients are charged different rates:—

In the case of consols or other government securities the rate is 2s. 6d. per cent.; Bank of England Stock 5s. per cent.; for Corporation and Colonial securities 5s. per cent. In the case of British Railway stocks, and other registered stocks, the rate is 10s. per cent., but in large transactions the commission may be 5s. per cent. In the case of shares the rate is 3d. per share where the share is under £1. For shares from £1 to £5, the rate varies from 3d. to 6d., and for £5 to £10 shares the charge is one shilling per share, while for shares between £10 and £25 the rate increases up to 2s. 6d. per share. Shares exceeding in value £25 the rate is 10s. per cent. It should be remembered that these are the maximum rates, but they are not official, and are such as are charged by brokers who carry on investment business only. But in the case of brokers who act for clients who do not employ their capital in investments but employ it for speculative purposes, the broker has to vary these rates, else perhaps he might get a reminder from his clients that their business could be transacted more cheaply elsewhere.

A broker occasionally makes commission by "placing shares." When a company is being floated, or a government or a corporation is raising a loan, the broker is sometimes asked to circulate prospectuses of such transactions amongst his clients. If his clients apply for shares, the broker stamps his name on the application forms, and if as a result of the application allotments are made to broker's clients, he receives from the company or corporation a commission on the allotments.

6. BUSINESS OF THE JOBBER. The jobber, or dealer, transacts business in the small group of securities which constitute what is called a "market." He makes a special business of dealing in this limited number of securities, and is thus able to gauge accurately the price which a given security should command in the market. The profit which he makes is the difference in the price at which he can buy and sell the same security. This difference is known as "the turn of the market." A jobber can deal in one market only at a time, though, of course, he may transfer himself from one market to another, and his authorised clerk can deal only in the same securities in which the jobber himself deals. Where several jobbers are in partnership, each of them may deal in a separate market. A member cannot be both a broker and a jobber at the same time. There is nothing, however, to prevent a broker from becoming a jobber, or *vice versa*.

7. OUTSIDE BROKERS. An outside broker is one who is not a member of the Stock Exchange. As members are forbidden to advertise, whenever one sees the advertisement of a broker one may be sure he is an outside broker, and therefore in no way amenable to the discipline and control of the House. This is an important consideration in favour of dealing with an inside broker. The Stock Exchange is under the management and control of a committee, who is entrusted with the power of investigating complaints, not only between members but also between members and their clients outside. Any departure from the established practice of the House may be visited with the penalty of suspension or expulsion. It is, therefore, as a rule, wiser for a person who wishes to deal in stock or shares to do so through a member of the Stock Exchange. We do not, however, mean to imply that all outside brokers are to be avoided. There are many who do a most reputable business, and who serve a most useful purpose as a connecting link between the inside broker and clients dealing only occasionally in shares, and also as a medium for the transference of unquoted shares, which the regular broker knows little or nothing about, and in which he takes little or no interest. This is especially so in the provinces, where the outside broker deals largely in local shares, and may practically be the only medium for dealings in them. A client should be most careful in selecting his man of business, whether he employs an inside or an outside broker, but especially so in the latter case, as the calling has become the happy hunting ground of many men of unscrupulous character.

8. BROKER AND CLIENT. A broker usually requires from a client a reference as to the client's ability to meet his engagements. In other cases the client must deposit money or securities as "cover" in order that the broker may not suffer in case there is a loss on the transaction

which the client might not be able to meet. A broker is not permitted to transact business for an employee without the knowledge of the employer, nor is he permitted to "carry over" for such a client, where the client is unable to take up stock which he has agreed to buy, or to deliver stock which he has agreed to sell.

The broker must obtain the best bargain that he can for his client, and must not sell at a lower rate to, or buy at a higher rate from, a jobber than could be obtained from other dealers in the same market. He is only an agent, and, therefore, cannot act as principal, and, therefore, if a client instructs him to purchase securities in the market, the broker must not sell his own securities to the client. Wherever, however, a broker receives instructions from a client to sell a security, and at the same time receives an order from another client to buy the same security, he may transact what is called a "cross bargain," i.e. transfer the security directly from the seller to the buyer, receiving a commission from each. In such a case he is supposed, before making such a bargain, to inform his principals, i.e. the seller and the buyer.

As the broker is bound to meet his engagements with the jobber with whom he deals, on pain of being declared a defaulter, he has to look to his client to be reimbursed, and to be indemnified for all liabilities arising out of the business which he transacts for his client. The Stock Exchange, however, does not recognise the outsider, and looks to the broker to meet all his engagements. Hence, where brokers transact speculative business for clients, they have to be very careful as to the character and the financial standing of their clients.

STOCK EXCHANGE TRANSACTIONS.

1. A TYPICAL CASE EXPLAINED. In order to make an ordinary deal for buying and selling securities easily intelligible, a very simple example will be given. A, the holder of stock, instructs his broker to sell out, and B instructs his broker to buy a similar quantity of the same stock.

(*a*) B's broker, acting on instructions, goes to the jobber with whom he usually deals in that class of business, and asks him to name a price for that stock without stating whether he wishes to buy from the jobber or to sell to him. Had the broker stated that he wished to buy, the jobber might be tempted to name a slightly higher price, in the hope of securing an extra profit; on the other hand, if the broker stated that he wished to sell to the jobber, the jobber would have named a lower price. Accordingly, the jobber names two prices, say 78½-78¾, the lower price being the amount the jobber will give for £100 of the stock, the higher price being the one at which he will sell the same quantity. Of course, it must be understood that, unless expressly stated, the jobber does not undertake to buy or to sell any quantity of the stock at the prices named. It is only a limited amount (settled by the rules) to which he binds himself. B's broker, being satisfied with the price named, buys from the jobber the amount which his client has instructed him to buy. The jobber and the broker each make a note of the bargain, which is the next morning checked by their clerks to see if the entries made by each are identical.

(*b*) B's broker next makes out a contract note and sends it to B, to inform him that his instructions have been carried out. The note contains the date of the transaction, the name of the broker, the name of the buyer for whom he has bought the stock, and the amount and the price of the stock, to which is added the brokerage (broker's commission), the amount of the stamp duties, and the fee for registering the buyer's name in the books of the company whose stocks or shares are being dealt in.

(*c*) Some time, however, has to elapse before the shares are actually transferred to B, the purchaser. The time for settlement on the Stock Exchange occurs, in the majority of cases, twice a month. The settlement time lasts three days in the case of ordinary securities, and four days in that of mining securities. On the second day, called *Ticket Day*, B's broker will pass to the jobber from whom he agreed to buy the stock a ticket bearing the name of his client who has bought the stock, and to whom it is to be transferred, and the name of the broker himself who is responsible for the payment. The jobber, meanwhile, has procured the stock, which he has agreed to deliver. This stock he has obtained from some broker who has been instructed by a client to sell it, it may be from A's broker who, as has been said, was instructed to sell.

It may be, however, that the ticket will pass through many hands, and have a corresponding number of names on it before it reaches the broker of the ultimate seller of the stock, who in the example given is A. By means of the ticket, A and B are brought together.

(*d*) The seller or his broker now prepares the transfer deed, signed and sealed by the seller, in which the seller A agrees to transfer the stock to the buyer B, in consideration of the price which is stated in the transfer form, and the buyer agrees to take the stock subject to the same conditions under which the seller held them. This transfer form, together with the seller's stock certificate, is sent on to B's broker, who obtains B's seal and signature to the deed, and on the last day of the settlement, which is called *Settling Day*, the buyer hands over the purchase-money.

(*e*) The broker for B then sends the transfer deed and the stock certificate to the company whose stock or shares have been bought and sold. The company then registers the buyer's name in their books as the holder of such stock or shares, and in due course sends a stock or share certificate, as the case may be, to the buyer's broker, intimating that the buyer's name has been registered as that of the owner of the stock or shares. The broker then sends the certificate to the buyer.

The seller of the stock may observe that the price stated in the transfer form, which the buyer has to pay, is not the same as he (the seller) receives. This is accounted for by the fact that the seller sold his stock at the price which his broker could obtain from the jobber who bought the stock, and as the stock may have been sold several times over before it reaches the ultimate buyer's broker, there will naturally be a difference between the price which the ultimate seller receives and which the ultimate buyer has to pay.

2. THE SETTLEMENT. Mention has been made of the "Settlement" as the time at which stock exchange transactions are arranged and settled. Generally speaking, the larger portion of business is done, not for ready cash but for the account. The length of an account is about a fortnight, such account ending on the first of the three days of the settlement. In the case of consols and other English and Indian Government securities, the account is for a month.

3. CONTANGO DAY. The first day of the settlement is *Contango* or *Making-up Day*, on which those who for one reason or another wish to postpone settlement of their accounts carry them over to the next fortnightly account, and for so doing they may or may not have to pay a price. The carrying over postpones payment of the purchase-money for the stock, and, of course, delivery of the stock. If the security is abundant, and the seller will have no difficulty in delivering the stock, he will make the purchaser pay a certain rate of interest if the purchaser is unable to take up the stock and to pay for it until the next settlement. If, however, the seller finds a difficulty in delivering the stock, owing to its scarcity or some other cause, he will pay to the purchaser as an allowance for postponing delivery, a sum of money. This payment is called "backwardation." But suppose the sellers have a difficulty in procuring the stock, and the purchasers are themselves at the same time anxious to postpone settlement, neither party has to pay anything for the carry over. When this is the state of affairs, the rate is said to be even. In the mining market there are two contango days, making the period over which the settlement extends four days.

4. TICKET DAY. The second day of the settlement is *Ticket Day* or *Name Day*. On that day a member (broker) who has bought securities for the account, hands to the member (jobber) from whom he purchased the securities, a ticket bearing the amount and the description of the

security. The ticket also bears the name of the member to whom the ticket is issued, i.e. to the selling member (jobber), and the name of the person to whom the security is to be transferred, and who, of course, is the ultimate purchaser of the security. He is the person on whose behalf the buying member has acted. As usually happens, the member (jobber) to whom the ticket is given has himself not got the security, but has during the account agreed to buy them from another. Accordingly, he passes the ticket on to that other member, and endorses that member's name on it. He, in turn, may hand it to another, and in the case of securities that are the subject of much speculative business, there may be a score of names endorsed on it. Thus the ticket is passed from hand to hand until it reaches the broker of the ultimate seller who has actually got the security. In this way the ultimate buyer and the ultimate seller are brought together, and the sale and transfer of the security completed.

5. **SETTLING DAY.** The last day of the settlement is called Settling Day or Pay Day. On this day payment must be made for securities agreed to be bought, and the securities, if payable to bearer or order, must then be handed over. In the case of registered securities, a further period of ten days is allowed in which to complete the delivery. If the bargain has been one not for the actual sale and delivery of securities, but merely one to pay "differences," then the difference must be paid on the settling day. (See "Differences" in *Commercial Dictionary*.)

6. **BULLS AND BEARS.** These two classes of operators on the Stock Exchange assist in making business lively.

A BULL is one who agrees to buy stock at a fixed price which he does not want, in the hope that when the settlement arrives the price will have gone up, and that by selling the stock which he agreed to buy he will be able to realise a profit. That profit being the difference between the price at which he agreed to buy and the price to which the stock has risen. Practically the profit is represented by the difference between the buying price and the "making-up price." This price is, in the case of government securities and corporation stocks, the average price of such securities between 11 o'clock and 12.45 o'clock on the settling day; in the case of other securities, it is the average during the two days preceding the settlement.

A BEAR is, on the other hand, a person who has agreed to sell at a fixed price stock which he does not possess, in the hope that before the settlement arrives the price will have fallen, and then he can buy the stock at the lower price and deliver it at the agreed price, which is higher, thereby securing a profit. His profit will be the difference between the selling price and the making-up price.

Naturally the interests of the bulls and the bears are antagonistic—the one anxious that prices should go up, the other desirous that prices should fall. Hence each class employs every means in their power, either to elevate or to depress prices according to their interests. Should the bears succeed, they very often depress prices much lower than they ordinarily would fall, but the decreased price tends to stimulate buying, and so prices tend to rise. If the bears then are called upon to deliver the stock which they had agreed to deliver, they may find themselves in a tight corner, because they may not be able to secure the stock except at greatly enchanced prices; in fact, they may be forced to procure the stock from the very operators to whom they had agreed to sell. Needless to say, a stiff price is exacted from them by this process, known as "squeezing the bears." On the other hand, if the bulls have succeeded in forcing up prices, they may find that this will lessen the demand for the stock, and when they come to re-sell they may have great difficulty in disposing of their stock, except at greatly diminished prices.

7. **OPTIONS, DEALING IN.** An option is the right to buy from a certain person stock at a certain price at a given future time, in which case it is described as a "call" option; or it may be the right to sell to a certain person a given stock at a certain price at a stated future time, in which case it is described as a "put option;" or it may be a double or *straddle*, or as it is sometimes described, "a put and call option," that is one which gives its holder a right either to buy or to sell to the same person a given quantity of stock at a fixed price at a certain future time. The option may be exercised at any time within the period specified, which may be either a day or six weeks, the limit recognised by the rules of the Stock Exchange, though in practice a longer period is frequently allowed for its exercise. The price paid for the privilege of exercising an option is a percentage on the value of the stock.

Suppose A gives B 1 per cent. for the call of some stock at 90. If then the stock should rise, say to 92, A will exercise his option, for in that case he will make a profit of 1 per cent., because after paying for the stock and the option, he will be able to sell the stock at 92. If, however, the stock does not rise sufficiently to give him a profit, or if it falls in value, he will abandon the option. His loss in that case being merely the price paid for the option. It will thus be seen that a "call" option is bought by a person who is in the same position as a "bull." Conversely, a person who has a "put" option hopes that the security will fall in price, and thus he resembles a "bear." The gambling element, though it comes in in the exercising of the single option, is much easier seen in the "double" option. In the single option, a person may have good reason to believe that the price of a certain stock will rise; he will then purchase a "call" option, or he may have equally good reason for thinking that the price will fall, and, accordingly, would acquire a "put" option. But in a double option, it is a matter of indifference to him whether the stock rises or falls, provided it rises sufficiently high or falls sufficiently low to make it worth his while to exercise the option. It is, therefore, with him a pure matter of chance.

BANKS AND BANKING.

KINDS OF BANKS. According to their functions banks are either banks of deposit or banks of issue. A bank of deposit has merely the right to receive money from depositors, but has no power to issue notes. A bank of issue has, as its name implies, the right to receive deposits and the power to issue bank notes. In England and Wales very few banks are banks of issue, the right to issue notes being confined chiefly to the Bank of England, which cannot issue notes of a less face value than £5. But in Ireland and in Scotland, most of the banks have power to issue notes, and they are not restricted to the issue of five pound notes, but may issue notes for any number of pounds, from one pound and upwards.

According as the banks are owned by a private individual or a number of individuals (not being incorporated), or by a corporate body, banks are said to be private banks or joint-stock banks. Of these a brief description will be given presently, but before doing so, an account will be furnished of the Bank of England, as it occupies a position somewhat different from that of all other banks

THE BANK OF ENGLAND.

The Bank of England is not a State Bank, but it is the bank in which the revenue collected by the Government from all parts of the country is deposited, and it is the agent for the government in transacting all such financial business as relates to the raising of government loans, whether for permanent or for temporary purposes. On account of its peculiar business, other banks have found it convenient to deposit a certain amount of their cash with it, and every bank which is a member of the Clearing House (q.v.) must keep an account at the Bank of England. Apart from these circumstances, the Bank of England is in the same position as all other banks, and conducts its business like other banks with a view of earning dividends for its proprietors, or holders of Bank of England stock as they are called.

The original capital of the Bank was £1,200,000, but

from time to time it was increased, till in 1816 it amounted to £14,553,000, at which figure it has remained ever since.

1. **THE BANK CHARTER ACT.** Owing to the frequency and the gravity of commercial crises due to the great number of banks that suspended payment during the early part of the 19th century, the Bank Charter Act was passed in 1844, for the purpose of placing the Bank of England on a sounder basis, and of regulating the issue of bank notes by the various banks throughout England and Wales. By this Act the Issue Department and the Banking Department of the Bank of England were completely separated. The Bank was prohibited by this Act from issuing notes exceeding £14,000,000 in value unless it had an equivalent in gold coin or bullion for the amount of such excess. But where a bank having the power of issuing notes should relinquish the right to issue, the Act empowered the Issue Department of the Bank of England to increase its issue to the extent of two-thirds of the issue relinquished. In consequence of this provision the total "fiduciary issue" of the Bank's notes has gradually grown, and on February 8th, 1905, amounted to £18,450,000. For every note issued in excess of this amount an equal amount of gold coin or bullion must be kept in reserve in its coffers. Moreover, the Bank is bound to publish every week a statement showing the position of the Banking and the Issue Departments. This report is known as the "Bank Return" (see below).

By the Bank Charter Act it was enacted that if any bank ceased issuing notes it could not afterwards claim the right to issue, and any bank not having the right to issue notes at the time the Act was passed could not in the future acquire the right to issue notes. Since the passing of the Act so many country banks that previously issued notes have ceased to do so that at the present time the issue of notes by English Banks, other than the Bank of England, is practically unimportant. There are still thirty-eight provincial English banks that issue notes, but the average amount of such notes in circulation does not exceed £750,000. So seldom, indeed, do these "country" notes come into the hands of most men, that the term "Bank Note" is with most people synonymous with "Bank of England Note."

How far the Act of 1844 has prevented losses to the public through the banks suspending payment is a moot point. The fact remains that on three occasions, 1847, 1857, and 1866, the Act has had to be suspended, and the Bank of England empowered to issue notes to any amount. Further, it must not be forgotten that the issue of notes is only one form of a banker's indebtedness to the public, and if he is forbidden to issue credit or loans in that shape, there is nothing to prevent him from making his loans or issuing his credit in another. This is precisely what has been done. Since the growth of the system of making payments by cheque, payments by means of notes are not made to anything like the extent of earlier days. In fact, notes of the Bank of England can hardly be said to circulate at all. They are issued by the Bank, and in a very short time find their way back again, and it is a rule of the Bank not to re-issue such notes. Accordingly, when an ordinary banker makes an advance to a customer, he does not lend the customer notes and gold, what he does is to place the amount so lent to the customer's credit, and the customer, in order to make payments or to discharge his obligations, can draw cheques against that amount. Of course the customer may draw all the amount in notes or gold, but in practice this is not done to any great extent. Now the law places no restriction on the amount which the banker so lends, and there is, therefore, no real need for placing any restriction on his power of lending in the shape of bank notes. The only safe rule to guide a banker in such matters is one derived from experience, viz., not to make advances out of the money of his depositors unless the advances are on good security and the security is one which can be quickly realised and turned into cash; and not to discount bills, unless they are first-class trade bills which have not too long a time to run. The length of time in such cases should be governed by the length of credit which it is customary in the locality in which the bank is situated, or the length of credit which it is customary to give in the trades or industries to which the bills relate.

For example, if in a particular trade or a particular locality it is customary for manufacturers to give three months credit to the wholesale or the retail people whom they supply with goods, then a bank should be reluctant to discount a bill which had four or six months to run, even though the names on the bill were first-class. And in any case the bank ought to see that the bulk of the bills which it discounted had a shorter period than three months to run.

2. **THE BANK RETURN.** Every week the Bank of England issues a report as to its financial position. This report is in times of financial pressure read by all those who are interested in money matters. In order to explain its meaning, the report for the week ending Wednesday, February 8th, 1905, will serve as an illustration.

ISSUE DEPARTMENT.

Dr.	£	Cr.	£
Notes issued	52,454,885	Government debt	11,015,100
		Other securities	7,434,900
		Gold coin and bullion	34,004,885
	£52,454,885		£52,454,885

BANKING DEPARTMENT.

Proprietors' capital	14,553,000	Government securities	15,603,585
Rest	3,495,839	Other securities	24,427,700
Public deposits	9,459,079	Notes	25,143,145
Other deposits	39,448,004	Gold and silver coin	1,901,893
Seven-day and other bills	120,401		
	£67,076,323		£67,076,323

From the report of the *Issue Department* it can be ascertained that the Bank issued notes to the value of £52,454,885, which are secured by the Government debt of £11,015,100, and other securities worth £7,434,900, together with gold coin and bullion worth £34,004,885. The Government debt is the amount actually owing to the Bank from the Government. The items on the credit side thus show what provision the Bank has made to secure the stability of its note issue. It must not be supposed that the whole of these notes are in "active circulation." As a matter of fact, the report shows that the Banking Department holds £25,143,145, leaving, therefore, £27,311,740 worth of notes in active circulation. This is an illustration of the fact that, except for special purposes, notes are not now used in England, most payments being made by cheques. Indeed, the notes in active circulation are really for the most part in the cash tills of the various banks throughout the country, and are used by the banks as coin.

(1) **"The Rest."** The first item in the return of the Banking Department explains itself. The *Rest* corresponds to the reserve fund of other banks, and is the result of accumulating profits which would otherwise have gone to the proprietors or shareholders. It is not so much a fund to eke out profits in bad years, but a fund which can be drawn upon to assist the Bank to meet its liabilities in times of financial stress. Taking the proprietors' capital and the "rest" together, the Bank has a working capital of over £18,000,000. In this respect the Bank is far ahead of all other banks, not only as to its actual amount but as to the ratio which this capital bears to the liabilities of the Bank.

(2) **"Public Deposits"** consist of the moneys lodged in the Bank by the Government Departments, and include the taxes paid to the account of His Majesty's Exchequer, and deposits made by the Savings Bank Department of the Post Office. This item fluctuates, being at its greatest amount towards the end of March, when the financial year for the collection of taxes comes to an end.

(3) **"Other Deposits"** refer to the deposits made by the ordinary customers of the Bank, and to the balances kept by other bankers with the Bank of England. It is these bankers' balances which constitute their reserve on

which they may fall back in times of panic. No information is given as to the amount of these balances, but doubtless they form a good proportion of "other deposits." In ordinary times these deposits are an indication of the state of the Money Market, for if they rise above the average, money must be abundant and therefore the rate for loans will be low. If they fall below the average, it indicates that money is scarce, and therefore the rate charged for loans will rise.

(4) **"Seven-day Bills"** are Bank Post Bills, and are bills of exchange payable by the Bank of England. They were used first in 1738, in consequence of the mails being so frequently robbed, and were payable seven days after sight.

The credit side of the *Banking Department* shows how the funds of the Bank are invested. Over £15,000,000 are invested in government securities. More than £24,000,000 are invested in other securities, e.g. debentures, mortgages, bills discounted, loans to bill-brokers, etc. The notes, coin, and bullion constitute the "Reserve" of the Bank, not for the purpose of securing the convertibility of its notes, but a reserve which can be called upon for loans to the Money Market.

The Reserve. It is this "reserve" which is so anxiously watched in financial circles. If gold is coming into the country, the "reserve" will improve, money will be abundant, and accordingly banks will lend money at cheaper rates. On the other hand, if gold is going out, the "reserve" will fall, and in order to keep the gold from being drained away, the Bank will increase the rate for loans, and, of course, other banks will follow suit, for it is to their interest that the "reserve" should be maintained.

3. **THE BANK RATE.** This is the advertised minimum rate per cent. of discount charged by the Bank of England. It is usually higher than the rate known as the market rate, charged by other banks for short loans. At present (February, 1905) the Bank rate is 3 per cent., and has remained unchanged since April 21st, 1904. For the connection between the Bank rate and the Foreign Exchanges, see under *Money Market.*

JOINT STOCK BANKS. The legislation of 1826 prohibited the issue of notes for less than £5 in England and Wales; but it expressly permitted, outside a radius of 65 miles from London, the establishment of Joint Stock Banks with the right to issue notes; and withheld this right from all Banks within the radius, excepting the Bank of England. An Act was passed in 1833 definitely permitting Joint Stock Banks to carry on a Deposit business in London. Since the passing of the Acts of 1826 and 1833, the business of Deposit Banks in England and Wales has gradually increased until it has reached its present gigantic proportions. This progress has no doubt been greatly facilitated by the Companies Acts of 1858 and 1862, which Acts allowed the limitation of the liability of shareholders.

PRIVATE BANKS. Little need be said about private banks. Their number is diminishing year by year. It may be stated, however, that a private bank cannot consist of more than ten partners, whose liability is, of course, unlimited.

THE CLEARING HOUSE. Were it not for the existence of the Clearing House, a banker who received cheques from his customers to place to their credit, would have to send clerks to every one of the banks on which the cheques had been drawn, and receive cash or notes for them. To avoid this inconvenience, a number of the London private bankers arranged, in 1775, a scheme by which the representatives of each bank met daily, and exchanged the cheques which each held on the other. The accounts so exchanged were added up, and the differences in the amounts only were handed over in cash. Thus, if bank A held cheques and bills to the amount of £1,100 on bank B, and bank B held cheques and notes on bank A to the amount of £1,200, then the representative of bank A would hand £100 in cash to the representative of bank B. A great saving in the actual use of cash was effected, and it is obvious that by means of this arrangement each bank would not be required to keep so large an amount of cash on hand to meet cheques and bills which had been drawn on them.

For many years the private banks had a monopoly of the Clearing House, but in 1854 the joint-stock banks in London were allowed to join. There are still, however, only seventeen banks entitled to send representatives to the Clearing House. All other banks must, to their dissatisfaction, do all their clearing business through the agency of a bank which is a member of the Clearing House.

A further development of the system avoids the actual transfer in cash of any balance due on the day's transactions from one bank to another. For all the clearing banks must keep an account at the Bank of England, and where a bank has to pay a balance, its account is debited with the amount. Where it has to receive a balance, its account is credited with the amount. Accordingly, the balance need not be paid every day, but at the end of a given period, when it will be found that the actual amount to be transferred from one bank to another is very small indeed.

By the system of "Country Clearing," cheques held by country banks on other banks are sent to the Clearing House, and from thence are passed on to the London agents of the banks on which the cheques are drawn. The London agent then sends every night these cheques to his principals in the provinces. In this way each country bank ascertains what amount may be due by it to all other banks and what it may be entitled to receive. The difference, if any, is then sent on to its London agent. Thus each bank has but one remittance to deal with each day, instead of having to make remittances to or to receive remittances from banks in all parts of the kingdom.

NATURE OF A BANKER'S BUSINESS.

1. **MONEY AT A BANKER'S DISPOSAL.** A bank is an institution into which people deposit money on the understanding that the money shall be repaid on demand, or after an agreed length of notice shall have been given. As the money which may be from time to time withdrawn by depositors is usually very much less in amount than the sums paid in (except in times of commercial panic or when there is a run on the bank), it will be seen that in addition to his own capital, a banker will have a considerable amount at his disposal. He, therefore, seeks a means of investing this large amount, and as the interest which he pays to depositors is generally much less than that which he receives from his investments, his profits are considerable. He must, however, always keep a certain amount of cash in his till, in order to meet the ordinary demands or withdrawals made upon him. The amount of these ordinary demands can be determined to a nicety, and, therefore, it is easy to make provision for them. But the banker must also be prepared for contingencies, he must be ready to meet all demands made upon him, and he, therefore, keeps a further supply of ready cash either in his own strong room, or as it usually happens in this country, to his credit at the Bank of England.

2. **A BANKER'S INVESTMENTS.** All the rest of the money he invests so as to earn profits, but he must take care that his investments are of such a nature that they can be quickly realised and turned into cash, in case there is an unexpected run on the bank.

(1) First and foremost of these investments is money lent on call or on short notice. This money is lent to bill brokers and discount houses, and though the rate charged is not very high, it exceeds the rate which the banker pays to his depositors, so that he makes a profit. Further, as this money is lent on the condition that it must be repaid when demanded, or at very short notice, the banker has this to fall back upon, in case large and unexpected demands are made upon himself.

(2) Of investments in securities, a great proportion is represented by Consols, which at all times can be easily converted into cash, though it may be at a loss, and in any case the Bank of England, which holds the only large stock of gold in the country, would advance gold on these securities to any bank which stood in great need of ready cash.

(3) Other securities in which the banks invest their

surplus funds are securities guaranteed by Government, debentures of sound and prosperous railway companies, mortgages, and the like.

It should be remembered, however, that these securities might be quite unrealisable in times of panic, and therefore a banker should not have too much of his money locked up in these investments. This remark applies, however, with varying degrees of force to the whole of a banker's investments. After providing for cash in till, balances at the Bank of England, call money, investments in recognised and high-class securities, a banker has still a surplus to work with. This surplus he employs in discounting bills, buying bills, and in making advances to his customers.

3. A BANKER'S CHIEF MEANS OF PROFIT. It is in discounting and buying bills and in making advances to his customers that the greater part of a banker's profits are made. For in discounting bills or in making advances he not only earns the market rate of interest, but he reaps a large additional profit from the fact that when making these advances or discounting bills he does not as a rule part with gold. What he does lend is not gold but *credit*, and this credit costs him nothing, and yet he earns the same rate for lending it as for lending gold. Suppose he discounts a bill for a customer. He does not give the customer gold, though of course he could do so, if required. What the banker does is to place the amount to the customer's credit, against which the customer can draw cheques in order to meet his obligations. Then, through the medium of the Clearing House, these cheques on the customer's bank are set off by cheques held by this bank against other banks, and so very little or no actual gold need be transferred.

The process is even easier to understand where the bank has power to issue notes of any amount, no matter how small. A manufacturer draws a bill on the tradesmen to whom he supplies goods on credit. His bank discounts the bills and lets him draw notes and coin to the amount of the bills *less* discount. With the notes and coin he pays his work-people and his creditors. The workpeople and the creditors spend the money in buying goods from the tradesmen. Thus the notes and the coin find their way to the tradesmen on whom the bills had been drawn, and who are bound to meet the bills. These, when the bills mature, go to the bank which holds the bills, and there meet the bills with the notes and coin which the bank had issued in discounting the bills.

It is obvious that the more his own notes are used and the less coin is used the greater will be the profit of the banker, because notes cost little to produce, and yet the banker gets the same rate of profit in lending them as he would in lending gold, which is costly. The above is actually what takes place in viewing commercial transactions as a whole.

4. PART PLAYED BY "CREDIT" IN BANKING. Banking companies earn their enormous dividends of 15 to 20 per cent. not so much by lending *money*, as by lending *credit*. This credit is, however, based on gold, for a banker must always be prepared to discharge his liabilities by gold payments, though it is evident were all the banks be called on at one and the same time to meet their liabilities in gold, there would not be sufficient gold to discharge them, and the whole country would be involved in financial ruin. It is not, therefore, scientifically true to say that the credit of the banks is based on their reserves of gold, it is based on the fact and on the belief that the mercantile community will discharge its obligations. In other words, that trade is on a sound basis, and that loans made or bills discounted are based on real commercial transactions for which value is given and received. Hence, when there is a collapse of credit due to rash and hazardous speculation, or to over trading, what is wanted to restore equilibrium is not merely gold, but confidence; in other words, credit.

5. BANKER'S LIABILITIES AND ASSETS. From the foregoing it will be seen that a banker's liabilities are to those who have deposited money with him, either on current accounts, from which the money can be withdrawn at any moment, or on deposit, properly so called, in which case the money cannot be withdrawn without notice, and in the case where a bank has power to issue notes, he is under liability to pay coin on demand for those notes. In other words, he incurs liabilities to specific individuals, and where he issues notes he incurs liabilities to all those who come into possession of his notes. To meet these liabilities, he possesses cash in his till and keeps in addition a balance to his credit at the Bank of England. Of the other moneys which he receives from the public he lends a part on short loans or on loans which can be called in at once, a part is invested in government or other safe securities, the remainder is employed in discounting bills and in making advances to his customers. These loans and investments can be more or less quickly realised and turned into cash in case there is a heavy and unexpected demand for gold made upon the bank. The more easily a bank can call in its loans, or realise its investments, the stronger and the safer is the position of that bank.

Cash in the till and money lodged at the Bank of England, money lent at call or for very short periods, investments in securities, constitute a banker's "liquid assets," because they are either available at once to meet the banker's liabilities, or may easily be converted into cash and so made available. The other assets not being so readily available are known as "non-liquid assets."

It should be noted that where a bank lends money on "short loans" to members of the Stock Exchange, such loans are really renewed from settlement to settlement, and are, therefore, not "short loans," but loans for lengthened periods. Were the banks to call in these so-called short loans, the members of the Stock Exchange would be unable to pay them. The banks would then be forced to realise the securities which such borrowers had deposited with them as guarantees for repayment. Needless to say that in such circumstances the securities would become sadly depreciated, and the banks would obtain only a fraction of the nominal value of such securities. This, of course, would mean not only ruin to the members concerned but would entail a very heavy loss upon the banks themselves, which would thus be crippled, if not compelled to suspend payment.

6. DANGER OF THE PRESENT BANKING SYSTEM. The weakness of the present system of banking is that the banks have not a sufficiently high proportion of "liquid assets." Of these assets gold is the essential one, and when it is considered the amount of gold which a bank possesses in proportion to the amount of its liabilities, the comparison is indeed striking. The ratio of cash in hand and balances at the Bank of England to the amount of the liabilities to the public is in the case of the London banks about 15 per cent. That is, for every £100 due to the public, the banks have got only about £15 in ready cash to meet it. Moreover, a certain part of this cash is not kept in the banker's own till or strong room, but at the Bank of England, where, much of it does not actually exist in the shape of gold, but of credit; so that if a crisis were to overtake the Bank of England, the so-called balances held there by other banks might easily disappear, and with their disappearance, many banks probably would collapse.

This smallness of the gold reserve, coupled with the fact that the bulk of it is held by the Bank of England, is the great weakness of our financial system, and is a potential danger to the commercial interests of the country. It explains, too, the sensitiveness of the Money Market. Some banks, anticipating the danger, are increasing their stock of gold held by themselves. And what prevents other banks from following their example is merely the desire to earn big dividends.

For it must be remembered that if a banker keeps a large reserve of gold, it is not earning any interest. The more he employs in lending, the greater is his dividend. His own capital is small compared with the large amounts entrusted to him, and the more he employs the money deposited with him, the greater is the actual dividend on his own capital.

It is a surprising fact that the banks as a whole do not earn two per cent. net interest on the moneys employed by them; and yet they pay dividends of 15 to 20 per cent. to their shareholders. The explanation is that where the capital of a bank is, say, £1,000,000, and its liabilities to the public, say, £7,000,000, this means that it

can trade safely with over £7,000,000, earning, say, 2 per cent., which would be equal to £140,000. A profit of £140,000 on a capital of £1,000,000 would be equivalent to a dividend of 14 per cent.

7. **HOW TO CHOOSE YOUR BANKER.** In selecting a bank in which to open a current account, or in which to deposit money, care should be taken in ascertaining the real financial position of the bank. An intending customer should look at the amount of working capital, which can be easily ascertained by adding together the paid-up capital and the reserve. The proportion which this working capital bears to the total liabilities of the bank should be determined, and if the ratio be very small, then the intending customer should be on his guard. Above all, the nature of the bank's investments should be closely criticised, and if it is seen that the investments are such as cannot easily be realised, in other words, if the assets are "non-liquid," the bank should be avoided. As a general rule, the "liquid assets" should never be less than two-fifths of the bank's liabilities to the public. In particular, an intending customer should be guided by that portion of the "liquid assets" which consists of ready cash or bullion, and where the ready cash does not amount to at least 15 per cent. of the bank's liabilities to the public, an intending customer should take his money elsewhere.

BANKER AND CUSTOMER.

1. **RELATION OF BANKER AND CUSTOMER.** The relation of banker and customer is that of debtor and creditor. The customer lends money to or deposits money with the banker, who thereby becomes the owner of it, but undertakes to repay the loan in a particular way, either by honouring the customer's cheques or by repaying the whole or the part after receiving due notice. That the banker becomes the owner of his customer's money is shown by the fact that the banker trades with it and keeps any profit arising out of it. Again, were the bank to stop payment, the moment that a customer had placed his money on the bank counter in such a way that the bank cashier had control of it, the customer could not demand his money back. All he could do would be to rank as an ordinary creditor of the banker, entitled, like the other creditors, to receive a dividend out of the banker's assets when realised in the bankruptcy. Lastly, if a customer has not operated on his account for six years or more, the banker, as he is merely the debtor of his customer, would be under no legal obligation to refund him any money which stood to his credit, though, of course, no banker would refuse payment in such circumstances. But in the case of unclaimed balances of deceased or of missing persons, the banker makes a nice little profit by using such balances in the course of his business.

Should a banker refuse to honour the cheque of a customer who has sufficient funds to his credit in the bank, such customer is entitled to damages, and can bring an action for damages against his banker for breach of contract. But the person to whom the cheque is payable has no such right of action against the banker.

In the case of valuables deposited with a banker for safe custody, the banker does not receive them as banker, but as warehouseman, and, therefore, unlike money which is banked with him, such valuables do not become his property, and, therefore, would not pass to the banker's creditors in the event of his bankruptcy. Moreover, as in this case the relation of the banker to his customer is not that of debtor and creditor, the customer could reclaim the valuables after the lapse of any length of time. Should the valuables be lost or damaged, or be given to a wrong person, the banker will be liable to the customer. Further, if the banker pledges such valuables, or otherwise misappropriate them, he would be guilty of a criminal offence.

A banker's authority to pay cheques drawn by a customer may be revoked by the customer's own order, or may be put an end to by the death of the customer, or by notice of his bankruptcy, or by the banker having a garnishee order served upon him, in which case the customer will not be allowed to operate on any money which he may have in the bank.

2. **BANKER'S LIEN.** Where a customer deposits securities with his banker, not for safe custody, but as a guarantee for the repayment of a loan made by the banker to the customer, the banker has a lien on the securities, that is, a right to retain them until the loan has been repaid. And, indeed, in some cases the banker, when the lien has once arisen, has a right to sell such securities and pay himself out of the proceeds. The securities which the banker can thus sell are those in which the property passes by simple delivery to a *bona-fide* holder for value, e.g. bills of exchange, shares and bonds payable to bearer, and the like (see "Negotiability" under *Bills of Exchange*).

Where a customer has deposited securities as a guarantee for a particular loan, the banker must return them when the loan is repaid, and has no further lien on them, even though the banker may have made other advances to him which have not been repaid. Of course, where the securities have been deposited to cover advances made by the banker generally, the banker has a lien on them until the whole amount has been repaid.

3. **PARTNERSHIP ACCOUNT.** Where partners have an account at a bank, each partner may in the firm-name draw cheques upon that account, and endorse them, and may accept or endorse bills of exchange against or in favour of that account. The firm may, however, give instructions not to honour cheques or bills unless signed by all the partners. Usually, however, where a partnership consists of several members, say Brown, Jones, and Robinson, trading as Brown & Co., then, if each of them is to draw cheques or to accept bills, each of them will sign a printed slip thus:—

James Brown will sign Brown & Co.
Robert Jones will sign Brown & Co.
Henry Robinson will sign Brown & Co.

Thus the banker will recognise each partner's signature when signing the firm-name.

4. **JOINT ACCOUNT.** When two or more persons, not being partners, open an account in their joint names, then, on the death of one or more of them, the money standing in the joint names will belong to the survivors, unless at the time of opening the account a written agreement is lodged with the banker that the money shall not go to the survivors. This also applies where a husband and wife bank in their joint names. In the case of a joint account, unless express instructions have been given to the banker he will not honour cheques unless signed by all the persons in whose names the account stands. Usually, however, it is agreed between the parties, and instructions to the banker accordingly given as to which of them is to sign cheques.

5. **GARNISHEE ORDER.** Where a person has obtained judgment in a court of law against another (who is then called a judgment debtor) he may get the Court to serve what is called a garnishee order on persons who have money belonging to or who owe money to the judgment debtor, forbidding such persons to hand over the money to the judgment debtor. Should the judgment debtor keep a banking account, then the banker upon being served with a garnishee order by the judgment creditor must not part with any of his customer's money, and must not, therefore, honour his cheques, even though the judgment debtor had an amount standing to his credit greatly in excess of the judgment debt.

6. **ADVANCES TO CUSTOMERS.** In making loans to customers, sometimes banks in London adopt a different method from that of most banks in the provinces. Where a bank in London advances money to a customer, it opens a loan account in his name. Suppose the customer had bargained for an overdraft for £1,000, the Bank would debit a loan account in his name with that amount, and lodge it to the credit of his current account, against which he draws to make his ordinary payments. Now it is evident that he may not use all the money with which he is credited in his current account. There may be a balance on any given day of £300, and, therefore,

on that day he has employed only £700 of the loan, but he has to pay interest on the full amount to which he is entitled to overdraw. In the country, however, it is managed somewhat differently. There the customer has to pay interest, each day, on the actual amount overdrawn, but he has in addition to pay a certain sum to the Bank as commission for its services.

Another method is sometimes adopted by bankers to secure remuneration for their services. A customer wants to be allowed to overdraw to the extent of £1,000. The banker then debits a loan account in his name with £1,100, and places that amount to the credit of his current account. He must agree to keep not less than £100 to his credit in the current account, that is, he is not allowed to draw out altogether more than £1,000. He has, therefore, to pay interest on the full amount borrowed—that is, in the case we have supposed, £1,100—whilst employing only £1,000.

As regards the rate of interest charged for advances, the customer must make the best bargain he can. The usual practice is to charge 1 per cent. more than the "Bank rate," with a minimum rate to be agreed upon. It must be remembered that a bank will not as a rule allow a customer to overdraw unless he deposits ample securities with the bank. Whenever a customer thinks that his banker is not treating him fairly in the way of charges or regards the amount of interest allowed him on his deposits to be too small, he need have no hesitation in transferring his account to another banker who will allow him better terms. The fact that a customer changes his banker does not as formerly prejudice him in the opinion of his fellows.

7. DEPOSITS AND UNCLAIMED BALANCES. On current accounts interest is not usually given. On deposit accounts the interest allowed depends, to a certain extent, on the length of notice required for withdrawal. The shorter the notice the lower the rate of interest must necessarily be; for in the event of a panic, the bank might find itself in difficulties if obliged to repay all its deposits at call. When the money on deposit is payable at short notice, say seven or fourteen days, banks usually allow interest at a rate 1½ per cent. below the rate of interest charged by the Bank of England for loans on marketable securities, or for discounting bills of exchange. Where the interest is payable half-yearly, or at any other interval, the customer should draw his interest, or else add it to his deposit, so that he may earn interest on the interest. If he neglects to do either of these things, he may possibly find that at the end of two or three years, when he comes to claim the interest, that his banker, instead of giving him compound interest, will give him simple interest only on his deposit.

A deposit receipt being merely a slip of paper is liable to be lost. Hence, in the case of deceased or missing persons who are known to have a banking account, inquiries should be made from the banks as to whether such persons had money on deposit there. A banker is bound to answer such questions, but he is not bound to volunteer information, and, as a matter of fact, "unclaimed balances" often amount to a considerable sum. Nevertheless, bankers, as a rule, are always ready to facilitate the transfer of the money left by the deceased in their hands to the persons legally entitled to it. It should be remembered, however, that where money has been left in a banker's hands unclaimed, or not drawn upon, for six years, actions for its recovery are statute-barred.

THE MONEY MARKET.

WHAT THE MONEY MARKET IS. The expression "Money Market" is merely a name; for the dealers by whom money is bought and sold—or rather borrowed and lent—have no local habitation, such as is possessed by the members of the Stock Exchange or by the members of Lloyds. And, further, it is not money that is borrowed and lent so much as credit; credit based on gold. The money dealers who thus buy and sell credit, are the bankers, bill-brokers, and discount houses. These two classes, those who borrow and those who lend, are not divided by a hard and fast line, for both are ready to buy the use of money at one price and to sell the use of money at another. Take the banks which are the chief lenders. They are in one sense borrowers, for their capital is but a small fraction of the total amount which they lend, the greater part of the funds which they employ in lending being obtained from those who deposit money with them, or who keep current accounts with them. Thus the greater part of the capital which the banks employ for making advances is borrowed capital.

It is evident that the rate charged for the use of money will depend to a large extent upon the demand for and supply of money. What has got to be ascertained is the conditions which determine the demand for money, and which regulate the supply of it. In short, who are the chief lenders, and from what do they derive their resources, and who are the chief borrowers, and what are the conditions governing their needs.

THE LENDERS. The banks are the chief agents in collecting the funds to be utilised for loans, and are, of course, the principal lenders. All the capital of the country, all the money for which the owners are seeking a profitable investment, is in the hands of the bankers. All this capital, amounting to nearly £900,000,000, except the portion in actual cash kept by each bank to meet its current liabilities, together with a balance kept at the Bank of England, is either invested in securities or is used in lending to those who require capital for the extension or the needs of their business. Some of the money so lent is advanced to the customers of the bank either in the shape of direct loans, or by allowing them to overdraw their accounts, or in discounting bills of exchange held by the customers. The remainder is used in the Money Market, or, as it is frequently called, the Short Loan Market. From other sources, too, the Money Market is supplied with money. Frequently the Government of India has large sums of money lying idle, and these sums are utilised in lending money to those who want large amounts (not less than £50,000) for short periods of a fortnight or a month. Of course, those who borrow the money must, as a guarantee of repayment, deposit securities with the agents of the lending government, such securities being of the first rank, e.g. Consols, and the debentures of a few Indian Railways. The foreign and colonial banks, which have branches in London, frequently supply funds for the money market, as do also the great insurance companies, when they cannot find a more profitable method of investing their money. Wealthy trading companies, when business is slack, allow a portion of their capital to find its way to the Money Market.

THE BORROWERS.

The people who want loans on undoubted security for short periods are bill-brokers and discount houses for the purpose of buying bills of exchange, bills that actually represent value, that represent one trader's indebtedness to another for goods or other commodities with which that other has supplied him on credit.

1. BUSINESS MEN AS BORROWERS. In trade and commerce conducted on a large scale, the business is seldom carried on on a cash basis. The manufacturer sells his products to the trader on credit for a month, two months, three months, or a longer period, according to the custom of the particular trade. Now the manufacturer cannot wait so long for payment. He has to pay his workpeople, and obtain many things for which hard cash must be paid. He therefore, in order to pay himself, draws a bill on the tradesman to whom he supplied the goods, for the amount in value of these goods. The tradesman accepts the bill, engaging himself to pay the amount at the end of the period for which credit was given him. The manufacturer, having got this bill with the tradesman's acceptance written on it, goes to a banker or to a

bill discounter, who, if satisfied as to the financial standing of the parties whose names are on the bill, will give him cash for it, or if the manufacturer who gets the bill discounted is a customer of the bank, the amount will be placed to his credit, and, of course, he can then draw out whatever cash is required for the immediate needs of his business. The banker or the bill-broker will not give the manufacturer the full amount of the bill, but will deduct a certain amount by way of discount, which constitutes his profit on the transaction. This amount depends on the market rate of interest, and how that market rate is affected will be afterwards discussed.

2. **THE BILL-BROKER AS BORROWER.** It may be a matter of surprise that a trader will prefer to have a bill discounted by a bill-broker rather than go to his own banker, and that a banker, who in this respect has the bill-broker for his rival, lends money to that rival to enable him to carry on his business. The trader prefers the bill-broker because the bill-broker charges him less for discounting his bill, and because the bill-broker is more ready to discount good bills. The banks, too, find it to their advantage to finance the bill-broker, who is to some extent their rival. Owing to his special training, they find it safer to buy bills from the bill-broker rather than discount the bills themselves. This is because the bill-broker has better means of knowing what bills are first-class and which will be met when they fall due; further, bills bought by a banker from a bill-broker are additionally secured by the broker's guarantee that they will be met at maturity. Lastly, from the bill-brokers the banks know that they can obtain bills to any desired amount, and bills of any required length of time to run —thirty days, sixty days, and so on. The banker then having bought bills in this way is able to utilise his loanable capital in the best way, because he is not inundated with bills when he does not want too many of them on his hands, and if he wants a greater number he knows where to obtain them.

> It must be remembered that this drawing, accepting, and discounting of bills is based on trade, is based on the fact that goods, services, and the like have been supplied by the drawers of the bills to the acceptors. When trade is in a sound condition, when there is no rash or hazardous speculation, the bill business proceeds automatically. Those who supply goods draw bills on those who have bought them. The buyers of the goods sell them in turn to the community, and with the proceeds of the sales are able to meet the bills as they fall due, and also to net a profit for themselves. In a sense it is almost like barter, and very little actual gold is needed to carry out the multitudinous mercantile transactions of a trading people.

3. **THE GOVERNMENT AS BORROWER.** As has been explained, the chief borrowers in the short loan market or money market are bill-brokers and discount houses. But the Government, when it wants to raise a temporary loan by means of Treasury Bills, payable in three, six, nine, or twelve months, has recourse to this market for its supplies.

4. **THE STOCK EXCHANGE AS BORROWER.** Another borrower is the Stock Exchange, or rather those who transact Stock Exchange business. Loans raised by members of the House are for the purpose of "carrying over" bargains from one settlement to the next—a period of a fortnight. But as these loans, although made for a fortnight, are frequently renewed from settlement to settlement, they can hardly be called short loans. Indeed, were the banks to "call in" these so-called short loans, the brokers would fail, and the securities which they had deposited with the banks as guarantee for repayment of the loans would fall in value.

THE BILL-BROKER. The bill-broker carries on his business largely with borrowed capital, as his own would be quite inadequate to carry on the transactions which he is called upon to perform; for he must always be prepared to buy good bills to any amount, lest his rivals should supplant him. Every morning the bill-broker, or his representative, calls on the banks with which he does business, and ascertains whether they wish to lend money or to call in what they have already lent, or if they want to buy bills from him. If the banks are willing to lend money to him, they charge a smaller rate for loans which can be called up at a moment's notice than the bill-broker himself charges for discounting bills. Thus, when the rate charged for loans on call is 2 per cent., the rate which the broker charges for good sight bills (i.e. bills payable on sight or on demand) may be 2⅛ per cent. Hence the bill-broker will make a profit of ⅛ per cent. on the money lent to him.

Should the bank wish to buy bills from him they will buy them from him at a price a little more than he gave for them. Thus, suppose the rate for a good trade bill, payable in three months, is 2¾ per cent., the broker will in that case give £97 12s. 6d. for a bill for £100, and if he sells the bill to the bank, the bank will probably charge him a rate of 2⅛ per cent.; that is, they will give him £97 17s. 6d. for his £100 bill, so that the broker makes a profit of five shillings on the transaction.

Should the bank wish to call in the money which had been lent to the broker, he withdraws from the bank the securities which he had deposited there, and arranges for a fresh loan from another bank, with which to pay off the loan which the former bank had called in. When, as it sometimes happens, the banks have themselves to make heavy payments, all their short loans are called in, and the bill-brokers and discount houses must then have recourse to the Bank of England to supply their needs.

BANK RATE. As the Bank of England charges a higher rate for short loans than do other banks, the bill-brokers resort to it only in case of absolute necessity, and as soon as possible try to redeem their liabilities to the Bank. Of course this is done when there is a scarcity of ready money. If the scarcity should continue, the bank rate rises. Other banks raise their rates too, because their reserves are placed in the Bank of England, and because they have to allow a higher rate of interest on Deposit Accounts. This increased rate of discount, however, attracts foreign bankers who have branch establishments in London to invest their gold in buying bills, and accordingly an inflow of gold takes place into London. Money once more becomes plentiful, and the Bank rate, and with it the market rate, tends to fall.

CAUSES OF TIGHTNESS IN THE MARKET. At certain periods of the year the banks, having to make heavy payments, must call in their short loans, or when a large government loan is floated, a great amount of money is drawn from the short loan market, and tends to make money dearer there. Again, too, the India Government has at stated times to withdraw from the money market the loans made to it, for the India Government has to make payments of its own. So, also, if the members of the Stock Exchange borrow largely from the banks in order to carry over from one settlement to the next, there is less loanable capital available for the short loan market. Lastly, if heavy foreign payments have to be made, there is a great outflow of gold. This outflow of gold diminishes the amount available for the money market. Bill-brokers have, therefore, a difficulty in finding the money necessary to be sent to them for carrying on their business. There is said to be a "pressure on the money market," and borrowers must resort to the Bank of England, which has the only reserve of gold in the country. To check the outflow of gold the Bank, as has been said, raises the rate of discount, the market rate follows suit; foreign capitalists are tempted to buy good bills in London because of the increased rate, and the outflow of gold is checked, and the money market once more breathes freely. This will be more clearly seen in discussing the Foreign Exchanges, which is the next topic to be dealt with

THE FOREIGN EXCHANGES.

1. **HOW FOREIGN CREDITORS ARE PAID.** In international trade it is seldom that the traders of a country have to transmit gold in payment of their debts to their foreign creditors. Gold costs something in the shape of

freight; there is a risk that the ship carrying it may founder, so that insurance charges have to be paid, and in former times there was a considerable risk from pirates and privateers. These considerations led traders to adopt a simple expedient for avoiding the risk, trouble, and cost of transmitting gold in payment of their debts and obligations due to their creditors abroad.

> Let us suppose that A, a merchant in London, owes £100 to a trader, B, in Paris. A does not actually send £100 in gold across the channel. He tries to find some one, say C, in England, to whom £100 is due from a person, D, in Paris. A then buys from C the right to receive that money, and transmits that right to B, in Paris, who can then go and collect the money from D. In this way A discharges his debt to B, and D discharges his debt to C, without the necessity of a single coin having to be sent from one country to the other.

The way in which these rights of the creditors are transferred from one country to the other is by means of bills of exchange. C, having the right to receive money from D, draws a bill of exchange on D, which D agrees to pay at the time agreed upon. C, having got this bill, sells it to A, who wishes to pay his creditor B, A then sends the bill of exchange to his creditor B, who thereupon presents it to D for payment, and in the ordinary course of things D fulfils his obligations.

It is not to be supposed that transactions can be carried through in this simple manner. A, in ordinary business, would have a difficulty in finding C were it not for the existence of the bill-broker. C and other persons who have to receive payments from abroad, and have drawn bills on their foreign debtors, sell those bills to the bill-brokers. When A and others who have to make foreign payments desire to discharge their obligations, they resort to the bill-brokers and buy from them the bills which those brokers had previously purchased from C and the other people who were entitled to receive money from abroad. The prices which C and his fellows obtain for their bills, and the prices which A and his kind have to pay for them, in other words, the selling price and the buying price of such bills, depend upon a variety of causes which will now be explained.

2. PRICE OF FOREIGN BILLS OF EXCHANGE. The price given or obtained for a foreign bill of exchange is hardly ever the same as the nominal value of the bill. This is due to the fact that sometimes we owe more to foreign countries than they owe to us, and sometimes we have to receive from foreign countries payments in excess of what we have to make to them. In the former case persons wishing to transmit gold abroad will have a difficulty in buying bills payable abroad—the demand will exceed the supply, and, therefore, such persons will have to pay more for such bills. In fact, in that case, the price paid for such a bill will exceed the amount expressed on the face of the bill. On the other hand, if other nations are indebted to us to a greater amount than is owing by us to them, there will be an abundance of bills drawn on foreign traders, and, of course, the persons wishing to transmit gold will be able to buy such bills cheaply; in fact, the price of a bill payable in a foreign country will be less than its face value.

3. THE "SPECIE POINT." The price of a foreign bill of exchange cannot, as a rule, rise above a certain point or fall below a certain point. This point is known as the "specie point." The reason of this is plain. If the price of a bill rose beyond this point, persons wishing to transmit gold would prefer to incur the risk and expense of sending the gold itself; and on the other hand, if the price of a bill fell below this point, persons who have got to receive money from abroad would not sell their bills. They would prefer to wait for the gold. An example will make this clear. An English sovereign contains as much gold as there is in 25.22 francs (that is, 25 francs 22 centimes). Therefore, a person in England who has to pay £100 to a French creditor could discharge his debt by a payment of 2,522 francs when the exchange is at par. Suppose, then, that the cost of sending gold to France, including expenses of freight and insurance, is at the rate of 10 francs for every £100, then it would cost the debtor in England the equivalent of 10 francs more than £100 to discharge his debt (£100) by sending gold, that is, it would cost him £100 7s. 11½d. Beyond this amount the price of a bill for £100 payable in France could not in the supposed circumstances rise, for it would be cheaper to send the actual gold than to pay a higher price for the bill. This maximum price is known as the "Export Specie Point," or the "Export Gold Point."

Similarly, the price of a bill for £100 payable in France cannot fall (as a rule) below £100, less the cost of sending the gold (7s. 11½d.), that is, below £99 12s. 0½d., or else the gold would be imported. This point is known as the "Import Specie Point," or the "Import Gold Point."

To put it shortly, an English sovereign, which is worth 25 francs 22 centimes, cannot, as a rule, exchange for less than 25 francs 12 centimes, or for more than 25 francs 32 centimes. When the exchange is between 25 francs 22 centimes and 25 francs 12 centimes, it is because there is, as has been said, a tendency for gold to leave this country, and, therefore, the exchanges are said to be "unfavourable" or "against" us.

The use of this latter phrase is a survival from the times when the precious metals were looked upon as the only form of wealth, and that, therefore, it was a bad thing that these should leave the country. When a sovereign exchanges at a figure between 25 francs 22 centimes and 25 francs 32 centimes, the exchanges are said to be in "our favour," because, as has been pointed out, the tendency is for gold to be imported, which in former times was regarded as eminently favourable to the commercial prosperity of the nation.

4. HOW THE FOREIGN EXCHANGES AFFECT THE BANK RATE. When the rate of discount for bills is higher in London than it is, say, in Paris or Berlin, it indicates that there is a scarcity of money in the market, probably because heavy foreign payments have to be made. In other words, there is likely to be an outflow of gold from England. That, again, indicates that the exchanges are "against us"; in other words, English gold exchanges for less quantity of francs or of marks, as the case may be. The scarcity of gold and the consequent increase in the bank rate and the market rate, tempt foreign bankers to invest their money in London by buying up first-class English bills. They do so, not only because of the higher rate of interest prevailing in London, but because of the fact that a turn of the exchanges in our favour may occur before the bills which they have bought reach maturity. In other words, not only will they reap the benefit of the higher rate of interest, but there is also the chance that before the bills mature the exchanges will rise, and the bills which they have bought will exchange for a greater quantity of French or German currency when the foreign bankers come to receive payment for them, than the bills would have done at the time they came into the foreign bankers' hands. In this way the foreign investor reaps a two-fold profit. Thus the increase of the Bank rate and the market rate at a time when money is scarce, and the exchanges are against us, and when money is thus likely to be drained from the country, attracts an influx of foreign gold. The money market is made easier, the outflow of gold is checked, and the exchanges once more rise in our favour.

SENSITIVENESS OF THE MONEY MARKET. The reason why the money market is so easily influenced by every turn of the exchanges is because there is so little gold in this country, compared with the volume of trade done and the amount of liabilities incurred. In fact, the whole machinery of trade is worked on a *credit basis*. What gold is held in reserve is kept at the Bank of England. Ordinary banks also keep their reserves of gold there with the exception of the actual coin which they need for every day transactions. The Bank of England, therefore, possesses the only large stock of gold in the United Kingdom. Accordingly, when gold threatens to leave the country, the Bank of England must increase the rate it charges for

short loans, and the rate at which it will discount bills. This, of course, tempts foreign capitalists to send gold here, and checks the outflow of gold, as has been previously explained. Other banks, too, must follow the lead of the Bank of England and increase their rate (the market rate) for the same transactions. For having their gold reserves in the Bank of England they must support that institution in checking the outflow of gold. Otherwise they might find themselves unable to meet the demands for gold, and were a "run for gold" to set in on the banks, it is needless to say that every one would collapse, and the entire trade of the country would be paralysed. This branch of the subject is fully discussed in the article on "Banking."

THE MONEY ARTICLE OF THE NEWSPAPERS.

To the reader who desires information as to the financial and trading position of the country, the money article in his daily paper gives him all the necessary details. In the Friday issues he will see the Bank Return, with the remarks of the city editor, and on that day, too, there also appears a report of the operations of the Bankers' Clearing House. On the 8th day of every month the Board of Trade Returns appear, giving the volume and the values of the import and export trade. During the middle of each week the various railways publish their traffic receipts. From these various returns the student of statistics should be able to arrive at some conclusion as to the state of the trade and the finances of the country.

1. CONDITION OF THE MONEY MARKET. The article usually begins with a report of the condition of the "money market." The rates charged by the Bank of England for discounting bills and for short loans, together with the rate given by banks and discount houses for deposits made with them either on call or on short notice, are given in a tabular form. In this table the rates charged in the "open market" for discounting bank bills and first-class trade bills are stated. By the "open market" is meant the bill-brokers, discount houses, and banks other than the Bank of England. The city editor also supplies information as to the conditions affecting the supply of and the demand for money in the market.

> Thus, when certain people have at certain periods of the year to pay their taxes, large amounts have to be drawn from the banks. Hence the amount available for loans is reduced, and consequently bankers call in the short loans which they have already made, and charge higher rates to would-be borrowers. Again, when the Treasury wishes to borrow money for short periods, by issuing Treasury Bills, this again will reduce the amount available for other borrowers, and therefore, banks will again raise their rates. On the other hand, when the time comes for repaying these Treasury Bills, the market will be flooded with ready cash, and therefore borrowers will be able to secure loans on easier terms. Similarly, when the India Council has money to lend, or wishes to call in money already lent, the market will be affected.

Whenever from any cause the market has a less supply of money than is usual or than is needed, borrowers must have recourse to the Bank of England, and consequently there is then a tendency for the Bank to raise its rate, particularly if the state of the Foreign Exchanges points to a drain of gold from the country. All this information the city editor supplies in a few brief sentences.

Having dealt with the "money market" proper, the article then treats of the movements of bullion, stating how much the Bank may have bought, or may have had to export. It then usually deals with whatever official report may have been issued, e.g. the Bank Return, the Traffic Receipts, and the like, and comparison is made with previous returns.

2. BANK RETURN. In dealing with the Bank Return, if there is a serious reduction in "Other Deposits," a comment will appear to the effect that money is scarce or becoming scarce, and that, therefore, the rate charged for loans will tend to rise. On the other hand, if there is an increase in these deposits, it indicates that money is abundant, and that borrowers will be able to secure loans on easier terms. How the reduction or the increase in the "Other Deposits" has been caused is also briefly indicated. The "Reserve" is also specially noticed, because the state of the "Reserve" shows whether gold is leaving the country or coming into it. If there is a heavy foreign demand for gold, the Bank rate is almost certain to rise, and the increase of this rate seriously affects the position of borrowers in the money market.

3. THE FOREIGN MARKET. Some papers publish a table relating to the rates of interest charged on loans in Paris, Berlin, and the other continental centres, and a table relating to the rates of exchange prevailing in those centres for bills and cheques on London. The first table indicates whether the rate in London is higher or lower than in the foreign centres, and, therefore, the likelihood of foreign banks investing their money in buying English bills, or withdrawing the money already invested. In other words, it indicates the likelihood of an influx of gold into London, or of a drain of gold from the country. In either case the Bank Rate is likely to be affected.

The second table affects those who have to receive payments from or make remittances to foreign countries. Where the exchanges are favourable, a given quantity of English gold will command more of foreign currency, and, therefore, those who have to make payments abroad can do so on favourable terms; while those who have to receive remittances abroad will get less of English gold in return for their claims. When the exchanges are "unfavourable," the reverse takes place. (See specimen table of "Exchange Rates" below.)

4. BUSINESS OF THE STOCK EXCHANGE. The money article then deals with the position of the various markets on the Stock Exchange, e.g. Consols, Foreign Government Bonds, Home Railways, American Railways, Banks, Industrials, and Miscellaneous, and ends with a list of "closing prices" and "business done" for the day. These "closing prices" are not official, but are merely based on the opinions and estimates furnished by experts in the various markets. In countries where paper money or silver is not readily convertible, at its nominal value, into gold, the exchange rate varies considerably.

EXCHANGE RATES.

(24th September, 1906.)

	Previous Quotation.	Latest Quotation.
Paris, cheques	25.19½	25.19½
Brussels, cheques	25.25	25.25
Germany, 8 days	20.42	20.42
Ditto, sight	20.43½	20.44½
Vienna, sight	24.00⅜	24.00⅜
Amsterdam	12.09½	12.10⅜
Italy, sight	25.16½	25.16½
Madrid, sight	27.97	27.97
Lisbon, sight	52⅝d.	52⅝d.
St. Petersburg, 3m	94.10	93.70
Bombay, T. T.	1s. 4 1/16d.	1s. 4 1/16d.
Calcutta, T. T.	1s. 4 1/16d.	1s. 4 1/16d.
Hong Kong, T. T.	2s. 2 7/16d.	2s. 2 7/16d.
Shanghai, T. T.	2s. 11⅞d.	2s. 11⅞d.
Singapore, T. T.	2s. 4d.	2s. 4d.
Yokohama, T. T.	2s. 0 7/16d.	2s. 0 7/16d.
Rio de Janeiro 90 days' sight	1s. 3 1/16d.	1s. 3⅛d.
Valparaiso, 90 days' com.	1s. 2 7/16d.	1s. 2 7/16d.
Buenos Ayres Gold prem.	127.27½ p.c.	127.27½ p.c.

EXPLANATORY NOTES.

Paris 25.19½ . . . . . =25.19½ francs per £1.
Brussels 25.25 . . . . . =25.25 francs per £1.
Germany 20.42 . . . . . =20.42 marks per £1.
Vienna 24.00⅜ . . . . . =24.00⅜ kroners or crowns per £1.
Amsterdam 12.09½ . . . . =12.09½ guldens or florins per £1.
Italy 25.16½ . . . . . =25.16½ lire per £1.
Madrid 27.97 . . . . . =27.97 pesetas per £1.
Lisbon 52⅝d. . . . . =52⅝ pence per milreis.
St. Petersburg 94.10. . . =94.10 roubles per £10.

Bombay and Calcutta 1s. $4\frac{1}{16}$d. $=16\frac{1}{8}$ pence per rupee.
Hong Kong 2s. $2\frac{1}{16}$d. . . . $=26\frac{1}{8}$ pence per dollar.
Shanghai 2s. $11\frac{1}{16}$d. . . . . $=35\frac{1}{8}$ pence per tael.
Singapore 2s. 4d. . . . . $=28$ pence per dollar.
Yokohama 2s. $0\frac{1}{16}$d. . . . . $=24\frac{1}{8}$ pence per yen.
Rio de Janeiro 1s. $3\frac{1}{16}$d. . . $=15\frac{1}{8}$ pence per (paper) milreis
Valparaiso 1s. $2\frac{15}{16}$d. . . . . $=14\frac{15}{16}$ pence per (paper) peso.
Buenos Ayres } 127.27½, p.c., that is, 100 pesos (gold)
Gold prem. } $=227.27\frac{1}{2}$ pesos (paper).

As to abbreviations in the above table of Exchange Rates:—
"Sight"=at sight, or on demand.
"3 m."=payable 3 months after sight.
"T.T"=Telegraphic Transfer. (See *Commercial Dictionary*.)
"90 days' sight"=payable in 90 days after "sighted" or received and accepted.
"90 days' com."=Commercial bills payable in London 90 days after "sighted."
(Refer to "Foreign Coinage" in *Index*).

INSURANCE.

Insurance may be defined as "a contract by which a person (called the insurer or assurer) in consideration of a lump sum of money, or of a periodical payment, undertakes to pay to another (called the insured or assured) a larger sum on the happening of a particular event." The instrument in which the contract of insurance is contained is called the "policy of insurance," the term policy being derived from an Italian word signifying a *promise*.

Nearly every risk to which a man is liable may be insured against. Unusual or extraordinary risks are not as a rule undertaken by the ordinary insurance offices, but by members of Lloyds or by those companies which transact the same kind of business as is done by members of Lloyds. In return for the payment of a premium, a man may be insured against loss in case debts due to him are not paid, or in case bills of exchange of which he is the holder or the payee are not met. Again, the risk of taking an epidemic disease like small-pox can be insured against. Football and cricket clubs frequently insure against loss in the receipts from the season's play. Organisers of bazaars and other entertainments do the like. And merchants and others in a large way of business insure themselves against loss, when they apprehend that there is likely to be an increase in the duties or taxes levied on the goods in which they traffic. These people, of course, do not as a rule go direct to the underwriters. They employ a broker, whose business it is to know the underwriters or insurers likely to undertake this kind of insurance, and through the broker the insurance is effected with the underwriter.

The more common forms of Insurance are Life, Fire, and Marine, to which may be added Accident and Burglary Insurance and Fidelity Guarantee. Each of these will be dealt with in some detail.

The contract of insurance is somewhat like a wagering contract, only for certain good reasons, the one is permitted by law, and the other is not. In order, however, that a contract of insurance may be valid, the insured must have what is called an "insurable interest" in the thing insured, otherwise the contract will be void. It is therefore necessary to understand clearly the meaning of the phrase "insurable interest."

INSURABLE INTEREST. In order to constitute an insurable interest, the person insured must have some pecuniary interest in the thing insured, or must be liable or accountable for any loss arising in regard to the thing which is insured. A few examples will make this plain:—

1. Thus, a man has an insurable interest in his own life, and as the contract of life insurance, unlike some of the other forms of insurance, is not a contract of indemnity, but an agreement to pay a certain sum on the happening of a given event, there is legally no limit to the amount for which a man may insure his own life, but practically there is, for no insurance office would accept a sum unreasonably large considering the station of life of the applicant.

2. A person may insure the life of another provided he has an insurable interest in that other's life; but such person cannot recover more than the value of the interest which he possessed in the life of the insured, at the time of effecting the insurance. But as life insurance is not a contract of indemnity, the insurable interest need not be a continuing one, it is sufficient if it existed at the time of effecting the policy. For example, a creditor may insure his debtor's life for the amount of the debt, and on the debtor's death he can recover the amount of the debt, even though the debt has been paid off.

3. As has been said, the interest in another's life must be *pecuniary*. Mere relationship is not by itself sufficient. Thus a wife has an insurable interest in the life of her husband, being dependent on him for support; so, too, children depending upon their father. But a husband has no such interest in the life of his wife, unless he has an income or other monetary advantage depending on her life.

4. Employers are often liable to their workmen in cases where the workmen have sustained injury, or have been killed in the course of their employer's business. Hence such employers have an insurable interest in the persons whom they employ.

5. As regards property, a person in order to have an insurable interest in it need not necessarily be the owner thereof. It is sufficient if he is responsible for loss of or injury to the property insured. For example, a trustee may insure the trust property, because he is liable if it is lost or injured; of course, if he receives the insurance money he will hold it, not for his own benefit, but for the benefit of the persons for whom he is trustee. A tenant may insure his house, but the landlord can insist that if the house is burned the insurance money will be employed in rebuilding the house. The same applies to common carriers in regard to goods intrusted to them for carriage, and to all those to whom goods are intrusted either by way of pledge or for safe custody, or for the purpose of having work done upon such goods.

6. It must be remembered that an interest, in order to be an insurable interest, must not be a mere expectancy or hope that the thing insured will one day belong to the person insuring that thing. The interest must be a right actually subsisting at the time of effecting the insurance. For example, the heir-apparent has no such interest in the property which he hopes at some future time to inherit, because such hope is not a right, for at any time the interest of the heir-apparent may be destroyed, by the owner making a will.

Besides having an insurable interest in the subject matter of the insurance, the person who wishes to insure against a risk must have capacity to make a valid contract. A married woman can now effect a policy upon her own life, or on the life of her husband, for her own separate benefit. Possibly also an infant could enter into a valid contract of life insurance, where the contract is in all respects for his benefit.

UBERRIMÆ FIDEI. Contracts of insurance belong to that class of contracts known as contracts *uberrimæ fidei* (i.e. of the utmost good faith) because the utmost good faith must be shown on either side. The person desiring to effect an insurance must not misrepresent or omit a material fact. If he knowingly or unwittingly misrepresent a material fact, the contract will be void, and he will be unable to recover the insurance money. In addition, the insurer must be informed of every material circumstance within the knowledge of the insured. Both the insurer and the insured must stand on an equal footing, otherwise the insurer would not be able to form an accurate estimate of the risk which he undertakes. It is a condition of the contract "that there is no concealment or misrepresentation either by the insured or by any one who ought as a matter of business and fair dealing to have disclosed the facts to him, or to the insurer for him."

To show how important it is that the proposal form should be filled up accurately, and that the proposer should not leave the filling up to a third person, the case of Beggar *v.* Rock Life Assurance Company provides a useful lesson.

In that case an accident insurance policy was effected with the company through their local agent. The local agent filled up the proposal form, making many false statements with regard to material matters, though these false answers were filled in without the knowledge or the authority of the applicant, who signed the proposal form without reading it. The proposal form contained a declaration in which the applicant agreed that the statements made in the proposal should form the basis of the policy, and the policy expressly stipulated that it was granted on the condition of the truthfulness of the answers in the proposal. Shortly after the policy had been granted, the insured was accidentally injured, and brought an action to recover the amount for which he was insured. It was held (1) that it was the duty of the applicant to read the answers in the proposal before signing it, and that he must be taken to have read them and adopted them; (2) that in filling in the false answers, the agent was acting not as agent of the company, but as agent of the applicant, who was bound by these false answers, and that therefore the policy was void, and the insured could not recover the insurance money.

LIFE INSURANCE.

"Life insurance is a contract by which the insurer in return for a lump sum, or a periodical payment, undertakes to pay to the person for whose benefit the insurance is effected, or to his executors, administrators or assigns, a certain sum of money or an annuity on the happening of a given event, or on the death of the person whose life is insured."

The contract of life insurance is not like that of fire or of marine insurance, a contract of indemnity. It is merely a contract to pay a certain sum on death. Hence there is no legal limit to which a man may insure his own life. If one person insures the life of another, he must, of course, have an insurable interest in that other's life, but the interest need not be a lasting one, all that is necessary is that he should have an insurable interest at the time of effecting the insurance. Accordingly, if a creditor insures his debtor's life for the amount of the debt, and the debtor afterwards dies, the creditor can recover the insurance money even though the debt has been paid off, long before the debtor died, provided that the debt was due when the policy was effected.

VARIETIES OF POLICY. The contract is set out in an instrument called the "policy of insurance," of which there is a great variety, the most common form being the whole life policy, where the sum assured is payable at death, either with or without profits. It is a mistake to use the word "profits" in this connection. What is paid beyond the sum insured is a portion of the accumulated profits on the investments of the company's funds.

1. In the "ENDOWMENT POLICY" the amount insured is payable at the end of a certain number of years, or at death, if death should take place before the period of years has expired. Should he survive to the end of the period, the person insured (1) may take the amount in cash, or (2) he may let the cash remain with the company to accumulate with interest, the whole to be paid on his death, or (3) he may take an annuity on the basis of the value of the policy. These endowment policies may either be with or without profits, according to the terms agreed upon. In some cases double the amount insured is paid to the insured, if he survives the stipulated age; in others, the policy states that only half the amount insured will be paid if the person insured dies before the term of years has expired.

2. Insurance may be effected for a term of years, during which, if the person insured dies, the sum insured will be payable on his death: for instance, a man may insure his life for one year, or for a longer period. The longer the period the higher is the premium. Similarly, insurance may be effected where the amount insured is payable only in the event of the policy-holder dying before a stipulated age.

3. A form of policy which has been introduced within recent years is the "NON-FORFEITABLE POLICY," which protects the insured against loss, in case he is unable or unwilling to keep up his premiums. Originally it was known as the "ten years' forfeiture plan." The premiums were payable during ten years only. If during that time the policy-holder discontinued paying his premiums, he was entitled to a free "paid-up policy," for as many tenths of the sum insured as he had paid yearly premiums. Most offices now-a-days, when a policy has been in force for a number of years, grant to the policy-holder a paid-up policy, in case he is unable to continue his premiums, so that a person who has unfortunately fallen on evil days does not lose the benefit of the premiums he has paid. He is not required to pay any further premiums, and in the event of his death his heirs get the benefit of the new policy, which usually, of course, represents a smaller sum than the amount orginally insured, but in some cases (in which profits have been allowed to accumulate) a larger, according to the age of the policy-holder and the length of time the old policy had been in force. This method might be adopted when the necessity for insurance had ceased.

4. When it is desired to keep the policy in force for the full amount, but the insured is unable for a period to continue the premiums, the companies are always prepared to advance on loan at 4 or 5 per cent. the premium due from year to year so long as 95 per cent. of the surrender value is not exceeded.

5. Again, a person may wish to insure in such a way that a provision may be obtained for his children or others depending on him, during the years in which they are unable to provide for themselves. If so, many life offices will meet his wishes. The sum insured is not paid on the death of the insured, but interest on it is allowed to the children for a period (usually twenty years), and at the end of that period the sum originally insured is paid over to the person or persons for whose benefit the policy was taken out. In this example, it would be paid to the children or their representatives.

6. A TONTINE POLICY is where several persons insure their lives, each for a separate amount. The amount is not paid on the death of each, but the total amount is paid when all the persons but one have died, and is paid to the survivor. This kind of policy is not often met with in this country, and it is doubtful whether such policy would be enforced by our Courts, inasmuch as it might be prohibited by the Lottery Acts. In America it is common enough, and the Courts there have decided that such a policy is not a wagering policy, and is therefore enforceable.

7. There are other varieties of policies, but description of them is unnecessary. It is sufficient to say, that many life offices, in their eagerness to increase their business, will do all in their power to grant such kind of policy as will meet the wishes of intending policy-holders. Some offices, indeed, now grant policies without requiring the person whose life is insured to undergo a medical examination. The premiums to be paid in this case are, of course, higher, or the terms, in other respects, less favourable.

8. A word may be said here in regard to what is known as "INDUSTRIAL INSURANCE." Its object is to provide money for funeral expenses, and it is the form of insurance adopted by working people, who in return for the payment of a penny, or of a few pence per week, receive a lump sum on the death of the person insured. Needless to say, these working people pay a very high price for insurance, for the expenses of management amount to nearly a half of the total incomes derived from premiums, which means that the offices which undertake this class of business cannot afford to give a large amount on the policy in return for the premiums paid. The expenses of management are due to the enormous number of canvassers and collectors that have to be employed. Contrast this with ordinary life insurance, where the expenses of management in well-conducted offices vary roughly from one-sixth to one-eighth of the annual income derived from premiums.

WHERE TO INSURE. In selecting an office in which to insure, a person should bear several things in mind:—

1. An office should be economically managed, the expenses of management bearing a just proportion to the annual income derived from premiums. The expenses should not as a rule exceed one-sixth of the annual pre-

mium income. In comparing expenses it is necessary to consider the cost separately of renewal business and new business. An office doing a large new business would have heavier expenses than one living chiefly on old policies, and yet might be in a better financial position.

2. Attention should be paid as to the manner in which the funds of the company are invested, for if the funds are invested in hazardous securities, there may come a time when the company will sustain serious losses on such investments, and if these losses are very heavy, it is needless to say that the policy holders will suffer.

3. Attention should also be given to the rate of interest assumed at the last valuation of the company's assets, and the amount actually earned. The rate assumed should be well under what might be fairly anticipated. The best offices value their funds at about 3 and actually earn about 4 per cent.

4. Further, the person who is about to effect an insurance should very carefully consider the way in which the company deals with those who are unable to keep up their premiums. Formerly, it was the usual practice to allow a policy to lapse on failure to pay a single premium, no matter how long the policy was in force, or how many and how large the premiums paid. Now-a-days, most life offices either grant a fully paid up policy in lieu of the old policy, or grant the surrender value of the old policy. Some life offices even quote the amount of the surrender value which they are prepared to give. The terms, therefore, of these matters should be carefully gone into. It may be mentioned that in order to obtain a surrender value, the policy must have been in force for at least three years, otherwise the insured will get no return if he discontinues payment of the premiums. Of course, the longer the premiums have been kept up the greater will be the surrender value of the policy.

5. Lastly, it is well not to insure in a foreign life office, for the simple reason that policy holders in this country are not able to exert any control over a foreign office, and in some cases may find it extremely difficult to obtain payment of the insurance money, for unless the foreign office has funds or assets here, our Courts would have no power to compel it to pay up. It is only fair to state that the objection to a foreign office, on the ground that no abatement of income tax is allowed on premiums paid to such an office, has been removed by the Revenue Act, 1906.

HOW TO INSURE. A person who wishes to insure his life will first apply to a Life Office, which will send him a proposal form for him to fill up. In this proposal form he is required to give accurate answers to the questions therein set out, concerning his health, his habits of life, and details of his family history, and he will generally have to pass a medical examination conducted by a medical man named by the company.

The greatest care should be taken in truthfully answering these questions in the proposal or declaration. For this proposal is the basis of the contract, and it is on the faith of the answers contained in it that the policy is granted, Accordingly, if the answers are untrue, however innocently they may be made, the policy falls to the ground, and the insurance money cannot be recovered, though the premiums paid may be returned, unless the untruthful answers have been wilfully or fraudulently made. In addition to the declaration, the life office usually requires a reference to one or two intimate friends of the person about to be insured. Their replies are treated as confidential. When all these requirements have been satisfactorily met, the life office grants the policy on payment of the first premium.

THE PREMIUM. The rates of premium differ in the various offices, some requiring a higher rate than others; but it by no means follows that the office which charges the lowest rate is the best in which to insure. Greater security, higher profits, or certain special advantages may more than compensate for the higher rates of premium. The rates also vary according to the kind of policy which is taken out. As a rule, the premiums are paid periodically, but in some cases the whole amount may be paid down at once, particularly in the case where the sum insured is payable at the end of a fixed term of years.

CONDITIONS ON WHICH THE POLICY IS GRANTED. These conditions are printed on the back of the policy. Among other things they provide that if there is any untrue statement in the proposal, or if any material information be withheld, the policy shall be void, and all moneys paid thereon shall be forfeited. Many offices, however, now agree that a policy that has been in force for a certain period shall be good, even though there may be a material error or non-disclosure in the proposal. Other conditions restrict the insured from travelling in certain parts of the world, or engaging in military or naval service; but what are called world-wide policies are now frequently granted. Again, if the insured is killed in a duel, or die by his own hand, or by the hand of justice, the policy usually becomes void. In regard to suicide, some companies agree that it will not affect the policy should the insured die by his own hand, after the policy has been in force for a certain time. Other offices will in that case return the premiums, or allow the surrender value of the policy. Two or three details may here be added:—

(1) The policy will not become void if the premium is paid within one month after it has become due.

(2) Printed receipts for the payment of the premiums, signed by a director or by an agent of the company must be given, otherwise payment is not considered to have been made to the company.

(3) Payment of the insurance money is made on proof of death. Life offices usually admit the age of the deceased, on satisfactory evidence being given at the time the insurance is effected. Such admission should, however, be endorsed on the policy.

ASSIGNMENT OF POLICY. A policy may be assigned either by an instrument in writing, or by indorsing the policy, that is by stating on the back of the policy that the policy-holder transfers it to the person to whom it is to be assigned, mentioning that person's name. The assignee can then recover the insurance money on the death of the person insured, even if he have no insurable interest in that person's life. The indorsement on the policy would require to be duly stamped and executed, and on this account a solicitor should be engaged.

A life policy belonging to a bankrupt will pass to his creditors. But if a married man insures his own life, for the express benefit of his wife or children, the creditors cannot touch the policy. They may, however, receive out of the money payable under the policy the premiums that have been paid, where such premiums were paid with intent to defraud the creditors.

DIFFERENT KINDS OF LIFE OFFICES. There are two kinds of life offices, viz., Proprietary and Mutual. The PROPRIETARY OFFICE is a Joint Stock Company, the shareholders of which are entitled to all the profits arising from the company's investments. Usually they are content with ten per cent of the profits, leaving the surplus to be divided amongst the policy holders. The share capital is usually very small compared with the total funds of the company. The MUTUAL OFFICE is in all respects similar, except that it has no shareholders and no subscribed capital. The whole of its profits are therefore divisible among the policy holders. Its assets entirely consist of its invested funds.

CONTROL EXERCISED OVER LIFE OFFICES. Every life insurance company established since 1870 in the United Kingdom must deposit £20,000 in the High Court, and no certificate of incorporation can be issued until the deposit has been made. As soon as the insurance fund accumulated out of premiums amounts to £40,000, the deposit is returned. If the company carries on other business besides that of life insurance, the receipts in respect of the life insurance must be kept in a separate account, and be placed in a separate fund called the life insurance fund of the company. This fund must exist solely for the security of holders of life policies, as though the company carried on no other business than that of life insurance.

Every life office doing business in this country must

render annual accounts and reports to the Board of Trade. Copies of these must be furnished to the policy-holders when required. It must be remembered, however, that the Board of Trade has no control over the conduct of a life office when once it has been started. There is therefore no guarantee that the business of any company is being properly carried on.

STAMPS. Policies of life insurance must be stamped as follows:—

	s.	d.
Where the sum insured does not exceed £10 ..	0	1
Exceeds £10 but does not exceed £25	0	3
Exceeds £25 but does not exceed £500, for every £50 or part of £50	0	6
Exceeds £500 but does not exceed £1,000, for every £100 or part of £100	1	0
Exceeds £1,000, for every £1,000 or part of £1,000	10	0

On policies of insurance against accident or sickness, the stamp duty is one penny. Policies of insurance against Employer's Liability are chargeable as agreements—that is, if under hand, 6d.; if under seal, 10s.

Notices in newspapers purporting to insure against accident or death do not require a stamp. The duty is compounded for in accordance with the Stamp Act of 1891 and the Finance Act of 1896.

FIRE INSURANCE.

Fire insurance is a contract of indemnity by which the insurer, in return for the payment of a sum of money called the premium, agrees to compensate the insured for any loss or damage (not exceeding a specified amount) to his property, caused by fire during a given period. The maximum amount of compensation which can be claimed is stated in the policy, but of course the insured will not necessarily receive this amount should his property suffer from fire. He will receive such compensation only as will cover the amount of damage done by the fire, which amount can only be ascertained after the fire has occurred. There is therefore no advantage in over-insuring property, or in insuring the property for its full value in each of several different offices. For in that case, the various offices will bear the loss in proportion to the amount insured with them. For example, the owner of a house worth £1,000 insures it in one office for £1,000, in a second for £1,200, and in a third say for £1,400. The house is afterwards totally destroyed by fire. The first office will pay to the insured something less than £280, the second will contribute £333 6s. 8d., and the third a trifle less than £390. It is clear, therefore, that the insured will not be allowed to make a profit out of a fire, that is if the fire offices can help it.

Further, as the contract is a personal one between the insurer and the insured, if the property is sold the purchaser has no right to demand the benefit of the vendor's insurance, should the property be destroyed or damaged by fire. The vendor is bound to get paid in any case by the purchaser, and therefore, as the contract of fire insurance is only one of indemnity, the vendor cannot recover from the insurance office for the simple reason that he has not sustained any loss. In one case a vendor had entered into a contract for the sale of a house at a given date. The vendor had insured the house, but no mention of this was made in the contract. Between the date of the contract and the time fixed for transferring the house and the paying over the purchase money, the house was burned. The insurance company, not knowing of the sale, paid the insurance money to the insured (the seller of the house), who had sustained no loss, because whatever loss resulted from the fire fell on the purchaser, since he was the real owner of the house from the moment that the contract to sell the house had been made. It was held that the company could recover the money from the insured, as money paid in mistake. It should also be remembered that if the insurance company pays the amount of the loss, and the insured receives in addition compensation from any other source, the company is entitled to recover from the insured the amount of such compensation, because the contract of fire insurance is a *contract of indemnity*.

In the case mentioned above, in order to protect the purchaser and to give him the benefit of the policy, the safest course is for the vendor to indorse the policy to the purchaser, and if the company approves of this by initialling the policy, and entering the transaction in their register, the purchaser will be protected in case of fire, for he has really entered into a contract of insurance with the company.

The person wishing to effect a fire insurance must have capacity to contract, and must have an insurable interest in the property insured, i.e., he must have some pecuniary interest in it, or be liable for loss or damage that may happen to the property. And as the contract is one of indemnity, the insurable interest must be continuing, that is, he must have the interest both at the time of insuring and at the time of the happening of the fire. In this respect fire insurance differs from life insurance.

HOW TO INSURE. A person wishing to insure against fire obtains a proposal form from a fire office. This he fills up, but in most cases the agent of the company fills in the particulars. In doing this, the agent of the company is acting as agent of the proposer, and therefore the proposer should see that the answers to the questions are correct. There should be no concealment, or misrepresentation, or the omission of anything likely to affect the company's estimate of the risk which it is asked to undertake: otherwise the policy will be absolutely void.

THE PREMIUM. The rate of premium varies according to the nature of the property insured. On ordinary risks, e.g., dwelling houses, the rate is usually 2s. per cent. and seldom less than 1s. 6d. per cent. In the case of factories, shops, etc., that entail more than ordinary risks, and in the case of theatres, distilleries, chemical works, and the like, which are exposed to peculiar danger, rates are fixed by special arrangement, the premium in extreme cases being £2 or even £3 per cent.

Fire insurances are usually effected for a year, the policy being renewable on the payment of another premium. Fifteen days, called "days of grace," are allowed at the end of the year in which to renew the policy, and during that time the company is liable, provided that it is intended by both parties to renew the policy. When those fifteen days have expired, the mere fact that a local agent of the company has accepted the premium is not in itself sufficient to make the company liable, but it would be liable if it had received the money from the agent.

THE CONDITIONS UNDER WHICH THE POLICY IS GRANTED. These conditions forbid the removal of the property insured, or the transfer of the property to another without the assent of the company. The risk must not be increased without the assent of the company. If the claim is fraudulent, or if no claim for the insurance money is made within three months after the fire, or if the fire is caused by the wilful act or connivance of the insured, the insurance money will not be paid.

Persons about to insure should be very careful in scrutinising what is known as the "Average Clause" in a policy, otherwise in case of a fire they may receive very much less than they expected. The clause deals with property which is under-insured, i.e. not insured to its full value, and it states that in case of a *partial* loss, the insured will receive a sum bearing the same ratio to his loss, as the amount for which he insured bears to the value of the property insured. For example, property worth £6,000 is insured for £4,000. Loss is caused by fire to the extent of £1,200. Here the insured will obtain not £1,200 but £800. Because as he insured his property for two-thirds of its value, he can recover only two-thirds of the loss. Of course the average clause deals only with *partial* loss, for where the loss is *total* the whole of the insurance money is recoverable.

A FEW ADDITIONAL DETAILS of some importance are here given.—

(1) When a loss occurs, notice should be given in writing to the company within fifteen days, accompanied by full particulars of the goods destroyed, with an estimate of their value. The company will only pay the actual value of the property at the time of the fire.

(2) It may be mentioned, that when a building is burned

down, the landlord, or the insurance company, or any other person interested in it, may insist on the insurance money being expended in re-building or replacing the structure.

(3) In the Metropolitan District, damage done by the Fire Brigade in the execution of their duty is to be deemed damage caused by fire; and the insurance company is liable for such damage.

(4) A policy of fire insurance can be assigned by indorsing on it the company's assent to the assignment.

(5) Every policy of fire insurance must bear a penny stamp.

MARINE INSURANCE.

The contract of marine insurance "is a contract of indemnity in which the insurer, in consideration of the payment of a premium, agrees to make good to the insurer all losses not exceeding a certain amount, that may happen to the thing insured, from the risks enumerated in the policy, during a certain voyage or period of time." The person effecting the insurance must have an insurable interest in the thing insured; and this interest must be a continuing one, that is, the insured person must have an interest in the subject matter of the insurance, not only at the time of effecting the policy, but also at the time when the loss occurred. A contract of marine insurance is one in which the utmost good faith must be shown. Any misrepresentation, or concealment, or non-disclosure of a material fact renders the policy void. Everything likely to influence the insurer in estimating the risk which he is asked to undertake must be made known to him.

In effecting a policy of marine insurance with the underwriters (who are the insurers), it is usual to employ a broker, who is remunerated by a commission on the amount of the premium paid to the insurers. The insurers are called underwriters, because they subscribe their names to the policy of insurance. The broker writes on a printed form called the *slip* the particulars of the matter to be insured, and brings it to the underwriter, who accepts the risk by signing his name or his initials on the slip, together with the amount for which he offers to become responsible. The same can be done by the underwriter giving to the broker, on behalf of the insured, a document signed by himself and containing similar particulars as are contained in a slip. This document is called a *covering note* or an *insurance note*. The slip or note is not the contract itself, but each merely provides the particulars on which the contract is founded, which contract is afterwards set out in the policy. It is the policy which binds the insurer, because that is the contract between the parties. The slip is not the contract, and the underwriter is not bound in law by it, but no underwriter would dream of disputing his liability on the slip or note to which he had appended his signature or initials.

VARIETIES OF POLICY. There are several varieties of policies, of which the following may be mentioned:—

A VOYAGE policy is one in which the property is insured while in transit from one place to another. A TIME policy is one in which the property is insured for a certain period of time. A MIXED policy is one in which a ship is insured in her voyages from one certain place to another certain place during a fixed period of time, e.g., "At and from Dover to Ostend for six months." A VALUED policy is one in which the precise value of the thing insured is inserted in the policy. In an OPEN policy, the value of the thing insured is not mentioned in the policy, so that in case of loss or damage, the value of the thing must be ascertained and proved. In a NAMED policy the name of the vessel on which the thing insured is carried is inserted in the policy; while in a FLOATING policy the vessel is not named, the thing insured being protected, no matter in what ship it may be carried. INTEREST policies are those in which the policy holder has a real interest in the property insured. In a WAGER policy the insured has not an insurable interest in the property insured; it is a mere gambling transaction, and unenforceable in law.

INTEREST OR NO INTEREST. The Marine Insurance (Gambling Policies) Act of 1909, provides that

(a) If any person effects a contract of insurance without having any bona fide interest, direct or indirect, either in the safe arrival of the ship in relation to which the contract is made, or in the safety or preservation of the subject matter insured, or a bona fide expectation of acquiring such an interest; or *(b)* if any person in the employment of the owner of a ship, not being a part owner of the ship, effects a contract of marine insurance in relation to the ship, and the contract is made "Interest or no Interest," or without further proof of interest than the policy itself, or "without benefit of salvage to the insurer," or subject to any other like terms, the contract shall be a contract by way of gambling on maritime perils, and the person effecting it shall be guilty of an offence, and shall be liable on summary conviction to imprisonment with or without hard labour, for a term not exceeding six months, or to a fine not exceeding £100, and in either case to forfeit to the Crown any money he may receive under the contract.

Like penalties are imposed on brokers or others who arrange such gambling contracts. Proceedings under this Act must not be instituted in England without the consent of the Attorney General, in Scotland of the Lord Advocate, and in Ireland of the Attorney General for Ireland.

ASSIGNMENT OF POLICY. A policy of marine insurance is assignable, but the person to whom it is assigned must also have the insurable interest transferred to him. The assignee of a policy takes it subject to the equities, that is, whatever defence the insurer would have against the original policy-holder he can set up the same defence against the assignee. For example, if the insured had made a fraudulent misrepresentation to the insurer, he could not recover the insurance money, and had the policy been assigned to another, neither could such assignee recover the insurance money.

RE-INSURANCE. When an underwriter, after subscribing his name to a policy, finds the risk is greater than he anticipated, he tries to secure himself by re-insuring with another underwriter. The second underwriter will, of course, charge a very high premium, and will in return consent to bear the risk or a part of it. The re-insurance is upon the same risks and under the same conditions as are contained in the original policy, and in no way affects the liability of the original insurer to the person insured. As an illustration, take the case of a vessel which is over-due; the underwriters fear that the ship is lost, and accordingly they insure themselves against the loss by inviting other underwriters to bear either the whole or a part of it. Of course, as the risk is very great, a very high premium will be charged, and the longer the vessel is overdue, the more likely she is to be lost, so that the premium on the re-insurance will rise higher and higher, until sometimes it may be eighty or ninety guineas per cent.

STAMP DUTIES. See table of "Stamp Duties," on p. 684.

MARINE POLICIES. The common form of marine policy is Lloyd's, all other policies being based on it, and differing from it only in shape and in grammatical accuracy. The text of the policy runs:—

LLOYD'S FORM OF MARINE INSURANCE POLICY.

S. G.

£

Delivered the

day of

19...

Be it known that A.B. as well in his own name, as for and in the name and names of all and every other person or persons to whom the same doth, may or shall appertain, in part or in all, doth make assurance and cause himself and them and every of them to be insured, lost or not lost at and from upon any kind of goods and merchandise, and also upon the body, tackle, apparel, ordnance, munition, artillery, boat and other furniture, of and in the good ship or vessel called the whereof is master, under God, for this present voyage or whosoever else shall go for master in the said ship, or the master thereof, is or shall be named or called, beginning the adventure upon the said goods or merchandise from the loading thereof aboard the said ship, *as above* upon the said ship, &c., *as above* and shall so continue and endure during her abode there, upon the said ship, &c.; and further, until the said ship, with all her ordnance, tackle, apparel, &c., and goods and merchandise whatsoever, shall be arrived at upon the said ship,

&c., until she hath moored at anchor, twenty-four hours in good safety, and upon the goods and merchandise until the same be there discharged and safely landed: and it shall be lawful for the said ship, &c., in this voyage to proceed and sail to and touch and stay at any ports or places whatsoever without prejudice to this insurance. The said ship, &c., goods and merchandise, &c., for so much as concerns the assured, by agreement between the assured and the assurers in this policy, and shall be valued at

Touching the adventures and perils which we the assurers are contented to bear and do take upon us in this voyage, they are of the seas, men-of-war, fires, enemies, pirates, rovers, thieves, jettisons, letters of mart and counter-mart, surprisals, takings at sea, arrests, restraints and detainments of all kings, princes and people, of what nation, condition, or quality soever, barratry of the master mariners, and of all other perils, losses, and misfortunes that have or shall come to the hurt, detriment, or damage of the said goods and merchandise, and ship, &c., or any part thereof: and in case of any loss or misfortune it shall be lawful to the assured, their factors, servants, and assigns, to sue, labour, and travel for, in, and about the defence, safeguard, and recovery of the said goods, merchandise and ship, etc., or any part thereof, without prejudice to this insurance: to the charges whereof we, the assurers, will contribute each one according to the rate and quantity of his sum herein assured. And it is expressly declared and agreed that no acts of the insurer or insured in recovering, saving, or preserving the property insured, shall be considered as a waiver or acceptance of abandonment. And it is agreed by us, the insurers, that this writing or policy of assurance shall be of as much force and effect as the surest writing or policy of assurance heretofore made in Lombard Street, or in the Royal Exchange, or elsewhere in London. And so we, the assurers, are contented, and do hereby promise and bind ourselves, each one for his own part, our heirs, executors and goods, to the assured, their executors, administrators and assigns, for the true performance of the premises, confessing ourselves paid the consideration due unto us for this assurance by the assured at and after the rate of

IN WITNESS whereof, we, the assurers, have subscribed our names and sums assured in London.

N.B.—Corn, fish, salt, fruit, flour, and seed are warranted free from average, unless general, or the ship be stranded; sugar, tobacco, hemp, flax, hides and skins are warranted free from average, under five pounds per cent.; and all other goods, also the ship and freight free from average under three per cent., unless general, or the ship be stranded, sunk, burnt, or on fire.

It may be well to explain some of the phrases in this form of policy, as their meaning is not obvious at first sight.

1. The letters "S. G." probably stand for Ship, Goods, though this is somewhat doubtful.

2. The words "DOTH, MAY, OR SHALL APPERTAIN" signify that the person effecting the insurance insures not merely for himself, but for the benefit of all those who shall afterwards have the same interest in the thing insured as he himself originally had. But this benefit will not extend to alien enemies who may have acquired that interest.

3. "LOST OR NOT LOST." These words imply that both the insurer and the insured stand on the same footing as regards their knowledge of the safety of the thing insured. If the insured knows that the thing insured has perished, and conceals this fact from the insurer, he will not be able to recover the insurance money, and in addition, he will forfeit the premiums which he may have paid. If, on the other hand, the underwriter knows that the property insured is quite safe, having reached its destination, and conceals this fact from the insured, who is under the impression that the ship or the goods have not yet arrived, the premiums will have to be returned to the insured.

4. "AT AND FROM." These words are intended to cover not merely the risks to which a ship is exposed while voyaging from a given place, but also while she remains at that place.

5. "WHEREOF IS MASTER UNDER GOD IN THIS PRESENT VOYAGE." The name of the skipper need not necessarily be inserted in the policy.

6. "AND IT SHALL BE LAWFUL FOR THE SAID SHIP, ETC., IN THIS VOYAGE TO PROCEED AND SAIL TO AND TOUCH AND STAY AT ANY PORT WHATSOEVER. . . . WITHOUT PREJUDICE TO THIS INSURANCE." These words do not mean what they seem to convey. What is meant is, that the ship may touch at such places only as are in *the course of the voyage usually taken by* ships travelling from and to the places mentioned in the policy. For instance, a ship insured from London to Lisbon would not be permitted to touch say at Hull, unless driven out of her course by stress of weather or some other peril, such as to escape an alien enemy. If she did so, the policy would be void, for by deviating from the course usually taken by ships voyaging from London to Lisbon, risks would be incurred that the underwriter had not contemplated when he subscribed his name to the policy. A ship will be allowed to deviate from her course for the purpose of saving life, but not to save property.

7. "PERILS OF THE SEA." These words do not cover every loss which may occur upon the sea, but only such losses as arise from some casualty, or some accident which could not be foreseen as one of the necessary incidents of the adventure. For example, they do not include natural wear and tear by the action of the sea, or loss to the cargo, when it deteriorates from some fault inherent in itself.

8. "JETTISON" is where the cargo or a portion of it is thrown overboard in order to save the ship, or the remaining portion of the cargo. The jettison must be honestly done with this intention, for if done wrongfully, the insurance money cannot be recovered. Further, it usually refers to cargo stowed under deck. If deck cargo is jettisoned, the underwriters will not be liable, unless this is expressly stipulated in the policy.

9. "BARRATRY" includes every species of wrongdoing committed by the master or the crew with the intention of benefiting themselves at the expense of the owners, and also every wilful wrongful act, by which the owners are put to a loss, e.g., scuttling or setting fire to the ship, abandoning the voyage without just cause, stealing the cargo or any part of it, and the like.

In the space following the phrase "in witness whereof," the underwriters subscribe their names, the portion of the premium paid to each and the amount of the loss for which each undertakes to become responsible.

"N. B." The clause beginning with these letters is known as the Memorandum.

10. "WARRANTED FREE FROM AVERAGE UNLESS GENERAL," means that in the case of the articles enumerated the underwriters will not be liable for any loss or damage resulting to them, unless the ship is stranded, or except the loss is a total one.

In regard to the second and third exceptions in the memorandum, the underwriters will not be liable for any loss not amounting to five per cent. and three per cent. of their value respectively, unless general, or the ship be stranded, sunk or burnt. For example, suppose the cargo is tobacco worth, say, £10,000. Through the perils of the sea the tobacco is damaged to the extent of £450. In this case the underwriters cannot be compelled to make good the loss, as the loss does not amount to five per cent. of the value of the tobacco. Had the damage amounted to £500 or upwards, the underwriters would have to make good the loss. For further information on the subject of average, see under *Shipping*.

ACCIDENT INSURANCE.

Accident insurance is a contract by which the insurer, in return for the payment of a premium, undertakes to provide against loss if the insured sustains injury or disablement, either partial or temporary, or to pay to the personal representatives of the insured if he meets with death in a particular way. In accident insurance the person effecting the insurance must have an insurable interest in the life insured, and as the contract is one in which the utmost good faith must be shown, the greatest care should be taken to guard against mis-statements. There must not be any concealment or omission of material facts. Every circumstance known to the insured which would be likely to cause the insurer to charge a higher premium, or to decline the risk altogether, must be disclosed.

As the contract of accident insurance is not one of indemnity but merely to pay a certain sum on the happening of a given event, there is no limit to the amount for which a life may be insured against accident. The insurable interest need not be a continuing one, it is sufficient if the interest exists at the time of effecting the insurance.

RATES OF PREMIUM. The rate of premium is determined chiefly by the occupation; but "every circumstance touching the profession, business, occupation, or habits of life," which may render the person whose life is to be insured peculiarly liable to accident, will be inquired into, so as to enable the insurer to fix the rate of premium.

According to the occupation, the risks are divided into three classes—ordinary, medium, and hazardous. To insure for £100 in case of death, with full benefits for disablement, the rates are in some offices 8s. 6d. a year for the ordinary, 12s. for the medium, and 14s. for the hazardous risks. The corresponding rates for £1,000 are £4 a year, £5, and £6 a year. These rates only apply to accidents happening in Europe: but some offices issue world-wide policies at considerably higher rates.

CONDITIONS OF COMPENSATION. No compensation will be given unless the death or injury result from some external and material cause. In case of death, such death must take place within three months of the accident. Disablement must take place within one month of the accident. If death or injury results from a breach of the law, or by suicide, or while the insured is intoxicated, or because he rashly rushed into danger, no payment can be recovered. The amount which can be recovered if the insured meets with more than one accident in the year is limited. If compensation has been given for disablement, and the insured afterwards dies, the amount of compensation will be deducted from the amount payable on death. Unless the policy is a world-wide one, it will be void if the insured goes out of Europe. The insured ought not to undertake a more hazardous occupation, otherwise the policy will be void, because he is increasing the risk. Claims for compensation should be made in writing usually within fifteen days, together with full particulars of the accident.

ADDITIONAL DETAILS. It may be useful to state that—

(1) Every policy of accident insurance must bear a penny stamp.

(2) A period of fifteen days, called days of grace, is allowed after the premium becomes due unless either side has determined not to renew the insurance.

(3) The various accident offices will not accept or even renew a risk, where the person whose life is to be insured is over sixty-five years of age, and in some offices the limit is sixty years of age.

FIDELITY GUARANTEE.

Fidelity guarantee ought hardly to be classed under insurance. It is a contract to make good the default of another, and therefore is akin to the contract of suretyship. Mere non-disclosure of facts will not vitiate the policy, unless the concealment be fraudulent. The premium may be paid in a lump sum or by instalments. The rates vary according to the responsibility of the persons whose fidelity is guaranteed. The appended list will give an idea of the rates usually charged.

Secretaries and Managers	from 10s. per cent.
Clerks and Cashiers	„ 10s. „ „
Branch Managers and Collectors ..	„ 20s. „ „
Travellers (on salary and expenses)	„ 25s. „ „

Special quotations may be made for guaranteeing an entire staff. When an entire staff is guaranteed, the policy may be either a *collective* or a *floating* policy.

A COLLECTIVE POLICY is one under which a particular amount to be agreed upon as the limit of the insurance company's liability is placed against the name of each individual member of the staff, in a schedule indorsed on the policy. In case there is a change in the staff, the necessary alterations may be made on the back of the policy.

A FLOATING POLICY is one under which an employer is secured against any loss up to the full amount mentioned in the policy, whether the defalcations be committed by *any one* of the members of the staff, or by *any number* of the members of the staff.

STAMPS. Where the sum guaranteed does not exceed £300 the duty is 2s. 6d. per cent. In any other case the policy must bear a 10s. stamp.

BURGLARY INSURANCE.

Burglary insurance is a recent development in the business of insurance. Generally speaking, the law in regard to fire insurance applies to burglary insurance, so that nothing further need be said on this part of the subject. The rate charged in regard to loss by burglary or housebreaking is usually 1s. 6d. in every £100's worth of goods insured. If the insured wishes to insure against theft either by strangers or by workmen or servants employed in his house, the rate is 2s. per cent. Against burglary, housebreaking, theft, and fire, the rate is in some offices 3s. 6d. per cent. Thus, if a house-holder effected such a combined policy on goods worth £2.000, the annual premium would be 3s. 6d. for every £100's worth of goods insured, that is, £3 10s. altogether. Every such policy must bear a penny stamp.

SHIPPING.

WHAT CONSTITUTES A BRITISH SHIP. In order to constitute a British ship, it must be registered as such, and must be wholly owned by British subjects, i.e. natural-born British subjects, or naturalized aliens, or corporations established under and subject to the laws of some part of the British Empire, and having its principal place of business in some part of the British Dominions. An alien cannot own a British ship, or any share or interest therein; but a limited company composed entirely of foreigners can own a British ship provided the company is registered in England, and its business is managed or carried on in England.

REGISTRATION. The owner or his agent may register a ship at any port of the British Empire. This port is the port to which the ship belongs, and is called the port of registry. Prior to registration, certain details regarding the name of the ship, the port of registry, the tonnage, and the draught must be painted or marked on the vessel. A certificate of survey, and on the first registration a builder's certificate, giving the tonnage and build of the vessel must be furnished. The owner must state his qualification to hold a British ship, the name of the master, and that no unqualified person has any interest or share in the vessel.

When the ownership of the vessel changes hands, this fact must be endorsed on the certificate of registry. If the ship is lost or ceases to be a British ship, the certificate must be given up.

OWNERSHIP OF A BRITISH SHIP. Formerly the property in a British ship was always divided into sixty-four shares, and not more than sixty-four persons could be registered as owners of one ship, although any number of persons not exceeding five could be registered as one person owning a single share. To avoid the unlimited liability thus incurred it is now usual for all shipping to be registered as the property of a limited liability company, under the Companies' Acts.

DUTIES OF OWNERS. The owners must see that the ship is sea-worthy, and must repair any damage which might render the vessel unsafe after the voyage has begun. They must appoint a proper master and crew, and must pay for all "necessaries," a term which includes "all that is fit and proper for the service in which the vessel is engaged, and that the owner, as a prudent man, would have ordered if present."

CO-OWNERS. Where a ship is owned by several persons, they are not partners, unless they have agreed to become so. If they are partners, each can bind the others by any contracts into which he may have entered on behalf of the ship.

In fact, their rights and liabilities are determined by the law of partnership. Where the owners constitute a Limited Company, their rights and liabilities are determined by the law relating to public companies. But where the owners are neither partners nor members of a limited company, their position is akin to that of tenants in common. Each may transfer his share when he pleases, and he cannot make the others liable on his contracts: e.g., if he orders work to be done on the ship, he is personally liable for the debt incurred, though he may be entitled to contribution from the others.

POWERS OF MANAGING OWNER. It is usual, however, when a ship is owned by several persons, to appoint an individual to manage the ship. He is called the "ship's husband," or if he is himself one of the owners he is termed the "managing owner." The ship's husband or managing owner is the agent of the owners for doing all the ordinary business of the ship: e.g., he may enter into contracts for carrying goods in the ship, or for chartering her. He must see that necessaries are provided, and he must do whatever is required "to enable the ship to prosecute her voyage and to earn freight." Generally speaking, he can within the scope of his authority bind the owners by contracts made by him on behalf of the ship. He cannot, however, engage her for an unusually long period in advance, for this would be taking her out of the control of the owners. Each part-owner must pay his share of all the expenses properly incurred by the ship's husband.

RIGHTS OF PART-OWNER. A part-owner may object to a voyage on which the other owners may intend to send the ship. In such a case the Admiralty Court may arrest the ship until the majority have given security for the value of the shares held by those who object. If, then, the ship is lost on the voyage, the persons who objected obtain the value of their shares, and are not liable for any expenses, but they cannot claim any of the profits earned on the voyage.

> Sometimes a minority of the owners may insist on a sale of the ship, but the Court will not in such a case decree a sale, unless all the parties concerned will benefit by the transaction.

Part-owners are entitled to have accurate accounts rendered to them, either at the end of the voyage, if it is a long one, or if the ship is employed in short voyages, then within a reasonable time. The managing owner, or the ship's husband, renders these accounts. Part-owners are entitled to inspect books, vouchers, &c. They may enforce these rights, either by arresting the ship or by bringing an action against the ship's husband or those owners who are managing the ship.

SALE OF A BRITISH SHIP. The sale of a British ship, or of any share in it, must be by a Bill of Sale in accordance with the form given by the Merchant Shipping Act of 1894, and must be attested by two witnesses. The transferee must make a declaration that he is qualified to hold a British ship, and that no unqualified person has any interest in her. The Bill of Sale and the declaration are registered, and the fact of the registration is indorsed on the Bill of Sale itself.

Where the transfer takes place through the death of the owner, his executor or administrator may be registered in his place. If the owner becomes bankrupt, his trustee may be registered. But in such cases the transferee must be qualified to hold a British ship, otherwise he must, within four weeks of the transmission, apply to the Court for an order for the sale of the share or the ship. If this application is not made within the prescribed time, the ship or the share is liable to be forfeited. In certain cases this time may be extended to a year.

MORTGAGE OF A BRITISH SHIP. A mortgage must be in the prescribed form, and must be registered. Mortgages take priority according to the order in which they are registered. The mortgagee does not become the owner of the ship, but if he is the first mortgagee he may sell it in default of payment, or seize the ship if his security is being impaired. Subsequent mortgagees cannot take possession, but they may have a receiver appointed.

A mortgagee has no right to any earnings before he takes possession. He is, however, entitled to freight, if he takes possession after it becomes due, but before it is actually paid. A mortgagee ought to sell the ship as soon as possible after he takes possession, but where this cannot be done, he may employ the ship and earn freight. When the mortgage is paid off, or is transferred, the transaction must be registered.

BOTTOMRY BOND. When it is a matter of vital importance to raise money for the proper completion of the voyage, and there is no time to communicate with the owners, and the master has exhausted every other means for raising money, he may hypothecate the vessel, and in some cases the cargo also, i.e. he may give a bond or written instrument for the loan of money advanced on the security of the ship and freight. This bond binds the owners to repay the loan within a limited time after the safe arrival of the ship, but if the ship does not arrive safely, the money is not repaid. Indeed, a bond making the loan payable, whether the ship arrived or not, would be void. The cargo cannot be hypothecated for the benefit of the vessel unless in cases of urgent necessity, and unless the cargo will receive some benefit out of the transaction. The master ought to communicate if possible with the owners of the cargo before hypothecating their property; and if the cargo is seized by the lenders of the money under the bond, the owners of the cargo are entitled to adequate compensation from the ship-owner. The holder of a bottomry bond has a right to be paid before a mortgagee, but will not be paid until claims for wages or for salvage have been satisfied. Where several bottomry bonds have been given on the security of a ship, the last bond-holder takes priority over the others, because the last loan furnished the means of saving the ship, and without it the prior lenders would have entirely lost their security.

RESPONDENTIA BOND is where the cargo alone is hypothecated. These bonds are not often met with nowadays, owing to the ease with which the masters can communicate with their owners. Sometimes, however, the owners themselves may hypothecate their property by means of these bonds.

THE MASTER. The master must be a properly qualified person certified by the Board of Trade. He must navigate the ship in a proper manner, and keep an official log. He is liable for *barratry*, i.e., any fraudulent or illegal act by which the owner's interests are in any way injured. He has a maritime lien for his wages, and for all expenses properly incurred by him on behalf of the ship. The master (or ship's agent) must sign bills of lading for all goods taken on board, and must deliver the cargo to the persons entitled, on being paid the freight. He may sell the ship, or hypothecate the ship or the cargo, where it is impossible to communicate with the owners in time, and where it is in their interests to sell or hypothecate. He may jettison, or throw the cargo overboard, where it is necessary for the safety of the ship.

SEAMEN. Every precaution is taken to safeguard the interests of merchant seamen, not only as against their employers, but as against those on shore who would be likely to prey upon them. These provisions are set out in the various Merchant Shipping Acts, 1854-1894, and deal with the engagement, treatment, discharge and the payment of wages of the seamen. It is not necessary to deal with these matters in detail, but a word or two may be said as to the rights and duties of seamen.

(*a*) Seamen's Rights. As regards the rights of merchant seamen, the ship-owner is bound to see that the vessel is sea-worthy. If the seaman is improperly discharged he is entitled to not more than a month's wages, in addition to the wages actually earned. He has a right to be properly fed, and to have compensation for bad or insufficient food. If he falls ill, or sustains injury in the service of the ship, he must have medical attendance free of charge. He must be paid his wages. He is, however, liable to forfeit all or part of his wages in the following cases:—

(1) If he deserts, or neglects to join his ship, or absents himself without leave; (2) if he is guilty of wilful disobedience or continued neglect of duty; (3) if he embezzles or wilfully damages the owner's property, and (4) if he is guilty of smuggling whereby his owners are involved in loss.

(*b*) **Seamen's Duties.** A seaman must obey the orders of his superior officers, and must do his best to bring the voyage to a successful conclusion. Hence, any agreement to pay him extra for performing his *ordinary* duties is void; an example will make this clear. During a voyage two of the crew deserted. The master promised the rest of the crew that the wages of the deserters would be divided amongst them if they consented to work the ship home. It was held that the crew could not compel the owners to observe the promise made by the master. If, however, the number deserting had been so great as to make it dangerous to navigate the ship, the promise could have been enforced.

(*c*) **Seamen's Remedies.** A seaman can sue for wages due to him, or he may enforce his lien for wages by arresting the ship and bringing an action in the High Court. This lien or claim for wages takes priority over the claims of a mortgagee, over the lien of the master, and in some cases over the claim of the holder of a bottomry bond. Where the amount of his wages is under £150, the seaman may sue in the County Court, if under £50 he may sue in the Police Court, or other Court of summary jurisdiction.

SHIP'S PAPERS. These papers must be carefully and accurately kept, particularly in time of war, so as to show the nationality of the ship and the nature of her cargo. This is of great importance to neutral ships in time of war, for it shows to the belligerents whether the ship is engaged in lawful trade, and not carrying contraband of war. Any omission in regard to these papers may render a neutral ship liable to capture. The ship's papers usually consist of (1) the Certificate of Registry, (2) the Agreement with the Seamen, (3) the Charter Party (if there is one), and the Bills of Lading, (4) the Manifest, or the invoices of the goods on board, (5) the Official Log, (6) the Bill of Health. The Bills of Lading and the Charter Party will be dealt with subsequently, but a word may be said on the Bill of Health and the Manifest.

(1) **The Bill of Health** is a document given to the master by the authorities of the port from which the ship is cleared. It describes the health and sanitary state of the port. Where there is no infectious or contagious disease, a clean bill is given. Where it is feared that such diseases exist, the bill is known as suspected. Where these diseases have actually broken out at the time of the ship's departure, the bill of health is said to be foul. A suspected or a foul bill will subject the ship to quarantine.

(2) **The Manifest** is an account of all the goods shipped on board for exportation. Its place may be taken by invoices of the goods.

RIGHTS AND LIABILITIES OF SHIP-OWNERS TO THIRD PARTIES.

1. LIABILITY OF THE SHIP-OWNER AS CARRIER. A sea-carrier is in the position of a "common carrier," except in cases where Act of Parliament has limited his liability, or where he has himself expressly limited his liability by a contract with the parties whose goods he carries. Like a common carrier he is bound to make good all loss or damage happening to the goods while they are in his hands, unless the loss is caused by the act of God, or the King's enemies, or arises through some inherent vice in the goods themselves, or is caused by faulty packing, or has arisen from some sacrifice for the general safety, as when goods are jettisoned or thrown overboard to save the ship or the rest of cargo.

But even in these cases a ship-owner will be liable—

(1) If he has not been reasonably careful to avoid the danger which has caused the loss or damage.

(2) If he has met with it after a deviation from the proper course of the voyage.

(3) If the loss is due to the fact that the ship was unfitted to receive the goods or was unseaworthy at the beginning of the voyage.

This general liability of the ship-owner may be limited by contract or by law.

2. SHIP-OWNER'S LIABILITY LIMITED BY LAW. The ship-owner's liability is expressly limited by law in the following cases, in which the ship-owner will not be liable for any loss unless it is due to his own fault:—

(1) Where goods are lost or damaged by fire on board the ship.

(2) Where gold, silver, diamonds, watches, jewels, or precious stones are lost or damaged by robbery, embezzlement or the like, unless the ship-owner or the master had at the time of shipment received a written declaration of their true nature and value.

Further, even in cases where the ship-owner is liable his total liability never exceeds £15 per ton of the ship's tonnage, provided that the loss is not due to his fault. When, therefore, an accident occurs, the owner asks the Court to limit his liability to the amount fixed by law. This amount is then distributed amongst those who have sustained loss, in proportion to the value of the lives or property lost.

3. RAILWAY COMPANIES' STEAMERS. The above provisions apply to railway companies which contract to carry persons, animals, or goods by sea, and procure them to be carried in vessels not belonging to the company. In the case of a railway company which employs its own steamers, the amount of damages to be recovered for injury to, or loss of animals, is limited, in the case of horses to £50 each, cattle £15 per head, sheep or pigs £2 each, unless the person sending them declares them to be of higher value. In such a case, the company can demand, as compensation for the increased risk, higher rates than the ordinary; but the contract must be in writing and signed by the person consigning the animals.

SUING FOR DAMAGES. The consignee is the person entitled to sue for damages for loss, as the contract though made with the consignor is really made with the consignee, the consignor being regarded as merely his agent to employ the company to carry his goods. Of course, if the ownership of the goods still belongs to the consignor, as where goods are sent on approval, the consignor is the proper party to sue the company for damages sustained by the goods in course of transit. The same is the case where the contract is of such a nature that it is not necessary to show ownership in order to bring the action, as e.g. where the consignor hands over the goods to the company for delivery to a particular person at a particular place. (For mode of suing refer to "Procedure in the Courts" in *Index*.)

It should be remembered that a ship-owner is not liable for damage to goods when the damage is wholly due to the fault of a pilot whom he was by law compelled to employ.

FREIGHT. The price for carrying goods by sea is called the "freight," a term which is sometimes used to denote the cargo itself. Freight is not usually paid before the goods have been actually delivered, unless the non-delivery is caused by the perils excepted in the Charter Party or the Bill of Lading. But whether payable in advance or not is a matter of agreement. In some cases, such as perishable goods or deck cargo, prepayment is generally exacted.

(*a*) **Advance Freight** is due as soon as the goods are shipped, and cannot be recovered should the goods be destroyed by fire, or the ship lost and the goods, consequently, not delivered.

(*b*) **Dead Freight.** Where by the terms of a charter party the charterer undertakes to load a full cargo and fails to do so, he will be charged for the empty space. The sum thus charged is called dead freight.

Contracts for carrying goods in vessels, or contracts of affreightment as they are called, may be embodied in a Bill of Lading, or in a Charter Party. When a ship or a part of it is hired by a person for the purpose of carrying goods, the contract is known as a charter party; in other cases, contracts for carrying goods are embodied in bills of lading. Each of these documents will now be dealt with in some detail.

BILL OF LADING.

When the shipper of goods delivers them to the person in charge of the ship, he receives what is called a *mate's receipt*. This document states the condition in which the

goods have been received, and is afterwards exchanged for a bill of lading signed by the master or the ship's agent. The bill of lading states the fact that the goods have been received on board, and the terms upon which they are to be carried and delivered. The following example gives the points which are common to all bills of lading :—

Shipped in good order and condition by
upon the good ship called the whereof
is master for this present voyage,
now in the port of and bound for
[here is inserted the description of
the goods], marked and numbered as in the margin, and are to be delivered in the like good order and condition at aforesaid (the act of God, the King's enemies, fire, and all and every other dangers and accidents of the seas, rivers, and navigation, of whatever kind and nature soever excepted) unto the order of
or to his assigns, he or they paying freight for the said goods at the rate of with primage and average accustomed. In witness whereof the master or agent hath affirmed to bills of lading all of this tenor and date, the one of which bills being accomplished the others to stand void.

Dated in London the day of
(Signed).

1. EXPLANATION OF TERMS IN BILL OF LADING. It may be well to explain here some of the words and phrases contained in the bill :—

(*a*) **Act of God.** An act of God is some natural event which occurs independently of human action, and which could not have been avoided or guarded against by human foresight, e.g. tempest, lightning, sudden and severe frost, and the like.

(*b*) **Primage** was originally a small payment made to the master for taking care of the cargo. The master now usually agrees that it shall belong to the ship-owner.

(*c*) **Average** denotes certain expenses now usually included under primage.

(*d*) **The clause,** "one of the bills of lading being accomplished, the others to stand void," means that if upon one of them the ship-owner acts in good faith, and delivers the goods to the person in possession of the bill of lading, he will have "accomplished" his contract, and cannot be made liable upon any of the other bills.

2. LIMITING CLAUSES IN BILL OF LADING. Many additional clauses are inserted for the purpose of limiting the ship-owner's liability, e.g. "weight, contents, and value of goods unknown." The effect of this is that where the goods are not really shipped in good order and condition, the ship-owner is not bound to deliver them in good order ; whereas, if the modifying words are not used, the ship-owner is bound by the statement shipped in good order, even though that statement is untrue, and will, therefore, be liable if the goods are not delivered in good condition. But in no case will the ship-owner be liable if the goods deteriorate through some inherent defect.

3. CLEAN BILL OF LADING is a bill without qualifying words, such as, "Cases in weak condition," or "Two packages in dispute as to whether put on board." Such a bill denotes that the goods are received in good condition, the ship-owner in that case being bound to deliver the same in like good condition.

4. DELIVERY OF BILL OF LADING. The bill of lading is filled in by the consignor of the goods, stating the kind and quantities of the goods and the marks upon the cases containing them. These are checked by the master or the ship's agent, and the bill is then delivered to the consignor in exchange for the "mate's receipt." A bill of lading is usually drawn in duplicate. Both of these bills are delivered to the consignor of the goods, who transmits one or both to the consignee, thereby enabling the consignee to obtain possession of the goods when they reach their destination. It will thus be seen that a bill of lading serves not only as a receipt that the goods have been taken on board, but also as a document of title, enabling the person who becomes lawfully possessed of the bill to claim possession of the goods.

5. ASSIGNMENT OF A BILL OF LADING. A bill of lading is assigned by the person to whom the goods are consigned indorsing it, and delivering it to the party to whom he wishes to transfer it. The person to whom the bill is thus assigned becomes the owner of the goods. But a bill of lading is not negotiable ; consequently the transferee of a bill of lading has no better title to the goods mentioned in it than the transferor had : e.g. a clerk steals a bill of lading for goods consigned to his employer ; he transfers the bill for value to a person who takes the bill in good faith ; such purchaser has no right to the goods mentioned in the bill. Where, however, the consignee transfers a bill in good faith and for value, the right of the consignor of the goods to stop them in transit is destroyed. If a bill is drawn in favour of a particular person, without the addition of the words "or order or assigns," the bill cannot be assigned. It sometimes happens that copies of the same bill are assigned to two different purchasers. This is one of the disadvantages of drawing a bill of lading in a set of three. Where this occurs, the person who acquired the bill first is the owner of the goods. Still, if the master delivers the goods to any person who presents the other copy of the bill, he is not liable, provided he acts in good faith, and that he had no notice of the claims of the first transferee.

Stamp. Every bill of lading made in the United Kingdom must be stamped with a sixpenny stamp before signature, under a penalty of £50. It cannot be stamped after signature. The stamp may be adhesive.

CHARTER PARTY. "A charter party is an agreement by which a ship-owner agrees to place an entire ship, or a part of it, at the disposal of a merchant for the conveyance of goods. The agreement binds the ship-owner to transport the goods to a particular place for a sum of money which the merchant undertakes to pay as freight for their carriage. The person whose goods are to be taken is called the charterer." Sometimes the charter puts the vessel under the sole control of the charterer, making the master and the crew his servants, and not the servants of the ship-owner. It is then not a contract for freight but a contract for the hire of a vessel, and, therefore, will not be discussed here. The same remarks apply to charters for passenger service, or for towage or salvage.

The following will serve as an example of a charter party :—

LONDON, *Sept.* 6th, 1904.

It is this day mutually agreed between of the good ship called the of the measurement of tons register, or thereabouts, now at and of merchant, that the said ship being warranted at British Lloyds, and being tight, staunch, and strong, and in every way fitted for the voyage, shall with all convenient speed sail and proceed to or so near thereto as she may safely get, and there load from the factors of the said merchant a full and complete cargo of not exceeding what she can reasonably stow and carry over and above her tackle, apparel, provisions, and furniture, and being so loaded shall therewith proceed to or so near thereunto as she may safely get, and deliver the same on being paid freight as follows.

in full of all port charges and pilotage as customary (the act of God, &c., and all and every other dangers of the seas, rivers, and navigation, of what nature and kind soever during the said voyage mutually excepted). Freight to be paid on delivery of cargo. The ship to receive the cargo from the charterer with all possible despatch, and any delay incurred by not doing so, not to count as part of the lay days. The said charterer to be allowed working days for loading and unloading the said ship, and days on demurrage over and above the said lay days at per ton per day. Portions of days to count as portions of days.

CHARTERER AND SHIP-OWNER. The statements in the charter party concerning the ship must be true, otherwise the charterer may repudiate the contract, and refuse to load unless the charter party has been so far acted upon that the ship-owner cannot be restored to the same position he was in when the charter party was effected, in which case the charterer is entitled to damages only. If the ship-owner has knowingly made a false representation concerning the ship, the charterer may repudiate the con-

tract, and, in addition, may claim damages for deceit. Where the representations amount to a condition upon which the contract is based, then if they turn out to be untrue, the charterer may repudiate the contract. If, however, they are merely warranties, the charterer is entitled to damages only. There is an implied condition that the ship is in a fit condition to the time of sailing with the cargo. The clause stating where the ship is usually amounts to a condition, which, if not true, entitles the charterer to repudiate the contract. The words "mutually excepted" protect both the ship-owner and the charterer, so that in case the ship or the cargo is lost or damaged, through the perils enumerated, the ship-owner cannot claim freight, and the charterer is not entitled to claim from the ship-owner compensation for the loss he may have sustained.

Lay Days. These are the days allowed for loading and unloading. Any delay beyond this time is called "demurrage," and must be paid for.

Demurrage is also the name given to this extra payment.

SHIP-BROKER. A person wishing to charter a ship usually employs a ship-broker, who keeps the original charter, and furnishes copies to those concerned. He is paid by the ship-owner a commission on the amount of the freight, and it does not, as a rule, matter whether the freight is earned or not. Where several brokers are employed to obtain a charter party, the one who first introduces the principals personally to one another is alone entitled to the commission.

Stamp. Every charter party must bear a 6d. stamp, which may be adhesive. It may be stamped under a penalty within a month after signature, but not afterwards. If the charter has been executed by both parties abroad, it may be stamped at any time within 30 days after it has been received in England.

SALVAGE. Salvage is the reward paid for saving a ship or its cargo from shipwreck, capture, or other similar danger. This reward is paid rateably by the persons whose property has been salved, i.e. by the ship-owner, or the cargo-owners, or both. To entitle a salvor to this reward he must not have been under any obligation to do the work and must have done it voluntarily. The ship and goods must be saved, and but for his services they would probably have been lost. There must also have been shown some skill or danger in the performance of these services. The salvor has a maritime lien on the property salved, and this lien ranks before all others. Disputes as to the amount of salvage are decided in the Admiralty Division of the High Court.

AVERAGE.

In commercial matters the word average means loss or damage, or extraordinary expenses incurred through the perils of the sea.

1. GENERAL AVERAGE. Where property on board a ship is sacrificed for the benefit of the ship, and of the cargo, the loss does not fall wholly on the property sacrificed, but is borne by the ship-owner and the owners of the cargo, in proportion to the values of the different kinds of property embarked in the venture. For example, if the masts are cut away, or a portion of the cargo jettisoned in order to save the ship and the rest of the cargo, the loss must be borne by all who have an interest in the ship and the cargo, in proportion to the value of their interests. The loss is a general average loss, and the contributions made to it by those benefited are general average contributions. To put it shortly, general average loss is "all loss which arises in consequence of extraordinary sacrifices made, or expenses incurred, for the preservation of the ship and cargo, and must be borne proportionally by all who are interested." In order that general averages may arise, so as to entitle the person whose property has been sacrificed to contributions from the others, the following conditions must be fulfilled:—

(1) The whole adventure and not merely a part of it must be in imminent danger.

(2) The ship and some of the property must be ultimately saved.

(3) The danger which led to the sacrifice must not have been brought about by the fault of the person claiming contribution.

(4) The sacrifice must be voluntary, and must usually be made by the person in command of the ship, and it must be absolutely necessary to make the sacrifice in order to avoid the peril threatening all the interests involved.

The amount of the contributions is determined by a class of men called average adjusters. Their work is of a highly technical and complicated character.

Where the different interests have been insured the contributions are made, not by the persons whose interests are benefited, but by the underwriters with whom those interests have been insured.

2. PARTICULAR AVERAGE. "A particular average is a loss borne wholly by the party whose property has been injured." Such loss may arise either from some danger peculiar to the property injured, or from the perils of the sea. The loss, however, is not incurred in the interests of all, but arises through accident, e.g. where goods are damaged by sea water, or where the ship has been injured by the violence of the wind or waves. Losses arising in this way must be borne by the owners of the property injured, or by the underwriters if the property has been insured.

RAILWAYS.

The subject of railways will be discussed under the following heads. (1) The railway system in general, dealing with such matters as the Clearing House, Railway Rates, Preferential Rates, the Railway and Canal Commission and Bye-laws. (2) Liability of railway companies as carriers of goods and of passengers' luggage. (3) Liability of railway companies in regard to accidents and to want of punctuality. (4) Duties and liabilities of passengers.

RAILWAY SYSTEM.

1. CLEARING HOUSE. Owing to the great number of railway companies, and to the fact that it is almost impossible to carry goods or passengers any considerable distance, without having to traverse the lines of more than one company, some device had to be adopted in order to apportion fairly the amount which each company ought to receive in regard to passengers and goods carried on the lines of several companies. This want was met by the establishment of the Clearing House in 1842. But for the Clearing House it would be impossible to convey passengers over the lines of several companies without changing the passengers from the carriages of the one company to those of the other. In the case of merchandise the difficulty (not to speak of the increased expense) would be even greater, for the goods would have to be unloaded from one set of trucks and loaded on to another. But the Clearing House, by fixing the proportion of the fares and of the charges for goods, which shall be awarded to each of the various companies over whose lines the goods and passengers are conveyed, obviates all this expense and inconvenience. In short, through traffic over various lines is carried on practically as if all the lines belonged to one company. The companies cannot dispute the decision of the Clearing House as to the proportion which each must receive of the receipts from the through traffic; that is to say, the company which in the first instance received the fares from the passengers, or the rates for the carriage of goods, must hand over to the other companies, over whose lines the goods and passengers were conveyed, the amount which the Clearing House decides shall be paid; for, by an Act of Parliament, whatever the Clearing House declares to be due from a company is legally due, and must be paid. From this decision there is no appeal, and thus the worry of delay and the expense of litigation are avoided.

The Clearing House does not deal with business carried on the lines of one company only. It is concerned only with all business carried over lines other than those on which it originated; but the fact that half the railway

traffic of Great Britain is carried on by means of through booking, shows what amount of business must go through the Clearing House.

Incidentally among other things, the Clearing House deals with inquiries after lost luggage and looks after the recovery of such luggage.

The Clearing House is controlled by a committee to which the railway companies are each entitled to send a representative, usually the chairman or a director. Over forty companies send representatives to the committee, which meets quarterly.

2. **RAILWAY RATES.** The classification of merchandise and the schedule of maximum rates and charges for carrying goods must be submitted to the Board of Trade. When a railway company intends to make any increase in such rates and charges, it must advertise such intended increase, stating when the increase is to take effect, and no such increase can take effect unless and until fourteen days' notice has been given. If a trader objects to the increase, he can appeal to the Railway and Canal Commission, but in order to avoid this, the Board of Trade may try to bring about a compromise, and thus save the expense of litigation.

The basis on which railway rates and charges are levied is not determined by the cost of carrying the goods themselves. Goods which are sent in great bulk, e.g., coal, are more costly to carry than goods, such as textile fabrics, which can be put in a small compass. But if the bulky goods were to be charged on the same scale as those which are easily carried, it would be impossible, on account of the expense, for a trader to send such goods by railway. Further, where different kinds of goods are carried in the same train, it is impossible to determine what each kind shall pay. Hence the company, in fixing its scale of charges, has in view what will give a fair average profit on the whole goods carried. Thus textile fabrics are charged more for carriage than coal.

3. **PREFERENTIAL RATES.** Much grumbling is caused by the fact that goods coming from abroad are charged by the railway companies a less rate than goods carried from an inland station. In this way it is said that home traders and manufacturers are handicapped in favour of their foreign rivals. American flour shipped to Liverpool can then be carried from Liverpool to London at a cheaper rate than flour can be carried from an intermediate station, say Crewe to London, and thus an unfair advantage is said to be given to the American producer. But if the railway company did not give the American shipper some advantage, the flour would be sent direct by sea to London, and the railway company would be deprived of the small profit which is earned by carrying the flour from Liverpool to London. It may be said that if the company can carry the flour for a small profit, it should charge the same for carriage between intermediate stations. The answer is that the profit would in that case be so small that the company could not earn enough to meet working expenses and to pay dividends.

4. **RAILWAY AND CANAL COMMISSION.** This is a court composed of two commissioners and of a judge of the High Court. It possesses both executive and judicial powers, and deals with such matters as giving undue preference to some traders over others, through rates, the legality of rates, facilities for traffic and the like. Any trader or body of traders aggrieved on any of these points may resort to the Commission to have their complaints heard and decided upon.

5. **BYE-LAWS.** Every railway company is empowered to make bye-laws for the regulation of traffic and the conduct of its business generally. These bye-laws must receive the approval of the Board of Trade. The mere fact that these rules and regulations are approved by the Board is no guarantee of their validity. These bye-laws, in order to be valid, must not be contrary to the law of the land, or in excess of the powers conferred on the company by Act of Parliament, and they must not be unreasonable. For example, a bye-law stating that a person travelling without a ticket must pay the fare, not from the place where he started, but from the place where the train originally started, is wholly void, and such passenger ought certainly to resist payment of such extortionate demand. Again, a bye-law providing that a passenger's luggage should be carried at the passenger's own risk is also void.

LIABILITY OF RAILWAY COMPANY AS CARRIER OF GOODS.

1. **LIABILITY OF THE COMPANY AS COMMON CARRIER.** A railway is in the position of a "common carrier," except in cases where Act of Parliament has limited its liability, or where the company has itself expressly limited its liability by a contract with the parties whose goods it carries. The company is bound to take goods brought to it by any person unless such goods are of a nature highly dangerous to carry. It must charge reasonable rates, and must not impose unreasonable conditions. The company is bound to make good all loss or damage happening to the goods while they are in its custody as *carrier*, unless the loss is caused by the act of God or the King's enemies, or is caused by faulty packing, or arises through some inherent vice in the goods themselves. This liability of the company has been limited by law, and may in addition be limited by special contract between the company and the persons whose goods it is carrying.

2. **LIABILITY LIMITED BY LAW.** By the Carriers' Act no carrier is liable for loss or injury to gold or silver articles, clocks, jewellery, watches, bills, money securities, pictures, stamps, maps, writings, plated articles, glass, china, silks, furs, or hand-made lace, delivered to him to be carried or to accompany the passenger where the value exceeds £10, unless when the goods are delivered to the carrier their value is stated, and an increased charge is paid or agreed to be paid, in accordance with the scale exhibited in a conspicuous part of the carrier's office. Thus a railway company is not liable for any loss however caused where the above provisions have not been complied with, or unless the loss has been caused by the felonious acts of the company's servant, where such felonious act occurred through the company's negligence. The provisions of this Act apply not merely to goods generally, but also to passenger's luggage, whether placed in the van or in the carriage where the passenger himself is.

Further, by the Railway and Canal Traffic Act, a railway company can limit its liability to a person consigning goods by means of a contract in writing, signed by the consignor or his agent. But the conditions limiting its liability must be just and reasonable. The company will then be liable only for loss caused by the negligence or wrong doing of its servants.

In regard to the carriage of animals, a railway company is liable to the extent of £50 per head in the case of horses, £15 per head for cattle, and £2 each for sheep or pigs, unless at the time of delivery to the company a higher value is declared, and an increased rate paid or agreed to be paid.

Where a company by through booking contracts to carry goods partly by rail and partly by sea, it may exempt itself from liability for any loss caused by the perils of the sea, provided this condition is posted up in a conspicuous part of the company's office, and is legibly printed on the receipt note.

3. **WHEN GOODS ARE LOST OR DAMAGED.** The proper person to sue the company when this happens is the person who owns the goods, who is, in many cases, the person to whom the goods are consigned. But where the consignor has not parted with the ownership of the goods, he is the proper party to sue the company for loss or damage.

Railway companies are bound to give proper facilities for the despatch of goods, provided such goods arrive at or before the advertised time of departure of the train by which the goods are to be sent. Where the goods do not arrive at such advertised time, then the company is not

liable for any loss which may ensue, even though the goods actually arrive in time for the train, which may happen when the train itself is late.

The goods must be delivered within a reasonable time by the company to the consignee, otherwise the company will be liable for any loss which may ensue, as, for instance, where the goods being perishable do not arrive in time for the market, and, therefore, cannot be sold except at a loss, the company will be liable for such loss.

4. PASSENGER'S LUGGAGE. The fact that a railway company is a common carrier renders them liable for any loss which may happen to a passenger's luggage, whether such luggage be placed in the van, or taken into the carriage by the passenger himself. Except that in the latter case, where the loss is due to the passenger's own negligence, the company cannot be made liable; nor can a railway company get rid of this liability by refusing to take the luggage of a passenger. It cannot refuse to take his personal luggage. What then is personal luggage?

It includes "such articles as a traveller, according to his position, would require for his use, either in connection with the journey itself, or with the objects thereof." In accordance with this, articles purchased by a passenger, and which could be easily carried without encroaching on the space allotted to other people would come under the heading of personal luggage:—but not title deeds, or an artist's sketches, or a quantity of bedding which the traveller intended to use, when he found a home.

5. LIMITATION OF LIABILITY FOR LUGGAGE. A company may, however, limit its liability in regard to a passenger's luggage by a contract imposing special conditions. These conditions must be reasonable, and the contract must be signed by the passenger. A condition which is unreasonable cannot be enforced against a passenger. Thus, where a company stated that it would not be liable for loss of luggage on their own line, unless fully and properly addressed, was held to be unreasonable. Again, a condition that a passenger's luggage should be conveyed at his own risk was held to be unreasonable, and therefore could not be enforced against the passenger, although he had agreed to the condition. In that case, therefore, in spite of the condition, the company was held liable for the loss of the luggage.

6. DURATION OF LIABILITY FOR LUGGAGE. The liability of the company begins from the moment the luggage is handed to their servants for conveyance to the van or the carriage, or to be labelled. If the luggage is merely handed to a porter to look after it without any further directions, the company is not liable for any damage that may occur to it. Further, the luggage must be handed to the porter for immediate or *present* not *future* conveyance.

Thus, if a traveller arrives at a station at 11 a.m., and gives his luggage to a porter to place in a train starting at 1 p.m., the company would not be liable if through the porter's negligence or misconduct the luggage were lost. A great deal depends, however, on the circumstances of the case. Thus, where a passenger with luggage arrived at Paddington station at 4·20 p.m. on Christmas Eve, in order to travel by the 5 p.m. train, and gave a bag to the porter to put in the carriage, and asked if it would be safe to leave it with him in the meantime, he replied that it would be quite safe. The porter disappeared with the bag, and the company was held liable for its loss.

The liability of the company ends when the luggage is delivered to the passenger or placed in his cab. Of course, if the passenger carries the luggage in the carriage in which he is seated he assumes control over it himself, and the company is then liable only for loss due to the negligence or wilful misconduct by their servants; whereas, if the luggage is placed in the van the company is liable for any loss or damage, no matter how caused, except loss or damage arising through the act of God or the King's enemies, or through some inherent defect in the luggage itself (e.g. bad packing).

A passenger must claim his luggage within a reasonable time, otherwise the company will not be liable as carriers, but as warehousemen, whose liability is not so great. Warehousemen are liable only for loss arising through ordinary negligence.

7. THE CARRIAGE OF CYCLES. Cycles come under the heading of ordinary merchandise, and, as has been shown, a railway company can, in accordance with the provisions of the Railway and Canal Traffic Act, limit their liability in regard to carrying cycles. Thus a company may make it a condition of their carrying cycles that such machines are carried at their owner's risk. But these conditions must be agreed to by the owner of the cycle and signed by him. And even then the company will be responsible for any loss caused through the negligence or fault of their servants, but they will not be liable as common carriers.

8. LUGGAGE DEPOSITED IN A CLOAK-ROOM. As a company is not obliged to take charge of parcels in a cloak-room, they can impose what conditions they please. Usually the conditions run that the company will not be liable for any parcels exceeding in value a certain sum, unless the person delivering them declare their true value and pay an additional charge. Even then the company will be liable only for any loss caused by the negligence of their servants, and will not be responsible if the goods are destroyed, say by fire. The company is not then in the position of common carriers, who undertake that the goods shall be kept safe. But the conditions which the company impose must be brought to the notice of the person placing the luggage in the cloak-room, such as by placing up a notice in a conspicuous part and by printing on the cloak-room ticket either the conditions themselves or a reference to them.

DUTIES AND LIABILITIES OF THE COMPANY TOWARDS ITS PASSENGERS.

1. ACCIDENTS. A company is liable to its passengers, and to all those lawfully on its premises or in its conveyances, for all injuries arising from the negligence or misconduct of its servants when acting within the scope of their authority. But a company is in no way liable for injuries sustained by a trespasser. Among those who are lawfully present may be reckoned passengers and their friends; also persons coming to a station on business, such as to receive or to despatch parcels, make inquiries and the like. Towards these people the company must take all reasonable precautions to safeguard them from injury. In regard to people who come to a station for their own amusement, such as buying papers and refreshments, the company is not under the same liability. Still, if the company or its servants are aware of some danger of which such visitors cannot be aware, the company will be responsible if those casual callers sustain injury by reason of such concealed danger. The mere fact that a passenger is travelling without a ticket will not disentitle him to compensation in case he sustains injury through the negligence of the company's servants, unless, indeed, he has been so travelling with intent to defraud the company.

Thus a child not being supplied with a ticket but travelling with an adult companion who has a ticket, will be entitled to damages in case of injury. So, too, persons travelling on a free pass will be entitled to recover damages, unless the free pass was expressly granted on the condition that the company would not be liable for any injury sustained by such persons.

In regard to passengers, the company only undertake to employ reasonable care in carrying them to their destination. They are not, in regard to them, common carriers. They are, therefore, only liable for negligence. They must take reasonable care to see that their lines and vehicles are fit to carry passengers safely, but they are not responsible for defects which a careful examination would not bring to light, or for defects the existence of which it was impossible to find out before the occurrence of the accident which such hidden defects caused. Again, a company is not responsible for injuries caused by the acts of their servants when such acts are outside the scope of their duties, nor is a company liable for the acts of outside persons engaged in a work over which the company has no control, and which the company has no reason to suspect as dangerous to the traffic.

2. LIMITATION OF LIABILITY FOR ACCIDENTS. A company may make conditions limiting their liability to passengers for injuries sustained by them, but the passenger must have agreed to these conditions. In workmen's trains, the amount of compensation which a passenger may receive for injuries sustained is limited to £100.

3. AMOUNT OF COMPENSATION. Where a person sustains injury under circumstances which entitle him to compensation, he is entitled to the expenses caused by his injury (medical attendance, &c.), compensation for loss of time (wages, &c.), compensation for the pain and suffering, and compensation for any future or permanent ill-effects of such injury. In reckoning up the total amount of compensation to be paid by the company, the fact that he has received compensation from other sources, as where he has been insured against accident, must not be taken into account.

Should death ensue as the result of the accident, then an action can be brought for damages, if the circumstances were such that the deceased if he had not died could have brought an action. The damages which will be awarded will be the pecuniary value of the life of the deceased, the amount which his relatives have lost by reason of his death.

> For example, if a person had an annuity as long as he lived, then the loss of that annuity will be taken into account in estimating the loss to those relatives depending on him. In the same way any prospective pecuniary benefit which they might reasonably expect to enjoy had his life continued, will also be a factor in estimating the damages to be awarded.

Where the deceased has insured his life, the amount of the insurance must be taken into account. Where the deceased received compensation in his lifetime, in full satisfaction of all claims for injuries, this action cannot be brought. The only person who can benefit by this action are the wife, husband, parents (including grandparents and step-parents), and children (including grandchildren and step-children) of the deceased. The action cannot be brought on behalf of an illegitimate child of the deceased; it must be brought by the legal personal representatives of the deceased, i.e. by the executor or administrator, but if the legal personal representative does not bring the action within six months, any of the persons who may benefit by the action can bring it. No action can, however, be brought after the expiration of twelve months from the death of the deceased.

4 WHICH COMPANY TO SUE. In case of injuries it is somewhat a nice point to determine which company ought to be sued where the person injured has been booked through and has thus travelled over lines other than those of the company which issued the ticket. As a general rule, the ticket-issuing company is responsible for the safety of the passenger throughout his whole journey, though that journey may be partly on the line of the ticket-issuing company and partly on the line of another. Hence if the passenger sustains injury, the ticket-issuing company will be liable for damages caused by the negligence of the servants, or the defective condition of the carriages or the permanent stock of any other company on whose lines the passenger has been booked through. In this case such ticket-issuing company will be liable because of their contract with the passenger whom they had booked through. On the other hand, the railway company, through the negligence of whose servants or the faulty construction of whose carriages or platforms the injury has been caused, may also be sued, not because there was any contract between such company and the injured passenger (the contract being between the ticket-issuing company and the passenger), but because of the wrong done to him by the servants of the company over whose lines, or in whose carriages the injured passenger had been travelling.

5. COMPROMISING CLAIMS FOR INJURIES. Where accidents occur, a railway company is always willing to settle the claims of injured passengers, rather than incur the worry and the expense of litigation. In that case an injured person should be on his guard, for if he should accept a sum in full satisfaction of his injuries, he cannot afterwards sue the company should his injuries prove to be more severe than was thought at the time. If, however, the agent of the company misrepresented to the passenger the nature of the receipt for the money which he accepted, then the passenger could still claim damages should his injuries prove to be more severe than was anticipated.

Compensation for injuries to clothing will not debar a passenger, who, although apparently sustaining no injury at the time of the accident, from bringing an action for damages should injury to his body or his brain afterwards develop itself as a result of the accident.

6. UNPUNCTUALITY OF TRAINS. The mere issue of a ticket to a passenger is in itself no guarantee that a train shall start on its journey or shall arrive at its destination in a given time; but where a company publishes time tables, and a passenger on the strength of the representations made in the time tables, books by a particular train, there is an express contract between the company and the passenger that such train shall start and shall perform the journey. If, then, the train does not start, or if after having started does not complete the journey, the passenger may sue the ticket-issuing company. It makes no difference whether the uncompleted portion of the journey is on the lines of another company (the passenger having booked through), the company to whom the passenger had paid his fare will still be liable.

In cases where the train fails to keep time, then the passenger will be able to sue the company, provided he can clearly prove that the unpunctuality was due to the actual negligence of the company's servants, and that he himself has been put to actual expense or real inconvenience by such unpunctuality.

> If, for example, owing to the unpunctuality of the train, he had been compelled to stay for a night at an hotel, he could recover his hotel expenses from the company.

But he could not recover the expense of hiring a special train to make up for the time lost, unless, indeed, the circumstances were so grave that it was imperative that he should be at his destination at a specified time. The test of such a case is, would the passenger who has been delayed have gone to the extra expense if the delay had been due to his own fault and not to the fault of the company.

In bringing an action for damages arising from the unpunctuality, a passenger will not get damages unless he has been put to real expense. He can only recover for the expenses which are directly due to the unpunctuality.

> Thus, for example, if he had through the delay of the train missed an important business appointment, by which he expected to benefit, he could not recover damages for the loss of the business engagement.

DUTIES AND LIABILITIES OF PASSENGERS.

1. TICKETS. Every passenger must produce his ticket when asked to do so by the proper officer of the company, or give his name and address. He must at the end of his journey deliver up his ticket, or pay the proper fare, or give his name and address. If a passenger refuse his name and address after having failed to produce his ticket or to pay the proper fare, he will be liable to be detained and to pay a penalty of £2.

Where a passenger is suspected of having given a wrong name and address, he may be detained pending inquiries. But this is a risky proceeding on the part of the company's servants, for should it turn out that the passenger has given his right name and address, the company will be liable to pay damages for false imprisonment, even though the conduct of the passenger has given reasonable grounds for leading the officials to suspect him.

Where a passenger has surrendered his ticket at some station before he has reached his destination, and is called upon to pay over again, he should refuse to do so, but should give his name and address, and should inform the collector that he has already given up his ticket. It should be remembered, however, that a passenger cannot be compelled to give up his ticket until he has reached his journey's end.

Should a passenger lose his ticket (not being a season ticket) or mislay it, he cannot be compelled to pay his fare over again. He should, however, give his name and address, and the name of the station from which he took the ticket, and the place to which his ticket entitled him to be carried. It will then be an easy matter for the company to verify these particulars.

2. **RETURN TICKETS** are not transferable, and any person selling or parting with the return half of a ticket is liable to a penalty not exceeding £2. The person who buys such ticket, or who travels, or attempts to travel with it is liable to the same penalty. Such return half will be confiscated, and the person travelling with it will be compelled to pay the fare from the station from which he started. It is difficult, however, to see how this punishment can be enforced, and in practice return halves of tickets are transferred every day.

3. **EXCURSION TICKETS** can only be used for the particular journey and the particular distance for which they are issued. Such tickets are advertised as available only to and from the stations named on them, and any passenger using them for a place short of the said stations, or beyond them, will be liable to forfeit them and to pay the ordinary fare. Hence, any passenger breaking his journey will be clearly liable. But it is not so clear where a passenger travels beyond the station to which the ticket is available. For in that case, what is to prevent a passenger getting out at the station named on the ticket and procuring a fresh ticket to carry him on to the end of his journey. Surely he should be in no worse position when he stays in the train, and on reaching his destination pays the fare for the distance between the station to which the excursion ticket is available and the station at which he gets out. Where an excursion ticket says that the return journey must be made on a certain date, and by a specified train, it is not available on a date prior to or after the specified date, or by any other train.

4. **SEASON TICKETS** are issued under special conditions to their holders, and if the holder of a season ticket fails to observe these conditions, he must abide by the consequences mentioned on the ticket. He must at all times produce his ticket when asked to do so by the proper officers of the company. Should a particular officer vexatiously and capriciously require a season ticket holder to produce his ticket, the proper course for such ticket holder is to write to the company, complaining of such unreasonable conduct on the part of its servant.

5. **TRAVELLING WITHOUT A TICKET.** Where a person travels or attempts to travel without having first paid his fare, and with intent to defraud, he is guilty of an offence. But it must be clearly shown that the passenger did so with the intent to defraud, otherwise he cannot be convicted. The intent to defraud can be shown from all the circumstances of the case, and, indeed, this is really the only way in which the fraudulent intent can be proved. On the first conviction such fraudulent passenger may be fined £2; for a second offence the penalty is £20 or a month's imprisonment.

Frequently, however, persons have not time to take a ticket. In such a case the passenger should pay the proper fare, which is the actual fare from the station at which he started to the station where he intends to get out. The company cannot compel him to pay the fare from the station at which the train originally started, although such extortion is often attempted. Should his payment be refused, he ought to give his name and address. If the company then sues him, his proper course is to pay the money into Court, and at the trial explain that he did tender payment at the proper time. In that case the company will have to pay all the costs of the action. A passenger who has not taken a ticket can be prevented from entering the train, but apparently he cannot be ejected after the train has started on its journey.

6. **BREAKING A JOURNEY.** Where a passenger gets out at a station short of his destination, he cannot afterwards on the same ticket resume his journey and travel on to the station to which that ticket is available. He cannot, however, be compelled to give up the ticket on breaking the journey, because the ticket cannot lawfully be taken from him until he has reached the station to which it is available. He must, however, show it if required.

7. **TRAVELLING BEYOND THE STATION NAMED ON THE TICKET.** Where a passenger, having paid his fare for a certain distance, wilfully and knowingly travels beyond that distance, *with intent to defraud*, he is liable to the same penalties as if he had travelled without a ticket with intent to defraud. The essence of the offence is the intent to defraud, and if there is no such intent, no offence has been committed.

Frequently passengers change their minds and travel further than they originally intended. In that case, all that can be demanded from them is the "additional fare for the additional distance." This is not the same thing as the difference between the sum originally paid and the fare from the original starting place to the station at which the passenger has actually got out.

> Thus, the fare from A to B is 5s., and from A to C a station farther on than B, on the same line is 7s., the fare from B to C being 1s. A passenger takes his ticket from A to B, but travels on to C. Here he cannot be charged 2s., the difference in the fares from A to B and from A to C. All that the company can legally exact is the fare from B to C, viz., 1s. In this way the passenger saves a shilling, and where this saving can be effected, many passengers do so. On the other hand, suppose the fares from A to B and from A to C are the same, and a passenger books to B, but continues his journey on to C, here he can be compelled to pay an additional fare, viz., the fare from B to C, though had he originally booked to C, he would have had nothing extra to pay.

8. **TRAVELLING IN A SUPERIOR CLASS.** Where a passenger travels in a class superior to that for which he has taken a ticket, he commits an offence, and is liable to a penalty of £2, provided he has so travelled with intent to defraud the company. But this fraudulent intent must be clearly proved. For instance, there is no fraudulent intent where the third class compartments are full, a passenger having taken a third-class ticket finds the only carriages available are first-class and enters a first-class carriage; then, if the station at which the traveller takes his ticket is the station from which the train starts, the passenger may travel in the first-class carriage without having to pay an increased fare, because his ticket entitled him to be carried in that particular train, and if the company were unable to convey him by that train, he might sue for damages. He should, however, as soon as the third-class carriages cease to be full change into his proper class. If the station at which the passenger takes his ticket be an intermediate one, he may enter a carriage of a superior class, but will be liable to pay the excess of fare, because at intermediate stations tickets are issued only on condition that there is room in the train, and the company is, therefore, under no obligation to carry a passenger by that particular train if there is no room in the carriages for which he has taken his ticket. It may, however, be said that railway companies do not as a rule insist on the excess of fare when a passenger has been compelled to travel in a superior class, through the other carriages being full.

9. **TRAVELLING IN AN INFERIOR CLASS.** Where a passenger has, through overcrowding, been compelled to travel in an inferior class, he is entitled to recover the difference in the fares of the two classes. He should, however, before his journey is ended, draw the attention of the company's servants to the fact that he was compelled to travel in an inferior class. He should not surrender his ticket until he is paid, giving, of course, his name and address; or, if he gives up his ticket without having been paid, he should take a note of its number and afterwards demand payment from the company. If payment is then refused, he may sue the company.

10. **ENTERING COMPARTMENT ALREADY FULL.** Every compartment is built to seat a certain number of

persons, and any one persisting in entering a carriage containing this number, after an occupant has objected to his so doing, is liable to a penalty of £2. The person objecting is entitled to keep him out, but he cannot eject the intruder if he has once entered. The only remedy that the objector has is to appeal to the guard or other responsible official to remove the intruder.

11. **SMOKING.** A passenger must not smoke in a compartment which is not set aside for that purpose. If he does so, he will be liable to a penalty of £2, and it makes no difference if he is the only occupant of the carriage, or if the other occupants do not object. Where a person in a non-smoking carriage objects to a person smoking in it, the objector has no remedy against the smoker; all he can do is to call the attention of the officials to the fact, and it is then for the company to prosecute or not as it thinks fit.

12. **FINDING LOST PROPERTY.** Where a passenger or other person is lawfully on the company's premises, and finds an article in a place to which the public have access, such person need not give the article to the officials of the company. He is entitled to keep it until the owner turns up, and should the owner never claim it, it becomes the property of the finder. Of course, if the property has on it the address of the owner, or has some clue by which he may be found, the finder should at once restore the lost property to its owner. The same is true of a servant of the company who, when off duty, finds lost property on a part of the company's premises to which the public have access, e.g. the platform, refreshment room, waiting room, the carriage of a train which is about to start on a journey, and such like places. But if the property be found in a place where the public have no business to be, e.g. an empty train alongside a platform and which is not there for the purpose of conveying passengers, the property must be given up to the company, and if the owner does not come forward, the company is entitled to keep it. The same is the case when a servant on duty finds lost articles.

13. **MISCELLANEOUS POINTS.** The person who is seated next the window and facing in the direction the train is going is recognised by custom as having the right to control the opening and the shutting of the window. A passenger has the right of reserving a seat for himself in a carriage by depositing some article of luggage thereon. He may eject a usurper from it, but he must take care not to use more force than is absolutely necessary, otherwise he may be involved in an action for damages. A passenger with a first-class ticket takes his seat in a first-class carriage. The guard afterwards fills the carriage with third-class passengers. Can the passenger sue the company for damages? One opinion is that the company, having practically converted the carriage into a third-class, have broken their contract with the first-class passenger, who would, therefore, be entitled to the difference between the first and the third-class fare. But this contention cannot be upheld. Had the guard filled the compartment with people travelling with free passes, surely the first-class passenger could not have claimed the difference between his fare and the cost of the free passes, which would be really the amount of his fare. Such a contention is absurd.

POST OFFICE.

The Post Office as a State institution, with the sole right of despatching letters, dates from an Act passed in 1657, declaring that "there shall be but one post office, and one post-master general and controller to settle posts." This Act of the Commonwealth Government was confirmed at the Restoration, 1660. During the next century highway robberies of the post frequently occurred, but by the adoption, in 1784, of Palmer's scheme of mail-coaches, much greater security was obtained. The main roads also were greatly improved, and the speed in consequence increased from four or five to ten miles an hour. But by far the most important step in the progress of the Post Office was taken in 1840, when Mr. (afterwards Sir) Rowland Hill's penny postage scheme came into operation. Previously, the postal rate was regulated not only by the weight of a letter, but by the distance it was carried, the minimum charge for a letter of one sheet being 4d. for a distance of 15 miles. This was doubled for 80 miles, and trebled for 300 miles, with many intermediate rates. But by Rowland Hill's scheme a uniform charge of 1d. per ½-oz. was made on all inland letters irrespective of distance.

The transmission of letters has always been the main business of the Post Office, but from 1838, when the Money Order system was taken in hand, its operations have from time to time been extended to other forms of business relating for the most part to conveyance and correspondence

DEVELOPMENT OF THE POST OFFICE BUSINESS.

1657. The Post Office as a State Institution, reserving to itself the sole right of transmitting letters, established.
1720. Ralph Allen's cross-road postal scheme adopted.
1784. John Palmer's scheme of mail-coaches tried and found successful.
1830. Mails first sent by railway between Liverpool and Manchester.
1838. Money-order system became a recognised branch of the post office service.
1840. Rowland Hill's uniform penny postage for inland letters not exceeding ½-oz. in weight came into force.
1841. Adhesive stamps on envelopes came into use.
1855. Book-post started at the rate of 4 oz. for 1d.
1860. Management of the mail-packet service, previously in the hands of the Admiralty, taken over by the Post Office.
1861. Post-office Savings Banks established.
1864. Postmaster-General authorised to grant Life-insurance policies and Annuities within certain limits.
1870. Electric telegraphs taken over by the Post Office and the exclusive privilege of sending telegrams conferred on it by Act of Parliament. A uniform charge of 1s. for 20 words, with free addresses, was the charge at first.
,, Half-penny post Cards first issued.
,, Pamphlets, sketches, circulars, &c., transmissible at the uniform charge of ½d.
,, The penny postage on newspapers reduced to ½d.
1871. Penny postage extended to letters not exceeding 1 oz. in weight.
1881. Postage stamps authorised to be used for receipts instead of the special receipt stamps previously required.
,, Postal Orders began to take the place of money orders for small sums.
1882. Reply post-cards first issued.
1883. Parcel Post came into operation, with 7 lbs. as the maximum weight.
1885. Minimum charge for a telegram reduced to 6d. for 12 words, but addresses no longer free.
1886. Maximum weight of a parcel raised to 11 lbs.
1889. Money orders made transmissible by wire.
1891. Uniform Colonial, India and Foreign postage of 2½d. for ½-oz.
,, Post-office Express Delivery by boy messengers.
1894. Private cards of proper size with ½d. adhesive stamp permitted.
1895. Free transmission of re-directed letters, books, and newspapers, but not parcels.
1897. All the Trunk Telephone lines in the United Kingdom transferred to the Post Office.
,, Penny postage extended to letters weighing not more than 4 ozs.
1898. Imperial penny postage, per ½-oz., established, except with Australia.
1902. Postage to, but not from, Australia reduced to 1d. per ½-oz.
1907. Imperial postage reduced this year to 1d. for 1 oz.; Foreign postage to 2½d. for 1 oz., and 1½d. for each additional ounce.
1908. Postage to and from U.S.A. 1d. per ounce.
1909. The Post Office take over from the Marconi Company all their coast "wireless" stations for communicating with ships.

[Refer to "Progress of the Post Office" in *Index*.]

EXCLUSIVE RIGHTS OF THE POSTMASTER-GENERAL.

The Postmaster-General possesses the exclusive privilege of carrying, collecting, and delivering letters. Carriers

are specially prohibited from carrying letters, except such as concern goods sent by carrier and are carried by him gratuitously and delivered with the goods to which they relate.

Similarly, the Postmaster-General possesses the exclusive privilege of transmitting telegrams or messages by telephone within the United Kingdom, except such as are transmitted gratuitously by a telegraph maintained for the private use of a corporation, company, or person. Thus a merchant may establish telegraphic communication between his house and his office, or between his head office and a branch office, but not with the office of another merchant.

INLAND RATES OF POSTAGE.

(United Kingdom, Channel Islands, Orkney, Shetland, and Scilly Isles).

LETTERS.

Not exceeding 4 oz. in weight, 1d.; for every additional 2 oz., ½d.

Double postage will be charged on delivery for letters posted unpaid, and double the deficiency for letters not sufficiently paid.

Letters may not exceed two feet in length or one foot in width or depth, excepting those to or from a Government Office.

Where there are two or more places of the same name in the United Kingdom, or where there is an important town bearing the same name abroad, it is advisable to add the name of the county. The abbreviated addresses registered for telegrams must not be used for letters.

LATE FEE LETTERS.

To catch the night mails, inland letters for the country and abroad must be posted in London before 6 o'clock, and in suburban places from half an hour to an hour and a half earlier. If, however, an extra ½d. be affixed to the letter, it will be forwarded by the night mails when posted after that hour. The late fee posting time is 7 p.m. at most town branch offices; 7.30 at St. Martin's Le Grand, and 7.45 at Mount Pleasant. Letters bearing an extra ½d. stamp may also be posted in the letter-boxes affixed to all mail trains to which sorting carriages are attached. A late fee is not necessary for letters addressed to certain towns within reach of later mails. As, however, some of the trains by which the later mails are conveyed are not mail trains, there is a certain risk of irregular arrival, particularly at the more distant towns.

RE-DIRECTION OF LETTERS, ETC.

No charge is made for the re-direction of letters, half-penny packets, post cards and newspapers, provided they are re-posted not later than the day after delivery (Sundays and public holidays not counted), and that they do not appear to have been opened or tampered with. If re-posted later than the day after delivery, they are liable to charge at the prepaid rate. If they appear to have been opened they will be charged as freshly posted unpaid letters or packets.

Re-directed registered letters must not be dropped into a letter-box, but must be taken to a post-office to be dealt with as registered. No additional postage or registering fee will be charged, provided they are presented for re-registration not later than the day after delivery.

Re-directed parcels are liable to additional postage at the prepaid rate for each re-direction, except in those cases where the original and corrected addresses are both within a delivery from the same post-office.

NOTICE OF REMOVAL.

Notices of removal and applications for letters, etc., to be re-directed by the Post Office authorities must be duly signed by the persons to whom the letters are addressed. Printed forms can be obtained from the post offices, and when filled up and signed should be given to the post-master or to the postman. Separate notices must be filled up for parcels and telegrams. The Post Office will continue to re-direct letters, etc., for a period of one year, but the time may be extended, if desired, on payment of 1s.

Letters, etc., will not be officially re-directed for a person leaving home temporarily, unless the house be left uninhabited, nor will they be re-directed when addressed to Clubs, Hotels, Boarding-houses, or Lodgings. Where caretakers are left in charge, they are expected to receive and re-direct letters.

UNDELIVERED CORRESPONDENCE.

Undelivered inland letters bearing the full name and address of the sender printed or written upon the outside are returned unopened. Others are opened, and where possible returned to the senders. If they contain neither the sender's address nor any enclosure of importance, they are destroyed. Undelivered letters containing anything of value are recorded and returned registered, for which a fee of 2d. is charged. Undelivered letters from abroad are returned unopened to the countries from which they came. Undelivered half-penny packets, newspapers, and post cards are returned, provided they bear on the outside the name and address of the sender, with a request for their return in case of non-delivery, and are delivered to the sender on payment of a second postage.

MISSING LETTERS.

Inquiries for missing letters should be made at the secretary's office, G.P.O. (north), between the hours of 10 a.m. and 5 p.m.; Saturdays between 10 a.m. and 1.30 p.m. The Returned Letter Office is at Mount Pleasant, E.C.

ARTICLES NOT ALLOWED TO BE SENT BY POST.

No indecent or obscene print, painting, book, etc., nor any explosive or noxious substance, nor any living creatures (bees excepted, and they must be packed in suitable cases), may be sent by post, nor anything likely to injure the contents of the mails or any officer of the Post Office.

POSTE RESTANTE.

Letters, etc., addressed to a Poste Restante, to be called for, are retained for one month in the Provinces, and for a fortnight in London. If not called for by the end of that time they are sent to the Returned Letter Office to be disposed of. If, however, a letter be addressed to a post office at a sea-port town for a person on board a ship bound for that port, it is kept two months. Letters should have the words "to be called for," or "Poste Restante," included in the address. The Poste Restante is only intended for the accommodation of strangers or travellers who have no permanent abode in the town.

Letters or parcels addressed to initials or fictitious names, or Christian names without a surname, are not taken in, but at once sent to the Returned Letter Office.

Persons applying for Poste Restante letters or parcels should be able to say from what place they are expected, and produce some proof of identity. Foreigners should produce their passports.

REGISTRATION OF LETTERS AND PARCELS.

The ordinary registration fee for each inland letter, parcel, or other postal packet is 2d., in addition to the postage. The payment of this fee secures compensation in the event of loss or damage up to £5. Compensation up to a limit of £400 may be obtained on the following scale: Fee of 2d., compensation £5; 3d., £20; and after this every additional penny on the fee adds £20 to the amount of compensation, up to the limit of £400.

Registered Letters must be handed to an agent of the Post Office, and a receipt obtained. They must not be posted in a letter box.

Letters containing money must be posted in an envelope supplied for registered letters by the Post Office.

CONVEYANCE OF SINGLE POST LETTERS BY RAIL.

By an agreement with the Postmaster-General, inland letters not exceeding 4 oz. in weight may be conveyed by certain railway companies by the next available train or steamship, either to be called for at the station of address, or to be transferred thence to the nearest letter box for

delivery by postman. The letter must be taken to a station of the railway company, and a charge of 2d. will be made for its conveyance, in addition to the ordinary postage rate of 1d. Letters to be conveyed in this way can be handed in at an Express Delivery Office, for immediate conveyance by special messenger to a railway station, on payment of the ordinary express fee of 3d. per mile.

EXPRESS DELIVERY OF LETTERS AND PARCELS.

There are three systems for the special delivery of letters and parcels :—

1. *By special messenger the entire distance*, for which the charge is 3d. per mile, or part of a mile (ordinary postage is not charged). Special charges are made where the packet is heavy or bulky, and for long distances where no ordinary public conveyance is available. This is the quickest service, and letters, etc., for Express Delivery are accepted at all the more important post offices. They must bear the word "Express" in the top left-hand corner of the cover.

2. *By special messenger after transmission by post.* By this system letters and parcels are forwarded in the regular course of post, and on arrival at the office of delivery are sent out by Express Messenger. The charge is 3d. per mile, or part of a mile, from the office of delivery, in addition to the ordinary postage. There are special charges, as in system No. 1. The letters may be posted like ordinary letters, but must be clearly marked "Express Delivery" in the top left-hand corner, and have a thick perpendicular line on each side of the envelope. Parcels and registered letters for this service must be handed in at a post office or to a rural postman.

3. *By special delivery in advance of the ordinary delivery.* Any persons wishing to receive their letters, etc., in advance of the ordinary delivery may have them delivered by special messenger on payment of 3d. per mile for one packet, and a further charge of 1d. for every ten, or less, additional packets.

STAMPS.

Postage stamps of the following values are issued by the Post Office : ½d., 1d., 1½d., 2d., 2½d., 3d., 4d., 5d., 6d., 9d., 10d., 1s., 2s. 6d., 5s., 10s., £1.

Embossed or impressed postage stamps, cut out of envelopes, &c., may be used as adhesive stamps.

Stamps may be perforated with the initials of firms, etc.

ENVELOPES.

Embossed envelopes bearing a half-penny stamp may be had in two sizes, Commercial and Foolscap, the former at ¾d. each, or 9d. the packet of 16 ; the latter at ¾d. each, or 6d. the packet of 10. Embossed penny envelopes are in three sizes : A (4¾ by 3⅛ in.), Commercial (5⅛ by 3⅛ in.), Foolscap (9 by 4 in.). A size are sold at 1¼d. each, or in packets of 20 for 1s. 10d. ; Commercial at 1¼d. each, or 16 for 1s. 5d. ; and Foolscap 1¼d. each, or 16 for 1s. 6d.

REGISTERED LETTER ENVELOPES.

Registered letter envelopes for foreign as well as inland letters, bearing a 3d. stamp embossed on the flap for payment of registration fee of 2d. and postage 1d., are of five sizes, and are sold at F (5¼ by 3¼ in.) 3½d. each, or 3s. 3d. for 12 ; G (6 by 3¾ in.) 3½d. each, or 3s. 4d. for 12 ; H (8 by 5 in.) and H2 (9 by 4 in.) 3¾d. each, or 3s. 9d. for 12. K (11½ by 6 in.) 4d. each, or 4s. for 12.

POST CARDS.

Post cards bearing a halfpenny stamp are sold at the rate of 1 for ¾d., 7 for 4d. and 11 for 6d. They are of two kinds—stout cards 4½ in. by 3½ in. ; thin cards 5½ in. by 3½ in. Reply post cards are sold at about double the price of the single cards. Private cards may be used, but must correspond as closely as possible in size and weight with the official post cards, and must bear a halfpenny stamp on the same side as the address. They must not be more than 5½ inches long and 3½ inches wide, nor less than 3¾ inches long and 2¼ inches wide. The right-hand half of the address side of a post-card is reserved exclusively for the address and postage-stamp.

LETTER CARDS.

Letter cards are sold at the following prices : 1 for 1½d., 8 for 9d., and a packet of 96 for 9s.

HALFPENNY PACKETS.

Printed or written matter not in the nature of a letter may be transmitted by the halfpenny packet post. The packet must not exceed 2 oz. in weight, and the regulation size is the same as that of letters.

Halfpenny packets may contain printed matter, manuscripts, books and periodicals, invoices, deeds and agreements, sketches, photographs, prints, maps, etc. (when not on glass or other brittle substance), also the binding or mounting ordinarily used for the same, provided it be not made of glass or any like substance, printed cards of invitation, visiting cards, Christmas, New Year, and birthday cards (these may bear written formulas of courtesy, provided they do not exceed five words or initials, such as "at home," "P.P.C.," "Change of Address," etc.). Samples of goods, patterns of cloth, etc., cannot be sent at the halfpenny rate.

Rules concerning halfpenny packets. A halfpenny packet must be posted without a cover, or in an unfastened envelope, or cover which can be easily removed to allow of examination. It may be tied with string for security. It must not contain any communication in the nature of a letter. Should any of these regulations not be complied with, the packet will be treated as a letter. If posted unpaid, double postage will be charged.

NEWSPAPERS.

The postage is ½d. for every registered daily or weekly newspaper, whether posted singly or with others in a packet. The newspaper must be posted without a cover, or in a cover open at both ends, and must be folded in such a way as to show the title. Nothing in the nature of a letter must be enclosed, but the name and address of the sender may be written on the wrapper, a request for return in case of non-delivery, and a reference to any page in the newspaper to which the sender wishes to call attention. A newspaper or packet of newspapers may not exceed 5 lb. in weight, two feet in length, and one foot in width or depth. If any of these rules be disregarded, the newspaper packet (unless it is admissible as a halfpenny packet) will either be charged as an insufficiently paid letter, or transferred to the Parcel Post, whichever charge is the lower, with a fine of 1d. in addition to any deficient parcel postage.

Newspaper wrappers, bearing a halfpenny stamp, are sold at the rate of 1 for ¾d., or 7 for 4d. A packet of 120 costs 5s. 8½d. The price of wrappers bearing a penny stamp is 1¼d. for 1, 8½d. for 8, or a packet of 40 for 3s. 6½d.

The annual fee for registering a publication at G.P.O. for circulation within the United Kingdom as a newspaper is 5s.

PARCEL POST.

Not over 1 lb.	.. 3d.	Not over 8 lb...	.. 8d.
,, ,, 2 lb...	.. 4d.	,, ,, 9 lb...	.. 9d.
,, ,, 3 lb...	.. 5d.	,, ,,10 lb...	.. 10d.
,, ,, 5 lb...	.. 6d.	,, ,,11 lb...	.. 11d.
,, ,, 7 lb...	.. 7d.		

Regulations. No parcel may exceed 11 lbs. in weight, 3 feet 6 inches in length, or 6 feet in length and girth combined. Parcels must not be posted in a letter-box, but must be handed over the counter of a post office, or given to a rural postman, and the postage must be prepaid by postage stamps affixed by the sender. The words "Parcel Post" should be written in the left hand corner above the address. The sender's name should be on the cover or inside the parcel. A certificate of the posting of a parcel may be obtained at the time, if so desired. Parcels are not delivered on Sunday in any part of the United Kingdom, nor are parcels accepted on that day. Parcels marked "to be called for" are kept for three weeks (unless they contain anything of a perishable nature). After they have remained in the office one clear day, a charge of 1d. per day is made. Parcels sent to or from the Channel Islands are liable to customs duty, and a declaration of contents must be made by the sender at

the time of posting. Rates of postage are the same as to other parts of the United Kingdom.

COMPENSATION FOR LOSS OR DAMAGE OF PARCELS.

For compensation on *Registered Parcels* see under "Registration of Letters and Parcels," p. 675. Compensation on *Unregistered Parcels* is limited to £2, and to secure compensation on such parcels, it is necessary, when posting, to obtain a certificate of posting. No compensation is paid in the case of unregistered parcels containing money, watches, or jewellery, nor for damage done to parcels containing articles of a perishable or exceptionally fragile nature.

UNDELIVERED PARCELS.

When a parcel, bearing on its cover the name and address of the sender, cannot be delivered owing to insufficient address or any other cause, it is retained at the Head Office of the district, and a notice forwarded to the sender informing him that the parcel will be given up free of charge on application at that office, or that it will be forwarded to a fresh address or returned to him on payment of a fresh postage. If no reply is received within six days of the date of the notice, the parcel is sent to the Returned Letter Office of the District. If the parcel does not bear the name and address of the sender on the outside, it is sent to the Returned Letter Office, where it is opened and examined. If the sender's name and address is found inside, the parcel is treated in accordance with the rule given above; if not, the name of the addressee and other particulars are entered on a list and exhibited at the Returned Letter Office in question. If unclaimed by the end of three months, the parcel is disposed of. Parcels, the contents of which are likely to be offensive or worthless through decay, are liable to be disposed of forthwith.

(For re-direction and registration of parcels, see re-direction and registration of letters.)

SUNDAY AND BANK HOLIDAY HOURS.

At all offices open in London on Sunday postage stamps may be purchased and telegrams despatched. The hours are, as a rule, from 8 a.m. to 10 a.m. Letters cannot be registered in London on Sunday except at certain railway stations. At those offices open during certain hours on Good Friday and Christmas Day for the transaction of telegraph business, postage stamps are sold and letters registered.

At all provincial offices open on Sunday postage stamps are sold and letters registered during the hours the offices are open, generally from 8 a.m. to 10 a.m. The same regulation applies to Christmas Day and Good Friday. The hours at which telegraph business is transacted are as a rule the same as for postal business, but certain offices are also open for telegraph business in the afternoon or evening, and postage stamps may be purchased there at such times. In no provincial town in England and Ireland is there more than one delivery of letters on Sunday, Christmas Day, or Good Friday. Few Scotch towns have any delivery on Sacramental Feast Days. No Parcel Post, Money Order, Savings Bank, Insurance or Annuity business is transacted on Sunday, Christmas Day, or Good Friday.

At all towns where Bank Holidays are observed as public holidays, the public counters of the Head Office and branch offices are closed at 12 noon for all business except telegraph business, the acceptance of parcels, the sale of postage stamps, and the registration of letters and parcels. All village offices which are not telegraph offices close at noon. Town sub-offices, which are not telegraph delivery offices, are, as a rule, closed entirely on Bank Holidays. There is only one delivery of letters and generally one despatch on Bank Holidays.

FOREIGN AND COLONIAL POSTAGE RATES.

LETTERS.

From the United Kingdom (1) to British Possessions generally and to Egypt, the United States of America, and the places in Morocco where there are British Post Office Agencies the rate of postage is 1d. per ounce; and (2) to all other countries it is 2½d. for the first ounce, and 1½d. for each succeeding ounce or fraction thereof.

POST CARDS.

Official post cards are transmissible to all parts of the world, 1d. single, 2d. reply. Inland post cards may also be used, provided the additional postage is supplied by means of postage stamps. Private post cards may be sent abroad if they are of the same size and substance as the official cards and have the words "Post Card" printed or written on the address side. Plain cards without any inscription cannot be sent abroad as post cards.

PRINTED PAPERS, COMMERCIAL PAPERS, AND SAMPLES.

Printed Papers comprise: Newspapers, books (stitched or bound), periodical works, pamphlets, sheets of music, proofs of printing, plans, maps, engravings, photographs, &c. Printers' proofs, corrected or not, and the corresponding manuscripts when included in the same package, are admitted as "printed papers," but not the products of the copying press and type writer.

Commercial Papers comprise all papers or documents written or drawn wholly or partly by hand (except letters or communications in the nature of letters) such as Deeds, Way Bills, Bills of Lading, Invoices, MS. Music.

The rate of postage on Printed Papers for all places abroad is ½d. per 2 oz., and on Commercial Papers, is 2½d. for the first 10 oz., and ½d. per 2 oz. thereafter.

Canadian Magazine Post. The postage rate on British Newspapers, Magazines, and Trade Journals intended for Canada is 1d. per lb.; on packets not exceeding 2 oz. it is ½d. Such packets must be posted in covers open at both ends and easily removable.

Sample Post. The rate of postage for all places abroad is 1d. for the first 4 oz. and ½d. per 2 oz. thereafter. Packets containing goods for sale, or articles sent by one private individual to another, cannot be forwarded by Sample Post.

Packets to British Colonies or Possessions, or to non-union countries or colonies must not exceed 2 feet in length by 1 foot in width or depth, and 5 lbs. in weight; the length is limited to 18 inches and weight to 4 lbs. to foreign countries in the Postal Union. If in the form of a roll, the limits of size in either case are 30 inches in length and 4 inches in diameter.

Packets must be posted without a cover, or in an ordinary envelope left entirely unfastened, or in a cover wholly open at both ends. To ensure the safety of the contents, however, the ends of the packet may be tied with string, but it must be easy to unfasten.

Packets must be prepaid; if wholly unpaid the packets will be stopped; if not fully prepaid, double the deficiency will be charged on delivery.

UNDELIVERED CORRESPONDENCE.

Undelivered correspondence returned from places abroad is, as a general rule, treated in the same way as inland correspondence.

FOREIGN AND COLONIAL PARCEL POST.

The rules and regulations for foreign and colonial parcels are similar to the rules for inland parcels, but the sender of each parcel must make a declaration as to its contents for Customs purposes. This declaration must be made on a form provided by the Post Office for the purpose. The sender can prepay all charges to certain countries and places by paying a fee of 6d., signing an undertaking to pay on demand the amount due, and making a deposit of 1s. for each 10s. and fraction of 10s. of the value of the parcel, (to Canada and U.S.A. 1s. for each 4s. with a minimum deposit of 5s.), otherwise the Customs and other charges must be paid by the addressee. The size limit to some places abroad differs from that for inland parcels.

Certain articles are inadmissible; these include letters to nearly every place; coin, jewellery, etc., to many places; opium to China, India, etc.; fresh meat and living plants to some countries; fire-arms and ammunition to many parts.

TABLE OF RATES.

Destination.	Not exceeding 3lb.	7lb.	11lb.
	s. d.	s. d.	s. d.
Aden	1 0	2 0	3 0
„ via Italy	2 0	3 0	4 0
Algeria	1 9	2 2	2 7
Argentine Republic	2 0	3 0	4 0
Ascension	1 0	2 0	3 0
Austria-Hungary	1 6	2 0	2 6
Azores	1 6	2 0	2 6
Bahamas	1 0	2 0	3 0
Barbadoes	1 0	2 0	3 0
Belgium	1 0	1 6	2 0
Bermuda	1 0	2 0	3 0
Bolivia	3 6	3 6	—
Bosnia-Herzegovina	1 9	2 3	2 9
Brazil	3 6	4 0	—
Brit. Central Africa	2 0	3 0	4 0
British East Africa	1 0	2 0	3 0
British Guiana	1 0	2 0	3 0
British Honduras	1 0	2 0	3 0
Brit. North Borneo	1 0	2 0	3 0
Bulgaria	2 3	2 9	3 3
Cameroons	2 3	2 9	3 3
Cape Verd Islands	2 6	3 0	3 6
Caroline Islands	3 0	3 6	4 0
Ceylon	1 0	2 0	3 0
„ via Italy	2 0	3 0	4 0
Chile	2 0	3 0	4 0
China	1 0	2 0	3 0
„ via Italy	2 0	3 0	4 0
Cochin China	4 0	4 6	5 0
Colombia	2 0	3 0	4 0
Comoro Islands	3 0	3 6	4 0
Congo Free State	2 6	3 0	3 6
Corea	2 0	3 0	4 0
Costa Rica	2 0	3 0	4 0
Crete	2 0	2 6	3 0
Cuba	2 0	3 0	4 0
Cyprus	1 0	2 0	3 0
Dahomey	3 0	3 6	4 0
Danish West Indies	2 0	3 0	4 0
Denmark	1 0	1 6	2 0
„ via Ostend	1 9	2 3	2 9
Dutch East Indies	3 0	3 6	4 0
Dutch Guiana	2 0	3 0	4 0
Dutch West Indies	3 6	4 0	4 6
Egypt	1 0	1 9	2 6
„ via Italy	2 0	2 6	3 0
Falkland Islands	1 0	2 0	3 0
Faroe Islands	1 0	1 6	2 0
Finland	2 3	2 9	3 3
France	1 4	1 9	2 2
French Congo	3 0	3 6	4 0
French Guiana	3 0	3 6	4 0
French Guinea	2 3	2 9	3 3
French Indo-China	4 0	4 6	5 0
French West Indies	3 0	3 6	4 0
Gambia	1 0	2 0	3 0
German East Africa	3 0	3 6	4 0
German S.W. Africa	3 0	3 6	4 0
Germany	1 0	1 6	2 0
„ via Ostend	1 3	1 9	2 3
Gibraltar	1 0	2 0	3 0
Gold Coast	1 0	2 0	3 0
Greece	2 3	2 9	3 3
Guatemala	2 0	3 0	4 0
Holland	1 0	1 6	2 0
Honduras	2 0	3 0	4 0
Hong-Kong	1 0	2 0	3 0
Iceland	1 0	1 6	2 0
India	1 0	2 0	3 0
„ via Italy	2 0	3 0	4 0
Italy	1 6	2 0	2 6
„ via Belgium	2 3	2 9	3 3
Jamaica	1 0	2 0	3 0
Japan	2 0	3 0	4 0
Labuan	1 0	2 0	3 0
Lagos	1 0	2 0	3 0
Leeward Islands	1 0	2 0	3 0
Liberia	2 0	3 0	4 0
Luxemburg	1 0	1 6	2 0
Madagascar	3 0	3 6	4 0
Madeira	1 6	2 0	2 6
Malay States	1 0	2 0	3 0
Malta	1 0	2 0	3 0
Mauritius	1 0	2 0	3 0
„ via Marseilles	2 0	3 0	4 0
Mexico	1 0	2 6	3 6
Montenegro	2 3	2 9	3 3
„ via Ostend	2 6	3 0	3 6
Morocco	1 0	2 0	3 0
New Caledonia	4 0	4 6	5 0
Newfoundland	1 0	2 0	3 0
New Zealand	1 0	2 0	3 0
Nigeria	1 0	2 0	3 0
Norway	1 0	1 6	2 0
Panama	2 0	3 0	4 0
Paraguay	2 8	4 0	—
Persia	2 0	3 0	4 0
„ via Italy	3 0	4 0	5 0
Peru	2 0	3 0	4 0
Porto Rico, see *U.S.A.*			
Portugal	1 6	2 0	2 6
Portuguese E. Africa	2 0	2 6	3 0
„ W. Africa	2 6	3 0	3 6
Réunion	3 0	3 6	4 0
Roumania	2 0	2 6	3 0
„ via Ostend	2 3	2 9	3 3
Russia in Europe	2 0	2 6	3 0
„ via Ostend	2 3	2 9	3 3
Russia in Asia	3 0	3 6	4 0
St. Helena	1 0	2 0	3 0
St. Lucia	1 0	2 0	3 0
St. Vincent	1 0	2 0	3 0
Salvador	3 0	4 6	6 0
Samoa	2 0	3 0	4 0
„ via Germany	3 0	3 6	4 0
Sarawak	1 0	2 0	3 0
Senegal	2 3	2 9	3 3
Servia	1 9	2 3	2 9
„ via Ostend	2 0	2 6	3 0
Seychelles	2 0	3 0	4 0
Siam	2 0	3 0	4 0
„ via Italy	3 0	4 0	5 0
Sierra Leone	1 0	2 0	3 0
Somaliland	1 0	2 0	3 0
Spain	1 6	2 0	2 6
Straits Settlements	1 0	2 0	3 0
„ via Italy	2 0	3 0	4 0
Sweden	1 6	2 0	2 6
Switzerland	1 6	2 0	2 6
„ via Belgium	1 9	2 3	2 9
Tahiti	5 6	6 0	6 6
Tobago	1 0	2 0	3 0
Togoland	2 3	2 9	3 3
Trinidad	1 0	2 0	3 0
Tripoli	1 9	2 3	2 9
Tunis	2 3	2 8	3 1
Turkey (British Agencies) according to route	1 0	2 0	3 0
	2 0	2 6	3 0
	2 3	2 9	3 3
Austrian and French Agencies	2 0	2 6	3 0
Turks' Islands	1 0	2 0	3 0
United States (New York, Brooklyn, Jersey City, or Hoboken)	2 6	3 6	4 6
(other places)	3 6	4 6	5 6
Uruguay	2 0	3 0	4 0
Venezuela	3 8	4 1	4 6
Zanzibar	1 0	2 0	3 0

(*See list following for places not on this list*).

	Not over 1 lb.	Every extra lb. up to 11 lb.
	s. d.	s. d.
Australia	1 0	0 6
Bechuanaland Protectorate	1 9	1 3
Canada	0 8	0 6
Cape Colony	0 9	0 9
Fiji Islands	1 0	0 8
Natal	0 9	0 9
Orange River Colony	1 0	1 0
Rhodesia	1 9	1 9
Transvaal	1 0	1 0

INSURANCE OF PARCELS.

Parcels can be insured to almost all foreign countries and colonies at the following rates:

For Compensation up to	Fee	For Compensation up to	Fee.
£1	4d.	£72	1s. 2d.
£24	6d.	£84	1s. 4d.
£36	8d.	£96	1s. 6d.
£48	10d.	£108	1s. 8d.
£60	1s. 0d.	£120	1s. 10d.

No parcel can be insured for more than its actual value.

The rates are different to the United States see list following).

For Compensation up to	Fee	For Compensation up to	Fee.
£12	6d.	£72	3s. 0d.
£24	1s. 0d.	£84	3s. 6d.
£36	1s. 6d.	£96	4s. 0d.
£48	2s. 0d.	£108	4s. 6d.
£60	2s. 6d.	£120	5s. 0d.

No parcel to U.S.A. can be insured for more than £120, and to other countries the limit varies from £20 to £400.

MONEY ORDERS.

INLAND.

At every Money Order Office Money Orders can be obtained between the hours of 8 a.m. and 8 p.m. The poundage for these orders is:—

For sums not exceeding

£1	£3	£10	£20	£30	£40
2d.	3d.	4d.	6d.	8d.	10d.

No order may contain a fractional part of a penny.

No single Money Order can be issued for more than £40.

A Money Order may be crossed like a cheque for payment through a bank.

TELEGRAPH MONEY ORDERS.

INLAND.

Money may be transmitted by Telegraph Money Order from any Money Order Office in the United Kingdom, which is also a *despatching* office for telegrams, and may be made payable at any Money Order Office which is also an office for the *delivery* of telegrams.

The charges for Telegraph Money Orders are a poundage at the ordinary rate for Inland Money Orders, with an additional fee of 2d. for each Order and the cost of the official telegram of advice.

POSTAL ORDERS.

Postal Orders are issued and paid at all Money Order Offices in the United Kingdom during the ordinary hours of business on week-days, and in certain British Colonies and places at which British Postal Agencies are maintained.

Orders may be had for every 6d. up to 19s. 6d.; and for 20s. and 21s. Those for 6d., up to 2s. 6d. cost ½d. each; after that, up to 15s. the charge is 1d.; after that, to 21s. the charge is 1½d.

By affixing stamps (perforated ones not allowed) not exceeding 5d. in value nor three in number to the face of any one Postal Order, odd amounts may be made up, but not fractions of a penny.

An Order not cashed within three months from the last day of the month of issue will be charged a fresh commission.

FOREIGN AND COLONIAL MONEY ORDERS.

For sums not exceeding

£1	£2	£4	£6	£8	£10
3d.	6d.	9d.	1s.	1s. 3d.	1s. 6d.

and for countries on which Orders may be issued for a larger sum than £10 the charge is 3d. for every additional £2 or portion of £2.

TELEGRAPH MONEY ORDERS—Foreign and Colonial.

Telegraph Money Orders may be sent to or from certain places. The charges for those issued in the United Kingdom are the ordinary foreign and colonial Money Order poundage, with the addition of a fee of 6d. and cost of official telegram of advice.

POST OFFICE SAVINGS BANK.

Savings Bank business is transacted at every Money Order Office from the hours of 8 a.m. to 8 p.m. on week-days. Any person over 7 years old may be a depositor.

Any sum from one shilling upwards (excluding pence) may be deposited at one time, and any number of deposits made in the course of a year (ending December 31st) up to a limit of £50. The total must never exceed £200, including interest, which is at the rate of 2½ per cent.

For those unable to save more than a few pence at a time, forms are provided free of charge, to which stamps can be affixed till they amount to a shilling in value, when they are accepted for deposit. Perforated stamps not accepted.

Acknowledgment for every deposit exceeding £5 is sent to the depositor by post from the Savings Bank Department in London. For any deposit under £5 the entry of such a deposit in the depositor's book is proof of the sum deposited.

Once every year, on the anniversary of the day on which the account was opened, the depositor must forward his book to the Comptroller of the Savings Bank that the interest up to the 31st December last may be entered in it. An envelope for this purpose may be obtained at any Post Office Savings Bank.

A depositor can at any time withdraw the whole or part of his deposits, and for sums not exceeding £1 without giving notice. For sums above £1 he must forward to the Savings Bank Department a notice of withdrawal, which he can obtain at any Post Office Savings Bank. He will then receive a warrant, which he must present for payment at the post office, together with his book.

LIFE INSURANCE.

Any persons between the ages of 14 and 65 years can effect a Life Insurance for any sum from £5 to £100. Children between 8 and 14 years of age can be insured for £5.

An insurance cannot be for less than £5, but further insurances may be effected on the same life from time to time for any amount of not less than £5, until the sum reaches £100. (See "Government Insurance Tables" p. 707).

ANNUITIES.

Immediate or deferred Annuities from £1 to £100 can be bought at any Post Office Savings Bank on the life of any one who is not less than five years of age. Husband and wife may each purchase an annuity for £100. (See "Government Annuity Tables" p. 707).

TELEGRAMS.

INLAND.

For the first 12 words, 6d.; for every additional word, ½d. Figures are counted at the rate of five to a word.

Stamps in payment must be affixed by the sender. The address of the receiver is charged for, but not that of the sender, if written on the back of the telegraph form.

The charge includes delivery, provided the address be within the Town Postal limits, or within three miles of a head office. When the address is beyond the free delivery limit, a charge of 3d. for each mile is made, reckoned from the limit of free delivery. This charge to be prepaid by the sender. Replies not exceeding 48 words in length may be prepaid by the sender.

Telegraph forms are of two kinds, the A form (given gratis) with no stamp; and the A1 form embossed with a stamp, which may be purchased singly, or in a book of 20, price 10s. 2d.

Any one may register an abbreviated address on payment of a fee of 21s. per year.

Telegrams re-directed by wire to a second address are liable to an additional charge.

The usual hours of attendance at Telegraph Offices on week days are from 8 a.m. to 8 p.m. The usual Sunday attendance in England is from 8 a.m. to 10 a.m.; in Scotland from 9 a.m. to 10 a.m., and in Ireland from 8.25 a.m. to 10.25 a.m. The following offices are always open:—

London. Central Telegraph Station (corner of Newgate Street), King's Cross Station, (closed from 1.30 p.m. to 2.30 p.m., Sundays), Liverpool Street Station, London Bridge Station, (S.E. and C. Railway), St. Pancras Station, Stratford Railway Station, Waterloo Station, West Strand Office, Willesden Junction.

The Provinces. Aberdeen, Alnmouth (Ry. Sta.), Belfast (G.P.O.), Birmingham, Bristol, Cardiff, Cork, Derby, Devonport, Dover, Dublin, Dundee, Edinburgh, Exeter, Falmouth, Glasgow, Holyhead, Hull, Inverness, Leeds, Liverpool, Londonderry, Lucker Station, Manchester, Newcastle-on Tyne, Norwich, Nottingham, Penzance, Plymouth, Portsmouth, Queenstown, Sheffield, Shipley Station (Mid. Ry.), Shipley Gate Station, Southampton Docks, Swansea.

FOREIGN AND COLONIAL TELEGRAMS.

[Where more than one price is given, the charge varies according to the route, or to the part of the country to which the telegram is sent.]

	Rate per word s.	d.
Abyssinia	2	5
Aden	2	0
Alaska	2	9
Algeria	0	2½
Annam	4/2 & 4	5
Antigua	4	4
Argentine Republic	3/10 & 4	2
Ascension	2	6
Australia	2/9 & 3	0
Austria	0	3
Azores	0	9
Bahamas	2	5
Barbadoes	4	9
Basutoland	2	6
Bathurst (West Africa)	3	6
Bechuanaland (British)	2	6
Belgium	0	2
Benguela	10/0 & 10	1
Bermuda	2	6
Bissao	4	8
Bokhara	1	0
Bolama	4	8
Bolivia	5	4
Borneo (British)	from 3/7 to 3	10
Borneo (Dutch)	4/2 & 4	5
Bosnia-Herzegovina	0	3½
Bourbon, see *Réunion.*		
Brazil	3/0 to 6	5
British Central Africa	2	11
British East Africa	2/6 & 2	9
British Guiana	7	0
British New Guinea (sent by post from Cooktown, Queensland, as occasion offers)	—	
Bulgaria and East Roumelia	0	4
Burma	1/10 & 2	0
Cameroons (West Africa)	5	2
Canada	from 1/- to 3	2
Canary Islands	0	9
Cape Colony	2	6
Cape Verd Islands	2/2 & 3	1
Caroline Islands	4/8 & 4	11
Ceylon	1/11 & 2	1
Chile	5	9
China	from 4/2 to 4	7
Cochin-China	3/7 & 3	10
Cocos	2	6
Colombia (S. America)	5/6 & 5	9
Comoro Islands (sent by post from Zanzibar, Aden, etc.)	—	
Congo Free State	5	6
Corea	4/7 & 4	10
Costa Rica	4	2
Crete	0	6
Cuba	1/8 & 1	10
Curaçao	6	9
Cyprus	1	0
Dahomey	5	0
Delagoa Bay	2	7
Denmark	0	3
Dominica	4	2
Dutch E. Indies	from 3/9 to 4	5
Dutch Guiana	6	9
Ecuador	5	9
Egypt	from 1/- to 1	4
Falkland Islands (sent by post from Monte Video or Punta Arenas)	—	
Fanning Island	2	6
Fiji Islands	3	0
Formosa	4/7 & 4	10
France	0	2
French Congo	5	2
French Guiana	6	9
French Guinea	3/6 & 3	7
Germany	0	2
German East Africa	2/8 & 3	1
German South West Africa (Swakopmund)	2	8
Gibraltar	0	3
Gold Coast	4/8 & 4	10
Greece and Greek Islands	0	6
Grenada	4	8
Guadeloupe	5	2
Guam Island	5	0
Guatemala	3/1 & 3	4
Hayti (West Indies)	5/4 & 7	5
Hedjaz (Arabia)	2	6
Holland	0	2
Honduras (British) (sent by post from New Orleans)	—	
Honduras (Independent)	3	9
Hong-Kong, see *China.*		
Hungary	0	3
Iceland	0	8½
India	1/10 & 2	0
Italy	0	3
Italian East Africa	2/1 & 2	2
Ivory Coast	4/6 & 4	8
Jamaica	3	0
Japan	4/7 & 4	10
Java (Dutch E. Indies)	3/9 & 4	0
Les Saintes	5	2
Liberia (sent by post from Sierra Leone)	—	
Loanda	5	5
Luxemburg	0	2½
Madagascar	2	8
Madeira	1	0
Malay Peninsula	3/3 & 3	6
Malta	0	4½
Martinique	5	2
Massowah	2	2
Mauritius	2	6
Mexico	from 1/6 to 2	1
Midway Island	4	0
Montenegro	0	8½
Morocco	3d. & 0	4½
Muscat	2/0 & 2	3
Natal	2	6
New Caledonia	3/5 & 3	8
Newfoundland	1	0
New Zealand	2/9 & 3	0
Nicaragua	3/11 & 4	2
Nigeria (West Africa)	5/0 & 5	2
Norfolk Island	3	0
Norway	0	3
Nyassaland	2	11
Orange River Colony	2	6
Panama	3	2
Paraguay	3/10 & 4	2
Perim	2	0
Persia	1/6 & 1	9
Persian Gulf	2/0 & 2	3
Peru	5	9
Philippine Islands	from 4/2 to 4	10
Porto Rico	4	2
Portugal	0	3
Portuguese East Africa	2	8
Principe (Island of)	5	0
Punta Arenas	3/10 & 4	2
Réunion	2	8
Rhodesia (Northern)	2	11
Rhodesia (Southern)	2	8
Rodriguez	2	6
Roumania	0	3
Russia (in Europe)	0	4
Russia in Asia	1	0
St. Croix	5	3
San Domingo	6	6
St. Kitts	4	8
St. Helena	2	6
St. Lucia	4	6
St. Pierre and Miquelon	1	0
St. Thomas	5	0
St. Thome (Island of)	5	0
St. Vincent	4	7
Salvador	3/6 & 3	9
Sandwich Islands	3	0
Senegal	1	5
Servia	0	8½
Seychelles	2	6
Siam	from 3/3 to 4	8
Sierra Leone	3/6 & 3	7
Society Islands (sent by post from San Francisco)	—	
Soudan (Egyptian)	1	4
Soudan (French)	1	5
Spain	3d. & 0	5
Straits Settlement	3/3 & 3	6
Sumatra (Dutch E. Indies)	4/2 & 4	5
Sweden	0	3½
Switzerland	0	3
Tasmania	3	0
Togoland	5/0 & 5	2
Tonquin	4/2 & 4	5
Transvaal	2	6
Trinidad	5	1
Tripoli	0	7
Tunis	0	2½
Turkey	0	6½
Turkish Islands	0	6½
Uganda	2	9
United States	from 1/0 to 1	6
Uruguay	3/10 & 4	2
Venezuela	7/2 & 7	7
Walfisch Bay (sent from Swakopmund, German S.W. Africa, by post or special messenger)	—	
Yemen (Arabia)	2	7
Zanzibar	2	6
Zululand	2	6

(In no case is a smaller sum than 10d. *accepted for a telegram or reply.)*

TELEPHONES.

THE TELEPHONE TRUNK LINES which connect the various Telephone Exchange areas throughout the country are the property of the Postmaster-General, and are worked by his officers. The Trunk lines can be used by callers at Post Offices which are connected with the Trunk Telephone system as well as by subscribers and callers using Telephone Exchanges.

The fees for the use of the Trunk lines are as follows:—

For 25 miles or under	Threepence.
„ 50 „ „	Sixpence
„ 75 „ „	Ninepence.
„ 100 „ „	One Shilling.
„ Every additional 40 miles or fraction thereof	Sixpence.

The period of conversation is three minutes from the time when the caller has been informed that the connection is completed; but any person, by prepaying a double fee, may secure either the uninterrupted use of a Trunk line for six minutes, or the option of continuing it at the end of three minutes. In the latter case the fee for the second period is refunded when the call is completed in three minutes. No person is entitled to use a Trunk line continuously for more than six minutes.

The charge for a six minutes' conversation between 7 p.m. and 7 a.m. is the same as for a conversation of three minutes' duration in the day time. All sums payable for the use of a Trunk line must be prepaid. Callers are required to pay the Call Office fee in addition to the Trunk fee.

TELEPHONE EXCHANGES. The Postmaster-General has Telephone Exchanges in London and at a large number of Provincial towns. The rates of subscription in LONDON for the *Ordinary Message-rate Service* (including one telephone at the subscriber's premises) are as follows:—

(*a*) For connection with any Exchange *in* the County of London within two miles of the subscriber's premises, annual subscription £5.

Message Fees: (1) One penny for each call to a subscriber on any Exchange in the County of London. (2) Two pence for each call to a subscriber on any Exchange outside the County of London.

(*b*) For connection with any Exchange *outside* the County of London within two miles of the subscriber's premises, annual subscription £4.

Message Fees: (1) One penny for each call to a subscriber on the same Exchange. (2) Two pence for each call to a subscriber on any other Exchange.

N.B.—The minimum yearly amount payable by each subscriber for Message Fees is 30s.

Any person can use a call office on the Post Office system in London for a fee of two pence. The fee is payable by subscribers as well as other persons. Post Office subscribers can communicate with subscribers of the National Telephone Company in the London Exchange Area at the same rates of charge as for communication with other Post Office subscribers.

TELEPHONE COMMUNICATION WITH FRANCE AND BELGIUM. London and certain provincial towns in England can communicate by telephone with Paris, Brussels, and certain provincial towns in France and Belgium. The fee is from 8s. to 10s. for a conversation of three minutes, the same conditions and regulations in this case as in that of ordinary Trunk line conversations.

N.B.—In making appointments for conversations with correspondents in France, remember that Paris time is 9 minutes in advance of Greenwich time. But in Belgium Greenwich time is used officially for telegraphic and telephonic purposes.

MISCELLANEOUS REGULATIONS.

CUT-OUT STAMPS. Embossed or impressed postage stamps cut out of envelopes, postcards, letter-cards, newspaper wrappers, or telegram forms may be used as adhesive stamps in payment of postage, provided they are not imperfect or defaced in any way. But embossed or impressed Inland Revenue Stamps cannot be used in payment of postage, and stamps indicating the payment of a registration fee may only be used for registered correspondence.

SPOILED STAMPS. Payment of postage cannot be made by means of imperfect or defaced postage stamps. Stamps are considered defaced when marked on the face with any written, printed, or stamped characters. Stamps may, however, be perforated with initials provided that the perforated holes are no larger than those dividing one stamp from another in a sheet of stamps.

Application for the recovery of the value of spoiled or unused stamps, whether postage or revenue, can be made in London at Somerset House, and elsewhere at most large Post Offices.

STAMPS BOUGHT FROM THE PUBLIC. Persons wishing to sell postage stamps must fill up a form obtainable at any Post Office, stating the value of the stamps, and the name, address, and occupation of the vendor. The form and stamps should then be handed in at any Money Order Office and an acknowledgment obtained. An order for payment for the face value of the stamps, less 5 per cent. commission, will be sent from the Chief Office of Account, London, Dublin, or Edinburgh. No smaller amount than one pound's worth will be purchased.

INLAND REVENUE STAMPS. Stamps issued for Inland Revenue purposes, whether impressed, or adhesive, can be obtained through any Money Order Office in England and Wales, and through certain selected offices in Scotland and Ireland. Fee stamps of every kind may also be obtained.

STAMP DUTIES. Ordinary adhesive Postage and Revenue stamps may, as a rule, be used for the purpose of denoting stamp Duties up to a limit of 2s. 6d., where adhesive stamps are admissible for that purpose (Refer to "Adhesive Stamps" in *Index*). One or more Postage and Revenue Stamps may be used to make up the duty.

STAMPING OF DOCUMENTS, &c. On the prepayment of the proper duty, any executed or unexecuted documents or printed forms can be left at any Money Order Office in England and Wales, and at certain offices in Scotland and Ireland, to be forwarded for stamping, without charge for transmission. Executed documents can, as a rule, be reclaimed the second day after being left.

EXCISE LICENCES. The following licences are obtainable at the Post Office:—

(1) *In England and Wales* (*a*) At all Money Order Offices—dog, gun, male servants, carriage (15s. only); (*b*) At all Money Order Offices where there is a demand for them—carriage, motor, armorial bearings, private brewer, game, game dealer, game-keeper; (*c*) At all Head Offices and some important Branches—Establishment licences, hackney carriage, hackney motor, and licence to keep hounds.

(2) *In Scotland* (*a*) Dog and gun licences are issued at all Money Order Offices; (*b*) Establishment, motor, private brewers,' game and gamekeepers' licences at some Money Order Offices. (See "Excise Tables" p. 681).

PREPAYMENT OF CORRESPONDENCE IN MONEY. At the Head Offices of the principal Metropolitan Districts, and at the Head Offices in Edinburgh and Dublin, and certain large towns in the provinces, every kind of inland correspondence, other than newspapers, may be prepaid in money, provided that the articles are chargeable with a uniform rate of postage, that the amount paid is in no case less than £1, and that the correspondence is tied in bundles representing a postage of 5s. each (or, in the case of exceptionally bulky packets, 2s. 6d. each), with the addresses arranged in the same direction.

EVASION OF POSTAGE. Nothing sent through the post may contain an enclosure directed to a name and an address different from the name and address borne on the cover with the intention of evading postage.

POSTMASTERS AND THE PUBLIC. Postmasters are not allowed to return any correspondence to the writer or sender, or to delay forwarding it to its destination according to the address, even though a request to such effect be written thereon. Postmasters are not bound to weigh for the public, letters, half-penny packets or newspapers, brought for the post, but they may do so if their duty be not impeded thereby. This rule does not apply to parcels, which are tested both as to weight and size before being accepted.

EXCISE TABLES.

The Excise is derived from taxes on commodities (chiefly spirits, beer, and tobacco) produced and consumed within the country, and from licences to carry on certain trades and professions. (The subject is treated on pp. 555-63.)

The following is a schedule of excise licences as revised by the Finance (1909-10) Act, 1910, with the amount payable *annually* :—

I. EXCISE LICENCES.

	£	s.	d.
Appraisers.	2	0	0
Licensed Auctioneers and House Agents may act as Appraisers without further licence. Licensed Appraisers may act as House Agents without further licence.			
Armorial Bearings. Great Britain	1	1	0
If used on any carriage or vehicle	2	2	0
Auctioneers.	10	0	0
Licensed Auctioneers may act as Appraisers or House Agents without further licence			
Banker's Licence	30	0	0
Brewers and Beer Dealers.			
Brewers of Beer for sale—Licences are calculated according to the number of barrels brewed during the preceding year.			
Not exceeding 100 barrels	1	0	0
Exceeding 100 barrels, for the first 100	1	0	0
For every further 50 or fraction of 50 barrels	0	12	0
Beer Dealers, wholesale	10	10	0
Beer Retailers' On Licences.			
BEER HOUSE LICENCE. A duty equal to a third of the annual value of the licensed premises, subject to the following minimum duty.			
IN GREAT BRITAIN.			
In areas which are not urban areas, and in urban areas with a population of under 2,000	3	10	0
2,000 and less than 5,000	6	10	0
5,000 „ „ „ 10,000	10	0	0
10,000 „ „ „ 50,000	13	0	0
50,000 „ „ „ 100,000	20	0	0
100,000 or above	23	10	0
IN IRELAND.			
In areas which are not urban areas, and in urban areas with a population of less than 10,000	3	10	0
In urban areas with a population of 10,000 or above	4	0	0
Beer Retailers' Off Licences (including Cider)			
Where annual value does not exceed £20	1	10	0
Rising to £10 where annual value exceeds £500. Persons brewing for private consumption only pay a duty of 4s. annually, if annual value of house exceeds £8 and not £10, and 9s. if it exceeds £10 and not £15. If above the annual value of £15 the licence is only 4s. but in that case a duty has to be paid on the beer brewed.			
Cards, see *Playing Cards.*			
Carriages.			
Hackney carriages, weight unladen not exceeding one ton, or of three tons or upwards	0	15	0
Other carriages, with four or more wheels, and fitted to be drawn by two or more horses	2	2	0
If with four or more wheels, and fitted to be drawn by one horse	1	1	0
With less than four wheels	0	15	0
Motor Bicycles and Motor Tricycles of whatever horse power	1	0	0
Motor Cars not exceeding 6½ horse power	2	2	0
Exceeding 6½ but not exceeding 12 horse power	3	3	0
„ 12 „ „ 16 „ „	4	4	0
„ 16 „ „ 26 „ „	6	6	0
„ 26 „ „ 33 „ „	8	8	0
„ 33 „ „ 40 „ „	10	10	0
„ 40 „ „ 60 „ „	21	1	0
„ 60	42	0	0
Ditto, used as hackney carriages	3	18	0
Motor Spirit Manufacturers	1	0	0
„ „ **Dealers**	0	5	0
Chimney Sweep (who employs an assistant)	0	2	6
Cider and Perry, retailers of			
ON LICENCES. Half the scale for Wine Retailers.			
OFF LICENCES	2	0	0
Distillers of Spirits.			
Not exceeding 50,000 gallons	10	0	0
exceeding 50,000 „ for first 50,000	10	0	0
For every further 25,000 or fraction of 25,000	10	0	0
Dogs (Great Britain).	0	7	6
Dogs under six months old, hounds under twelve months old if used in a pack, dogs solely used for tending sheep or cattle (according to a certain scale, but not exceeding eight dogs), blind person's dog, are exempt.			
Game Licence. Whole year	3	0	0
Ditto, Half year	2	0	0
Ditto, for fourteen continuous days	1	0	0
Gamekeepers. Whole year, Great Britain	2	0	0
Ditto ditto Ireland	3	0	0
Ditto Half year, Ireland	2	0	0
Game Dealers	2	0	0
Glucose Manufacturers	1	0	0
Guns to use or carry, including any firearm, or air-gun	0	10	0
Persons using guns in their own dwelling-houses or in the garden attached thereto, and persons having a game licence are exempt.			
Hawkers	2	0	0
A hawker is a person travelling about with a horse or other animal drawing merchandise or goods for the purpose of selling them in a place in which he does not usually reside or carry on business.			
House Agents	2	0	0
Persons letting furnished houses at an annual rent of £25 do not require a licence. Licensed auctioneers, appraisers, agents on landed estates and solicitors are exempt.			
Inebriates' Retreat, licence to keep	5	0	0
For every patient above ten	0	10	0
These are collected by means of stamps.			
Invert Sugar Manufacturers	1	0	0
Male Servants, Great Britain	0	15	0
EXEMPTIONS. Persons who are *bona fide* employed in some other capacity and who are only partially employed as servants; nor does it include a person who does not reside in his employer's house, and who serves his employer for a portion only of each day. Trade servants, including those engaged in hotels and refreshment houses, are exempt, as are also game watchers, garden labourers (but not gardeners or under-gardeners), grooms in public stables (but not in private stables).			
Marriage Licence (see under *Stamp Duties*).			
Medicine, Patent, makers and sellers of	0	5	0
Dealers in, for every place of business	0	5	0
(See also "Patent Medicines" under *Excise Duties*).			
Methylated Spirit. Makers	10	10	0
Ditto Retailers	0	10	0
Motor Cars (see *Carriages*).			
Occasional Licences for sale of any intoxicating liquor per day	0	10	0
Sale of beer or wine only per day	0	5	0
RAILWAY RESTAURANT CAR	1	0	0
Passenger Boats on which intoxicants and tobacco are sold	10	0	0
One day only	2	0	0
Patent Medicine, makers and sellers of	0	5	0
Pawnbrokers	7	10	0
Ditto, dealing in plate, or in gold and silver ware, must take out in addition a plate dealer's licence	5	15	0
Pedlar, not an excise licence, but a police licence	0	5	0
Plate Dealers (including Hawkers and Pedlars). Dealing in gold above 2 dwts. and under 2 oz., or silver above 5 dwts. and under 30 oz.	2	6	0
Dealing in gold 2 oz. or upwards, or silver 30 oz. or upwards	5	15	0
Playing Cards. Makers who sell	1	0	0
Publicans' full licence for sale of Spirits, Beer, Cider, Wine and Sweets.			
A duty equal to half the annual value of the licensed premises, subject to the following minimum duty :—			
IN GREAT BRITAIN.			
In areas which are not urban areas, and in urban areas with a population of less than 2000	5	0	0
In urban areas with a population of 2,000 and less than 5,000	10	0	0
5,000 „ „ 10,000	15	0	0
10,000 „ „ 50,000	20	0	0
50,000 „ „ 100,000	30	0	0
100,000 or above	35	0	0
IN IRELAND.			
In areas which are not urban areas, and in urban areas with a population of less than 10,000	5	0	0

	£	s.	d.
Publicans *(continued.)*			
In urban areas with a population of 10,000 or above	7	10	0
NOTE.—A retailer's on licence authorises sale by retail of the liquor to which the licence extends for consumption either on or off the premises. A reduction of duty is made in the case of hotels or restaurants, when it is shown to the satisfaction of the Commissioners that the receipts from the sale of liquor are less than two-fifths of the total receipts in the case of a restaurant, and less than two thirds of the total receipts in the case of an hotel. A duty of sixpence in the pound is charged on all purchases of liquor by Clubs.			
Refiners of gold and silver	5	15	0
Refreshment Houses.			
Annual value under £30	0	10	6
Ditto £30 or over	1	1	0
Saccharine Manufacturers	1	0	0
Spirits.			
Rectifiers and Compounders	15	15	0
Dealers not retailers	15	15	0
Spirit Retailer's Off Licence.			
Where annual value of licensed premises does not exceed £10	10	0	0
exceeding £10 and not exceeding £20 ..	11	10	0
„ £20 „ „ £30 ..	14	0	0
„ £30 „ „ £50 ..	15	0	0
„ £50 „ „ £75 ..	16	0	0
„ £75 „ „ £100 ..	17	10	0
„ £100 „ „ £250 ..	19	0	0
„ £250 „ „ £500 ..	30	0	0
„ £500 ..	50	0	0
Stills and Retorts, Chemist's licence	0	10	0
Sweets. Dealers	5	5	0
Retailers same as for Cyder (q.v.)			
Tobacco and Snuff Manufacturers.			
Trade not exceeding 20,000 lbs. in the year ..	5	5	0
„ „ 40,000 lbs. „ ..	10	10	0
„ „ 60,000 lbs. „ ..	15	15	0
„ „ 80,000 lbs. „ ..	21	0	0
„ „ 100,000 lbs. „ ..	26	5	0
Exceeding 100,000 lbs.	31	10	0
Beginners to pay £5 5s., and to be surcharged on expiration of licence, if quantity exceeds 20,000 lbs.			
Tobacco Growers, Cultivators or Curers in England or Scotland—annual licence ..	0	5	0
Tobacco and Snuff Dealers (not retailers of intoxicating liquors)	0	5	3
Vinegar Makers (for sale)	1	0	0
Wine Dealers (wholesale)	10	10	0
Wine Retailers' On Licence (including sweets).			
Where annual value of licensed premises is under £30	4	10	0
£30 and under £50	6	0	0
£50 „ £100	9	0	0
£100 and over	12	0	0
Wine Retailers' Off Licence.			
Annual value not exceeding £20	2	10	0
with additional rates up to £10 where annual value exceeds £500.			

II. EXCISE DUTIES.

	£	s.	d.
Beer, per barrel of specific gravity of 1055 (55° of gravity)	0	7	9
Chicory, per cwt.	0	12	1
Coffee Mixture or substitutes, per ¼ lb.	0	0	0½
Commissions.			
To any officer in the Army or the Royal Marines	1	10	0
To any officer in the Royal Navy	0	5	0
Of Lunacy. These duties are collected by means of stamps	0	5	0
Glucose, per cwt., solid	0	2	9
„ „ liquid	0	2	0
Motor Spirit .. .. per gall.	0	0	3
Rebate allowed when used otherwise than for motive power for motor cars; half duty repayable when used for trade vehicles, or hackney carriages, or by a medical man in the course of his profession.			
Patent Medicines.			
Not exceeding 1s.	0	0	1½
„ 2s. 6d.	0	0	3
„ 4s.	0	0	6
„ 10s.	0	1	0
„ £1	0	2	0
„ £1 10s.	0	3	0
„ £2 10s.	0	10	0
Exceeding £2 10s.	1	0	0

	£	s.	d.
Playing Cards, per pack	0	0	3
Railways.			
On passenger receipts per £100, in Great Britain, but subject to an exemption in respect of fares not exceeding the rate of a penny per mile			
Urban Traffic	2	0	0
Other traffic	5	0	0
Saccharin, per oz.	0	1	3
Spirits.			
Home-made, per proof gallon	0	14	9
Imported	0	11	4
Tobacco and Snuff grown in England, Ireland, or Scotland.			
Unmanufactured tobacco			
Containing 10 lbs. or more of moisture in every 100 lbs. weight	0	3	6
Ditto, if stripped or stemmed	0	3	3
Containing less than 10 lbs. of moisture in every 100 lbs. weight	0	3	11
Cavendish or Negrohead, manufactured in Bond	0	4	8

(Refer to Taxes, Duties, and Licences, pp. 555-63.)

STAMP DUTIES.

(As revised by Finance Bill, 1909.)

The following is a list of the principal stamp duties:—

	£	s.	d.
Admission as Barrister	50	0	0
„ as Solicitor	25	0	0
„ to any Inn of Court	25	0	0
„ as Notary Public, England	30	0	0
„ „ „ Scotland or Ireland ..	20	0	0
Affidavit and Statutory Declaration	0	2	6
Agreement under hand, or memorandum of an agreement and not otherwise specifically charged with duty	0	0	6
Exemptions—contracts for the sale of goods, shipping articles, contracts for hiring labourers, servants, and the like.			
Alkali Works, certificate of registration of	5	0	0
Appointment of a new trustee	0	10	0
Appointment of a gamekeeper	0	10	0
Appraisement or valuation of property—			
not exceeding £5	0	0	3
„ £10	0	0	6
„ £20	0	1	0
„ £30	0	1	6
„ £40	0	2	0
„ £50	0	2	6
„ £100	0	5	0
„ £200	0	10	0
„ £500	0	15	0
over £500	1	0	0
Exemptions—valuations for legacy or succession duty or valuations for the information of one party only.			
Apprenticeship indentures	0	2	6
Except in the case of pauper children.			
Articles of Association	0	10	0
Articles of Clerkship to Solicitor	80	0	0
Award	0	10	0
Bank Note, other than Bank of England Notes, not exceeding £1	0	0	5
„ £2	0	0	10
„ £5	0	1	3
„ £10	0	1	9
„ £20	0	2	0
„ £30	0	3	0
„ £50	0	5	0
„ £100	0	8	6
If re-issued a fresh stamp is not required.			
Bill of Exchange. See "Stamps" p. 567.			
Bill of Lading	0	0	6
Bill of Sale (for money borrowed) see Mortgage.			
Bond for securing the payment or re-payment of money—the same as Mortgages (q.v.)			
Bond for customs or excise duties, where the penalty does not exceed £150, the same as Mortgage (q.v.) In any other case	0	5	0
Bond for securing the payment of an annuity for life, or for an indefinite period, for every £5 or part of £5 of such annuity			
(a) If the only or primary security	0	2	6
(b) If as collateral security	0	0	6
Bond for securing payment of an annuity for a definite period, same as Mortgage (q.v.)			
Bond on obtaining letters of administration ..	0	5	0

	£	s.	d.
Bond of any kind whatsoever not specifically charged with any duty, same as Mortgage, but not to exceed, e.g. fidelity guarantee bonds ..	0	10	0
Capital Duty on the capital of limited companies, on every £100 or part of £100 of such capital	0	5	0
Capital Duty on loan borrowed by corporation, local authority, or company, on every £100 or part of £100 of such loan	0	2	6
Cards (playing) per pack	0	0	3
Certificate, annual.			
To practise as solicitor, law agent, writer to the signet, notary public, conveyancer, or equity draftsman, within ten miles of the General Post Office, London, or in Edinburgh, or within three miles of Dublin	9	0	0
Outside the above limits	6	0	0
N.B.—During the first three years of practising, the fees are one-half of the above scale.			
Certificate of goods for drawback	0	4	0
Certificate of birth, death, marriage, see copy or extract from register.			
Certificate of Registration. Alkali Works	5	0	0
Other works which require to be registered ..	3	0	0
Charter Party	0	0	6
Cheque	0	0	1
Collateral Security. For each £100 or part of £100	0	0	6
Commission of Lunacy	0	5	0
Contract Note for the sale or purchase of stock or other marketable security.			
Of the value of £5 and under £100	0	0	6
Exceeding £100 and up to £500	0	1	0
„ £500 „ £1,000	0	2	0
„ £1,000 „ £1,500	0	3	0
„ £1,500 „ £2,500	0	4	0
„ £2,500 „ £5,000	0	6	0
and 2 shillings extra for each additional £2,500 up to a maximum of £1, where the value exceeds £20,000.			
Conveyance or Transfer.			
Bank of England Stock	0	7	9
Colonial stock, for every £100 or part of £100 ..	0	2	6
***Conveyance** or transfer (on sale) of any other property			
not exceeding £5	0	0	6
„ £10	0	1	0
„ £15	0	1	6
„ £20	0	2	0
„ £25	0	2	6
Then up to £300, for every £25 or part of £25 ..	0	2	6
Exceeding £300, for every £50 or part of £50	0	5	0
***Conveyance** or transfer not otherwise charged ..	0	10	0
The above scale applies only to a single transaction where the amount of the consideration does not exceed £500, where the amount exceeds £500 or forms part of a larger transaction, or of a series of transactions of which the amount or value or the aggregate amount or value exceeds £500, double the above duties are charged.			
Copy or extract attested or authenticated, the same duty as original document, but not to exceed	0	1	0
Copy or extract (certified) from any register of births, deaths, etc.	0	0	1
Debenture for drawback, where the allowance to be received does not exceed £10	0	1	0
„ „ £50	0	2	6
Exceeds £50	0	5	0
Debentures or loan capital of a company, etc., except where ad valorem duty paid on trust deed. For every £100 or part of £100 ..	0	2	6
Declaration of any trust of property by any writing not being a will	0	10	0
Declaration (statutory) see *Affidavit*.			
Deeds of Arrangement, for every £100 or part of £100	0	1	0
Deed, where no duty is specifically chargeable ..	0	10	0
Dock Warrant	0	0	3
Duplicate or counterpart of any instrument chargeable with duty, the same as the original instrument, but not to exceed	0	5	0
Equitable mortgage, for every £100 or part of £100	0	1	0
Extract, see *Copy*.			
Insurance against loss under Employers' Liability Act or the Workmen's Compensation Act.			
Where the annual premium does not exceed £1	0	0	1
Exceeding £1—if under hand	0	0	6
if under seal	0	10	0
Lease. For a term not exceeding a year—of any dwelling-house at a rent not exceeding £10 per annum	0	0	1
For a term less than a year—of a furnished dwelling-house or apartments, where the rent exceeds £25	0	5	0

	£	s.	d.
Lease (*continued.*)			
Lands or tenements for a term not exceeding 35 years where the annual rent does not exceed £5	0	1	0
„ £10	0	2	0
„ £15	0	3	0
„ £20	0	4	0
„ £25	0	5	0
„ £50	0	10	0
„ £75	0	15	0
„ £100	1	0	0
Where the rent exceeds £100, for every £50 or part of £50	0	10	0
If the term exceeds 35 years, but does not exceed 100 years, the stamp duty is *six times the above.* If the term exceeds 100 years, the stamp duty is *twelve times the above.*			
Letter of Allotment.			
Less than £5	0	0	1
£5 and over	0	0	6
Letters Patent, Grant of, to assume the honour and dignity of			
Duke	350	0	0
Marquis	300	0	0
Earl	250	0	0
Viscount	200	0	0
Baron	150	0	0
Baronet	100	0	0
Other honours and dignities	30	0	0
Letter of Renunciation.			
Less than £5	0	0	1
£5 and upwards	0	0	6
A separate duty is chargeable on letters of allotment and letters of renunciation, even though they are contained in the same document.			
Letter of Credit, same as Bill of Exchange.			
Licence, Ecclesiastical.			
To hold the office of lecturer, reader, chaplain, church clerk, chapel clerk, parish clerk, or sexton	0	10	0
For licensing a building for the performance of divine service, or a chapel for the solemnization of marriages	0	10	0
For any other purpose	2	0	0
Licence to keep an inebriates' retreat.			
Upon every licence	5	0	0
And for every patient above ten	0	10	0
Licence to use surname or arms.			
In compliance with the terms of a will or settlement	50	0	0
Upon a voluntary application	10	0	0
Marketable Securities other than Colonial Government, or Colonial Municipal Securities transferable by delivery.			
Dated or signed before August 6th, 1885, double the duty of a Mortgage, (q.v.			
dated or signed after August 6th, 1885, for every £10 or fraction of £10	0	2	0
Marriage licence.			
Special	5	0	0
Not special	0	10	0
Marriage settlement, same as settlement (q.v.).			
Memorandum of Association	0	10	0
Money Lenders, Registration of	1	0	0
Mortgage, being the only or principal security for the repayment of money—			
not exceeding £10	0	0	3
„ £25	0	0	8
„ £50	0	1	3
„ £100	0	2	6
„ £150	0	3	9
„ £200	0	5	0
„ £250	0	6	3
„ £300	0	7	6
Exceeding £300, for every £100 or part of £100	0	2	6
Transfer of mortgage, for every £100 or part of £100	0	0	6
Release of a mortgage, for every £100 or part of £100	0	0	6
Notary Public, licence to act as.			
In England	30	0	0
In Scotland or Ireland	20	0	0
Notarial Act (except protest of a bill of exchange or of a promissory note)	0	1	0
Passport	0	0	6
Policy of Sea Insurance.			
Where the premium does not exceed 2s. 6d. per cent. per annum	0	0	1
In any other case—For voyage, for every £100 or part of £100 insured	0	0	3

	£	s.	d.
Policy of Sea Insurance *(continued.)*			
For time not exceeding six months	0	0	3
Not exceeding twelve months	0	0	6
If there is a continuation clause extending the time for thirty days beyond the year, an extra duty of sixpence must be paid. A mixed policy is charged with duty as a voyage policy, and also with duty as a time policy.			
Policy of Life Insurance.			
Where the sum insured does not exceed £10 ..	0	0	1
Not exceeding £25	0	0	3
Not exceeding £500, for every £50 or part of £50	0	0	6
Not exceeding £1,000, for every £100 or part of £100	0	1	0
Exceeds £1,000, for every £1,000 or part of £1,000	0	10	0
Policy of Fire Insurance	0	0	1
Policy of Insurance against accident to life or limb, or against damage to property	0	0	1
Power of Attorney.			
To vote at a meeting	0	0	1
To receive one payment of dividends only ..	0	1	0
To receive dividends or interest on stock ..	0	5	0
To receive prize money or wages of any seaman or soldier	0	1	0
To receive any sum of money not exceeding £20, or any periodical not exceeding the annual sum of £10 (not being otherwise charged) ..	0	5	0
For the sale or transfer of Government funds, where the nominal value does not exceed £100	0	2	6
For any other purpose	0	10	0
Procuration Deed or other instrument	0	10	0

	£	s.	d.
Promissory Note, same as for Bill of Exchange. See "Stamps," p. 567.			
Protest of bill of exchange or promissory note. The same duty as on the bill itself, but not to exceed	0	1	0
Proxy to vote at one meeting	0	0	1
If to vote at more than one meeting	0	10	0
*Receipt for £2 or upwards	0	0	1
Scrip Certificate	0	0	1
Settlement. Any instrument whereby a definite sum of money or any definite amount of stock is settled upon a person, or is settled in any manner whatever. For every £100 or part of £100 settled	0	5	0
Share Warrants and Stock Certificates to Bearer of any Company, Corporation or body of persons in the United Kingdom, on issue p.c.	1	10	0
To Bearer of any Foreign or Colonial Company, for every £10 or fraction of £10	0	2	0
Transfer of Cost Book Mining Shares	0	0	6
Transfer of Stock and Shares, see *Conveyance.*			
Valuation, see Appraisement.			
Voting Paper or Proxy, for one meeting	0	0	1
To vote generally	0	10	0
Warrant of Attorney, to confess and enter up a judgment given as a security for the payment or repayment of money, same as Mortgage.			
Warrant of Attorney of any other kind	0	10	0
Warrant for goods	0	0	3

UNSTAMPED DOCUMENTS. The following instruments cannot legally be stamped after execution:—Bills of exchange, bills of lading, marine policies executed in the United Kingdom, proxies, and voting-papers. And as an unstamped document has no legal force, such instruments cannot be adduced as evidence in a law-court. In most cases, however, documents requiring stamps may be stamped after execution on payment of certain penalties and then used as evidence. (N.B.—The subject of "Stamp Duties" is treated on pp. 562-3.)

Penalties incurred by failing to stamp documents at the proper time:—	£	s.	d
Agreements under hand only after 14 days from execution	10	0	0
Attested copies after 14 days from execution	10	0	0
Charter-parties within 7 days from execution	0	4	6
Charter-parties after 7 days but within a month	10	0	0
Receipts within 14 days after they have been given	5	0	0
Receipts after 14 days, but within a month	10	0	0

* After a month receipts cannot be stamped under any circumstances. A stamp is not required on a receipt for money not paid as a debt.

CUSTOMS TARIFF (1910.)

(*As revised by Finance* (1909-10) *Act*, 1910).

Ordinary Import Duties.	£	s.	d.
Cocoa:—Raw .....lb.	0	0	1
Husks and Shells .....cwt.	0	2	0
Cocoa or Chocolate, ground, prepared, or in any way manufactured .....lb.	0	0	2
(For additional duty, if spirit has been used in the manufacture, see below)			
Cocoa butter.....lb.	0	0	1
Coffee:—Raw .....cwt.	0	14	0
Kiln-dried, roasted or ground .....lb.	0	0	2
Chicory:—Raw or Kiln-dried.....cwt.	0	13	3
Roasted or ground .....lb.	0	0	2
Chicory (or other Vegetable substances) and coffee roasted and ground; mixed .....lb.	0	0	2
Fruit, Dried:—Currants .....cwt.	0	2	0
Figs, Fig-cake, Plums preserved, Prunes and Raisins .....cwt.	0	7	0
Molasses:—Containing 70 per cent. or more of sweetening matter .....cwt.	0	1	2
Containing less than 70 per cent. and more than 50 per cent. of sweetening matter cwt.	0	0	10
Containing not more than 50 per cent. of sweetening matter .....cwt.	0	0	5
If to be used solely for the purpose of food for stock	Free		
Motor Spirit:—This is a new duty, imposed in accordance with the provisions of the Finance (1909-10) Act, 1910 .....gall.	0	0	3
Sugar:—Tested by the polariscope, of a polarisation exceeding 98 degrees .....cwt.	0	1	10
Of a polarisation not exceeding 76 degrees cwt.	0	0	10

	£	s.	d
(Intermediate rates are levied on Sugar of a polarisation between 76 and 98 degrees, and special rates on composite sugar articles, e.g. Caramel, Chutney, Canned, Bottled and Crystallized Fruit, Jam, Preserved Ginger, Condensed Milk, etc.)			
Tea.....lb.	0	0	5
Tobacco:—Unmanufactured, stemmed or stripped; Containing 10 lbs. or more of moisture in every 100 lbs. .....lb.	0	3	8
Containing less than 10 lbs. of moisture in every 100 lbs. .....lb.	0	4	1½
Unmanufactured, unstemmed; Containing 10 lbs. or more of moisture in every 100 lbs. .....lb.	0	3	8
Containing less than 10 lbs. of moisture in every 100 lbs. .....lb.	0	4	1
Manufactured:—Cigars .....lb.	0	7	0
Cavendish or Negrohead .....lb.	0	5	4
Snuff containing more than 13 lbs. of moisture every 100 lbs. .....lb.	0	4	5
Not more than 13 lbs. of moisture lb.	0	5	4
Cigarettes.....lb.	0	5	8
Other manufactured tobacco, and Cavendish or Negrohead manufactured in Bond from unmanufactured tobacco .....lb.	0	4	8
Wine:—Not exceeding 30 degrees of proof spirit .....gall.	0	1	3
Exceeding 30 but not exceeding 42 degrees of proof spirit .....gall.	0	3	0
Every degree beyond the highest above charged, an additional duty of .....gall.	0	0	3
Additional Duty on Wine imported in bottle .... Sparkling .... „	0	2	6
Still ..... „	0	1	0

Import Duty to countervail Stamp Duty on British-made articles.

	£	s.	d.
Playing Cards.....doz. packs.	0	3	9

Import Duties to countervail Excise Duties on British Beer, Glucose and Saccharin.

	£	s.	d.
Beer, called Mum, Spruce or Black Beer and Berlin White Beer and similar preparations: The worts of which were, before fermentation, of a specific gravity not exceeding 1215 degrees ..... for every 36 gallons	1	13	0
Exceeding 1215 degrees „ „ „ „	1	18	8
Beer of any other description, the worts of which were, before fermentation, of a specific gravity of 1055 degrees, for every 36 gallons (and in proportion for any difference in gravity).	0	8	3
Glucose:—Solid .....cwt.	0	1	2
Liquid..... „	0	0	10
Saccharin (including mixtures of Saccharin and substances of like nature or use.) .....oz.	0	0	7

Import Duties to countervail Excise Duty on British Spirits.

	£	s.	d.
Spirits and Strong Waters:—For every gallon, computed at hydrometer proof, of spirits of any description (except perfumed spirits) including Naphtha or Methylic Alcohol purified so as to be potable, and mixtures and preparations containing spirits ..Proof gall.	0	15	1
Additional on spirits imported in bottle, enumerated and tested, and sweetened spirits imported in bottle, unenumerated and tested Proof gall.	0	1	0
Sweetened, tested for strength, additional to the Spirit Duty, in respect of the sugar used therein .....Proof gall.	0	0	1
Additional on Imitation Rum, Geneva and unenumerated spirits sweetened and not sweetened, tested .....Proof gall.	0	0	1
Liqueurs, Cordials, or other preparations containing Spirits, in bottle, entered in such a manner as to indicate that the strength is not to be tested .....gall.	1	1	5
Perfumed spirits ..... „	1	4	1
Additional if imported in bottle..... „	0	1	0
(Foreign Spirits, methylated, or used in art or manufacture are charged, per proof gallon, the difference between Customs Duty on Foreign Spirits and Excise Duty on British Spirits).			
Chloroform .....lb.	0	4	4
Chloral Hydrate ..... „	0	1	9
Cocoa or Chocolate in the manufacture of which Spirit has been used, in addition to any other duty to which such Cocoa or Chocolate is at present liable .....lb.	0	0	0½
Collodion .....gall.	1	14	11
Confectionery, in the manufacture of which Spirit has been used, in addition to any other duty to which such Confectionery is liable .....lb.	0	0	0½
Ether, Acetic ..... „	0	2	7
„ Butyric .....gall.	1	1	10
„ Sulphuric..... „	1	16	6
Ethyl Bromide .....lb.	0	1	5
„ Chloride..... gall.	1	1	10
„ Iodide of ..... „	0	19	0
Soap, Transparent, in the manufacture of which spirit has been used .....lb.	0	0	3

(N.B.—The subject of Customs Duties is treated on p. 560.)

COMMERCIAL PRODUCTS

WITH SPECIAL REFERENCE TO

THE TRADE AND MANUFACTURES OF THE UNITED KINGDOM.

Ale or Beer, a fermented liquor made from various grains malted (chiefly barley). Made in all parts of the British Islands and in Germany. Burton-on-Trent and Edinburgh are famous for their *ales*, Dublin for *stout*, and London for *porter*. Bavaria and Vienna are famous for *beer*, especially *lager beer*, which is beer *laid up* or stored before use. We import a certain amount from Germany and Holland.

Alabaster, a compact variety of gypsum or sulphate of lime. The best kinds are found in Spain and Italy; inferior in Germany and France. Made into statuary, vases, tables, candlesticks, etc., etc. Florence is the centre of the trade.

Allspice, Pimento or Jamaica Pepper, is the dried berry of a West Indian plant. It is used for flavouring, and is called allspice because it combines the flavours of other spices.

Almonds are stones (with kernels) of the fruit of a tree of the plum kind. Those sold in shops are "sweet almonds." From "bitter almonds" an oil is obtained which is used medicinally, and in confectionery. Bitter almonds are imported from Morocco; sweet almonds from Valencia, Malaga, Italy and France.

Aloes, a bitter, resinous drug obtained from the juice of the leaves of aloes. It is used as a stimulating and purgative medicine. The best aloes are imported from Socotra, inferior kinds from Arabia and Cape Colony.

Alpaca is a cloth made from the long wool of the Alpaca, a species of llama found in the Andes of Peru, Chile, and Bolivia, whence it is imported. The cloth is manufactured in Yorkshire, especially at Saltaire, near Bradford.

Alum is a double sulphate of alumina and potass: white, transparent, and very astringent. It is found in China, Italy, South Scotland, and Yorkshire. It is used in calico printing, dyeing, leather dressing; by candle makers to harden and whiten the tallow, and sometimes by bakers to adulterate bread; in medicine, as an astringent.

Amber is a resinous substance found as a fossil, chiefly on the Prussian Baltic coast, also in the United States, East Indies, and East Africa. It is used for pipe mouth-pieces, beads, necklaces, handles of instruments, etc.

Ambergris, a fragrant, fatty substance, a secretion in the intestines of the Spermaceti Whale. Found floating on the ocean or picked up on the coasts of the Bahamas, Brazil, Africa, the East Indies, China, and Japan. It is used as a perfume.

Amethyst, a bluish or purple sub-species of quartz. The common amethyst is found chiefly in Brazil; also in India, Siberia, Germany, and Spain. The so-called *oriental* amethyst is really a bluish ruby or sapphire. Amethysts are used for jewellery.

Anchovy, a small fish found in the North Mediterranean and on the coasts of Portugal and France. Imported into England from the Mediterranean in casks; much used in making Anchovy sauce and paste.

Anthracite Coal is found chiefly in the United States and South Wales. It is hard and compact, burns with great heat, but without flame, and is, therefore, used in smelting iron.

Antimony is a whitish, brittle metal found in West Europe, the East Indies, North America, Siberia, and Mexico. It is imported into England chiefly from Singapore and Borneo, and is used in medicine, with lead in making printing type, and with tin for plates on which music is engraved; also in making Britannia Metal and Pewter.

Apples are grown in the temperate parts of Europe, America and Australia. Imported into England from the United States, Canada, Portugal, and Tasmania; dried apples from the United States and Canada.

Areca or Betel Nut is the nut of an Indian palm, largely used in the East to chew with lime and the leaves of the betel pepper. It is an important article of commerce in the East.

Arrowroot, a highly nutritious farinaceous substance extracted from the roots of plants in Brazil, West Indies, India, and Australia. A variety called Canna Arrowroot, or "tous les mois," is produced from a species of Canna.

Arsenic, a metal of steel grey colour and brilliant lustre, used as an alloy. Oxide of arsenic or arsenious acid, or white arsenic, is a deadly poison, used in medicine and in the arts.

Asbestos is a whitish, fibrous mineral found in most countries of Europe and in Canada. It may be woven into fine cloth, which is inconsumable by fire. Blocks of it are now used in gas stoves. It is imported chiefly from Canada and Russia.

Asphalt is the solid form of Bitumen, dark in colour and very hard. It is found in Germany, France, on the shores of the Black Sea, in Switzerland, and in the West Indies. The Swiss Asphalt (from the Val de Travers) is largely used in London for street paving. The varnish called Brunswick Black is made from asphalt. We import it from Germany, British West Indies, France, and Italy.

Attar or Otto of Roses is a fragrant essential oil distilled in Eastern countries from rose leaves. It is very costly, 100,000 roses yielding only 180 grains. It is imported into England chiefly from the southern slopes of the Balkans. The valley of the Maritza is famous for its rose gardens, as is also the district round Grasse, in South France.

Bacon, the salted and dried flesh of pigs, except the thighs, which are similarly prepared, but sold separately as "Hams." Produced in all parts of Great Britain, the best is Wiltshire, Hants, and Yorkshire. Irish bacon is less carefully prepared. Large quantities are imported from the United States, Denmark, and Canada.

Badger Skins. Badgers are found throughout the Northern Hemisphere. Their skins are made into a coarse fur. Those of the American badger are the finest. Badgers' hairs are made into painters' and other brushes.

Balsam, a resinous, oily substance of various kinds, obtained from the juices of certain plants. *Copaiva Balsam* is obtained from a tree in the West Indies and Brazil; *Canada Balsam* comes from Canadian pines; *Balsam* or *Syrup of Tolu* from South America; *Storax* from the East Indies; *Balsam of Gilead* or *Opobalsam* from the Levant. Used for medicinal and other purposes.

Bamboos are tree grasses, natives of tropical Asia and America. The hollow stems are of immense use for building houses and bridges, for water pipes, masts, walking-sticks, fishing rods, wickerwork, etc., etc.

Bananas are the nutritious fruit of a tropical plant, and grow in large bunches, each of 60 to 150 fruits. Enormous quantities are now imported into England from the Canary Islands and the West Indies. The **Plantain**, though closely allied, requires cooking before it is eaten.

Barilla, an impure carbonate of soda, obtained by burning marine plants. It is found native in Hungary and Egypt. Used in glass and soap making, and in bleaching.

Bark is the rind of plant stems and branches, especially of trees. The bark of the *oak* is used in tanning; that of the *cork-tree* for making corks; that of the *cinchona* for quinine. Cork bark is imported from Spain, cinchona from Peru and India, bark for tanning from Natal, Belgium, Algeria, Victoria, South Australia, and Tasmania.

Barley. See *Corn.*

Barytes, the sulphate of *Baryta*, the heaviest of all earths. Used by painters as a white paint, and in the manufacture of wall papers, paper collars, etc.

Bast is the inner bark of lime trees. Made into matting, it is used by gardeners for protecting plants. It is imported from Russia.

Bay-salt, a coarse salt obtained by evaporation of sea water in France, Spain, and Portugal, used in curing bacon, etc.

Bdellium, a gummy, aromatic resin obtained from trees in South-West Asia. Formerly used in compounds and plasters, such as *diachylon*. The bdellium mentioned in the book of Genesis probably was a mineral.

Bear Skins are obtained from the colder parts of the Northern Hemisphere: those of the brown bear from Russia and Siberia, of the black bear from North America, and those of the white bear from the Polar regions. They are used for clothing, and for mats, muffs, etc. Imported largely from Russia and North America.

Bear's Grease is the fat of bears, used in making pomatum.

Beaver is the fur of the beaver, once much used in the manufacture of men's hats. Still used for coats, rugs, mats, etc The beaver was once common in Europe; now found only in North America, whence the fur is imported.

Beef, the flesh of the ox, is produced in large quantities in the British Islands, but much fresh beef is imported in a frozen state from the United States, the Argentine Republic, New Zealand, and Queensland. Salt beef is imported from the United States.

Beer. See *Ale.*

Benzoin, or **Gum Benjamin**, is a fragrant resin obtained from a tree in the East Indies. Used as a cosmetic and in making incense, pastilles for fumigation, and varnishes.

Bergamot is a perfume made from the fruit rind of a species of citron; imported from Italy.

Betel. See *Areca.*

Black-Lead, Plumbago, or **Graphite**, a mineral composed chiefly of carbon, is used in making pencils and crucibles, and as a polish for iron stoves, etc. Formerly the best was obtained from Borrowdale, Cumberland; but Ceylon is now the chief source of supply.

Boots and Shoes are made in Great Britain, but large numbers are imported from the United States, Belgium, France, and Holland.

Bottles. See *Glass.*

Borax, a salt composed of boracic acid and soda, is used in soldering, and as a flux for metals; also in assaying minerals, and in preserving meat, fish, etc. It is imported from Chile, Asiatic Turkey, and Peru.

Brandy, an ardent spirit, distilled from wine and from grape husks. France produces the best brandy, chiefly at Bordeaux, Cognac, Orleans, Rochelle, and Nantes, whence we import it.

Brazil-nuts are the nuts of a tree grown in South America. They are enclosed, 18 or 20 together, in a hard, round shell. Imported largely from Brazil.

Bristles, the short, coarse hairs of swine, chiefly used in brush making, are obtained from China, Germany, Russia, Bengal, and Hong Kong.

Butter, a fat obtained by churning the cream of milk in nearly all parts of the British Islands, except the mountains. England imports large and increasing quantities from Denmark, Russia, Normandy, Holland, New Zealand, Sweden, and Canada.

Cacao or **Cocoa** is the seeds of the Cacao tree, which is grown in the West Indies, New Granada, Brazil, Ecuador, Caracas, and Guayaquil. They are used in the preparation of the beverages, cocoa and chocolate, and of the latter in solid cakes for eating.

Camphor is a white substance with a strong, pungent smell, obtained from the oil of two trees in China, Japan, Formosa, and the East Indies, whence it is exported. It is used in medicine and as a disinfectant.

Canes are the slender stems of various grass-like palms found in the hotter parts of the East. The commonest canes used in England are *rattans*, which are readily split, and are used in making chair bottoms, baskets, etc. *Bamboos* are used in the East for building houses, bridges, etc., and in England for making furniture. *Malacca* canes are made into walking-sticks. Our chief imports are from the Straits Settlements, China, Japan, and Hong Kong.

Caoutchouc, or India Rubber, is an elastic substance obtained from the juices of various tropical trees. It was first used for rubbing out pencil marks, whence its name of *India Rubber*. It is now chiefly used in making waterproof clothing, and the tyres of motor cars and other carriages. It is imported in large quantities from Brazil, and in small quantities from West Africa and the United States.

Capers, the pickled buds of a plant grown in Mediterranean countries. Used chiefly as a condiment.

Carpets are largely manufactured in England and Scotland, Wilton, Axminster, and Kidderminster giving their names to different kinds. Carpets and rugs are still imported from Turkey, Persia, and the East Indies, but Great Britain is the centre of carpet manufacturing.

Cassia Bark is obtained from a species of laurel in the East Indies, India, and China. It is used as a spice, much like cinnamon, for which it is often substituted. Cassia buds are also used as a spice. Other varieties of cassia are sold as senna. It is imported from China, India, and Java.

Catechu is a brown inspissated juice, extracted from an acacia grown in India and Burma. Used in tanning, dyeing, and as a drug.

Cattle. Oxen are imported in large numbers from the United States and Canada, smaller numbers from the Argentine Republic.

Caviare is prepared from the roe of sturgeons, spiced and salted. It is a favourite delicacy in Russia, the best being produced, near Astrakan, whence small quantities are exported to Italy and England.

Cayenne Pepper is a very pungent species of pepper produced from capsicums. It is imported from the West and East Indies and Cayenne, and is used in cooking.

Cedar is the wood of various trees, the Cedar of Lebanon being the largest. Havana cedar is used in making the insides of furniture, boxes, etc. Another variety is used in pencil making. A harder kind is used in the West Indies in shipbuilding. Cedar is imported from North America, West Indies, New South Wales, etc.

Cements are mixtures used for uniting stone and brick-work. Ordinary cement is a mixture of slaked lime and sand; Portland cement is composed of chalk and clay or mud in the ratio of 3 to 1. After mixing it is dried, then burned in a kiln, then ground to powder. Cement is manufactured largely on the Lower Thames and Medway. Much is imported from Belgium.

Cheese is the curd of milk, separated from the whey and pressed into moulds. Large quantities are made in England, Cheshire, Gloucestershire, Somerset, Shropshire, and Leicestershire being the chief counties. Very large quantities are imported from Canada, the United States, Holland, Italy, France, and Belgium.

Chicory, the roasted roots of a plant that grows wild all over Europe.

Chillies. See *Cayenne Pepper.*

China or **Porcelain** is fine earthenware, called China because first brought from that country. It is now manufactured in all European countries, the Dresden, Sèvres, and Staffordshire wares being most esteemed. Our chief imports are from Germany, Holland, and France. See *Pottery*.

Cider is the fermented juice of apples, and is largely manufactured in Worcestershire, Herefordshire, Somerset, and Devon; also in Normandy, Belgium, Germany, and the United States. From the last large quantities are imported into England.

Clocks are time pieces whose motions are regulated by a pendulum. Large numbers are manufactured in England, London being the chief seat of the trade. Large numbers are imported from Belgium and the United States.

Cloves, the dried flower-buds of a plant, a native of the Moluccas and Philippines, used as a spice.

Coal is a rock of vegetable origin composed chiefly of carbon and bitumen, and found in layers under the surface of the earth. *Anthracite* coal is chiefly carbon and burns without flame. *Bituminous* coal flames when kindled. Coal is largely used for heating and cooking, for the manufacture of gas and the production of steam. It is plentiful in Great Britain, the chief coal-fields being in Northumberland, Durham, Yorkshire, Staffordshire, South Wales, Cumberland, Somerset, and the Midlands; near Edinburgh and Glasgow, and in Fife and Clackmannan; small quantities in Ireland. On the continent of Europe coal is plentiful in Belgium, France, Prussia, Silesia, Russia, and Spain. Enormous quantities are found in the United States, and smaller quantities in many other parts of the world. Great Britain exports many millions of tons annually.

Cocoa. See *Cacao*.

Cocoa Nuts are the fruit of the Cocoa-Nut Palm, which grows in most tropical countries. They are used as food, and an oil extracted from the fruit is used in the East as butter, and imported into England for candle-making. The nuts are imported chiefly from the West Indies.

Cod, a valuable food fish caught in vast numbers off the Newfoundland Bank and in the North Sea. Cod-liver oil is obtained from its liver.

Coffee is the berries of a tree grown in Brazil, Colombia, the southern United States, the British East and West Indies, and Costa Rica, whence it is imported into England. The best comes from Arabia, but by far the largest quantity comes from Brazil.

Coir is the coarse fibre which surrounds the shells of cocoa-nuts. It is used for making boat ropes, matting, sail-cloth, and brushes. It is imported largely from Ceylon and India.

Condensed Milk. See *Milk*.

Copal is a resin obtained from two trees, one in the West, the other in the East Indies, and in Central and South America. It is largely used in the preparation of Copal Varnish.

Copper is the well-known reddish metal, next to iron the most useful in manufactures. It is very abundant, being mined in Chile, Peru, Spain, Cape of Good Hope, New South Wales, Queensland, and the United States. Our chief imports of copper ore are from Chile, Cape of Good Hope, and Peru; of copper bars, blocks, ingots, from United States and Chile.

Copra, the dried kernel of the cocoa-nut, yielding cocoa-nut oil.

Coral is the secretion, in the form of cells, of minute marine polypes. Chief sources of supply, the Mediterranean, the Arabian Gulf, and the East Indies. The pink or red coral is used largely in England in making ornaments, buttons, beads, etc. Black Coral is much prized in India.

Cork is the thick fungous bark of a species of oak, called the cork-tree, abundant in Spain and Portugal, Italy, France, and North Africa. Cork is made into stoppers for casks and bottles, and, on account of its lightness, into lifebelts and jackets, and parts of lifeboats. It is imported chiefly from Spain and Portugal. Manufactured cork is imported also from France.

Corn or **Grain** is the seed of various plants, the chief being wheat, oats, barley, rye, and maize. Much wheat, oats, and barley is grown in the British Isles; rye in the northern countries of Europe; maize chiefly in the United States, in the hotter parts of America and South Europe. *Wheat* is used (as are oats also in Scotland) for grinding into meal for food; *oats* are used in England chiefly as food for horses; *barley* is made into malt for use by brewers and distillers; *maize*, when ground, is used in cornflour, for food; and, unground, as food for fowls, etc. England imports *wheat* chiefly from the United States, South Russia, Argentina, British India, and Canada. The amount from the United States is decreasing, that from India and Canada increasing. *Barley* is imported from South Russia, Turkey, Roumania, and the Western United States; *oats* from Russia, Roumania, and Germany; *maize* from the United States, Argentina, Roumania, and South Russia; *rye* from Canada, Russia, and the United States.

Cotton is the down which covers the seeds of the cotton plant. It is cultivated in the Southern United States, Egypt, British India, and Brazil, whence it is imported into England. Much of the oil-cake used in cattle feeding is made from cotton seeds after an oil has been extracted.

Creosote, obtained by distillation from wood-tar, is largely used for preserving timber.

Crystal is a transparent mineral of geometrical form, found in Brazil, Madagascar, Switzerland, and France; used as articles of ornament. The Cairngorm of the Scottish Highlands is a species of crystal.

Currants. See *Grapes*.

Cypress Wood is the wood of a coniferous tree, and is of unique durability. It is grown in East and North-East Europe, and in China and India; has been used in the making of mummy chests and coffins.

Dates are the nutritious fruit of the date palm, cultivated largely in Turkey, Western Asia, North Africa, and Arabia, where they form the chief article of food. They are imported into England from Smyrna, Alexandria, and Tunis, and are used as a dried fruit.

Deals are long planks of fir or pine over 7 inches in width, used largely by carpenters. They are imported from the Baltic ports of Russia, and from Sweden, Norway and Canada.

Diamonds, the most valuable of precious stones, are remarkable for hardness and brilliancy. They are found in India, Sumatra, Java, Brazil, South Africa, the Ural Mountains, and Australia. Besides being worn as ornaments, diamonds, from their extreme hardness, are used in cutting other gems and glass. Our chief imports are from South Africa, Brazil and India.

Down, the fine, soft feathers from the breast of certain birds, especially the eider duck, is imported chiefly from Scandinavia, Greenland, and Iceland. It is much used in stuffing quilts, beds, and coverlets. Swan's down is largely imported from Dantzic.

Ebony is a hard, black wood, the heart of a tree found in most hot countries in the East. It is used for inlaying, mosaic work, and turnery; also in making piano keys, musical and mathematical instruments, handles of knives, etc. It is imported chiefly from the Mauritius, Madagascar, Ceylon, and the East Indies.

Eggs. Fowls' eggs are very largely imported into England from Russia, Denmark, Germany, Belgium, and France.

Eider-down, the down taken from the nests of the Eider Duck, in Iceland and northern countries.

Emerald, The, is a precious stone of a rich green colour, obtained from Colombia, Egypt, Germany, Venezuela, and Russia.

Emery is a dark-coloured, very hard mineral, which is used in a powdered state in polishing precious stones, metals, glass, marble, etc. *Emery paper* is paper covered with emery powder and used in polishing.

Ermine is the fur of an animal of the weasel kind, which in the winter of cold latitudes becomes white, except the tip of the tail, which remains black. This white fur, made up with the tail tips at regular intervals, is used for the state robes of kings and nobles. The robes of judges and magistrates are lined with ermine, as emblematic of purity. Ermine is imported from Norway, Lapland, Siberia, and the Hudson Bay territories.

Esparto Grass is a coarse grass found in South Europe and North Africa, whence it is imported into England to be used in paper making.

Feathers are produced in the rural districts of Great Britain, chiefly those of fowls, but large quantities are imported from Germany and France. Feathers are much used in stuffing beds, cushions, etc., and enormous quantities are used in millinery for ornament. Ornamental feathers are imported chiefly from France, Holland and South Africa.

Figs are the fruit of a tree grown in all the countries of Southern Europe and North Africa. Dried and packed in boxes and baskets, they are exported to England, the best coming from Turkey and Greece.

Fir. See *Pine*.

Flax is an annual plant (*linum*) from the rotted fibrous stalks of which linen is produced. It is grown in the British Islands, but chiefly for its seed, Linseed, whence also linseed oil and oil cake are made. For the manufacture of linen, flax is imported in large quantities from Russia and Belgium. *New Zealand Flax* is the very strong fibre of a wild plant in New Zealand, and is imported for making ropes, mats, sail-cloth etc.

Flour and **Wheatmeal** are very largely imported from the United States and Canada; smaller quantities from Austria and France.

Flowers. Fresh flowers are imported largely from France. Bulbous and tuberous roots of many flowers chiefly daffodils, tulips, hyacinths, narcissi, anemones, and crocuses are imported in large quantities from Holland and Belgium, Haarlem being the centre of the trade. Rose trees and other plants are also imported thence. Flower seeds are chiefly imported from France. Artificial flowers are brought chiefly from France and Holland.

Furs are the skins of certain animals covered with short, fine, soft hair, prepared for use as clothing, especially in colder climates. They are chiefly imported from the northern parts of Europe and Asia (especially Russia), and North America. The most important are those of the seal, from the Pribylov Islands (Behring Sea) the ermine and sable (which see); bear (see *Bearskins*); chinchilla, a rat abundant in Chile; badger, otter, hare, rabbit,

and lynx. Rabbit skins in enormous quantities are imported from Australia, New Zealand and Tasmania, Belgium and France. Tiger and leopard skins, used chiefly as mats, reach us from India.

Gall Nuts are vegetable excrescences produced by insects depositing their eggs in the bark or leaves of plants or trees. Those produced on oaks are most valuable and are largely used in ink making, dyeing, and in medicine. They are imported from the Levant, China, and Persia.

Gin is a spirit distilled from rye and barley. It is largely used as a beverage in England, especially in London, where large quantities are manufactured.

Ginger is the hot and spicy root of a plant grown in the East and West Indies and Sierra Leone, whence it is imported. It is largely used in cookery and medicine.

Glass is a more or less transparent substance made by fusing salts and metallic oxides with silica. It is used in various ways, for windows, drinking vessels, bottles, optical instruments, vases, clock and watch faces, etc. Much glass is made in, and a certain amount exported from, Britain, but enormous quantities are imported from Belgium, Holland, and Germany. *Glass bottles* are largely imported from Germany, France, Holland, and Belgium.

Gloves are made of leather, fur, silk, cotton, and wool. They are largely made in London, Yeovil, Worcester, Woodstock, Leominster, and Ludlow. Large numbers of leather gloves are imported from France, where Paris and Grenoble are the chief seats of the manufacture; also from Germany and Belgium.

Gold is a heavy, yellow metal, very malleable and ductile. It is much used in coinage, making ornaments, and in gilding. The chief sources of supply in modern times are California, Australia, New Zealand, Transvaal, and (since 1896) the district of Klondyke, North-West Canada.

Grapes, the fruit of the vine, are imported from Spain, especially Malaga, and in a dried state, as *raisins* from Spain, Turkey, and the Levant; and as *currants*, small dried grapes, from the Ionian Islands and Patras, in Greece.

Graphite. See *Black-Lead.*

Ground Nuts, the seeds of a plant which are largely exported from West Africa and yield an oil for burning and for table use.

Guano is the dung of sea fowl, found on the coast and islands of Bolivia and Peru, whence it is sent to England to be used in a powdered state as manure. *Fish Guano* is now coming much into favour. It is made from fish and fish offal dried and ground. It reaches England in large quantities from Norway and Newfoundland.

Gum is a juice which exudes from the barks of several trees. *Gum Arabic*, the most important, is imported from North Africa, Turkey, and the East Indies. It is much used for adhesive purposes. *Copal* is used in making varnish. The best comes from the East Indies; other kinds from the West Indies, Guinea, and America. *Gum animi* is similarly used, and is imported from South America. *Tragacanth*, from Asia Minor, is used by confectioners. *Assafœtida*, imported from Persia and India, is used as a drug, and is noted for its disagreeable smell.

Gutta Percha is the hardened juice of trees found in the East Indian Archipelago. It is easily moulded and is used for a variety of purposes—such as the making of belting, hose-pipes, boot-soles, and for insulating telegraph cables. Our chief imports are from the Straits Settlements.

Hair, both of men and of animals, is extensively imported into England from various European countries, especially the northern. *Human hair* is used in the manufacture of wigs, and also as false hair. *Camel's hair* is chiefly imported from China, and is used in making artists' brushes. *Horsehair* is made into hair cloth, and is used by upholsterers for stuffing, and by fishing-line makers. Coarser kinds of hair are made into brushes. *Goat's hair* is largely imported from British India, China, Belgium, and France.

Hams. See *Bacon.*

Hats. Silk hats, with backs of wool, are manufactured in England, in London and Coventry; straw hats in Bedfordshire, Luton and Dunstable being the chief centres, but the straw plait used there is now largely imported from Tuscany and Leghorn. Panama hats are made of the narrow strips of the leaves of a plant grown in Central America, and of such extreme fineness that a hat sometimes costs many pounds. Felt hats are made in England chiefly of the fur of rabbits, hares, beavers, etc. Straw hats are imported chiefly from Belgium and France.

Hemp is a plant whose fibrous bark is used for coarse cloth and cordage. It is largely exported from Russia, Germany and Italy. A special kind, known as *Manila Hemp*, comes from the Philippine and Ladrone Islands.

Hempseed is used as a food for birds and for the extraction of oil.

Herring. In spite of the vast numbers caught by British fishermen, a large quantity is imported from Sweden and Norway.

Hides are the skins of beasts, especially the larger ones, such as the ox, cow, horse, buffalo, etc. They are imported in great quantities for the manufacture of leather, from Holland, South America, China, Russia, and the East Indies.

Hollands, or Geneva, is a kind of gin made in Holland and Germany, and flavoured with Juniper-berry juice. It is chiefly imported from Holland.

Honey is a thick, sweet fluid collected by bees from flowers. Large quantities are produced in Great Britain, but some is imported from the British West Indies.

Horns of various animals, especially the ox, deer, buffalo, and sheep are heated or soaked, and pressed into various shapes to make knife and other handles, combs, knobs, spoons, boxes, buttons, etc. Our chief imports are from British India and Argentina.

Horses, Mares, and **Geldings** are imported in large numbers from Belgium and France.

Ice. Although much is obtained at home in severe winters, enormous quantities are imported from Norway, chiefly from Wenham Lake.

Indigo is a blue colouring matter obtained from the indigo plant, a native of India, chiefly in the province of Bengal, whence most is imported.

Iron is a metal, hard, durable, and very malleable when heated. Large quantities are produced in many parts of England, South Scotland, and Wales. Its uses in manufactures, railways, ship-building, etc., etc., are too numerous to mention.

Isinglass, a gelatine prepared from the air-bladder of the sturgeon and other fishes and used in confectionery and for clarifying wines.

Ivory is a hard, white, opaque substance obtained from elephants' tusks, and also from those of the walrus and fossil mammoths. It is easily turned and polished, and is much used for making handles, parts of various instruments, billiard balls, chessmen, boxes, etc.

Jute is a fibre obtained from the inner bark of two species of plants of the lime tree order. It is manufactured into cordage, coarse cloth, and carpets, the chief seat of the manufacture in Britain being Dundee. Almost the whole of our imports of raw jute come from Bengal, but large quantities of *Jute Yarn* reach us from France and Belgium, and enormous quantities of manufactured jute from Bengal.

Lac is a resinous substance produced by an insect, principally on the banyan tree. Various forms are stick-lac, seed-lac, and shell-lac. Shell-lac is used in making varnish, sealing-wax, and hats. It is imported chiefly from Bengal.

Lace, a fabric of fine threads of linen, silk, or cotton, forming a net, used as an ornament in dress. Machine-made lace is manufactured at Nottingham, Leicester, and Derby. Brussels and Valenciennes have long been famous for lace, but these are imitated in England. Our chief imports are from France, Holland, and Belgium.

Lambskins, are largely used for clothing, those from Astrakhan especially being valued for their rich, black, glossy fur.

Lead is a heavy metal of a dull, bluish white colour. Being soft, ductile, and malleable it is much used in making water and gas pipes, and (as sheet lead) for roofing, lining cisterns, etc. It is still produced in the British Islands, but chiefly in Spain and the United States. *Pig and Sheet Lead* are largely imported from Spain, New South Wales, and the United States.

Leather is made by preparing animals' skins, so as to render them waterproof, tough, and durable, the hair being first removed. It is used in the manufacture of boots, shoes, and gloves, harness, carriages, straps for machinery, book-covers, etc. Much is produced in England, but large quantities, dressed and undressed, reach us from the United States, and of undressed from British India, chiefly Madras.

Lemons are fruits resembling oranges, but with a more acid flavour, and are grown in and imported from South Europe, especially Italy and Spain. Lemons are used an an anti-scorbutic, in making lemonade and other drinks, and preserves.

Linseed, the seed of common flax. The oil from the seed is used in the making of linoleum, in oil-painting, and in the composition of varnishes and of printers' ink. The refuse makes oil-cakes for cattle.

Lobsters are large, long-tailed, crustaceans, used for food, found largely in the Scilly Islands and Cornwall; also in Scotland. Large quantities are imported from Norway and Newfoundland. *Canned Lobsters* are largely imported from Canada.

Logwood is the wood of a tree growing about the Gulf of Mexico, especially the Bay of Campeachy. It is used chiefly in dyeing, producing purple and black colours. It is imported chiefly from Honduras, Hayti, and St. Domingo.

Macaroni is an article of food made from wheat flour into tubes, largely made in and exported from Naples. *Vermicelli* is another form in smaller tubes (little worms).

Mace. See *Nutmegs.*

Machinery of all kinds, including steam engines, mill-work, electrical, agricultural, and textile machinery, sewing machines, motor cars and cycles, bicycles, etc., etc., is imported in enormous quantities from the United States, and (less) from Germany and Belgium.

Madder, a plant grown in Holland, Belgium, and other European countries, and India. From the roots is produced a valuable dye used for silk, cotton, and woollen goods, and by artists; it is imported from the Netherlands.

Mahogany is the hard wood of a large tree in South America, of a rich brown or red colour, and capable of a high polish. It is, therefore, much used in furniture making and in internal house decoration. The logs are imported from British and French West Africa, the West Indies, Central America, and the United States.

Maize. See *Corn.*

Marble. The term is applied to any compact, calcareous stone, beautiful and capable of high polish. There are many varieties:—*Parian* and *Carrara* are white; *Verde Antico*, *Giallo Antico*, *Rosso Antico*, and *Nero Antico* being green, yellow, red, and black respectively. Our chief imports are from Italy.

Margarine or **Butterine** is a manufacture of ox and other fats sold as an imitation of butter. Large quantities are imported from Holland.

Matches are small splints of wood tipped with some chemical compound which will ignite by friction. *Safety Matches* are so tipped that they will ignite only by rubbing on a side of the box which is covered with phosphorus mixed with ground glass. Matches are manufactured in large quantities in England, especially in London, but enormous numbers of boxes are imported from Sweden, Belgium, and Norway.

Mats are textures of sedges, rushes, or straw used to lay down in halls, rooms, floors, etc.; for packing figs, dates, etc. Imported from India; bast mats from Russia.

Mercury or **Quicksilver**, a silvery-white metal, used medicinally, in separating gold and silver in ores, in the backs of looking-glasses, and in making barometers and thermometers. It is imported almost entirely from Spain.

Milk is the opaque white or yellowish liquid secretion with which mammals suckle their young. It contains all the ingredients of a perfect food, and is, therefore, used as an article of diet for adults as well as infants all over the world, that of the cow being most used. From it are made *Butter* and *Cheese* (which see). Milk is produced all over the British Islands, except in mountain districts, but *Condensed Milk* is imported in large quantities from France, Holland and Switzerland.

Millet is the grain of an East Indian grass, now largely cultivated in South Europe, as well as in the East and in Syria, Arabia, and North Africa, growing well in light, sandy soil. It is used as food for man in the East; as food for fowls in Europe. Two varieties are known as *Dhourra* and *Sorghum.*

Mohair, fine wool of the Angora goat, a native of Asia Minor, but now successfully bred in South Africa. Exported in large quantities to England.

Molasses, the viscid, uncrystallizable syrup which runs from sugar in process of refining, is imported from the United States of America, Cuba, and Egypt, and used for sweetening under the names of *Treacle* and *Golden Syrup.*

Morocco, a fine kind of leather, prepared from goat skins, coloured red or yellow. It is used in bookbinding, chair-covering, etc.

Mother of Pearl, a shining substance forming the internal part of the shell of the pearl-oyster. Exported from Queensland and Ceylon. Used for knife-handles, buttons, etc.

Motors and **Motor Cycles** are locomotive machines, propelled by electricity, steam, or petrol, and used on ordinary roads. They are largely made in Great Britain, but numbers are imported from the United States, France, Holland, and Belgium.

Nickel is a grayish metal, very ductile and malleable, much used in alloys, e.g. German or Nickel Silver, Belgian coinage; also in the manufacture of porcelain. It is found in Westphalia, in other countries of Europe, and in the United States, whence it is exported to England.

Nitrate of Soda is largely imported from Iquique in Chile and used as a manure.

Nutmegs are kernels of the fruit of a tree cultivated in the East Indies. They are ground or grated and used for flavouring. The second coat or skin of the nuts is *Mace*, which is similarly used. *Oil of Nutmegs* is obtained by crushing small nutmegs.

Nuts. Brazil nuts are the fruit of the Juvia found on the banks of the Orinoco and Amazon. Hazel nuts are imported from Spain, Portugal, and France, the best, "Barcelonas," coming from Tarragona. See also *Cocoa Nut* and *Walnut.*

Oak. The Oak is a genus of trees found in all parts of the Northern Hemisphere, except the extreme north, and also in some parts of the Southern Hemisphere. The Oak is the chief forest tree of England, and its timber was, in earlier days, most valuable in shipbuilding. It is now used in the manufacture of furniture and many other things where strength and durability are required. Much is imported from the United States and Germany. *Oak bark* is used for tanning, dyeing, and medicinal purposes. The *cork oak*, from which cork is obtained, grows in France, Portugal, and Spain, whence large quantities of cork are imported.

Oats. See *Corn.*

Oils are of various kinds. *Fixed oils* or fats are either animal or vegetable. Animal oils are obtained from whales, herrings, cod, and other fish; vegetable oils from olives, palms, linseed, nuts, castor, hemp, poppy, etc. Whale and fish oils are imported from Newfoundland, Norway, Denmark, and the United States; *Castor Oil* from Belgium, France, and Bengal; *Cocoa Nut Oil* from Ceylon, New South Wales, and Madras; *Olive Oil* from Spain and Italy; *Palm Oil* from British West Africa and Germany.

Oils, Volatile. See *Petroleum.*

Olives are the fruit of a tree grown in the southern countries of Europe and North Africa. Their chief value is in the oil which is obtained from the fleshy covering of the seeds. The oil is imported in large quantities from Spain and Italy, and is used as an article of diet, and in the manufacture of soap and woollen.

Onions are bulbs of acrid, pungent flavour, which form a valuable article of food, especially in Spain and Portugal. They are grown in all the countries of Europe, and in Asia and Africa. Spanish and Portuguese onions are milder in flavour than English garden onions, and are very largely imported into England. Large supplies also come from Egypt and Holland.

Opals are beautiful, iridescent gems, showing many different colours, which have been highly prized since very ancient times. The finest opals are obtained from the Dubnik mine, Hungary. Opals are also found in Saxony, South America, etc.

Opium is the dried juice of unripe white poppy heads, which are extensively cultivated in India, chiefly in the plain of the Ganges, Asiatic Turkey, Egypt, Persia, and China. It is used largely as a medicine, but its chief use in the East is for chewing and smoking. The chief imports into England are from Turkey and Persia.

Oranges are the fruit of a tree of the Citron genus, other well-known species being the lemon, citron, lime, and shaddock. The most common are sweet oranges, which are imported from the Spanish peninsula, Turkey, and Italy, and eaten as a fruit; and the bitter or Seville oranges from Seville, used in making marmalade and orange wine. The peel of the Seville orange is dried for use by apothecaries and candied for use in cooking.

Oyster, The, is a bivalve shell-fish very abundant round the British Islands. Artificial oyster beds are made at many points on the coast, those at Whitstable being the most noted. Young oysters to stock these beds are imported from France. Our chief imports of full grown oysters are from the United States, Baltimore being the centre of the trade.

Paper is a substance in thin sheets of different colours, used for printing and writing on, covering walls of rooms, as covers for parcels, and in many other ways. It is made of vegetable matter reduced to pulp, the chief materials now used being wood and sawdust, Esparto grass, linen and cotton rags, old paper, and other vegetable substances. England manufactures much paper of all kinds, but requires to import immense quantities from Sweden, Norway, Holland, and the United States.

Paper Making Materials are imported: *Pulp of Wood* (wet and dry), from Norway, Sweden, and Canada; *Rags* from Belgium and France; *Esparto* and other grasses from North Africa and Spain.

Paraffine is a white, transparent crystalline substance obtained by distillation from coal, coal tar, etc., and used in the manufacture of candles. Large quantities are imported from the United States.

Paraffine Oil. See *Petroleum.*

Pearls are round, white, shining bodies formed between the shell and body of a species of oyster found in Eastern seas, chiefly round Ceylon and in the Persian Gulf; also in the East Indies and on the coasts of Australia and Central America. They are used as gems for personal ornament. Ceylon pearls are considered the best.

Pepper is the fruit of a genus of shrubs cultivated in the East Indies and other tropical countries. *Black Pepper* consists of the berries dried whole and then ground; *White Pepper* is made from the dried berries with the black coat rubbed off. *Cayenne or Red Pepper* is produced by a plant in Cayenne (Guiana), and in the East and West Indies. It is extremely pungent. Pepper is used for culinary purposes. Our largest imports are from the Straits Settlements, Indo-China, and British India.

Perfumery is of two kinds, animal and vegetable. *Animal* scents or perfumes are obtained from the Musk Deer, the Spermaceti Whale, the Civet Cat, and the Beaver. *Vegetable* scents from numerous kinds of flowers and plants by distillation, the chief being the Rose, Iris, Orange, Violet, Jasmine, Tuberose, and Lavender. Perfumes are imported chiefly from France; smaller quantities from Germany and the United States. See *Attar of Roses.*

Peruvian Bark, Cinchona, or **Jesuits' Bark**, is the bitter bark of certain trees growing in Peru, Ecuador, and Bolivia. It is most valuable for medicinal purposes, quinine being obtained from it. The trees have been introduced into British India, and our chief supplies now come from Madras; smaller quantities are imported from Holland, Java, and Peru.

Petroleum, Rock Oil, Paraffine Oil, or **Naphtha**, is an inflammable liquid bitumen which exudes from the earth in Pennsylvania, at Baku, in South Russia, Roumania, Burma, Canada, etc. When refined by distillation it is used for illumination. It is also used as a lubricant. Its use for fuel, as in Motor cars, has increased the demand for it. Our chief supply comes from the United

States; out of 235,000,000 gallons imported in 1902, nearly 184,000,000 gallons came thence; while South Russia supplied $6,000,000.

Phosphate of Lime, prepared from the calcined bones of animals, is a valuable fertiliser. It is imported chiefly from United States of America, Algeria and Tunis.

Pimento. See *Allspice*.

Pine, a coniferous tree closely allied to the fir, and abundant in the northern countries of E. and W. hemispheres. Most of the timber of commerce is obtained from pines and firs. It is exported mostly in the form of deals or planks from Sweden, Norway, Russia, and Canada.

Pineapples are the luscious fruit of a plant which is a native of tropical America. It is largely cultivated in the West Indies, and many, either in their natural state or canned, are exported to England. Pineapples of superior quality are cultivated in English hothouses.

Plantain. See *Banana*.

Pitch is a black, solid residuum after the distillation of tar from wood or coal. It is also obtained from petroleum. In a liquid state it is used as a paint or varnish for preserving ships, iron and wood fences; in making asphalt for paving and patent fuel. It is imported chiefly from Russia and North Germany.

Plaiting (Straw, etc.), for the manufacture of hats, is imported chiefly from Japan, China, Belgium, and France.

Platinum is a whitish, hard, tough, malleable metal. It is obtained in small quantities from the Ural Mountains, Brazil, Central and South America. Our imports of it reach us through Belgium and France.

Plumbago. See *Black-Lead*.

Plums are the fruit of a tree, of which the *Blackthorn* or *Sloe* is the original wild form. They are extensively grown in Europe and Asia; some varieties also in North America. The *Damson* (Damascene) is a variety of plum. Plums are used for eating as fresh fruit, and also largely for preserving. *Prunes* are dried plums, and are imported from the United States. Fresh plums are largely imported from Germany, Holland, and France.

Pomegranates are the fruit of a tree commonly grown in tropical countries and imported into England from South Europe and the West Indies.

Porcelain. See *China*.

Potatoes are the tubers of a plant which was introduced into England from Virginia in the 17th century by Raleigh. They are now grown in enormous quantities in temperate and sub-tropical countries. Although not very nutritious, they are of very great value as food. Although extensively grown in Great Britain, large quantities are imported, chiefly from France, Germany, Belgium, and the Channel Islands. Potatoes are largely used in the manufacture of starch.

Pottery. For the production of earthenware of all kinds England is unsurpassed. Its exports are in value three or four times that of its imports. Germany stands second and France third in this industry.

Poultry, including fowls, turkeys, ducks and geese, are reared in large numbers in Great Britain for the sake of their eggs, flesh, and feathers. Large quantities are, however, imported, chiefly from Russia, Belgium, France, and the United States.

Pyrites, compounds of metals with sulphur, much used in the production of sulphuric acid. Imported chiefly from Spain and Portugal.

Quicksilver. See *Mercury*.

Quinine is a very bitter alkaloid obtained from Peruvian Bark (which see), or cinchona, the salts of which are used as medicines in cases of fevers and agues, and also as a tonic. It is imported chiefly from Germany, Holland, and the United States.

Rabbits are very prolific rodents found in most warm and temperate climates. Introduced into Australia about the middle of the 19th century, they increased so fast as soon to become a plague, and large sums were spent in endeavouring to get rid of them. They are plentiful in Britain, and form a valuable article of food, but enormous numbers are imported in tins from the United States and Victoria, and, fresh, from Holland and Belgium.

Rags. See *Paper Making Materials*.

Raisins. See *Grapes*.

Rape Seed is the seed of a plant of the cabbage kind, imported from British India, South Russia, and Roumania. It is used for the manufacture of lubricating oil for machinery, the refuse being made into cake for feeding cattle.

Rice is the seed of a grass, a native of the East Indies, but now grown in all countries with a hot, moist climate. It has for ages formed almost the sole article of food in China, Japan, and Burma. Enormous quantities are imported into England from Burma and Bengal. *Carolina Rice* is imported and is superior in quality to rice from the East. *Paddy* is Indian rice with the brown husk left on. Rice, ground and unground, is largely used for food in England, and *Rice Starch* is also made from the grains.

Rosewood is the wood of various trees, the most important being grown in Brazil. The wood is generally red coloured and beautifully marked, hard, and one very suitable for making furniture. Our chief imports are from Bahia and Rio de Janeiro. Less beautifully marked rosewood is imported from India.

Ruby, The, is a transparent, red-coloured gem, the hardest and heaviest of all gems except the diamond. In value, the finest oriental rubies are superior to diamonds of the same size and quality. The finest rubies come from Upper Burmah, large numbers of inferior ones from Java, Siam, Ceylon, and China.

Rum is a spirit distilled from cane juice, treacle or molasses, produced chiefly in Guiana, the West Indies, France, and Holland. Our chief imports are from Guiana and the West Indies, rum of the best quality coming from Jamaica. *Pine Apple Rum* is West Indian rum flavoured with slices of pine apple.

Russia Leather is a leather specially prepared in Russia from cow-hides. Its flexibility makes it suitable for book-binding. It is produced in South Russia, chiefly near Astrakhan, whence it is exported.

Rye is the grain of a hardy esculent plant allied to wheat, and forms the chief food in North Europe. It is scarcely grown in Great Britain, but considerable quantities are imported from the United States, Canada, and South Russia.

Sable is the fur of an animal of the same name of the weasel kind. The fur is dark coloured, the blackest being the most valuable. The fur is imported chiefly from Russia and North America.

Sago is a granulated starch, prepared from the pith of the sago palm, and valuable as an article of food, especially for invalids. Nearly all our imports are from the Straits Settlements.

Salmon, The, is the most important and valuable fish of British rivers. It is found in most northern seas, ascends the rivers to spawn, and the salmon fishery is an important branch of business in the Scottish and Irish rivers and lakes. The salmon is also a great object of sport to anglers. Fresh salmon, packed in ice, are imported from Norway, and tinned salmon, in enormous quantities, from the Pacific coasts of the United States and Canada.

Salt, the chloride of sodium, is largely used for seasoning certain foods, and for preserving fish, meat, etc. It is found in mines in Poland, Spain, Hungary, and in many other countries. Cheshire salt-mines are very extensive, and salt springs abound in Cheshire and Worcestershire.

Saltpetre, or Rock Salt, is nitrate of potassa and is largely used in the manufacture of gunpowder and in glass making. It is imported into England chiefly from Bengal; smaller quantities from Germany, Belgium, and Holland.

Sandal-wood is the wood of a tree growing in India, Ceylon, and the South Sea Islands. The wood takes a high polish, and is used for ornamental purposes. It has been long in use as a medicine. *Red Saunders*, another variety, is used as a dye.

Sapphire, The, is a blue precious stone, next in hardness to the diamond, found chiefly in Ceylon. The *White Sapphire*, and the *Oriental Sapphire*, which is blue, are varieties, and all are allied to the *Oriental Amethyst* (purple), the *Oriental Topaz* (yellow), and the *Oriental Emerald* (green).

Sardine, The, is a fish of the herring family, caught in large quantities in the Mediterranean and on the coasts of Portugal and France. England imports sardines tinned in olive oil, chiefly from Portugal.

Satin is a glossy, thick, silk cloth, the woof being overshot by the warp. It is manufactured chiefly at Lyons, Genoa, and Florence.

Satin-wood is a fragrant lemon-coloured hard wood, which takes a lustrous surface, and is much used in cabinet work. It grows chiefly in India and Ceylon, but the best in the West Indies. England imports it chiefly from Singapore, Bombay, and St. Domingo.

Seals are carnivorous, amphibious mammals, found on the coasts of most cold countries, and on the ice, in both hemispheres. Their bodies are covered with hair or fur. There are many varieties. The common seal is found on all the west coasts of Europe (not on the ice), and even in the Mediterranean. It is hunted for its oil and its skin, which is covered with hair. Larger seals of the same class are the Sea Elephant and the Sea Leopard. The Sea Lions are also covered with hair, but the Sea Bears, or Eared Seals, are covered with the valuable fur generally known as *Sealskin*. These are killed on the Pribylov and other Islands in the Behring Sea, and elsewhere in the Arctic regions; much smaller numbers in the Antarctic regions. The skins of the hair seals, tanned, are made into shoes; and, with the fur on, into coats, etc. Our imports of common sealskin are chiefly from Newfoundland, much smaller quantities from Canada and Norway; seal-oil mostly comes from Norway.

Semolina is the larger, harder parts of wheat grains, retained in the sifting machine. It is used as a food, chiefly for puddings, and imported into England chiefly from France.

Shammy, or Chamois Leather, is a soft, pliant leather, prepared from the skins of the chamois goat, but much is manufactured from skins of common goats and sheep. It is used for cleaning purposes, and is, therefore, called *wash-leather*.

Shantung. A pongee woven in the province of Shantung or adjacent districts in China, from wild silk—Russore or Tussah—it has been known in all parts of the world as "shantung pongee" for many decades.

Shawls are loose coverings for the shoulders, made of wool, silk, cotton, or

hair. The most valuable shawls are Cashmere Shawls, made of the wool of goats found in Tibet. Some fine specimens are worth £200 or £300. They are manufactured in Cashmere, Tibet, and (inferior ones) in the Punjab. Shawls are manufactured in France at Lyons, Paris, and Nismes. The use of shawls is declining.

Sheep, The, is a small ruminant quadruped, most valuable to mankind for its flesh and wool. Sheep are bred in enormous numbers in Great Britain, especially in hilly districts, but very large numbers of sheep and lambs reach England from the United States, Canada, and Argentina. See also *Mutton and Wool.*

Shoes. See *Boots and Shoes.*

Silk is the fine, soft thread forming the cocoon in which the silkworm caterpillar lies in its chrysalis state. The threads are unwound from the cocoon, producing *raw silk*, and then become by various processes the silk and satin woven cloth so well known as rich materials for clothing. From China, where silk was first manufactured, the industry has extended to Japan, India, Italy, Turkey, France, Holland, and Belgium. *Raw silk* is imported into England from China, France, India, and Italy; *Thrown Silk* from France and Holland; *Manufactured Silk or Satin* from France, and smaller quantities from Holland and Japan; *Velvet* from Holland; *Ribbons* from France, Belgium, and Holland.

Silver is a soft, white, ductile and malleable metal, capable of a high polish. With some alloy it is largely used for coin, plate, and various ornamental purposes; also for covering or "plating" other substances. The chief sources of supply are Germany, New South Wales, Chile, Peru, Spain, and the United States.

Skins of various animals are imported into England. See *Furs, Leather.*

Soap, used in washing, etc., is a compound of acids formed from fatty bodies and the alkalis, potash and soda. It is largely manufactured in England, but is also imported, chiefly from the United States.

Spermaceti. See *Whales.*

Spices. See *Allspice, Ginger, Nutmeg, Cassia.*

Spirits. See *Brandy, Rum, Hollands, Whisky, Gin.*

Sponges are light, fibrous substances found adhering to rocks and classed as belonging to the animal kingdom. They are dived for on the coasts of Asiatic Turkey, Greece, France, and the British West Indies, whence they are exported to England. Sponges are used in washing, and are very valuable in surgery and the arts.

Steel is iron combined with carbon and refined. It is used for instruments of war (swords, etc.). surgical instruments, tools, knives, razors, springs, and many other mechanical appliances, girders of bridges, rails, tyres, axles, etc. Steel is largely manufactured in England and Scotland, but large imports come from Belgium, Holland, the United States. and Germany; steel and iron machinery (including motors and cycles) is imported very largely from the United States, and in smaller quantities from the countries mentioned above.

Straw Plait. See *Hats.*

Sugar is a sweet, crystalline substance obtained from the sugar cane, beet, and maple trees, and other vegetables. The sugar cane is cultivated in the East and West Indies, China, India, and South America. *Brown Sugar* is the raw sugar, from which British refiners produce white, refined, *lump* or *loaf sugar.* *Molasses* is the viscid, uncrystallizable syrup which drains from sugar in process of refining. *Refined Sugar* (mostly beetroot) is imported in very large quantities from Germany, and smaller amounts from Holland, France, and Austria. *Unrefined* is also chiefly imported from Germany, with smaller quantities from Austria, Belgium, and France. *Unrefined cane sugar* is imported chiefly from the British West Indies, British Guiana, Java, Cuba, Argentina, and Peru.

Sulphur, or **Brimstone,** is a yellow, brittle mineral which burns with a blue flame and a suffocating odour. It is found in connection with volcanoes in Italy, the West Indies, and the Andes, also in veins in Hungary and Switzerland. It is used in the manufacture of gunpowder and sulphuric acid, and as a drug. It is chiefly imported from Sicily.

Tallow is the melted fat of animals of the sheep and ox kind, and is used in making candles and soap. England imports it chiefly from New Zealand, Australia, the United States, and Argentina.

Tapioca is a farinaceous substance prepared in the British East Indies, Java, and South America from the roots of the cassava or manioc plants, a poisonous juice with which the American Indians poisoned their arrows having been extracted.

Tar is the thick, dark, resinous substance obtained from pine and fir trees by burning them in a close, smothering heat. It is used for the same purposes as *Pitch* (which see), and is imported almost entirely from Russia. *Coal Tar* is a bituminous substance found native in coal mines.

Tea is the leaves of a shrub, a native of China and Japan, where it has been cultivated from remote ages. The leaves are dried and then roasted. *Green Teas* are produced by drying the leaves less before roasting than is done with the other teas. The Tea plant is chiefly cultivated in Ceylon, China, Japan, and Assam. Our supplies come principally from India, Ceylon, and China.

Teak is the wood of the teak tree which grows in Burma, India, Ceylon, Java, and Siam. The wood is hard and durable, and is much used for shipbuilding and general carpentry, an important quality being that it resists the attacks of white ants. England imports considerable quantities from Burma, and small amounts from Siam, Bengal, and Java.

Tin is a white, soft metal, very malleable. It was at one time very plentiful in Cornwall. Our chief supplies are now from the Straits Settlements and Chile. Tin is largely used for coating or plating other metals, such as iron. Iron, so plated, is commonly called *tin*, and is made into cooking and other vessels, boxes, etc.

Tobacco is the leaf of a plant native in America, now cultivated in most hot and temperate countries. It is largely used for *smoking*, in the form of cigars and cigarettes, and in fibrous form in pipes; for *chewing*, and, when ground, as snuff. *Unmanufactured Tobacco* is imported into England chiefly from the United States, smaller quantities from Holland and Turkey; *Cigars* from the United States; *Cigarettes* from Egypt; *Cavendish* as *Negrohead* from the Cape of Good Hope and the United States.

Tulip-wood is the wood of a large, ornamental North American tree of the magnolia kind. Imported from North America, and used in cabinet-making and coach-building.

Turpentine is an oleo-resinous substance which exudes from coniferous trees, and is chiefly produced in North America. When distilled, *spirit* or *oil of turpentine* is produced, and the residuum is *resin.* Turpentine and oil of turpentine are imported from the United States.

Turquoise, The, is a gem of bluish green colour, not of great value; used as an ornament and imported chiefly from Persia and Mexico.

Turtle, The, is a marine species of tortoise, found on the west coast of the Atlantic from Brazil to Cape Hatteras. It is highly valued for its flesh, used in making the rich turtle soup.

Velvet is a soft cloth of silk with a loose pile or shag on the surface. It was first woven in Italy, Genoa, Florence, Milan, Lucca and Venice being the chief seats of its manufacture. It was later introduced into France, and from France, after the Revocation of the Edict of Nantes, into England. Much is now imported from France and Holland. *Velveteen* is made of cotton and silk mixed.

Vicuna is the wool of the Vicuña goat found in the Andes of South America. It is made into a fine variety of cloth.

Walnut-wood is that of the common walnut tree, and is used for the making of furniture and gunstocks. The unripe fruit is made into pickle and ketchup, and the ripe is eaten as a nut. The wood is imported chiefly from Italy, Spain, and France.

Watches. London excels in watch making, but Paris, Geneva, and Neufchatel are important centres of the industry. Our chief imports are from France, Belgium, Germany, the United States, and Switzerland.

Whales are aquatic mammals of various species. The *Spermaceti Whale* is killed for the oily, flaky substance obtained from its fat and brains. It is used in making candles, ointment, etc. The *Greenland* or *Right Whale* furnishes oil to be used in making soap, etc., and as lamp oil; also *Whalebone* (which see).

Whalebone is a flexible, bone-like substance taken from the upper jaw of the right whale. It is not properly bone, but is more properly called *baleen.* It is brought by whalers from the Arctic Seas, and is used as a stiffening for stays, fans, screens, etc., and for making brushes in road-sweeping machines and other hard brushes.

Wheat. See *Corn.*

Whisky is a spirit distilled from barley or other grains, potatoes, etc. It is produced largely in Scotland and Ireland, where it is the national drink, also in England, where it is largely used.

Wine is the fermented juice of fruit, but the name is generally confined to that produced from the grape. It is manufactured in most of the warmer temperate countries in both hemispheres. The chief wine-producing countries are France, Italy, Spain, Austria-Hungary, Algeria, Portugal, Russia, and Germany. The chief wines imported from France are *Burgundy, Champagne,* and *Claret;* from Spain, *Sherry, Amontillado,* and *Malaga;* from Portugal, *Port* and *Madeira;* from Italy, *Marsala;* from Austria, *Tokay;* from Germany, *Hock* and *Moselle.*

Wool is the warm covering of the sheep and other animals in cold countries. The wool of the sheep is cut annually, and the fleeces are cleaned, spun into thread, and woven into cloth of various kinds to be used chiefly as clothing. Much sheep and lamb's wool is produced in Great Britain, but enormous quantities are imported from New Zealand, New South Wales, Cape Colony, Victoria, British India, Argentina, France, and Chile. *Merino* is a fine wool imported from Spain, and is woven into fine cloths.

Woollen Yarn is imported from Belgium, France, and Germany.

THE METRIC SYSTEM.

The Metric System of Weights and Measures is arranged decimally, each Weight or Measure being ten times the next below it.

The unit of **length** is called a **metre**.
The unit of **capacity** is called a **litre**.
The unit of **weight** is called a **gram**.

Each unit has multiples and sub-multiples: the multiples being 10, 100, and 1,000 times the unit; the sub-multiples being $\frac{1}{10}$, $\frac{1}{100}$, and $\frac{1}{1000}$ of the unit.

The multiples are named from prefixes derived from the Greek:—

deca = 10; **hecto** = 100; **kilo** = 1,000; **myria** = 10,000.

The sub-multiples are named from prefixes derived from the Latin:—

deci = $\frac{1}{10}$; **centi** = $\frac{1}{100}$; **milli** = $\frac{1}{1000}$.

The metric standards in the custody of the Board of Trade are:—

Measures of Length.

Double metre or 2 metres.
METRE
Decimetre or 0·1 metre.
Centimetre or 0·01 „
Millimetre or 0·001 „

Weights.

20, 10, 5, 2 kilograms.
KILOGRAM.
500, 200, 100, 50, 20, 10, 5, 2, 1 grams.
5, 2, 1 decigrams.
5, 2, 1, 0·5 milligrams.

Measures of Capacity.

20, 10, 5, 2 litres.
LITRE.

0·5	litre	or 500	cubic centimetres.
0·2	„	„ 200	„	„
0·1	„	„ 100	„	„
0·05	„	„ 50	„	„
0·02	„	„ 20	„	„
0·01	„	„ 10	„	„
0·005	„	„ 5	„	„
0·002	„	„ 2	„	„
0·001	„	„ 1	„	„

Metric Weights and Measures with the British equivalents.

WEIGHTS.

	Grams.	Equivalents.
Milligram .	$\frac{1}{1000}$	0·00056438 drams.
Centigram .	$\frac{1}{100}$	0·0056438 drms.
Decigram .	$\frac{1}{10}$	0·056438 drms.
Gram. . .	1	0·56438 drms.
Decagram .	10	5·6438 drms.
Hectogram .	100	3 ozs., 8·4383 drms.
Kilogram .	1,000	2 lbs., 3 ozs., 4·3830 drms., or 15432·3487 grains.
Myriagram .	10,000	22 lbs., 0 oz., 11·8304 drms.
Quintal .	100,000	1 cwt., 108 lbs., 7 ozs., 6·304 drms.
Millier . .	1,000,000	19 cwt., 76 lbs., 9 ozs., 15.04 drms.

LENGTH.

	Metres.	Equivalents.
Millimetre .	$\frac{1}{1000}$	0·0394 ins.
Centimetre .	$\frac{1}{100}$	0·3937 ins.
Decimetre .	$\frac{1}{10}$	3·9371 ins.
Metre. . .	1	39·3708 ins.
Decametre .	10	10 yds., 2 ft., 9·7079 ins.
Hectometre.	100	109 yds., 1 ft., 1·079 ins.
Kilometre .	1,000	1,093 yds., 1 ft., 10·79 ins.
Myriametre.	10,000	6 mls., 376 yds, 0 ft., 11·9 ins.

SURFACE.

	Square Metres.	Equivalents.
Centiare ($\frac{1}{100}$ are) .	1	1·196 sq. yds.
Are	100	119·6033 sq. yds.
Decare (10 ares) . .	1,000	1,196·0333 sq. yds.
Hectare (100 ares) .	10,000	2 acres, 2,280·3326 sq. yds.

CAPACITY.

	Cubic Metres.	Equivalents.
Centilitre ($\frac{1}{100}$ litre)	$\frac{1}{1000}$	0·0176077 pints.
Decilitre ($\frac{1}{10}$ litre) .	$\frac{1}{100}$	0·176077 pts.
Litre.	$\frac{1}{1000}$	1·76077 pts.
Decalitre (10 litres).	$\frac{1}{100}$	1 pk., 1·8077 pts.
Hectolitre (100 litres)	$\frac{1}{10}$	2 bus., 3 pks., 0·077 pts.
Kilolitre (1,000 litres)	1	3 qrs., 3 bus., 2 pks., 0·77 pts.

Metric Equivalents of British Weights and Measures.

LENGTH.

Inch	=	25·39954	Millimetres.
Foot	=	3·04794	Decimetres.
Yard	=	0·91438	Metres.
Pole	=	5·02911	„
Chain	=	20·11644	„
Furlong	=	201·16437	„
Mile	=	1·60931	Kilometres.

SURFACE.

Square Inch	=	6·06451	Square Decimetres.
Square Foot	=	9·28997	„ „
Square Yard	=	0·836097	„ Metres.
Square Pole	=	25·291939	„ „
Rood	=	10·116776	Ares.
Acre	=	0·40467	Hectares.
Square Mile	=	258·98945	„

CUBIC.

Cubic Inch	=	16·38618	Cubic Centimetres.
Cubic Foot	=	28·31631	„ Decimetres.
Cubic Yard	=	0·76451	„ Metres.

CAPACITY.

Gill	=	1·41983	Decilitres.
Pint	=	0·56793	Litres.
Quart	=	1·13587	„
Gallon	=	4·54346	„
Peck	=	9·08692	„
Bushel	=	3·63477	Decalitres.
Quarter	=	2·90781	Hectolitres.

WEIGHT.

Grain	=	0·06479895	Grams.
Dram	=	1·77185	Grams.
Ounce	=	2·83495	Decagrams.
Pound	=	45·35927	„
Hundredweight	=	50·80238	Kilograms.
Ton	=	1·01605	Millier or Metric ton.
Ounce troy	=	31·103496	Grams.

Notwithstanding anything in the Weights and Measures Act, 1878, the use in trade of a weight or measure of the metric system shall be lawful, and nothing in section nineteen of that Act shall make void any contract, bargain, sale or dealing, by reason only of its being made or had according to weights or measures of the metric system, and a person using or having in his possession a weight or measure of the metric system shall not by reason thereof be liable to any fine.

The Board of Trade standards which may be made under section eight of the Weights and Measures Act, 1878, shall include metric standards derived from the iridio-platinum linear standard metre and iridio-platinum standard kilogram deposited with the Board of Trade and numbered 16 and 18 respectively.—*Weights and Measures (Metric System) Act*, 1897.

TABLE FOR THE MUTUAL CONVERSION OF BRITISH AND METRIC WEIGHTS AND MEASURES.

Metres into Yards.			Yards into Metres.			Kilometres into Miles.			Miles into Kilometres.		
Met.	Yd.	8ths.	Yds.	Met.	Cts.	Kil.	M.	100ths	Miles.	Kil.	Met.
¼	0	2	⅛	0	11	¼	0	16	¼	0	402
½	0	4	¼	0	23	½	0	31	½	0	805
¾	0	7	⅜	0	34	¾	0	47	¾	1	207
1	1	1	½	0	46	1	0	62	1	1	609
2	2	1	⅝	0	57	2	1	24	2	3	219
3	3	2	¾	0	68	3	1	86	3	4	828
4	4	3	⅞	0	80	4	2	49	4	6	37
5	5	4	1	0	91	5	3	11	5	8	47
6	6	4	2	1	83	6	3	73	6	9	656
7	7	5	3	2	74	7	4	35	7	11	265
8	8	6	4	3	66	8	4	97	8	12	875
9	9	7	5	4	57	9	5	59	9	14	484
10	10	7	6	5	49	10	6	21	10	16	93
20	21	7	7	6	40	20	12	43	20	32	186
30	32	6	8	7	32	30	18	64	30	48	279
40	43	6	9	8	23	40	24	86	40	64	373
50	54	5	10	9	14	50	31	7	50	80	466
60	65	5	20	18	29	60	37	28	60	96	559
70	76	4	30	27	43	70	43	50	70	112	652
80	87	4	40	36	58	80	49	71	80	128	745
90	98	3	50	45	72	90	55	92	90	144	838
100	109	3	60	54	86	100	62	14	100	160	931
200	218	6	70	64	1	200	124	28	200	321	863
300	328	1	80	73	15	300	186	41	300	482	794
400	437	3	90	82	29	400	248	55	400	643	726
500	546	7	100	91	44	500	310	69	500	804	657

Litres into Gallons, &c.			Gallons into Litres, &c.			Hectolitres into Bushels.			Bushels into Hectolitres.		
Lit.	Gal.	Pts.	Gal.	Lit.	Cts.	Hec.	Bush.	Pks.	Bus.	Hec.	Lit.
¼	0	0½	⅛	0	57	¼	0	2½	¼	0	9
½	0	0⅞	¼	1	14	½	1	1½	½	0	18
¾	0	1¼	⅜	1	70	¾	2	0½	¾	0	27
1	0	1¾	½	2	27	1	2	3	1	0	36
2	0	3½	⅝	2	84	2	5	2	2	0	73
3	0	5¼	¾	3	41	3	8	1	3	1	9
4	0	7	⅞	3	98	4	11	0	4	1	45
5	1	0¾	1	4	54	5	13	3	5	1	82
6	1	2½	2	9	9	6	16	2	6	2	18
7	1	4¼	3	13	63	7	19	1	7	2	54
8	1	6	4	18	17	8	22	0	8	2	91
9	2	0	5	22	72	9	24	3	9	3	27
10	2	1½	6	27	26	10	27	2	10	3	63
20	4	3¾	7	31	80	20	55	0	20	7	27
30	6	4⅜	8	36	35	30	82	2½	30	10	90
40	8	6½	9	40	89	40	110	0½	40	14	54
50	11	0	10	45	43	50	137	2½	50	18	17
60	13	1¾	20	90	87	60	165	0½	60	21	81
70	15	3½	30	136	30	70	192	2½	70	25	44
80	17	4⅜	40	181	74	80	220	0½	80	29	8
90	19	6½	50	227	17	90	247	2½	90	32	71
100	22	0	60	272	61	100	275	0½	100	36	35
200	44	0	70	318	4	200	550	1	200	72	70
300	66	0	80	363	48	300	825	1½	300	109	4
400	88	0½	90	408	91	400	1100	2	400	145	39
500	110	0⅝	100	454	35	500	1375	2½	500	181	74

Kilograms. &c., into Avoirdupois Weight.					Avoirdupois Weight to Kilograms.		
Gr.	cwt.	Qr.	Lb.	oz.	Oz.	Kilo.	Gram
100	0	0	0	3½	1	0	28
200	0	0	0	7	2	0	57
250	0	0	0	8¾	3	0	85
300	0	0	0	10½	4	0	113
400	0	0	0	14	8	0	227
500	0	0	1	1¾	12	0	340
600	0	0	1	5¼	Lib. 1	0	454
700	0	0	1	8¾	2	0	907
750	0	0	1	10½	3	1	361
800	0	0	1	12¼	4	1	814
900	0	0	1	15¾	5	2	268
Kil.1	0	0	2	3½	6	2	722
2	0	0	4	6¾	7	3	175
3	0	0	6	9¾	8	3	629
4	0	0	8	13	9	4	82
5	0	0	11	0¼	10	4	536
6	0	0	13	3½	11	4	990
7	0	0	15	7	12	5	443
8	0	0	17	10¼	13	5	897
9	0	0	19	13¼	14	6	350
10	0	0	22	0¾	15	6	804
11	0	0	24	4	16	7	257
12	0	0	26	7¼	17	7	711
13	0	1	0	10¾	18	8	165
14	0	1	2	13¾	19	8	618
15	0	1	5	1	20	9	72
16	0	1	7	4¼	21	9	525
17	0	1	9	7¼	22	9	979
18	0	1	11	11	23	10	433
19	0	1	13	14¼	24	10	886
20	0	1	16	1¼	25	11	340
21	0	1	18	4¾	26	11	793
22	0	1	20	8	27	12	247
23	0	1	22	11¼	Qr. 1	12	701
24	0	1	24	14¼	2	25	401
25	0	1	27	1¾	3	38	102
30	0	2	10	2¼	Cwt.1	50	802
35	0	2	21	2¾	2	101	605
40	0	3	4	3	3	152	407
45	0	3	15	3¼	4	203	210
50	0	3	26	3¾	5	254	12
60	1	0	20	4½	6	304	814
70	1	1	14	5¼	7	355	617
75	1	1	25	5½	8	406	419
80	1	2	8	6	9	457	221
90	1	3	2	6¾	10	508	24
100	1	3	24	7	11	558	826
200	3	3	20	15	12	609	629
300	5	3	17	6	13	660	431
400	7	3	13	14	14	711	233
500	9	3	10	5	15	762	36
600	11	3	6	12	16	812	838
700	13	3	3	4	17	863	640
800	15	2	27	11	18	914	443
900	17	2	24	3	19	965	245
1000	19	2	20	10	T. 1	1016	48

BRITISH WEIGHTS AND MEASURES.

Although, each trade having its own system, there are numbers of different weights and measures, every one must, by law, be derived from the two Imperial Standards —the Imperial Standard yard and the Imperial Standard pound—and each weight or measure must also be the same throughout the United Kingdom.

Formerly, the two Imperial Standards were kept at the Houses of Parliament, but were lost when the Parliament buildings were destroyed by fire in 1834. New Standards were constructed which are now in the custody of the Board of Trade, and, in case of further mishaps, copies are also deposited at the Royal Mint, the Royal Observatory at Greenwich, the New Palace at Westminster, and with the Royal Society of London. (For the benefit of the public, sections of the Standards are exhibited on the outer walls of Greenwich Observatory; and, as probably few people know, a length of 100 feet, and another of 66 feet (1 chain) marked on brass are let into the granite step at the back of Trafalgar Square.)

Should either of the originals or copies be destroyed or injured in the future, the Board of Trade have powers to replace it by reference to either of the remaining originals or copies; so that the likelihood of fresh standards having to be constructed is very remote, unless the Standards are altered by law.

Besides the Imperial Standards, there are Secondary, or what are called Board of Trade Standards, all, of course, fractional parts or multiples of the Imperial Standards. Copies of these Board of Trade Standards are supplied to the Local Authorities for use by their Inspectors in testing weights and measures and weighing and measuring instruments. For this small fees varying from ½d. for small weights up to 10s. for a ten ton weighing instrument are charged. Inspectors are stationed at or attend at convenient intervals, all parts of the United Kingdom, thus giving ample facilities to the public for the stamping and verifying of all weights, measures, and instruments. The Inspectors have the power to test weights, measures, and instruments, used in trade, at any time; and any persons convicted of fraud are liable to fines up to the sum of £50, or for a second offence, to be imprisoned for two months with or without hard labour.

The following tables of the different Weights and Measures in use in the United Kingdom are arranged under the three convenient sections, **Measure, Weight and Capacity**; and full particulars of the Imperial Standards and lists of the Board of Trade Standards are given under their respective headings.

MEASURE.

Imperial Standard . . . . the yard.

The Imperial Standard yard is the straight line or distance between the centres of the two gold plugs or pins in the bronze bar used for determining the Imperial Standard yard, measured when the bar is at the temperature of sixty-two degrees Fahrenheit, and when it is supported on bronze rollers placed under it in such manner as best to avoid flexure of the bar, and to facilitate its free expansion and contraction from variations of temperature.

"The Imperial Standard, for determining the length of the Imperial standard yard, is a solid square bar, thirty-eight inches long and one inch square in transverse section, the bar being of bronze or gun-metal; near to each end a cylindrical hole is sunk (the distance between the centres of the two holes being thirty-six inches) to the depth of half an inch; at the bottom of this hole is inserted in a smaller hole a gold plug or pin, about one-tenth of an inch in diameter, and upon the surface of this pin there are cut three fine lines at intervals of about the one hundredth part of an inch transverse to the axis of the bar, and two lines at nearly the same interval parallel to the axis of the bar; the measure of length of the Imperial Standard yard is given by the interval between the middle transversal line at one end and the middle transversal line at the other end, the part of each line which is employed being the point midway between the longitudinal lines; and the said points are in this act referred to as the centres of the said gold plugs or pins; and such bar is marked 'copper 16 oz., tin 2 oz., zinc 1. Mr. Baily's metal. No. 1 standard yard at 62°·00 Fahrenheit. Cast in 1845. Troughton and Simms, London.'" —*Weights and Measures Act*, 1878.

Board of Trade Standards.

(Prepared for the use of Inspectors in testing Measures—See Introduction.)

100 feet.
66 feet or a chain of 100 links.
Rod, pole, or perch.
10 feet
6 feet or 2 yards.
5 feet
4 feet.
3 feet or 1 yard.
[illegible]
1 foot
1 inch divided into 12 duodecimal and 16 vinary equal parts.

Long Measure.

12 lines	=	1 inch.	*in.*
12 inches	=	1 foot	*ft.*
3 feet	=	1 yard	*yd.*
5½ yards	=	1 pole, or rod.	*pl.*
40 poles (220 yards)	=	1 furlong.	*fur.*
8 furlongs (1,760 yards)	=	1 mile.	*mi*
3 miles (5,280 yards)	=	1 league.	

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3 barleycorns	=	1 inch.
2½ inches	=	1 nail.
3 inches	=	1 palm.
4 inches	=	1 hand (used in measuring the height of a horse.)
9 inches	=	1 span.
18 inches	=	1 cubit.
2½ feet	=	1 pace (military).
5 feet	=	1 pace (geometrical).

Square Measure.

144 square inches (*sq. in.*)	=	1 square foot.	*sq. ft.*
9 square feet	=	1 square yard.	*sq. yd.*
30¼ square yards	=	1 square pole, rod, or perch.	*sq. pl.*
40 square poles	=	1 rood.	*rd.*
4 roods	=	1 acre.	*ac.*
640 acres	=	1 square mile.	*sq. ml.*

Cubic Measure.

1728 cubic inches (*cub. in.*)	=	1 cubic foot.	*cub. ft.*
27 cubic feet	=	1 cubic yard.	*cub. yd.*

Land Measure.

Land is measured with a chain invented by Gunter in 1606. It is 22 yards long and has 100 links. Every tenth link has a piece of brass attached for the convenience of the surveyor.

7·92 inches	=	1 link.
25 links	=	1 pole.
4 poles (100 links, or 22 yards)	=	1 chain.
80 chains	=	1 mile.
62·7264 square inches	=	1 square link.
625 square links	=	1 square pole.
16 square poles	=	1 square chain.
10 square chains	=	1 acre.
30 acres	=	1 yard of land.
100 acres	=	1 hide of land.
40 hides	=	1 barony.

Nautical Measure.

Cables' lengths are nearly always used in Marine chart reckonings.

6 feet	=	1 fathom.
120 fathoms	=	1 cable's length.
2027·3 yards	=	1 knot or nautical mile.
3 knots	=	1 nautical league.
69.121 statute miles	=	1 degree.
60 knots	=	1 degree.
360 degrees	=	the circumference of the earth.

Cotton Yarn Measure.

120 yards	=	1 skein.
7 skeins	=	1 hank.
18 hanks	=	1 spindle.

Worsted Yarn Measure.

80 yards	=	1 skein.
7 skeins	=	1 hank.
144 hanks	=	1 gross.

Linen Yarn Measure.

300 yards	=	1 cut.
12 cuts	=	1 hank
16 hanks	=	1 bundle.

Cloth Measure.

This measure is used in measuring cloths, linens, silks, ribbons, muslins, tapes, tapestries, etc. Scotch and Irish linens, etc., are measured by the yard; Dutch linens bought by the Flemish ell and sold by the English ell; and tapestry is sold by the Flemish ell.

2¼ inches	=	1 nail.
4 nails	=	1 quarter (of a yard).
3 quarters	=	1 Flemish ell.
4 quarters	=	1 yard.
5 quarters	=	1 English ell.
6 quarters	=	1 French ell.

Paper and Book Measure.

24 Sheets	=	1 quire.
20 Quires (480 sheets)	=	1 ream.
516 Sheets	=	1 printer's ream.
2 Reams	=	1 bundle.
10 Reams	=	1 bale.

Paper is made in sheets of different recognized sizes, which are as follows:—

Brown Papers.

	Inches.		Inches.
Casing	46 × 36	Imperial Cap	29 × 22
Double Imperial	45 × 29	Haven Cap	26 × 21
Elephant	34 × 24	Bag Cap	24 × 19½
Double Four Pound	31 × 21	Kent Cap	21 × 18

Writing and Drawing Papers.

	Inches.		Inches.
Emperor	72 × 48	Medium	22 × 17½
Antiquarian	53 × 31	Large Post	20¾ × 16¾
Double Elephant	40 × 26¾	Copy	20 × 16
Atlas	34 × 26	Demy	20 × 15½
Colombier	34½ × 23½	Post	19 × 15¼
Imperial	30 × 22	Pinched Post	18½ × 14¼
Elephant	28 × 23	Foolscap	17 × 13½
Super Royal	27 × 19	Brief	16½ × 13½
Royal	24 × 19	Pott	15 × 12½

Printing Paper

	Inches.		Inches.
Double Super Royal	40 × 27½	Super Royal	27½ × 20
Double Royal	40 × 25	Royal	25 × 20
Double Demy	35½ × 22½	Medium	24 × 19
Double Large Post	33 × 21	Demy	22½ × 17½
Double Crown	30 × 20	Large Post	21 × 16½
Double Post	31 × 19	Crown	20 × 15
Double Foolscap	27 × 17	Post	19 × 15¼
Imperial	30 × 22	Foolscap	17 × 13½

The sheets are folded and make various sizes, those most frequently used being given in the following table. It must be remembered that a sheet unfolded is one leaf or two pages, it being printed on both sides (thus a sheet folded once makes two leaves or four pages). The size of a book is described by the size of the folded paper (e.g. crown quarto) and the double sized papers give twice the number of leaves and pages of the same size as the single sizes. Thus a Crown quarto gives 4 leaves or 8 pages and a Double Crown quarto 8 leaves or 16 pages. The different foldings are named:—

Folio	making	2	leaves or	4 pages.
Quarto (4to)	„	4	„	8 „
Octavo (8vo)	„	8	„	16 „
Duodecimo (12mo)	„	12	„	24 „

And so on—16mo = 16 leaves, 32 pages; 32mo = 32 leaves, 64 pages; etc.

Sizes of Folded Papers.

The size of a book when bound and finished is the size of the paper before it is trimmed.

	Folio.	Quarto.	Octavo.
Imperial	15 × 22	11 × 15	7½ × 11
Super Royal	13¾ × 20	10 × 13¾	6⅞ × 10
Royal	12½ × 20	10 × 12½	6¼ × 10
Medium	12 × 19	9½ × 12	6 × 9½
Demy	11¼ × 17½	8¾ × 11¼	5⅝ × 8¾
Large Post	10½ × 16½	8¼ × 10½	5¼ × 8¼
Crown	10 × 15	7½ × 10	5 × 7½
Post	9½ × 15½	7¼ × 9½	4¾ × 7½
Foolscap	8½ × 13½	6¾ × 8½	4¼ × 6¾

Timber Measure.

1 load of unhewn timber	=	40 cubic feet.
1 load of squared timber	=	50 cubic feet.
1 ton of shipping	=	42 cubic feet.
1 stack	=	108 cubic feet.
1 cord	=	128 cubic feet.
1 Christiania standard	=	103⅓ cubic feet (120 boards, 11 feet long, 1″×9″)
1 Petersburg standard	=	165 cubic feet (120 deals, 6 feet long, 3″×11″)
1 London standard } 1 Dublin standard }	=	270 cubic feet (120 deals, 12 feet long, 3″×9″)
1 Quebec standard	=	229½ cubic feet (100 deals, 10 feet long, 3″×11″)
1 square	=	100 square feet (superficial).

Boards sold by the square can be any thickness, thus:—200 boards 6 ft. long by 12 ins. wide measure 12 squares whatever their thickness. If ½ inch thick, for instance, it would be 12 squares of ½ inch stuff; if ¾ inch thick, 12 squares of ¾ inch stuff and so on.

Time Measure.

60 seconds	=	1 minute.
60 minutes	=	1 hour.
24 hours	=	1 day.
7 days	=	1 week.
4 weeks (28 days)	=	1 lunar month.
28, 30 or 31 days	=	1 calendar month.
13 lunar months	=	1 year.
12 calendar months	=	1 year.
52 weeks	=	1 year.
365 days	=	1 year.
366 days	=	1 leap year.
100 years	=	1 century.

A year really consists of 365 days, 5 hours, 48 minutes, 51 seconds, that being the time occupied by the earth in revolving round the sun. This is called a Solar year. On account of this, every fourth year has an extra day in it, which is placed in February, thus making 29 days in that month. When this occurs the year is called leap year. This correction, however, is a little too much, so that *every* 100th year is not a leap year, but only those the first two figures of which are exactly divisible by 4, e.g. the year 1900 was not a leap year, but the year 2000 will be. At all other times every year is a leap year, the last two figures of which are exactly divisible by 4, as 1884 and 1892.

Thirty days hath September,
April, June, and November;
February hath twenty-eight alone,
All the rest have thirty-one.
Except in leap year, once in four,
February's days are one day more.

Diurnal Motion of the Earth.

REDUCED TO TIME.

360 degrees	=	24 hours.
15 degrees	=	1 hour.
1 degree	=	4 minutes.

NOTE.—From this it will be seen that for every degree of distance on the earth's surface east or west, there is a difference of 4 minutes of time respectively; it is noon 4 minutes later than at Greenwich for every degree west of the first meridian, and 4 minutes earlier for every degree east of that meridian.

Astronomical Motion.

60 seconds (″)	=	1 minute (′)
60 minutes	=	1 degree (°)
30 degrees	=	1 sign of the Zodiac.
90 degrees	=	1 quadrant.

12 signs, or 4 quadrants, or 360 degrees, are the circumference of the Zodiac, which is an imaginary belt encompassing the heavens; it extends eight degrees on each side of the ecliptic. When fixed at this width it contained the paths of all the known planets, but many *ultra-zodiacal* planets have since been discovered. The astronomical day now commences at 12 o'clock, midnight, and the common or civil day begins at the same time. Every circle is divided into 360 parts or degrees, which are sub-divided into minutes and seconds.

Quarter Days.

ENGLAND AND IRELAND.

Lady Day	25th March.
Midsummer	24th June.
Michaelmas	29th September.
Christmas	25th December.

SCOTLAND.

Candlemas Day	2nd February.
Whitsunday	15th May.
Lammas Day	1st August.
Martinmas	11th November.

NOTE.—Easter Sunday is the first Sunday after the first full moon on or after the 21st of March.

Whit Sunday is the seventh Sunday after Easter Sunday.

Bank Holidays are Easter Monday, Whit-Monday, the first Monday in August and Boxing-Day (December 26th).

The Seasons.

Spring commences March 21st and lasts 92 days 21 hours *(Vernal Equinox)*.
Summer commences June 22nd and lasts 93 days 14 hours *(Summer Solstice)*.
Autumn commences Sept. 23rd and lasts 89 days 17½ hours *(Autumn Equinox)*.
Winter commences December 22nd and lasts 89 days 1 hour *(Winter Solstice)*.

The longest day is the 21st of June. The shortest day is the 21st of December. Two days in the year are equally divided into day and night, viz., the 21st of March and the 23rd of September.

General.

12 articles	=	1 dozen.
12 dozen	=	1 gross.
12 gross	=	1 great gross.
20 articles	=	1 score.
5 score	=	1 hundred.
6 score	=	1 great hundred.

WEIGHT.

Imperial Standard . . . . the pound.

The Imperial Standard pound is the weight in vacuo of the platinum weight used for determining the Imperial Standard pound.

"The Imperial Standard for determining the weight of the imperial standard pound is of platinum, the form being that of a cylinder nearly 1·35 inch in height and 1·15 inch in diameter, with a groove or channel round it, whose middle is about 0·34 inch below the top of the cylinder, for insertion of the points of the ivory fork by which it is to be lifted; the edges are carefully rounded off, and such standard pound is marked, 'P.S 1844, 1 lb.'"—*Weights and Measures Act*, 1878.

The Avoirdupois pound is .. .. 7,000 grains.
The Troy pound is .. .. 5,760 grains.
(The grain is one seven thousandth part of the Imperial Standard pound, and does not vary, but is the same in all tables).

Board of Trade Standards.

(Prepared for the use of Inspectors in testing Weights—See Introduction).

Avoirdupois Weights.—56, 28, 14, 7, 4, 2, and 1 pounds; 8, 4, 2, and 1 ounces; 8, 4, 2, 1, and ½ drams.
240 grains, commonly called 10 pennyweights.
120 grains, commonly called 5 pennyweights.
72 grains, commonly called 3 pennyweights.
48 grains, commonly called 2 pennyweights.
24 grains, commonly called 1 pennyweight.

Troy Bullion Weights.—500, 400, 300, 200, 100, 50, 40, 30, 20, 10, 5, 4, 3, 2, 1, 0·5, 0·4, 0·3, 0·2, 0·1, 0·05, 0.04, 0·03, 0·02, 0·01, 0·005, 0·004, 0·003, 0·002, 0·001 ounces.

Decimal Grain Weights.—4000, 2000, 1000, 500, 300, 200, 100, 50, 30, 20, 10, 5, 3, 2, 1, 0·5, 0·3, 0·2, 0·1, 0·05, 0·03, 0·02, 0·01 grains.

Weights to be used.

"All articles sold by weight must be sold by Avoirdupois weight; except that—

(1) Gold and silver, and articles made thereof, including gold and silver thread, lace, or fringe; also platinum, diamonds, and other precious metals or stones, may be sold by the ounce troy or by any decimal parts of such ounce.

(2) Drugs, when sold by retail, may be sold by apothecaries' weight."

Weights and Measures Act, 1878.

Avoirdupois weights being used so very much more than any others, it is not necessary to name the system when quoting those weights, but when referring to others it is better to do so (e.g. 10 ounces troy).

Troy Weight.

Jewelry made of gold is described as of so many carats. This is not the *weight* of the article, but the *proportion* of gold used in its manufacture. Articles are not made of pure gold, the metal being too soft. Each article is supposed to be divided into 24 equal parts or carats, and is composed of so many parts gold and so many alloy. Thus 18 carat gold is made of 18 parts gold and 6 alloy. The gold in general use is either 9, 15, 18, or 22 carat.

The British sovereign is 22 carat gold. It weighs 123·274 grains, 113 of which is gold.

3·17 grains	=	1 carat.	
24 grains	=	1 pennyweight.	*dwt.*
20 pennyweights	=	1 ounce.	*oz.*
12 ounces (5,760 grains)	=	1 pound.	*lb.*
100 pounds	=	1 hundredweight	*cwt.*

Apothecaries' Weight.

Now only used by Physicians in their prescriptions and [illegible] in dispensing the same. Apothecaries' weight is used in the British Pharmacopœia.

20 grains or minims	=	1 scruple.	℈
3 scruples	=	1 drachm.	ʒ
8 drachms	=	1 ounce.	℥

Avoirdupois Weight.

27·34375 grains	=	1 dram.	*dr.*
16 [illegible]	=	1 ounce.	*oz.*
16 [illegible]	=	1 pound	*lb.*
14 pounds	=	1 stone.	*st.*
28 pounds	=	1 quarter.	*qr.*
4 quarters (112 pounds)	=	1 hundredweight	*cwt.*
20 hundredweight	=	1 ton.	
100 pounds	=	1 cental.	
8 pounds	=	1 stone of butcher's meat.	

Bread Weight.

		lbs.	ozs.	drs.
A peck loaf	=	17	6	2
A half-peck loaf	=	8	11	1
*A quartern loaf	=	4	5	8½
A quartern (or quarter-peck) of flour	=	3	8	0

* Bread is now usually sold in 4lb. and 2lb. [illegible] known as quartern and half quartern loaves—which must be weighed in the presence of the purchaser [illegible] when complained of.

Bakers are forbidden by statute to sell bread by the peck or quartern.

Butter and Cheese Weight.

8 pounds	=	1 clove.
56 pounds	=	1 firkin.
84 pounds	=	1 tub.
112 pounds	=	1 Dutch cask.
224 pounds	=	1 barrel.
256 pounds	=	1 Suffolk wey.
336 pounds	=	1 Essex wey.

Coal Weight.

14 pounds	=	1 stone.
28 pounds	=	1 quarter.
112 pounds	=	1 hundredweight.
20 hundredweight	=	1 ton.
1 sack	=	1 hundredweight.
1 large sack	=	2 hundredweight.
21 tons 4 cwt.	=	1 barge or keel.
20 keels (424 tons)	=	1 shipload.
7 tons	=	1 room.

Truckloads vary, but contain from 7 to 10 tons.

"All coal shall be sold by weight only, except where by the written consent of the purchaser it is sold by boat load or by waggons or tubs delivered from the colliery into the works of the purchaser.

Where any quantity of coal exceeding two hundredweight is delivered by means of any vessel to a purchaser, the seller of the coal shall deliver, or cause to be delivered, or to be sent by post or otherwise, to the purchaser or to his servant, before any part of the coal is unloaded, a ticket or note according to a prescribed form.

Fish Weight and Measure.

1 barrel (of anchovies)	=	30 pounds.
1 quintal	=	112 pounds.
1 box (of salmon)	=	120 to 130 pounds.
4 fish	=	1 warp.
33 warps (132 fish)	=	1 long hundred.
10 long hundred (1,320 fish)	=	1 thousand.
10 thousand (13,200 fish)	=	1 last.
500 herrings	=	1 cade.
1000 sprats	=	1 cade.
600 herrings	=	1 mease.
615 herrings	=	1 maze.

Flour Weight.

14 pounds	=	1 peck or stone.
56 pounds	=	1 bushel.
140 pounds	=	1 boll.
196 pounds	=	1 barrel.
280 pounds	=	1 sack.

Hay Weight.

56 pounds	=	1 truss of old hay.
60 pounds	=	1 truss of new hay.
36 trusses	=	1 load.
1 square yard	=	6 stone of new hay.
1 square yard	=	8 stone of oldish hay.
1 square yard	=	9 stone of old hay.

Straw Weight.

36 pounds	=	1 truss.
11 cwt. 64 lbs.	=	1 load.
36 trusses	=	1 load.

Wool Weight.

Wool is weighed by wool weight only.

7 pounds	=	1 clove.
2 cloves (14 pounds)	=	1 stone.
2 stone (28 pounds)	=	1 tod.
6½ tods (182 pounds	=	1 wey.
2 weys (364 pounds)	=	1 sack.
12 sacks	=	1 last.
20 pounds	=	1 score.
12 score (240 pounds)	=	1 pack.

Miscellaneous Weights.

Almonds	basket	1¼ to 1½ cwt.
„	seron	1½ to 2 cwt.
„	box (Jordan)	25 lbs.
Arsenic	cask	4 cwt.
Ashes	cask (American)	3½ to 5 cwt.
„	cask (Russian)	10 cwt.
Beef	tierce of 38 pieces (Irish)	304 lbs.
Bristles	cask	10 cwt.
Bullion	bar	15 to 30 lbs.
Camphor	box	1 cwt.
Candles	barrel	120 lbs.
Cassia	chest	60 lbs.
Cinnamon	bale	92½ lbs.
Clover seed	sack	2 to 3½ cwt.
„ seed	cask	7 to 9 cwt.
Cloves	matt	80 lbs.
„	chest	200 lbs.
Cochineal	seron	140 lbs.
„	bag	200 lbs.
„		70,000 insects to 1 lb.
Cocoa	bag	1 cwt.
„	cask	1½ cwt.
Coffee	barrel or robin	1 to 1½ cwt.
„	bag	1¼ to 1½ cwt.
„	tierce	5 to 7 cwt.
„	bale (Mocha)	2 to 2½ cwt.
Copperas	hhd	16 to 20 cwt.
Cotton	bale (American)	400 to 500 lbs.
„	bale (Egyptian)	700 to 740 lbs.
„	bale (Indian)	500 to 600 lbs.
Currants	caroteel	5 to 9 cwt.
„	butt	15 to 20 cwt.
Feathers	bale	1 cwt.
Figs	drum (Turkey)	24 lbs.
„	frail (Faro)	32 lbs.
„	frail (Malaga)	56 lbs.
Flax	matt. (Dutch)	126 lbs.
„	bale (Flemish)	2 cwt.
„	bale (Russian)	5 to 6 cwt.
Galls	sack	3½ cwt.
Ginger	bag (Jamaica)	1 cwt.
„	bag (E. Indies)	1 cwt.
„	bag (Barbadoes)	1¼ cwt.
Glass	stone	5 lbs.
„	seam	24 stone.
Gum	chest (Turkey)	4 cwt.
„ Arabic	chest (E. Indies)	6 cwt.
Gunpowder	barrel	100 lbs.
„	last (24 barrels)	2,400 lbs.
Hemp	stone	32 lbs.
Hops	pocket	1 to 2 cwt.
„	bag	2½ cwt.
Honey	gallon	12 lbs.
Indigo	seron	250 lbs.
Jute	bale	400 lbs.
Lead	fodder or fother	19½ cwt.
Liquorice juice	case	1½ cwt.
Mace	case	1½ cwt.
Madder	cask	15 to 23 cwt.
Magnesia	chest	1 cwt.
Meat	stone	8 lbs.
Molasses	puncheon	1½ to 12 cwt.
Mustard	cask (small)	9 to 18 lbs.
„	cask (large)	18 to 36 lbs.
Nutmegs	cask	250 lbs.
Nuts	bag (Barcelona)	126 lbs.
„	bag (Messina)	1½ to 1¾ cwt.
Opium	chest (Turkey)	136 lbs.
„	chest (E. Indies)	149½ lbs.
Pepper	bag (free trade)	¼, ½, or 1 cwt.
„	bag (white)	168 lbs.
„	bag (black)	316 lbs.
Pimento	bag	1 cwt.
Plums	carton	9 lbs.
„	½ box	20 lbs.
Pork	firkin (Irish)	160 lbs.
„	tierce	320 lbs.
Potash	barrel	200 lbs.
Potatoes	cwt.	120 lbs.
Prunes	barrel	1 to 3 cwt.
„		10 cwt.
Quicksilver	bottle	84 lbs.
Rags	bale (Hamburg)	2½ cwt.
„	bale (Mediterranean)	4½ to 5 cwt.
Resin	barrel	about 2 cwt.
Raisins	drum (Valencia)	28 lbs.
„	box „	30 to 40 lbs.
„	cask (Malaga)	1 cwt.
„	box „	22 lbs.
„	cask (Turkey)	2½ cwt.
Rice	bag (E. Indies)	1½ cwt.
„	cask (America)	6 cwt.
Sago	bag	1 cwt.
Salmon	box	120 to 130 lbs.
Salt	bushel	56 lbs.
Saltpetre	bag	1½ cwt.
„	barrel	1 cwt.
Shellac	chest	1 to 3 cwt.
Soap	firkin	64 lbs.
„	barrel	256 lbs.
„	chest	3½ cwt.
Soda	cask	3 to 4 cwt.
Steel	faggot	120 lbs.
Sugar	bag (E. Indies)	1 to 1½ cwt.
„	matt or bag (Mauritius)	1 to 1½ cwt.
„	tierce (W. Indies)	7 to 9 cwt.
„	hhd. (W. Indies)	13 to 16 cwt.
Sugar Candy	box	70 lbs.
Tallow	cask	9 cwt.
Tapioca	barrel	1½ cwt.
Tea	chest (Congou)	80 lbs.
„	„ (Hyson)	60 to 80 lbs.
„	„ (ordinary)	84 lbs.
Tiles	load	1,000
Tobacco	hhd	12 to 18 cwt.
Turpentine	barrel	2 to 2½ cwt.
Vermilion	bag	60 lbs.
Walnuts	bag	1 cwt.

CAPACITY.

Imperial Standard . . . . . the gallon.

The Imperial Standard gallon contains ten Imperial Standard pounds weight of distilled water weighed in air against brass weights, with the water and the air at the temperature of sixty-two degrees Fahrenheit, and with the barometer at thirty inches.

"The brass gallon marked 'Imperial Standard Gallon, Anno Domini MDCCCXXIV., Anno V. G iv Regis,' which has a diameter equal to its height, and made in pursuance of 5 Geo. 4, c. 74, s. 6., and is at the passing of this act in the custody of the Warden of the Standards, shall be deemed to be a Board of Trade Standard for the gallon."—*Weights and Measures Act*, 1878.

The Imperial Standard gallon measures 277·274 cubic inches.

Board of Trade Standards.

(Prepared for the use of Inspectors in testing Measures—See Introduction.)

Measures of Capacity.—Bushel, half-bushel, peck, gallon, half-gallon, quart, pint, half-pint, gill half-gill, quarter-gill.
Measures used in the sale of Drugs.—Fluid ounces.—4, 3, 2, 1. Fluid drachms.—4, 3, 2, 1. Minims.—30, 20, 10, 5, 4, 3, 2, 1.

Dry Measure.

4 gills	=	1 pint.
2 pints	=	1 quart.
2 quarts (4 pints)	=	1 pottle.
2 pottles (4 quarts)	=	1 gallon.
2 gallons	=	1 peck.
4 pecks	=	1 bushel.
3 bushels	=	1 bag.
4 bushels	=	1 coomb.
5 bushels (or porter's load)	=	1 sack of flour.
8 bushels	=	1 quarter.
12 bags (36 bushels)	=	1 chaldron.
5 quarters (40 bushels)	=	1 wey or horse-load.
2 weys (10 quarters)	=	1 last.

Ale and Beer Measure.

4 gills	=	1 pint.
2 pints	=	1 quart.
4 quarts	=	1 gallon.
9 gallons	=	1 firkin.
2 firkins (18 gallons)	=	1 kilderkin.
2 kilderkins	=	1 barrel.
1½ barrel	=	1 hogshead.
2 hogsheads	=	1 butt.
2 butts	=	1 tun.

Wine Measure.

4 gills	=	1 pint.
2 pints	=	1 quart.
4 quarts	=	1 gallon.
10 gallons	=	1 anker.
18 gallons	=	1 runlet.
31½ gallons	=	1 barrel.
42 gallons	=	1 tierce.
63 gallons	=	1 hogshead.
84 gallons	=	1 puncheon.
2 hogsheads	=	1 pipe or butt.
2 pipes	=	1 tun.

Miscellaneous Wine and Spirit Measures.

1 hogshead of Claret	=	46 gallons.
1 butt of Sherry	=	108 ,,
1 pipe of Port	=	115 ,,
1 pipe of Madeira	=	92 ,,
1 pipe of Teneriffe	=	100 ,,
1 pipe of Lisbon	=	115 ,,
1 butt of Malaga	=	105 ,,
1 aum of Hock, Rhine, or Moselle	=	30 ,,
1 pipe of Cape	=	92 ,,
1 hogshead of Tent	=	54 ,,
1 pipe of Marsala	=	93 ,,
1 puncheon of S. Whisky	=	112 to 120 ,,
1 puncheon of Brandy	=	100 to 110 ,,
1 hogshead of Brandy	=	45 to 55 ,,
Quarter-cask of Brandy	=	26 to 28 ,,
1 pipe of Cider	=	100 to 118 ,,
1 piece of Geneva	=	about 116 ,,
1 puncheon of Rum	=	90 to 100 ,,
1 hogshead of Rum	=	45 to 50 ,,
1 tun of Wine	=	240 ,,
1 pipe or butt	=	108 to 117 ,,

Fluid Measure.

60 Minims (drops)	=	1 drachm.
8 drachms	=	1 ounce.
20 ounces	=	1 pint.
1 Tea-spoonful	=	1 drachm.
1 Dessert-spoonful	=	2 drachms.
1 Table-spoonful	=	4 drachms.

It is advisable to use a graduated glass measure to measure the spoonfuls.

FOREIGN WEIGHTS AND MEASURES.

Full particulars of the Metric System will be found on p. 692.

ARGENTINA.

Metric System.

AUSTRIA.

The Metric System is compulsory, but the names used are the same as in Germany.

BELGIUM.

The Metric System has been long adopted but not rigidly enforced. The "Livre" = half a Kilogram and the "Aune" = $\frac{1}{20}$ of a metre are still in common use.

BOLIVIA.

Old Spanish (See *Spain*).

BRAZIL.

Measure:—Pollegada = 1.093 inches; Covado (24 Pollegadas) = 26.247 inches; Vara (40 Pollegadas) = 1.215 yards.
Weight:—Arratel = 1.0118 lbs.; Arroba (32 Arratel) = 32.384 lbs.; Quintal (100 Arratel) = 101.18 lbs.
Capacity:—Almude = 3.684 galls.; Alqueire = 1.1 bushels.
The Metric System is also in use.

CENTRAL AMERICAN STATES.

(Guatemala, Honduras, San Salvador, Nicaragua, Costa Rica.)
The Metric System and Old Spanish (See *Spain*).

CHILE.

The Metric System and Old Spanish (See *Spain*).

CHINA.

Measure:—Fan = .141 inches; Tsun (10 Fan) = 1.41 inches; Chih (10 Tsun) = 14.1 inches; Chang (10 Chih) = 141 inches; Li = 705 yards; Ching = 121 square feet.
Weight:—3 Taels = 4 ounces; 1 Cattie or Chin (16 Tael) = 1⅓ lbs.; 84 Catties = 1 cwt.; 1 Picul (100 Catties) = 133⅓ lbs.; Money Tael = 580 grains.
Capacity:—Ho = 2 pints; Sheng = 20 pints; Tou = 100 pints.
At Hong Kong and the Treaty Ports, British Weights and Measures are also used.

DENMARK.

Measure:—Tomme = 1.029 inches; Fod (12 Tommer) = 1.029 feet; Alen (2 Fod) = 2.059 feet; Favn (3 Alen) = 6.178 feet; Tonde = 1.363 acres.
Weight:—Pund (16 Unser or 32 Lod) = 1.102 lbs.; Centner (100 Pund) = 110.231 lbs.
Capacity:—Pot (3 Pœgle) = 1.699 pints; Kande (2 Pot) = 3.398 pints; Viertel (4 Kande) = 1.699 gallons; Anker = 8.07 gallons; Tonde = 28.885 gallons; Oxehoved = 48.425 gallons. Tonde (8 Skepper or 4 Fjerdingkar) = 3.823 bushels.

EGYPT.

Measure:—Pik = 27 inches; Gasab = 3 yards; Feddan = about one acre.
Weight:—Cantar (100 Rottoli) = 98.046 lbs.; Oke = 2.723 lbs.
Capacity:—The Ardeb is the only legal measure for grain, and it varies considerably. The Cairo Ardeb = 5 bushels.

FRANCE.

Metric System.

GERMANY.

The Metric System (*q.v.*) is used, but with German names as follows:—
Stab for Metre; Neuzoll for Centimetre; Strich for Millimetre; Kette for Decametre; Kanne for Litre; Schoppen for Half-litre; Fass for Hectolitre; Neuloth for Decagram; Centner = 50 Kilograms; Tonne = 1,000 Kilograms.

GREECE.

The Metric System is used, but with Greek names as follows:—

Pecheus for Metre; Gramme for Millimetre; Daktylos for Centimetre; Palame for Decimetre; Stadion for Kilometre; Skionis for Myriametre; Stremma for Are; Litra for Litre; Kybos for Millilitre; Mystron for Centilitre; Kotyle for Decilitre; Koilon for Hectolitre; Drachme for Gram; Kokkos for Centigram; Obolos for Decigram; Mna = Half Kilogram.

ITALY.

The Metric System is used, but with Italian names as follows:—

Metro for Metre; Decametro for Decametre; Ettometro for Hectometre; Chilometro for Kilometre; Miriametro for Myriametre; Decimetro for Decimetre; Centimetro for Centimetre; Millimetro for Millimetre; Ara for Are; Ettara for Hectare; Centiara for Centiare; Litro for Litre; Decalitro for Decalitre; Ettolitro for Hectolitre; Chilolitro for Kilolitre; Decilitro for Decilitre; Gramma for Gram; Decagramma for Decagram; Ettogramma for Hectogram; Chilogramma for Kilogram; Miriagramma for Myriagram; Decigramma for Decigram; Centigramma for Centigram; Milligramma for Milligram.

JAPAN.

Measure:—Ken (6 Shaku or 60 Sun) = 6 feet; Cho (60 Ken) = 119.3 yards; Ri = 2½ miles; Square Cho = 2½ acres.
Weight:—Kin (160 Mommo) = 1⅓ lbs.; Tan (100 Kin) = 133⅓ lbs.
Capacity:—To (10 Sho) = 3.703 gallons; Koku (10 To) = 4.96 bushels.

MEXICO.

Metric System and Old Spanish (See *Spain*).

NETHERLANDS.

The Metric System is used, but with names as follows:—

El for Metre; Streep for Millimetre; Duim for Centimetre; Palm for Decimetre; Roede for Decametre; Mijle for Kilometre; Kan for Litre; Vingerhoed for Centilitre; Maatje for Decilitre; Vat for Hectolitre; Wigtje for Gram; Korrel for Decigram; Lood for Decagram; Onze for Hectogram; Pond for Kilogram.

NORWAY.

Metric System.

PERSIA.

Measure:—The Guz or Zer varies from 36 to 44 inches; Fersakh or Parasang = 4½ miles.
Weight:—Miskal = 47.5 grains; Maund = 6½ lbs.
Capacity:—Chenica = .289 gallons; Capicha = .578 gallons; Artata = 1.809 bushels

PERU.

Old Spanish (See *Spain*).

RUSSIA.

Measure:—Stopa (8 Vershok) = 14 inches: Arschine (2 Stopa) = 28 inches; Saschen (3 Arschine) = 7 feet; Verst (500 Saschen) = 1166.66 yards; Dessatine = 2.7 acres.
Weight:—Funt = .9028 lbs.; Poud (40 Funt) = 36.114 lbs.; Berkowitz = 361.273 lbs.
Capacity:—Vedro = 2.704 gallons; Anker = 8.114 gallons; Chetvert = 46.2 gallons.

SERVIA.

Metric System.

SPAIN.

The Metric System (*q.v.*) is now used, with the simple alteration of changing the last letter of the names into o, e.g., Metro, Litro, Gramo. The Are is called the Area.

OLD SPANISH.

Measure:—Spanish foot = 10.958 inches; Vara (36 Pulgadas) varies in different parts, but is usually reckoned as 2.782 feet; Fanegada = about 1½ acres.
Weight:—Castilian Libra (16 Onzas) = 1.014 lbs; Quintal (100 Libras) = 101.443 lbs.
Capacity:—Arroba Mayor (4 Cuartillas or 8 Azumbres or 32 Cuartillos) = 3.551 gallons; Fanega = 1½ bushels.

SWEDEN.

Metric System.

SWITZERLAND.

Metric System.

TURKEY.

The Metric System is used, with the following alterations in the names:—

Arshin for Metre; Nal for Kilometre; Shinik for Decalitre; Kileh for Hectolitre; Evlek for Are; Djeril for Hectare; Oke for Kilogram; Batman = 10 Kilograms; Cantar = 100 Kilograms; Tcheki = 1000 Kilograms.

UNITED STATES.

The same as Great Britain, but the old Winchester measures are used (See below).

The following table of FOREIGN WEIGHTS and MEASURES, with English equivalents, has been drawn up at the Commercial Department of the BOARD OF TRADE.

Countries.	Foreign Weights and Measures.	British Equivalents.
Russia	Poud	36 lbs.
Sweden	Mètre	1.09 yard.
German Empire	Cubic Mètre	1.308 cubic yd.
Holland	Kilogramme	2.204 lbs.
Belgium	Quintal metrique	220.4 lbs.
France	Centner	
Switzerland	Tonneau (coals)	2,204 lbs.
Austria-Hungary	Litre	1.76 Imp. pint.
Portugal	Hectolitre (liquid)	22 Imp. gallons.
Spain	,, (cereals)	2.75 Imp. bush.
Italy	Decalitre	2.2 Imp. gallons.

Countries.	Foreign Weights and Measures.	British Equivalents.
Egypt	Cantar	99 lbs.
	Ardeb of Wheat	2.75 lbs.
United States	Bushel (Winchester)	0.9694 Imp. bush. or 33 Winchester bushels = 32 Imp. bushels.
	Gallon (Old English)	0.833 Imp. gall., or 6 United States gallons = 5 Imperial gallons.
	Barrel of Flour	196 lbs.
	Short Ton	2000 lbs.
	Long Ton	2,240 lbs.
Japan	Kwan	8.26 lbs.
	Kin	1.32 lbs.

COLONIAL WEIGHTS AND MEASURES.

Colonies and Possessions.	Colonial Weights and Measures.	British Equivalents.
British India	Maund	82⅔ lbs.
Straits Settlements, Hong Kong, Labuan, B. North Borneo and Sarawak	Tahil	1⅓ ozs.
	Pikul	133⅓ lbs.
	Catty	1⅓ lbs.
	Gantang	1 gallon.
Mauritius and Seychelles	Kilogrammo	2.204 lbs.
	Metre	1.09 yards.
	Hectolitre (liquid)	22 Imp. gallons.
	„ (cereals)	2.75 Imp. bush.
	Litre	1.76 Imp. pints.
	Arpent	1.05 acre.
Cape of Good Hope	Leaguer	128 Imp. gallons.
	Muid	3 Imp. bushels.
	Morgen	2.116 acres.
	Short Ton	2000 lbs.
	Long Ton	2240 lbs.

Colonies and Possessions.	Colonial Weights and Measures.	British Equivalents.
Dominion of Canada	Gallon	Same as Imperial.
	Bushel	
	Yard	
	Short Ton	2000 lbs.
	Bushel of Wheat	60 lbs.
	„ „ Potatoes	
	„ „ Turnips	
	„ „ Indian Corn	56 lbs.
	„ „ Barley	48 lbs.
	„ „ Oats	34 lbs.
Malta	Cafiso	4½ Imp. gallons.
	Salma	8 Imp. bushels.
	Cantar	175 lbs.
	Oke	2.8 lbs.
	„ (liquid)	1⅔ quarts.
Cyprus	Cantar (44 okes)	123.2 lbs.
	„ Aleppo (180 okes)	504 lbs.
	Kilé	1 Imp. bushel.

SCRIPTURE WEIGHTS AND MEASURES.

Long Measure.

		ft.	ins.
1 digit or finger	=	0	0·912
1 hand or palm (4 digits)	=	0	3·648
1 span (3 palms)	=	0	10·944
1 cubit (2 spans)	=	1	9·888
1 fathom (4 cubits)	=	7	3·552
1 Ezekiel's reed (1½ fathoms)	=	10	11·328
1 Arabian pole	=	14	7·104
1 Measuring line (10 Arabian poles)	=	145	11·04

		mls.	yds.
1 stadium or furlong	=	0	243⅛
1 Sabbath day's journey (5 stadiums)	=	0	1,216
1 Eastern mile (2 Sabbath day's journies)	=	1	672
1 day's journey (24 Eastern miles)	=	33	288

Liquid Measure.

		gals.	pts.
1 caph	=	0	0·625
1 log	=	0	0·833
1 cab (4 logs)	=	0	3·333
1 hin (3 cabs)	=	1	2
1 seah (2 hins)	=	2	4
1 bath or ephah (3 seahs)	=	7	4
1 homer	=	75	5

Dry Measure.

		pks.	pts.
1 gachal	=	0	0·142
1 cab (20 gachals)	=	0	2·833
1 omer	=	0	5·1
1 seah	=	1	1
1 ephah (3 seahs)	=	3	3
1 letech	=	16	0
1 homer (2 letechs)	=	32	0

Weights.

1 gerah	=	12	grains troy.
1 bekah	=	5	dwts. „
1 shekel	=	10	„ „
1 maneh (60 shekels)	=	30	ozs. „
1 talent of silver (3,000 shekels)	=	125	lbs. „
1 talent of gold (6,000 shekels)	=	250	„ „

Time Measure.

In Holy Scripture the day is always reckoned from the sun-set of the previous evening. Both the day and night were divided into four equal parts.

THE WATCHES.

The first Watch was from *sun-set* to the *third hour* of the night.
The second or middle Watch was from the *third hour* to the *sixth*.
The third Watch, or Cock-crowing, was from the *sixth* to the *ninth*.
The fourth, or Morning Watch, was from the *ninth hour* to *sun-rise*.

BRITISH AND FOREIGN COINAGE.

The monetary systems of the various countries of the world are chiefly distinguished by what constitutes standard money, which in some countries is *monometallic*, consisting of either gold or silver, and in other countries *bimetallic*, consisting of both gold and silver. By "standard money" is meant that which is legal tender to any amount. Thus in the United Kingdom and in most other countries gold only is unlimited tender; whereas in India silver enjoys that prerogative. The great objection to silver being taken as standard money is the great variation, from time to time, in the market value of silver, whereas the price of gold is almost stationary. Hence for the purpose of international trade, in the case of countries that have a double standard, gold only forms the basis of all trade transactions, and in the case of countries with a silver standard only, the exchange rate varies with the price of silver; for obviously in dealings between different countries the standard coinage of one country will only be accepted by another at its intrinsic value, and that depends on the actual value of the metals of which it is composed.

In comparing the intrinsic value of coins of different countries the fineness of the metal must be taken into consideration as well as the weight of the coin. Gold and silver are not hard enough to stand the wear and tear of circulation, and are mixed with an alloy to harden them, e.g., the English pound is $\frac{11}{12}$ths gold and $\frac{1}{12}$th alloy, and the United States dollar is $\frac{9}{10}$ths gold and $\frac{1}{10}$th alloy.

Though in international trade money is taken at its intrinsic value only, yet for the purposes of internal trade in any country, and of the payment of debts in the country itself, a certain amount of token money may form part of the currency without any inconvenience. "Token coins" are such as contain less metal, or metals of less value, than their face value represents. Thus, in the United Kingdom silver and bronze coins are mere tokens; for the amount of silver, say in a shilling, is worth much less than $\frac{1}{20}$th of a pound. But no one objects to take such coins at their nominal value, because they are limited to small payments, no persons being compelled to accept silver for any amount over £2, or bronze for any amount over one shilling.

Each country has a certain coin which serves as a Unit to which all its other coins are related either as multiples or submultiples, e.g., the English sovereign, the French franc, and the United States dollar. Two groups of countries have formed Unions, each group adopting the same Unit and agreeing to issue coins of the same weight and fineness. They are—(1) The SCANDINAVIAN UNION, comprising Norway, Sweden, and Denmark, which have taken the *Krona* as their unit. (2) The LATIN UNION, comprising France, Belgium, Italy, Switzerland, and Greece. (Servia, Bulgaria, and Roumania have in great measure adopted the same system). All of this group have taken the *Franc*, under different names, as their unit.

BRITISH IMPERIAL COINAGE.

In the Middle Ages, in England, the standard measure of value was the pound-weight of silver, but the actual medium of exchange consisted of silver pennies. Since the primary object of coinage was to affix a stamp to certify a certain weight and fineness, all metallic money was at first what it professed to be. Thus a pound of silver was coined into 240 pennies, whose aggregate weight, accordingly, was actually a pound. This fact is preserved in the table of Troy Weight; 20 pennyweights (i.e. the weight of 20 pennies)=1 oz: 12 ozs.=1 pound. Hence originally 240 silver pennies weighed one pound, and from this fact has arisen the present relation between a penny and a pound sterling.

The following table gives the weights of the coins when issued, the amount of variation allowed to the Mint (called the "Remedy"), and the least a gold coin can weigh without being withdrawn from circulation.

Coin.	Standard Weight.	Least Current Weight.	Remedy.
GOLD:	grains.	grains.	grains.
Sovereign	123·27447	122·50000	0·20000
Half-Sovereign	61·63723	61·12500	0·10000
SILVER:			
Crown	436·36363	..	2·000
Half-Crown	218·18181	..	1·264
Florin	174·54545	..	0·997
Shilling	87·27272	..	0·578
Sixpence	43·63636	..	0·346
Threepence	21·81818	..	0·212
BRONZE:			
Penny	145·83333	..	2·91666
Halfpenny	87·50000	..	1·75000
Farthing	43·75000	..	0·87500

There are also two gold coins, of the value of 5 sovereigns (£5) and 2 sovereigns (£2) respectively, issued on special occasions, the last being King Edward VII.'s Coronation year, 1902.

The gold coins are made of metal composed of $\frac{11}{12}$ths pure gold and $\frac{1}{12}$th alloy.

The silver coins are made of metal composed of $\frac{37}{40}$ths of fine metal and $\frac{3}{40}$ths of alloy.

The bronze coins are made of metal composed of 95 % of copper, 4 % of tin, and 1 % of zinc.

Bank of England Notes are issued for £5, £10, £20, £50, £100, £200, £500, and £1,000, and can be exchanged for gold at the Bank of England at any time during the legal Banking hours. They are legal tender in England and Wales.

Old English Coins.

Joannes	(gold)	36s. 0d.	Half-guinea	(gold)	10s. 6d.
Moidore	„	27s. 0d.	Angel	„	10s. 0d.
Jacobus	„	25s. 0d.	Noble	„	6s. 8d.
Carolus	„	23s. 0d.	Dollar	„	4s. 6d.
Guinea	„	21s. 0d.	Tester	(silver)	6d.
Mark	„	13s. 4d.	Groat	„	4d.

Old Scots Coins.

		Scots.	Sterling.
Bodle	=	2 pennies	$\frac{1}{12}$th penny
Plack or groat	=	2 bodles	$\frac{1}{3}$rd penny
Bawbee	=	6 pennies	$\frac{1}{2}$ penny
Shilling	=	12 pennies	1 penny
Pound	=	20 shillings	1s. 8d.
Merk	=	13s. 4d.	1s. 1$\frac{1}{9}$d.

FOREIGN AND COLONIAL MONEY.

Countries.	Chief Coins.	Approximate value in British money.
		s. d.
Argentina	Peso (paper)*=100 centisimos	1 9
..	.. (gold)	4 0
Austria-Hungary	Krone or Crown=100 heller	0 10
Belgium	Franc=100 centimes	0 9½
Brazil	Milreis (paper)*=1000 reis	1 3
B. Honduras	Dollar (gold)=100 cents	4 1
Bulgaria	Leva=franc=100 stotinkis	0 9½
Canada	Dollar (gold)=100 cents	4 1
Ceylon	Rupee=16 annas	1 4
Chile	Peso (paper)*=100 centavos	0 10
China	See below.	
Cuba	Dollar (gold)=100 cents	4 1
Denmark	Krone=100 öre	1 1½
Egypt	Egyptian £=100 piastres	20 6
Finland	Markka=100 pennia	0 9½
France	Franc=100 centimes	0 9½
Germany	Mark=100 pfennige	0 11½
Greece	Drachmè (paper)*=100 lepta	0 7
Holland	Florin or Gulden=100 cents	1 8
India	Rupee=16 annas	1 4
Italy	Lira=franc=100 centesimi	0 9½
Japan	Yen=100 sens	2 0½
Mauritius	Rupee=16 annas	1 4
Mexico	Dollar (gold)=100 centavos	2 0½
Newfoundland	Dollar (gold)=100 cents	4 1
Norway	Krone=100 öre	1 1½
Peru	Sol=100 centisimos	2 0
Portugal	Milreis=1000 reis	4 4½
Roumania	Lev=franc=100 banis	0 9½
Russia	Rouble=100 copeks	2 1½
Servia	Dinar=franc=100 paras	0 9½
Spain	Peseta=franc=100 centimos	0 9½
Straits Settlmnts.	See below.	
Sweden	Krone=100 öre	1 1½
Switzerland	Franc=100 centimes	0 9½
Turkey	Turkish £=100 piastres	18 0
United States	Dollar (gold)=100 cents	4 1
Uruguay	Peso (gold)=100 centimos	4 2

* The exchange value of paper money fluctuates considerably in countries where it is not readily convertible, at its face value, into gold.

OBS. From the above table it will be seen that many colonies and dependencies of the Empire have their own system of coinage, although British money is current in most of them. In Hong Kong and Labuan, the Mexican, British, and Hong Kong silver dollars (about 2s. 2d. are current. In the Straits Settlements the Straits Settlements silver dollar (about 2s. 4d.) is the standard coin of the colony. Since 31st August, 1904, the Mexican and British silver dollars have ceased to be legal tender there.

In countries where silver is legal tender to any amount the exchange varies greatly, as in Central America, where the "peso" about 1s. 5d., at the present date (1909), is the standard coin. In China, the only coins in use are a British, Hong Kong, or Mexican silver dollar, and a native coin called "cash" (made of copper, iron and tin), about twenty-five of which are only worth a penny. In the Exchange Rates relating to China the value of the tael is quoted. The "tael" is a weight of silver about 2s. 11d. in value, and it is equivalent to 10 "mace" or 100 "candareens." In Persia, the standard coin is a "kran," the intrinsic value of which, at the average price of silver, is only 4d. (Refer to "Exchange Rates" in *Index*.)

SIMPLE INTEREST TABLE.

From the following table the simple interest on any amount can be obtained for any number of days from 1 to 365.

In the table the interest on £100 for each day, 1 to 365, at 2 %, 3 %, 4 %, and 5 % is given. It will be found that any rate per cent. can be obtained from these: e.g. 2½ % is one half of 5 %; 4¼ % is 4 % + one-eighth of 2 %; 3¾ % is 3 % + one fourth of 3 %.

Having found the interest on £100, the interest on any amount is easily calculated.

Examples.

Find the interest on £40 for 73 days at 2 %:—

The table shows the interest on £100 is 8s. The interest on £40 is therefore ⅖ of 8s. = 3s. 2½d.

Find the interest on £130 for 146 days at 2½ %:—

The table shows the interest on £100 at 5 % is £2 0s. 0d. Half of this, £1 0s. 0d., is therefore the interest on £100 at 2½ %. The interest on £130 is therefore 1·3 of £1 0s. 0d. =£1 6s. 0d.

Find the interest on £75 for 120 days at 3¼ %:—

The table shows the interest on £100 at 3 % is 19s. 8⅔d. and at ¼ % (i.e. one eighth of 2 %) is 1s. 7⅔d. 19s. 8⅔d. + 1s. 7⅔d. = £1 1s. 4½d. = the interest on £100 at 3¼ %. The interest on £75 is therefore ¾ of £1 1s. 4½d. = 16s. 0½d.

Interest on £100 at 2 %, 3 %, 4 % and 5 % for any number of days from 1 to 365.

Days.	2 %	3 %	4 %	5 %	Days.	2 %	3 %	4 %	5 %	Days.	2 %	3 %	4 %	5 %
	s. d.	s. d.	s. d.	s. d.		s. d.	s. d.	£ s. d.	£ s. d.		s. d.	£ s. d.	£ s. d.	£ s. d.
1	0 1¼	0 2	0 2¾	0 3½	55	6 0½	9 0½	12 0½	0 15 0	109	11 11¼	17 11	1 3 10¾	1 9 10¼
2	0 2¼	0 4	0 5¼	0 6½	56	6 1½	9 2½	12 3½	0 15 4	110	12 0¾	18 1	1 4 1¼	1 10 1¼
3	0 4	0 6	0 8	0 10	57	6 3	9 4½	12 6	0 15 7	111	12 2	18 3	1 4 4	1 10 5
4	0 5¼	0 8	0 10½	1 1¼	58	6 4¼	9 6½	12 8½	0 15 10½	112	12 3¼	18 5	1 4 6¾	1 10 8¼
5	0 6½	0 10	1 1¼	1 4½	59	6 5½	9 8½	12 11½	0 16 2	113	12 4½	18 7	1 4 9½	1 10 11½
6	0 8	0 11¾	1 3¾	1 7¾	60	6 7	9 10½	13 1½	0 16 5½	114	12 6	18 9	1 4 11¼	1 11 2¾
7	0 9¼	1 1¾	1 6¼	1 11	61	6 8¼	10 0¼	13 4½	0 16 8	115	12 7¼	18 11	1 5 2¼	1 11 6
8	0 10½	1 3¾	1 9	2 2¼	62	6 9½	10 2¼	13 7	0 16 11½	116	12 8½	19 0¾	1 5 5	1 11 9½
9	0 11¾	1 5¾	1 11½	2 5½	63	6 11	10 4½	13 9½	0 17 3	117	12 10	19 2¾	1 5 7¾	1 12 0¾
10	1 1¼	1 7¾	2 2¼	2 9	64	7 0½	10 6½	14 0½	0 17 6	118	12 11½	19 4¾	1 5 10½	1 12 4
11	1 2½	1 9¾	2 5	3 0½	65	7 1½	10 8½	14 3	0 17 9	119	13 0¾	19 6¾	1 6 1	1 12 7½
12	1 3¾	1 11¾	2 7½	3 3½	66	7 2¾	10 10½	14 5½	0 18 1	120	13 1½	19 8¾	1 6 3½	1 12 10½
13	1 5	2 1¾	2 10½	3 6¾	67	7 4¼	11 0½	14 8½	0 18 4½	121	13 3¼	19 10¾	1 6 6¼	1 13 1¾
14	1 6½	2 3¾	3 0¼	3 10	68	7 5½	11 2½	14 11	0 18 7½	122	13 4¼	1 0 0¾	1 6 9	1 13 5
15	1 7¾	2 5½	3 3½	4 1¼	69	7 6¾	11 4½	15 1½	0 18 11	123	13 5½	1 0 2¾	1 6 11¼	1 13 8¼
16	1 9	2 7½	3 6	4 4¼	70	7 8	11 6	15 4½	0 19 2½	124	13 7	1 0 4¾	1 7 2½	1 13 11½
17	1 10½	2 9½	3 8¾	4 8	71	7 9½	11 8	15 6½	0 19 5½	125	13 8¼	1 0 6¾	1 7 4¼	1 14 3
18	1 11¾	2 11½	3 11¼	4 11¼	72	7 10¾	11 10	15 9½	0 19 8½	126	13 9½	1 0 8¾	1 7 7¼	1 14 6¼
19	2 1	3 1½	4 2	5 2½	73	8 0	12 0	16 0	0 20 0	127	13 11	1 0 10¾	1 7 10	1 14 9¼
20	2 2¼	3 3½	4 4¾	5 5¾	74	8 1¼	12 2	16 2½	1 0 3¼	128	14 0¼	1 1 0¾	1 8 0½	1 15 0½
21	2 3¾	3 5½	4 7¼	5 9	75	8 2¾	12 4	16 5½	1 0 6¼	129	14 1½	1 1 2¾	1 8 3½	1 15 4½
22	2 5	3 7½	4 10	6 0¼	76	8 4	12 6	16 8	1 0 10	130	14 3	1 1 4¾	1 8 6	1 15 7½
23	2 6¼	3 9½	5 0½	6 3¾	77	8 5¼	12 8	16 10½	1 1 1¼	131	14 4¼	1 1 6¾	1 8 8½	1 15 10½
24	2 7½	3 11¼	5 3¼	6 7	78	8 6½	12 10	17 1½	1 1 4½	132	14 5½	1 1 8¾	1 8 11½	1 16 2
25	2 9	4 1¼	5 5¾	6 10¼	79	8 8	12 11¾	17 3¾	1 1 7½	133	14 7	1 1 10¾	1 9 1½	1 16 5½
26	2 10¼	4 3¼	5 8½	7 1½	80	8 9¼	13 1¾	17 6½	1 1 11	134	14 8¼	1 2 0¾	1 9 4½	1 16 8¼
27	2 11½	4 5¼	5 11	7 4¾	81	8 10½	13 3¾	17 9	1 2 2½	135	14 9½	1 2 2¾	1 9 7	1 16 11½
28	3 0¾	4 7¼	6 1¾	7 8	82	8 11¾	13 5¾	17 11½	1 2 5½	136	14 11	1 2 4¾	1 9 9½	1 17 3¼
29	3 2¼	4 9½	6 4½	7 11¼	83	9 1¼	13 7¾	18 2½	1 2 9	137	15 0¼	1 2 6¾	1 10 0¼	1 17 6¼
30	3 3½	4 11¼	6 7	8 2¾	84	9 2½	13 9¾	18 5	1 3 0½	138	15 1½	1 2 8¾	1 10 3	1 17 9¼
31	3 4¾	5 1¼	6 9½	8 6	85	9 3¾	13 11¾	18 7½	1 3 3½	139	15 2¾	1 2 10¾	1 10 5½	1 18 1
32	3 6	5 3¼	7 0¼	8 9¼	86	9 5	14 1¾	18 10½	1 3 6¾	140	15 4¼	1 3 0¾	1 10 8¼	1 18 4¼
33	3 7½	5 5	7 2¾	9 0½	87	9 6½	14 3¾	19 0½	1 3 10	141	15 5½	1 3 2¾	1 10 11	1 18 7½
34	3 8¾	5 7	7 5½	9 3¾	88	9 7¾	14 5½	19 3½	1 4 1½	142	15 6¾	1 3 4¾	1 11 1½	1 18 11
35	3 10	5 9	7 8	9 7	89	9 9	14 7½	19 6	1 4 4½	143	15 8	1 3 6	1 11 4¼	1 19 2¼
36	3 11¼	5 11	7 10¾	9 10½	90	9 10½	14 9½	19 8½	1 4 8	144	15 9¼	1 3 8	1 11 6¾	1 19 5½
37	4 0¾	6 1	8 1¼	10 1¾	91	9 11¾	14 11½	19 11¼	1 4 11¼	145	15 10½	1 3 10	1 11 9½	1 19 8¼
38	4 2	6 3	8 4	10 5	92	10 1	15 1½	1 0 2	1 5 2½	146	16 0	1 4 0	1 12 0	2 0 0
39	4 3¼	6 5	8 6½	10 8¼	93	10 2¼	15 3½	1 0 4¾	1 5 5¾	147	16 1¼	1 4 2	1 12 2¾	2 0 3¼
40	4 4¾	6 7	8 9¼	10 11½	94	10 3¾	15 5½	1 0 7½	1 5 9	148	16 2¾	1 4 4	1 12 5½	2 0 6½
41	4 6	6 9	8 11¾	11 2¾	95	10 5	15 7½	1 0 10	1 6 0¼	149	16 4	1 4 6	1 12 8	2 0 10
42	4 7¼	6 11	9 2½	11 6	96	10 6¼	15 9½	1 1 0½	1 6 3¾	150	16 5¼	1 4 8	1 12 10½	2 1 1½
43	4 8½	7 0¾	9 5	11 9½	97	10 7½	15 11½	1 1 3½	1 6 7	151	16 6½	1 4 10	1 13 1¼	2 1 4½
44	4 10	7 2¾	9 7¾	12 0¾	98	10 9	16 1½	1 1 5¾	1 6 10¼	152	16 8	1 4 11¾	1 13 3¾	2 1 7¾
45	4 11¼	7 4¾	9 10½	12 4	99	10 10¼	16 3¼	1 1 8½	1 7 1½	153	16 9¼	1 5 1¾	1 13 6½	2 1 11
46	5 0½	7 6¾	10 1	12 7¼	100	10 11½	16 5¼	1 1 11	1 7 4½	154	16 10½	1 5 3¾	1 13 9	2 2 2¼
47	5 1¾	7 8¾	10 3¼	12 10½	101	11 0¾	16 7¼	1 2 1¾	1 7 8	155	16 11¾	1 5 5¾	1 13 11½	2 2 5½
48	5 3¼	7 10¾	10 6¼	13 1¾	102	11 2¼	16 9¼	1 2 4¼	1 7 11½	156	17 1¼	1 5 7¾	1 14 2½	2 2 9
49	5 4½	8 0¾	10 9	13 5	103	11 3½	16 11¼	1 2 7	1 8 2¾	157	17 2½	1 5 9¾	1 14 5	2 3 0¼
50	5 5¾	8 2¾	10 11½	13 8½	104	11 4¾	17 1¼	1 2 9½	1 8 6	158	17 3¾	1 5 11¾	1 14 7½	2 3 3½
51	5 7	8 4¾	11 2¼	13 11¾	105	11 6	17 3¼	1 3 0¼	1 8 9¼	159	17 5	1 6 1¾	1 14 10½	2 3 6¾
52	5 8½	8 6½	11 4¾	14 3	106	11 7½	17 5	1 3 2¾	1 9 0½	160	17 6½	1 6 3¾	1 15 0¾	2 3 10
53	5 9¾	8 8½	11 7½	14 6¼	107	11 8¾	17 7	1 3 5½	1 9 3¾	161	17 7¾	1 6 5½	1 15 3½	2 4 1¼
54	5 11	8 10½	11 10	14 9½	108	11 10	17 9	1 3 8	1 9 7	162	17 9	1 6 7½	1 15 6	2 4 4¾

SIMPLE INTEREST TABLE (*continued*).

Interest on £100 at 2 %, 3 %, 4 % and 5 % for any number of days from 1 to 365.

Days.	2 %			3 %			4 %			5 %		
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
163		17	10½	1	6	9½	1	15	8¾	2	4	8
164		17	11¾	1	6	11½	1	15	11¼	2	4	11¼
165		18	1	1	7	1½	1	16	2	2	5	2½
166		18	2¼	1	7	3½	1	16	4¾	2	5	5¾
167		18	3¾	1	7	5½	1	16	7¼	2	5	9
168		18	5	1	7	7½	1	16	10	2	6	0¼
169		18	6¼	1	7	9½	1	17	0½	2	6	3¾
170		18	7½	1	7	11¼	1	17	3¼	2	6	7
171		18	9	1	8	1¼	1	17	5¾	2	6	10¼
172		18	10¼	1	8	3¼	1	17	8½	2	7	1½
173		18	11½	1	8	5¼	1	17	11	2	7	4¾
174		19	0¾	1	8	7¼	1	18	1¾	2	7	8
175		19	2¼	1	8	9¼	1	18	4¼	2	7	11¼
176		19	3½	1	8	11¼	1	18	7	2	8	2¾
177		19	4¾	1	9	1¼	1	18	9½	2	8	6
178		19	6	1	9	3¼	1	19	0¼	2	8	9¼
179		19	7¼	1	9	5	1	19	2¾	2	9	0½
180		19	8¾	1	9	7	1	19	5½	2	9	3¾
181		19	10	1	9	9	1	19	8	2	9	7
182		19	11¼	1	9	11	1	19	10¾	2	9	10½
183	1	0	0¾	1	10	1	2	0	1¼	2	10	1¾
184	1	0	2	1	10	3	2	0	4	2	10	5
185	1	0	3¼	1	10	5	2	0	6½	2	10	8¼
186	1	0	4¾	1	10	7	2	0	9¼	2	10	11¼
187	1	0	6	1	10	9	2	0	11¾	2	11	2¾
188	1	0	7¼	1	10	11	2	1	2½	2	11	6
189	1	0	8½	1	11	0¾	2	1	5	2	11	9½
190	1	0	10	1	11	2¾	2	1	7¾	2	12	0¾
191	1	0	11¼	1	11	4¾	2	1	10½	2	12	4
192	1	1	0½	1	11	6¾	2	2	1	2	12	7¼
193	1	1	1¾	1	11	8¾	2	2	3¼	2	12	10½
194	1	1	3¼	1	11	10¾	2	2	6¼	2	13	1¾
195	1	1	4½	1	12	0¾	2	2	9	2	13	5
196	1	1	5¾	1	12	2¾	2	2	11½	2	13	8½
197	1	1	7	1	12	4¾	2	3	2¼	2	13	11¾
198	1	1	8½	1	12	6½	2	3	4½	2	14	3
199	1	1	9¾	1	12	8½	2	3	7½	2	14	6¼
200	1	1	11	1	12	10¼	2	3	10	2	14	9½
201	1	2	0¼	1	13	0½	2	4	0¾	2	15	0¾
202	1	2	1¾	1	13	2½	2	4	3¼	2	15	4¼
203	1	2	3	1	13	4½	2	4	6	2	15	7½
204	1	2	4¼	1	13	6½	2	4	8½	2	15	10¾
205	1	2	5½	1	13	8½	2	4	11¼	2	16	2
206	1	2	7	1	13	10½	2	5	1¾	2	16	5¼
207	1	2	8¼	1	14	0¼	2	5	4½	2	16	8½
208	1	2	9½	1	14	2¼	2	5	7	2	16	11¾
209	1	2	11	1	14	4¼	2	5	9¾	2	17	3¼
210	1	3	0¼	1	14	6¼	2	6	0¼	2	17	6½
211	1	3	1½	1	14	8¼	2	6	3	2	17	9¾
212	1	3	2¾	1	14	10½	2	6	5½	2	18	1
213	1	3	4¼	1	15	0¼	2	6	8¼	2	18	4¼
214	1	3	5½	1	15	2¼	2	6	11	2	18	7½
215	1	3	6¾	1	15	4¼	2	7	1½	2	18	11
216	1	3	8	1	15	6	2	7	4¼	2	19	2¼
217	1	3	9½	1	15	8	2	7	6¾	2	19	5½
218	1	3	10¾	1	15	10	2	7	9½	2	19	8¾
219	1	4	0	1	16	0	2	8	0	3	0	0
220	1	4	1¼	1	16	2	2	8	2¾	3	0	3¼
221	1	4	2¾	1	16	4	2	8	5¼	3	0	6½
222	1	4	4	1	16	6	2	8	8	3	0	10
223	1	4	5¼	1	16	8	2	8	10½	3	1	1¼
224	1	4	6½	1	16	10	2	9	1¼	3	1	4½
225	1	4	8	1	16	11¾	2	9	3¾	3	1	7¾
226	1	4	9¼	1	17	1½	2	9	6½	3	1	11
227	1	4	10½	1	17	3¾	2	9	9	3	2	2¼
228	1	4	11¾	1	17	5¾	2	9	11½	3	2	5½
229	1	5	1¼	1	17	7¾	2	10	2¼	3	2	9
230	1	5	2½	1	17	9¾	2	10	5	3	3	0¼
231	1	5	3¾	1	17	11¾	2	10	7½	3	3	3½
232	1	5	5	1	18	1¾	2	10	10¼	3	3	6¾
233	1	5	6½	1	18	3¾	2	11	0¾	3	3	10
234	1	5	7¾	1	18	5½	2	11	3½	3	4	1¼
235	1	5	9	1	18	7½	2	11	6	3	4	4¾
236	1	5	10½	1	18	9½	2	11	8¾	3	4	8
237	1	5	11¾	1	18	11½	2	11	11¼	3	4	11¼
238	1	6	1	1	19	1½	2	12	2	3	5	2¼
239	1	6	2¼	1	19	3½	2	12	4¾	3	5	5¾
240	1	6	3¾	1	19	5½	2	12	7¼	3	5	9
241	1	6	5	1	19	7½	2	12	10	3	6	0¼
242	1	6	6¼	1	19	9½	2	13	0½	3	6	3¾
243	1	6	7½	1	19	11½	2	13	3¼	3	6	7
244	1	6	9	2	0	1½	2	13	5¾	3	6	10¼
245	1	6	10½	2	0	3½	2	13	8¼	3	7	1½
246	1	6	11½	2	0	5½	2	13	11	3	7	4¾
247	1	7	0¾	2	0	7½	2	14	1¾	3	7	8
248	1	7	2¼	2	0	9½	2	14	4½	3	7	11½
249	1	7	3½	2	0	11½	2	14	7	3	8	2¾
250	1	7	4¾	2	1	1½	2	14	9½	3	8	6
251	1	7	6	2	1	3½	2	15	0½	3	8	9½
252	1	7	7½	2	1	5	2	15	2¾	3	9	0¾
253	1	7	8¾	2	1	7	2	15	5½	3	9	3¾
254	1	7	10	2	1	9	2	15	8	3	9	7
255	1	7	11¼	2	1	11	2	15	10¾	3	9	10½
256	1	8	0¾	2	2	1	2	16	1¾	3	10	1¾
257	1	8	2	2	2	3	2	16	4	3	10	5
258	1	8	3½	2	2	5	2	16	6½	3	10	8¼
259	1	8	4¾	2	2	7	2	16	9¼	3	10	11½
260	1	8	6	2	2	9	2	16	11¾	3	11	2¾
261	1	8	7¼	2	2	11	2	17	2½	3	11	6
262	1	8	8½	2	3	0¾	2	17	5	3	11	9½
263	1	8	10	2	3	2½	2	17	7¾	3	12	0¾
264	1	8	11½	2	3	4¾	2	17	10½	3	12	4
265	1	9	0½	2	3	6¾	2	18	1	3	12	7¼
266	1	9	1½	2	3	8½	2	18	3¾	3	12	10½
267	1	9	3½	2	3	10½	2	18	6¼	3	13	1¾
268	1	9	4½	2	4	0½	2	18	9	3	13	5
269	1	9	5¾	2	4	2½	2	18	11¼	3	13	8¼
270	1	9	7	2	4	4½	2	19	2¼	3	13	11¾
271	1	9	8½	2	4	6½	2	19	4¾	3	14	3
272	1	9	9¾	2	4	8½	2	19	7¼	3	14	6¼
273	1	9	11	2	4	10½	2	19	10	3	14	9½
274	1	10	0½	2	5	0½	3	0	0¾	3	15	0¾
275	1	10	1½	2	5	2½	3	0	3¼	3	15	4¼
276	1	10	3	2	5	4½	3	0	6	3	15	7¾
277	1	10	4½	2	5	6½	3	0	8¾	3	15	10¾
278	1	10	5½	2	5	8½	3	0	11½	3	16	2
279	1	10	7	2	5	10½	3	1	1¾	3	16	5¼
280	1	10	8½	2	6	0¼	3	1	4½	3	16	8¼
281	1	10	9½	2	6	2¼	3	1	7	3	16	11¾
282	1	10	11	2	6	4¼	3	1	9¾	3	17	3¼
283	1	11	0½	2	6	6¼	3	2	0¼	3	17	6½
284	1	11	1½	2	6	8¼	3	2	3	3	17	9¾
285	1	11	2¾	2	6	10¼	3	2	5½	3	18	1
286	1	11	4½	2	7	0¼	3	2	8¼	3	18	4½
287	1	11	5¾	2	7	2¼	3	2	11	3	18	7¾
288	1	11	6¾	2	7	4¼	3	3	1¼	3	18	11
289	1	11	8	2	7	6	3	3	4¼	3	19	2¼
290	1	11	9¼	2	7	8	3	3	6¾	3	19	5½
291	1	11	10¾	2	7	10	3	3	9¼	3	19	8¾
292	1	12	0	2	8	0	3	4	0	4	0	0
293	1	12	1¼	2	8	2	3	4	2¾	4	0	3¼
294	1	12	2¾	2	8	4	3	4	5¼	4	0	6½
295	1	12	4	2	8	6	3	4	8	4	0	10
296	1	12	5½	2	8	8	3	4	10¼	4	1	1¼
297	1	12	6½	2	8	10	3	5	1¼	4	1	4½
298	1	12	8	2	8	11¾	3	5	3¾	4	1	7¾
299	1	12	9½	2	9	1¾	3	5	6¼	4	1	11
300	1	12	10½	2	9	3¾	3	5	9	4	2	2¼
301	1	12	11¾	2	9	5¾	3	5	11¼	4	2	5½
302	1	13	1½	2	9	7¾	3	6	2¼	4	2	9
303	1	13	2½	2	9	9¾	3	6	5	4	3	0¼
304	1	13	3¾	2	9	11¾	3	6	7¾	4	3	3½
305	1	13	5	2	10	1¾	3	6	10¼	4	3	6¾
306	1	13	6½	2	10	3¾	3	7	0¾	4	3	10
307	1	13	7¾	2	10	5¾	3	7	3¾	4	4	1½
308	1	13	9	2	10	7¾	3	7	6	4	4	4¾
309	1	13	10½	2	10	9¾	3	7	8¾	4	4	8
310	1	13	11¾	2	10	11¾	3	7	11¼	4	4	11¼
311	1	14	1	2	11	1¾	3	8	2	4	5	2½
312	1	14	2½	2	11	3¾	3	8	4¾	4	5	5¾
313	1	14	3½	2	11	5¾	3	8	7¼	4	5	9
314	1	14	5	2	11	7¾	3	8	10	4	6	0¼
315	1	14	6½	2	11	9¾	3	9	0¾	4	6	3¾
316	1	14	7½	2	11	11¾	3	9	3¾	4	6	7
317	1	14	9	2	12	1¾	3	9	5¾	4	6	10½
318	1	14	10½	2	12	3¾	3	9	8¼	4	7	1½
319	1	14	11½	2	12	5¾	3	9	11	4	7	4½
320	1	15	0½	2	12	7¾	3	10	1¾	4	7	8
321	1	15	2¼	2	12	9¾	3	10	4¼	4	7	11¼
322	1	15	3½	2	12	11¾	3	10	7	4	8	2¾
323	1	15	4¾	2	13	1¾	3	10	9¼	4	8	6
324	1	15	6	2	13	3¾	3	11	0¼	4	8	9¼
325	1	15	7½	2	13	5	3	11	2¾	4	9	0½
326	1	15	8½	2	13	7	3	11	5¼	4	9	3¾
327	1	15	10	2	13	9	3	11	8	4	9	7
328	1	15	11¼	2	13	11	3	11	10¾	4	9	10½
329	1	16	0½	2	14	1	3	12	1¼	4	10	1½
330	1	16	2	2	14	3	3	12	4	4	10	5
331	1	16	3½	2	14	5	3	12	6¼	4	10	8¼
332	1	16	4¾	2	14	7	3	12	9¼	4	10	11¼
333	1	16	6	2	14	9	3	12	11¾	4	11	2¾
334	1	16	7½	2	14	11	3	13	2¾	4	11	6
335	1	16	8½	2	15	0¾	3	13	5	4	11	9¼
336	1	16	10	2	15	2¾	3	13	7¾	4	12	0½
337	1	16	11¼	2	15	4¾	3	13	10¼	4	12	4
338	1	17	0½	2	15	6¾	3	14	1	4	12	7¼
339	1	17	1½	2	15	8¾	3	14	3¾	4	12	10½
340	1	17	3½	2	15	10¾	3	14	6¼	4	13	1¾
341	1	17	4½	2	16	0¾	3	14	9	4	13	5
342	1	17	5¾	2	16	2¾	3	14	11¼	4	13	8¼
343	1	17	7	2	16	4¾	3	15	2¼	4	13	11¾
344	1	17	8½	2	16	6¾	3	15	4¾	4	14	3
345	1	17	9¾	2	16	8¾	3	15	7¼	4	14	6¼
346	1	17	11	2	16	10¾	3	15	10	4	14	9½
347	1	18	0½	2	17	0¾	3	16	0¾	4	15	0¾
348	1	18	1½	2	17	2¾	3	16	3¼	4	15	4¼
349	1	18	3	2	17	4¾	3	16	6	4	15	7½
350	1	18	4½	2	17	6¾	3	16	8¼	4	15	10¾
351	1	18	5¾	2	17	8¾	3	16	11¼	4	16	2
352	1	18	7	2	17	10¾	3	17	1¾	4	16	5¼
353	1	18	8½	2	18	0¾	3	17	4¼	4	16	8¼
354	1	18	9½	2	18	2¾	3	17	7	4	16	11¾
355	1	18	11	2	18	4¾	3	17	9¾	4	17	3¼
356	1	19	0½	2	18	6¾	3	18	0¼	4	17	6½
357	1	19	1½	2	18	8¾	3	18	3	4	17	9¾
358	1	19	2¾	2	18	10¾	3	18	5¼	4	18	1
359	1	19	4½	2	19	0¾	3	18	8¼	4	18	4¼
360	1	19	5½	2	19	2¾	3	18	11	4	18	7½
361	1	19	6¾	2	19	4¾	3	19	1¼	4	18	11
362	1	19	8	2	19	6	3	19	4¼	4	19	2¼
363	1	19	9½	2	19	8	3	19	6¾	4	19	5½
364	1	19	10¾	2	19	10	3	19	9¾	4	19	8¾
365	2	0	0	3	0	0	4	0	0	5	0	0

COMPOUND INTEREST TABLES.

Giving:—The amount a sum accumulates to at Compound Interest: The sum an Annuity amounts to: Present Values of Annuities, Leases, etc.: Capitalization of Incomes, Pensions, etc.: Repayment of Loans.

The working out of any kind of calculation where Compound Interest is concerned is naturally a long process, but with the aid of the Tables given on the next two pages, it will be found comparatively simple.

Table A gives the amount £1 will accumulate to at 2½ %, 3 %, 3½ %, 4 %, 4½ %, and 5 %, for any number of years from 1 to 60.

Table B gives the sum an Annuity of £1 will amount to at 2½ %, 3 %, 3½ %, 4 %, 4½ % and 5 % for any number of years from 1 to 60.

From these two Tables a number of calculations can easily be made, as the following explanations will show.

To find the amount a sum will accumulate to at Compound Interest at a given rate for a given number of years.

Table A gives the amount £1 will accumulate to: Multiply this by the sum and the result is the amount required.

Example:—Find the amount £75 will accumulate to at Compound Interest in 23 years at 4 °/₀.

Table A shows that £1 in 23 years at 4 °/₀ accumulates to £2·464712.

2·464712 × 75 = 184·8534 = £184 17s. 1d. = the amount £75 accumulates to in 23 years at 4 °/₀.

To find the sum to be invested to accumulate to a given amount at Compound Interest at a given rate for a given number of years.

Table A gives the amount £1 will accumulate to; Divide the amount by this and the product is the sum required.

Example:—A child is born and it is required to invest a sum at 3 °/₀ compound interest for the child to receive £1,000 when it is 21 years of age.

Table A shows that £1 in 21 years at 3 °/₀ accumulates to £1·860296.

1,000 ÷ 1·860296 = 537·5488 = £537 10s. 11d. = the sum to be invested.

To find the sum an Annuity will amount to at a given rate for a given number of years.

Table B gives the sum an Annuity of £1 will amount to: Multiply this by the Annuity and the result is the sum required.

Example:—Find the sum an Annuity of £260 will amount to at 3 °/₀ in 52 years.

Table B shows that an Annuity of £1 at 3 °/₀ in 52 years amounts to £121·696302.

121·696302 × 260 = 31,641·038520 = £31,641 0s. 9d., the sum an Annuity of £260 amounts to in 52 years at 3 °/₀.

To find the present value of an Annuity at a given rate.

If it is a Life Annuity, the number of years the Annuitant may expect to live will be found in the table at the foot of this page.

Multiply the Annuity by the figure given in Table B and divide the result by the figure given in Table A.

Example (*):—Find the present value of an Annuity of £60 received by a person 22 years of age, at 5 °/₀.

The Table below shows that a person 22 years of age may expect to live 40 years.

The figure in Table B for 40 years at 5 °/₀ is 120·799797.

The figure in Table A for 40 years at 5 °/₀ is 7·039993.

$\frac{120{\cdot}799797 \times 60}{7{\cdot}039993} = 1029{\cdot}5448 = £1029\ 10s.\ 11d.$ = the present value required.

What Annuity will a stated sum buy at a given rate?

Multiply the sum by the figure given in Table A and divide the result by the figure given in Table B.

Example:—A person 67 years of age has £1,000, what Annuity will this purchase at 3½ °/₀?

The expectation of life is about 10 years.

The figure in Table A for 10 years at 3½ °/₀ is 1·410598.

The figure in Table B for 10 years at 3½ °/₀ is 11·731397.

$\frac{1{,}000 \times 1{\cdot}410598}{11{\cdot}731397} = 120{\cdot}2412 = £120\ 4s.\ 10d.$ = the Annuity £1,000 should buy.

To find the present value of a Lease at a given rate.

This is worked in the same way as an Annuity, *e.g.*, the last example (*) but one given above could read.

Find the present value of a Lease bringing in £60 per annum (after all deductions for repairs, etc., are made) which has 40 years to run; at 5°/₀. The answer would be the same as the Annuity, £1029 10s. 11d.

To find the capital value of an income or pension.

This is really the present value of the income or pension, and example (*) could read as follows:

It is desired to capitalize a life income (or pension) of £60 per annum received by a person 22 years of age, at 5 °/₀. The answer would be the same as the Annuity, £1029 10s. 11d.

To find the equal annual instalment payable for a Loan for a stated period at a given rate.

Multiply the amount borrowed by the figure given in Table A and divide the result by the figure given in Table B.

Example:—A loan of £5,400 is borrowed at 5 °/₀ and is to be repaid in 10 equal annual instalments.

The figure in Table A for 10 years at 5 °/₀ is 1·628894.

The figure in Table B for 10 years at 5 °/₀ is 12·577890.

$\frac{1{\cdot}628894 \times 5400}{12{\cdot}577890} = 699{\cdot}3245 = £699\ 6s.\ 6d.$ = the annual instalments required.

EXPECTATION OF LIFE.

There are a number of Mortality Tables, compiled at different times and for different periods, giving exact figures of the expectation of life at all ages. The figures given in the following table are, however, quite exact enough for all purposes except actuarial calculations.

Age.	*	Age.	*	Age.	*	Age.	*	Age.	*	Age.	*	Age.	*	Age.	*
0	40	20	41	32	33	44	24½	56	16½	68	9½	80	5	92	2
5	50	21	41	33	32	45	24	57	16	69	9	81	4½	93	2
10	48	22	40	34	31	46	23½	58	15	70	8½	82	4	94	2
11	48	23	39	35	31	47	22½	59	14½	71	8	83	4	95	2
12	47	24	39	36	30	48	22	60	14	72	7½	84	4	96	1½
13	46	25	38	37	29	49	21	61	13½	73	7	85	3½	97	1½
14	45	26	37	38	29	50	20	62	13	74	7	86	3½	98	1
15	45	27	36	39	28	51	19½	63	12½	75	6½	87	3	99	1
16	44	28	36	40	28	52	19	64	12	76	6	88	3	100	1
17	43	29	35	41	27	53	18	65	11	77	6	89	2½		
18	43	30	34	42	26	54	17½	66	10½	78	5½	90	2½		
19	42	31	33	43	25	55	17	67	10	79	5	91	2½		

* These columns give the expectation of life of a person at the age given in the preceding column.

COMPOUND INTEREST TABLES.

TABLE A.

The amount £1 accumulates to at different percentages for any number of years from 1 to 60.

Years.	2½ %	Years.	3 %	Years.	3½ %	Years.	4 %	Years.	4½ %	Years.	5 %
1	1·025	1	1·03	1	1·035	1	1·04	1	1·045	1	1·05
2	1·050625	2	1·0609	2	1·071225	2	1·0816	2	1·092025	2	1·1025
3	1·076890	3	1·092727	3	1·108718	3	1·124864	3	1·141166	3	1·157625
4	1·103812	4	1·125509	4	1·147524	4	1·169859	4	1·192518	4	1·215506
5	1·131407	5	1·159273	5	1·187688	5	1·216653	5	1·246181	5	1·276281
6	1·159692	6	1·194051	6	1·229256	6	1·265319	6	1·302259	6	1·340095
7	1·188684	7	1·229873	7	1·272280	7	1·315932	7	1·360860	7	1·407100
8	1·218401	8	1·266771	8	1·316809	8	1·368569	8	1·422098	8	1·477455
9	1·248861	9	1·304774	9	1·362897	9	1·423311	9	1·486092	9	1·551328
10	1·280083	10	1·343913	10	1·410598	10	1·480243	10	1·552966	10	1·628894
11	1·312085	11	1·384231	11	1·459969	11	1·539453	11	1·622850	11	1·710339
12	1·344889	12	1·425758	12	1·511068	12	1·601031	12	1·695878	12	1·795856
13	1·378511	13	1·468531	13	1·563955	13	1·665072	13	1·772192	13	1·885649
14	1·412974	14	1·512587	14	1·618694	14	1·731675	14	1·851941	14	1·979931
15	1·448298	15	1·557965	15	1·675348	15	1·800942	15	1·935279	15	2·078928
16	1·484505	16	1·604708	16	1·733985	16	1·872980	16	2·022366	16	2·182874
17	1·521618	17	1·652849	17	1·794674	17	1·947899	17	2·113372	17	2·292018
18	1·559658	18	1·702434	18	1·857487	18	2·025815	18	2·208474	18	2·406619
19	1·598649	19	1·753507	19	1·922498	19	2·106847	19	2·307855	19	2·526950
20	1·638615	20	1·806113	20	1·989785	20	2·191121	20	2·411708	20	2·653298
21	1·679580	21	1·860296	21	2·059427	21	2·278766	21	2·520235	21	2·785963
22	1·721570	22	1·916094	22	2·131507	22	2·369916	22	2·633645	22	2·925261
23	1·764609	23	1·973577	23	2·206110	23	2·464712	23	2·752159	23	3·071524
24	1·808724	24	2·032785	24	2·283324	24	2·563300	24	2·876006	24	3·225100
25	1·853942	25	2·093769	25	2·363241	25	2·665832	25	3·005426	25	3·386355
26	1·900291	26	2·156582	26	2·445954	26	2·772465	26	3·140670	26	3·555673
27	1·947798	27	2·221281	27	2·531563	27	2·883363	27	3·282000	27	3·733457
28	1·996493	28	2·287919	28	2·620168	28	2·998697	28	3·429690	28	3·920130
29	2·046405	29	2·356557	29	2·711874	29	3·118645	29	3·584026	29	4·116137
30	2·097565	30	2·427254	30	2·806789	30	3·243391	30	3·745307	30	4·321944
31	2·150004	31	2·500071	31	2·905026	31	3·373127	31	3·913846	31	4·538041
32	2·203754	32	2·575087	32	3·006702	32	3·508052	32	4·089969	32	4·764943
33	2·258856	33	2·652340	33	3·111937	33	3·648374	33	4·274017	33	5·003190
34	2·315327	34	2·731911	34	3·220855	34	3·794309	34	4·466347	34	5·253350
35	2·373210	35	2·813868	35	3·333585	35	3·946081	35	4·667333	35	5·516018
36	2·432540	36	2·898284	36	3·450260	36	4·103924	36	4·877363	36	5·791819
37	2·493354	37	2·985233	37	3·571019	37	4·268081	37	5·096844	37	6·081410
38	2·555688	38	3·074790	38	3·696004	38	4·438804	38	5·326202	38	6·385481
39	2·619570	39	3·167034	39	3·825364	39	4·616356	39	5·565881	39	6·704755
40	2·685059	40	3·262042	40	3·959252	40	4·801010	40	5·816345	40	7·039993
41	2·752185	41	3·359903	41	4·097826	41	4·993050	41	6·078081	41	7·391993
42	2·820990	42	3·460700	42	4·241250	42	5·192772	42	6·351594	42	7·761593
43	2·891515	43	3·564521	43	4·389694	43	5·400483	43	6·637416	43	8·149673
44	2·963803	44	3·671457	44	4·543333	44	5·616502	44	6·936099	44	8·557157
45	3·037898	45	3·781601	45	4·702350	45	5·841162	45	7·248223	45	8·985015
46	3·113845	46	3·895049	46	4·866933	46	6·074808	46	7·574393	46	9·434266
47	3·191691	47	4·011900	47	5·037276	47	6·317800	47	7·915241	47	9·905979
48	3·271483	48	4·132257	48	5·213580	48	6·570512	48	8·271426	48	10·401278
49	3·353270	49	4·256225	49	5·396055	49	6·833332	49	8·643640	49	10·921342
50	3·437102	50	4·383912	50	5·584917	50	7·106665	50	9·032604	50	11·467409
51	3·523030	51	4·515429	51	5·780389	51	7·390931	51	9·439071	51	12·040779
52	3·611106	52	4·650892	52	5·982702	52	7·686568	52	9·863829	52	12·642818
53	3·701384	53	4·790413	53	6·192097	53	7·994030	53	10·307701	53	13·274959
54	3·793919	54	4·934125	54	6·408820	54	8·313791	54	10·771548	54	13·938707
55	3·888767	55	5·082149	55	6·633129	55	8·646343	55	11·256268	55	14·635642
56	3·985986	56	5·234613	56	6·865289	56	8·992197	56	11·762799	56	15·367424
57	4·085636	57	5·391651	57	7·105573	57	9·351885	57	12·292125	57	16·135795
58	4·187777	58	5·553401	58	7·354268	58	9·725960	58	12·845271	58	16·942585
59	4·292471	59	5·720003	59	7·611667	59	10·114998	59	13·423308	59	17·789714
60	4·399782	60	5·891603	60	7·878075	60	10·519598	60	14·027357	60	18·679200

COMPOUND INTEREST TABLES.

TABLE B.

The sum an Annuity of £1 amounts to at different percentages for any number of years from 1 to 60.

Years.	2½ %	3 %	3½ %	Years.	4 %	4½ %	5 %	Years.
1	1	1	1	1	1	1	1	1
2	2·025	2·03	2·035	2	2·04	2·045	2·05	2
3	3·075625	3·0909	3·106225	3	3·1216	3·137025	3·1525	3
4	4·152515	4·183627	4·214943	4	4·246464	4·278191	4·310125	4
5	5·256327	5·309136	5·362467	5	5·416322	5·470709	5·525631	5
6	6·387834	6·468409	6·550155	6	6·632974	6·716890	6·801912	6
7	7·547526	7·662560	7·779411	7	7·898292	8·019149	8·142007	7
8	8·736210	8·892433	9·051691	8	9·214222	9·380009	9·549107	8
9	9·954611	10·159204	10·368500	9	10·582791	10·802107	11·026562	9
10	11·203472	11·463978	11·731397	10	12·006102	12·288199	12·577890	10
11	12·483555	12·807891	13·141995	11	13·486345	13·841165	14·206784	11
12	13·795640	14·192122	14·601964	12	15·025798	15·464015	15·917123	12
13	15·140529	15·617880	16·113032	13	16·626829	17·159893	17·712979	13
14	16·519040	17·086411	17·676987	14	18·291901	18·932085	19·598628	14
15	17·932014	18·598998	19·295681	15	20·023576	20·784026	21·578559	15
16	19·380312	20·156963	20·971029	16	21·824518	22·719305	23·657487	16
17	20·864817	21·761671	22·705014	17	23·697498	24·741671	25·840361	17
18	22·386435	23·414520	24·499688	18	25·645397	26·855043	28·132379	18
19	23·946093	25·116954	26·357175	19	27·671212	29·063517	30·538998	19
20	25·544742	26·870461	28·279673	20	29·778059	31·371372	33·065948	20
21	27·183357	28·676574	30·269458	21	31·969180	33·783080	35·719246	21
22	28·862937	30·536870	32·328885	22	34·247946	36·303315	38·505209	22
23	30·584507	32·452964	34·460392	23	36·617862	38·936960	41·430470	23
24	32·349116	34·426541	36·666502	24	39·082574	41·689119	44·501994	24
25	34·157840	36·459326	38·949826	25	41·645874	44·565125	47·727094	25
26	36·011782	38·553095	41·313067	26	44·311706	47·570551	51·113449	26
27	37·912073	40·709677	43·759021	27	47·084171	50·711221	54·669122	27
28	39·859871	42·930958	46·290584	28	49·967534	53·993221	58·402579	28
29	41·856364	45·218877	48·910752	29	52·966231	57·422911	62·322709	29
30	43·902769	47·575434	51·622626	30	56·084876	61·006937	66·438846	30
31	46·000334	50·002688	54·429415	31	59·328267	64·752244	70·760790	31
32	48·150338	52·502759	57·334441	32	62·701394	68·666090	75·298831	32
33	50·354092	55·077846	60·341143	33	66·209446	72·756059	80·063774	33
34	52·612948	57·730186	63·453080	34	69·857820	77·030076	85·066964	34
35	54·928275	60·462097	66·673935	35	73·652129	81·496423	90·320314	35
36	57·301485	63·275965	70·007520	36	77·598210	86·163756	95·836332	36
37	59·734025	66·174249	73·457780	37	81·702134	91·041119	101·628151	37
38	62·227379	69·159482	77·028799	38	85·970215	96·137963	107·709561	38
39	64·783067	72·234272	80·724803	39	90·409019	101·464165	114·095042	39
40	67·402637	75·401306	84·550167	40	95·025375	107·030046	120·799797	40
41	70·087696	78·663348	88·509419	41	99·826385	112·846391	127·839790	41
42	72·839881	82·023251	92·607245	42	104·819435	118·924472	135·231783	42
43	75·660871	85·483951	96·848495	43	110·012207	125·276066	142·993376	43
44	78·552386	89·048472	101·238189	44	115·412690	131·913482	151·143049	44
45	81·516189	92·719929	105·781522	45	121·029192	138·849581	159·700206	45
46	84·554087	96·501530	110·483872	46	126·870354	146·097804	168·685221	46
47	87·667932	100·396579	115·350805	47	132·945162	153·672197	178·119487	47
48	90·859623	104·408479	120·388081	48	139·262962	161·587438	188·025466	48
49	94·131106	108·540736	125·601661	49	145·833474	169·858864	198·426744	49
50	97·484376	112·796961	130·997716	50	152·666806	178·502504	209·348086	50
51	100·921478	117·180873	136·582633	51	159·773471	187·535108	220·815495	51
52	104·444508	121·696302	142·363022	52	167·164402	196·974179	232·856274	52
53	108·055614	126·347194	148·345724	53	174·850970	206·838008	245·499092	53
54	111·756998	131·137607	154·537821	54	182·845000	217·145709	258·774051	54
55	115·550917	136·071732	160·946641	55	191·158791	227·917257	272·712758	55
56	119·439684	141·153881	167·579770	56	199·805134	239·173525	287·348400	56
57	123·425670	146·388494	174·445059	57	208·797331	250·936324	302·715824	57
58	127·511306	151·780145	181·550632	58	218·149216	263·228449	318·851619	58
59	131·699083	157·333546	188·904900	59	227·875176	276·073720	335·794204	59
60	135·991554	163·053549	196·516567	60	237·990174	289·497028	353·583918	60

GOVERNMENT LIFE INSURANCE TABLE.

ANNUAL PREMIUMS TO ASSURE £100 PAYABLE:—

Age next Birthday.	At Death.	At Death. Annual Premium till Age 60.	At Age 55 or Death.	At Age 60 or Death.	At Age 65 or Death.	Age next Birthday.	At Death.	At Death. Annual Premium till Age 60.	At Age 55 or Death.	At Age 60 or Death.	At Age 65 or Death.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.		£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
21	1 14 0	1 17 6	2 9 6	2 3 6	1 19 6	36	2 11 0	3 3 6	4 15 6	3 17 0	3 5 6
22	1 14 6	1 18 6	2 11 6	2 5 0	2 0 6	37	2 13 0	3 6 6	5 1 6	4 0 6	3 8 0
23	1 15 6	1 19 6	2 13 0	2 6 6	2 2 0	38	2 14 6	3 9 6	5 7 6	4 4 6	3 11 0
24	1 16 6	2 1 0	2 15 0	2 8 0	2 3 0	39	2 16 6	3 13 0	5 14 6	4 9 0	3 14 0
25	1 17 6	2 2 6	2 17 6	2 9 6	2 4 6	40	2 18 0	3 16 6	6 2 6	4 13 6	3 17 6
26	1 18 6	2 3 6	2 19 6	2 11 6	2 6 0	41	3 0 0	4 0 6	6 11 6	4 19 0	4 1 0
27	1 19 6	2 5 0	3 2 0	2 13 6	2 7 6	42	3 2 6	4 5 0	7 1 6	5 4 6	4 5 0
28	2 0 6	2 7 0	3 5 0	2 15 6	2 9 0	43	3 4 6	4 10 0	7 13 6	5 11 0	4 9 0
29	2 1 6	2 8 6	3 7 6	2 17 6	2 10 6	44	3 7 0	4 15 6	8 7 6	5 18 6	4 13 6
30	2 3 0	2 10 0	3 11 0	2 19 6	2 12 6	45	3 9 6	5 1 6	9 3 6	6 6 6	4 19 0
31	2 4 0	2 12 0	3 14 0	3 2 0	2 14 0	46	3 12 0	5 8 6		6 16 0	5 4 6
32	2 5 6	2 14 0	3 17 6	3 4 6	2 16 0	47	3 15 0	5 16 0		7 6 0	5 10 6
33	2 6 6	2 16 0	4 1 6	3 7 6	2 18 6	48	3 17 6	6 5 0		7 18 0	5 17 0
34	2 8 0	2 18 6	4 6 0	3 10 0	3 0 6	49	4 1 0	6 15 6		8 12 0	6 4 6
35	2 9 6	3 1 0	4 10 6	3 13 6	3 3 0	50	4 4 0	7 7 6		9 8 6	6 13 0

Further information can be obtained of the local Postmaster or on application to the Controller, Savings Bank Department, Blythe Road, West Kensington, London, W., free of Postage.

GOVERNMENT ANNUITY TABLE.

IMMEDIATE LIFE ANNUITIES.

PURCHASE MONEY NOT RETURNABLE.

Table showing the sum for which an Immediate Life Annuity of £1 will be granted.

Age next Birthday.	Males.	Females.	Age next Birthday.	Males.	Females.
	£ s. d.	£ s. d.		£ s. d.	£ s. d.
6	25 19 0	27 12 6	36	19 4 1	21 6 2
7	25 15 1	27 9 1	37	18 18 11	21 0 9
8	25 11 1	27 5 8	38	18 13 9	20 15 3
9	25 7 0	27 2 2	39	18 8 6	20 9 7
10	25 2 11	26 18 8	40	18 3 2	20 3 11
11	24 18 10	26 15 1	41	17 17 10	19 18 0
12	24 14 9	26 11 6	42	17 12 4	19 12 1
13	24 10 6	26 7 10	43	17 6 10	19 5 11
14	24 6 4	26 4 1	44	17 1 4	18 19 8
15	24 2 1	26 0 4	45	16 15 8	18 13 3
16	23 17 10	25 16 6	46	16 9 11	18 6 9
17	23 13 6	25 12 7	47	16 4 2	18 0 0
18	23 9 1	25 8 8	48	15 18 3	17 13 2
19	23 4 9	25 4 8	49	15 12 3	17 6 1
20	23 0 4	25 0 8	50	15 6 1	16 18 11
21	22 15 10	24 16 6	51	14 19 11	16 11 9
22	22 11 4	24 12 4	52	14 13 6	16 4 7
23	22 6 9	24 8 1	53	14 7 1	15 17 4
24	22 2 3	24 3 10	54	14 0 5	15 9 11
25	21 17 7	23 19 5	55	13 13 8	15 2 4
26	21 12 11	23 15 0	56	13 6 9	14 14 9
27	21 8 3	23 10 6	57	12 19 8	14 6 11
28	21 3 6	23 5 11	58	12 12 5	13 19 0
29	20 18 9	23 1 3	59	12 4 11	13 11 1
30	20 13 11	22 16 6	60	11 17 4	13 3 1
31	20 9 1	22 11 8	61	11 9 8	12 15 1
32	20 4 2	22 6 9	62	11 2 2	12 7 0
33	19 19 2	22 1 9	63	10 14 11	11 19 0
34	19 14 2	21 16 7	64	10 7 8	11 11 0
35	19 9 2	21 11 5	65	10 0 6	11 2 11

The Annuity Tables give the cost of an Annuity of £1, and an Annuity of a larger amount costs a larger sum in exact proportion.

Savings Bank Annuities are payable by half-yearly instalments on the 5th January and 5th July, or the 5th April and 10th October, according to the date of purchase.

GOVERNMENT ANNUITY TABLE.

DEFERRED LIFE ANNUITIES.

PURCHASE MONEY RETURNABLE SCALE.

Table showing the Yearly Sum or the Single Payment for which a Deferred Life Annuity of £1 will be granted. In this Class of Annuities the Purchase Money will be returned on application or on the Death of the Nominee if an Instalment of the Annuity shall not have become due.

Age next Birthday	Cost of an Annuity of £1 Payable after the Expiration of 10 Years.				Cost of an Annuity of £1 Payable after the Expiration of 20 Years.			
	Males.		Females.		Males.		Females.	
	In 11 Yearly Sums of	In one Sum at time of Purchase.	In 11 Yearly Sums of	In one Sum at time of Purchase.	In 21 Yearly Sums of	In one Sum at time of Purchase.	In 21 Yearly Sums of	In one Sum at time of Purchase.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
22	1 12 5	15 15 9	1 15 10	17 9 0	0 13 0	10 15 1	0 14 6	11 19 3
23	1 12 0	15 11 10	1 15 5	17 5 1	0 12 10	10 11 8	0 14 3	11 15 6
24	1 11 7	15 7 11	1 15 0	17 1 1	0 12 7	10 8 4	0 14 0	11 11 9
25	1 11 3	15 4 0	1 14 7	16 17 0	0 12 5	10 4 10	0 13 9	11 7 10
26	1 10 10	15 0 0	1 14 2	16 12 11	0 12 2	10 1 4	0 13 6	11 3 10
27	1 10 5	14 16 0	1 13 9	16 8 8	0 12 0	9 17 10	0 13 3	10 19 9
28	1 10 0	14 11 11	1 13 4	16 4 4	0 11 9	9 14 3	0 13 0	10 15 6
29	1 9 7	14 7 10	1 12 10	16 0 0	0 11 6	9 10 7	0 12 9	10 11 3
30	1 9 2	14 3 9	1 12 5	15 15 6	0 11 4	9 6 10	0 12 6	10 6 10
31	1 8 8	13 19 6	1 11 11	15 10 11	0 11 1	9 3 1	0 12 3	10 2 6
32	1 8 3	13 15 3	1 11 5	15 6 3	0 10 10	8 19 2	0 12 0	9 18 1
33	1 7 10	13 11 0	1 10 11	15 1 6	0 10 7	8 15 2	0 11 9	9 13 8
34	1 7 5	13 6 8	1 10 5	14 16 7	0 10 4	8 11 2	0 11 5	9 9 2
35	1 6 11	13 2 3	1 9 11	14 11 7	0 10 1	8 7 0	0 11 2	9 4 6
36	1 6 6	12 17 9	1 9 5	14 6 6	0 9 10	8 2 10	0 10 11	8 19 11
37	1 6 0	12 13 3	1 8 11	14 1 3	0 9 7	7 18 6	0 10 7	8 15 2
38	1 5 6	12 8 7	1 8 4	13 15 10	0 9 4	7 14 1	0 10 4	8 10 4
39	1 5 1	12 3 11	1 7 9	13 10 4	0 9 1	7 9 6	0 10 0	8 5 5
40	1 4 7	11 19 2	1 7 2	13 4 10	0 8 9	7 4 10	0 9 9	8 0 7
41	1 4 1	11 14 4	1 6 7	12 19 2	0 8 6	7 0 2	0 9 5	7 15 8
42	1 3 7	11 9 4	1 6 0	12 13 7	0 8 3	6 15 7	0 9 2	7 10 9
43	1 3 0	11 4 3	1 5 6	12 7 11	0 7 11	6 11 2	0 8 10	7 5 10
44	1 2 6	10 19 1	1 4 10	12 2 1	0 7 8	6 6 9	0 8 6	7 1 0
45	1 2 0	10 13 9	1 4 3	11 16 3	0 7 5	6 2 4	0 8 3	6 16 0
46	1 1 5	10 8 4	1 3 8	11 10 3	0 7 2	5 18 0	0 7 11	6 11 0

PURCHASE MONEY NOT RETURNABLE SCALE.

22	1 10 3	14 2 4	1 14 0	16 1 5	0 11 0	8 5 11	0 12 11	9 19 2
23	1 9 10	13 18 1	1 13 7	15 17 3	0 10 10	8 2 2	0 12 8	9 15 4
24	1 9 5	13 13 8	1 13 2	15 13 1	0 10 7	7 18 5	0 12 5	9 11 5
25	1 8 11	13 9 4	1 12 9	15 8 10	0 10 4	7 14 7	0 12 2	9 7 6
26	1 8 6	13 4 10	1 12 4	15 4 6	0 10 2	7 10 9	0 11 11	9 3 6
27	1 8 1	13 0 5	1 11 10	15 0 1	0 9 11	7 6 11	0 11 8	8 19 5
28	1 7 8	12 15 11	1 11 5	14 15 7	0 9 8	7 3 1	0 11 5	8 15 3
29	1 7 2	12 11 5	1 10 11	14 11 1	0 9 5	6 19 2	0 11 2	8 11 0
30	1 6 9	12 6 10	1 10 6	14 6 5	0 9 3	6 15 4	0 10 11	8 6 9
31	1 6 3	12 2 3	1 10 0	14 1 9	0 9 0	6 11 4	0 10 8	8 2 5
32	1 5 10	11 17 8	1 9 6	13 16 11	0 8 9	6 7 5	0 10 5	7 17 11
33	1 5 4	11 13 0	1 9 0	13 12 1	0 8 6	6 3 6	0 10 1	7 13 5
34	1 4 11	11 8 3	1 8 6	13 7 2	0 8 3	5 19 6	0 9 10	7 8 10
35	1 4 5	11 3 6	1 8 0	13 2 1	0 8 0	5 15 6	0 9 6	7 4 2
36	1 3 11	10 18 9	1 7 6	12 16 11	0 7 9	5 11 5	0 9 3	6 19 5
37	1 3 5	10 13 11	1 6 11	12 11 8	0 7 6	5 7 5	0 8 11	6 14 8
38	1 3 0	10 9 1	1 6 5	12 6 4	0 7 3	5 3 4	0 8 8	6 9 10
39	1 2 6	10 4 2	1 5 10	12 0 10	0 7 0	4 19 2	0 8 4	6 4 11
40	1 2 0	9 19 2	1 5 3	11 15 3	0 6 9	4 15 1	0 8 0	6 0 0
41	1 1 6	9 14 2	1 4 8	11 9 7	0 6 6	4 10 10	0 7 9	5 14 11
42	1 0 11	9 9 1	1 4 1	11 3 9	0 6 2	4 6 8	0 7 5	5 9 10
43	1 0 5	9 4 0	1 3 5	10 17 9	0 5 11	4 2 5	0 7 1	5 4 9
44	0 19 11	8 18 10	1 2 10	10 11 9	0 5 8	3 18 1	0 6 9	4 19 7
45	0 19 4	8 13 7	1 2 2	10 5 6	0 5 4	3 13 9	0 6 5	4 14 4
46	0 18 10	8 8 3	1 1 6	9 19 3	0 5 1	3 9 5	0 6 1	4 9 1

The Annuity Tables give the cost of an Annuity of £1 and an Annuity of a larger amount costs a larger sum in exact proportion. These Pensions can be Deferred any number of years from 10 to 50, and any cost not given above will be furnished on application to the Controller, Savings Bank Department, London.

WAGES TABLE.

Giving the rates per Month, Week, and Day of Yearly Incomes from £5 to £100.

Year.	Month.	Week.	Day.	Year.	Month.	Week.	Day.
£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
5 0 0	0 8 4	0 1 11	0 0 3¼	16 10 0	1 7 6	0 6 4½	0 0 10¾
5 5 0	0 8 9	0 2 0¼	0 0 3½	16 16 0	1 8 0	0 6 5½	0 0 11
5 10 0	0 9 2	0 2 1½	0 0 3½	17 0 0	1 8 4	0 6 6½	0 0 11¼
6 0 0	0 10 0	0 2 3¾	0 0 4	17 10 0	1 9 2	0 6 8¾	0 0 11½
6 6 0	0 10 6	0 2 5	0 0 4¼	17 17 0	1 9 9	0 6 10½	0 0 11¾
6 10 0	0 10 10	0 2 6	0 0 4¼	18 0 0	1 10 0	0 6 11	0 0 11¾
7 0 0	0 11 8	0 2 8¼	0 0 4½	18 10 0	1 10 10	0 7 1½	0 1 0¼
7 7 0	0 12 3	0 2 10	0 0 4¾	18 18 0	1 11 6	0 7 3¼	0 1 0½
7 10 0	0 12 6	0 2 10½	0 0 5	19 0 0	1 11 8	0 7 3¾	0 1 0½
8 0 0	0 13 4	0 3 1	0 0 5¼	19 10 0	1 12 6	0 7 6	0 1 0¾
8 8 0	0 14 0	0 3 2¾	0 0 5½	19 19 0	1 13 3	0 7 8	0 1 1
8 10 0	0 14 2	0 3 3¼	0 0 5½	20 0 0	1 13 4	0 7 8¼	0 1 1¼
9 0 0	0 15 0	0 3 5½	0 0 6	21 0 0	1 15 0	0 8 1	0 1 1¾
9 9 0	0 15 9	0 3 7½	0 0 6¼	22 0 0	1 16 8	0 8 5½	0 1 2½
9 10 0	0 15 10	0 3 7¾	0 0 6¼	23 0 0	1 18 4	0 8 10¼	0 1 3
10 0 0	0 16 8	0 3 10¼	0 0 6½	24 0 0	2 0 0	0 9 2¾	0 1 3¾
10 10 0	0 17 6	0 4 0½	0 0 7	25 0 0	2 1 8	0 9 7½	0 1 4½
11 0 0	0 18 4	0 4 2¾	0 0 7¼	30 0 0	2 10 0	0 11 6½	0 1 7¾
11 10 0	0 19 2	0 4 5	0 0 7½	35 0 0	2 18 4	0 13 5½	0 1 11
11 11 0	0 19 3	0 4 5¼	0 0 7½	40 0 0	3 6 8	0 15 4½	0 2 2¼
12 0 0	1 0 0	0 4 7½	0 0 8	45 0 0	3 15 0	0 17 3¾	0 2 5½
12 10 0	1 0 10	0 4 9¾	0 0 8½	50 0 0	4 3 4	0 19 2¾	0 2 9
12 12 0	1 1 0	0 4 10¼	0 0 8½	55 0 0	4 11 8	1 1 1¾	0 3 0¼
13 0 0	1 1 8	0 5 0	0 0 8½	60 0 0	5 0 0	1 3 1	0 3 3½
13 10 0	1 2 6	0 5 2¼	0 0 9	65 0 0	5 8 4	1 5 0	0 3 6¼
13 13 0	1 2 9	0 5 3	0 0 9	70 0 0	5 16 8	1 6 11	0 3 10
14 0 0	1 3 4	0 5 4½	0 0 9¼	75 0 0	6 5 0	1 8 10¼	0 4 1¼
14 10 0	1 4 2	0 5 7	0 0 9½	80 0 0	6 13 4	1 10 9¼	0 4 4½
14 14 0	1 4 6	0 5 7¾	0 0 9¾	85 0 0	7 1 8	1 12 8¼	0 4 8
15 0 0	1 5 0	0 5 9¼	0 0 9¾	90 0 0	7 10 0	1 14 7½	0 4 11¼
15 10 0	1 5 10	0 5 11¼	0 0 10¼	95 0 0	7 18 4	1 16 6½	0 5 2½
15 15 0	1 6 3	0 6 0¾	0 0 10¼	100 0 0	8 6 8	1 18 5½	0 5 5¾
16 0 0	1 6 8	0 6 1¾	0 0 10½				

PRODUCTS OF NUMBERS AT A GLANCE.

×	13	14	15	16	17	18	×	19	20	21	22	23	24	25	×
13	169	182	195	208	221	234	13	247	260	273	286	299	312	325	13
14	182	196	210	224	238	252	14	266	280	294	308	322	336	350	14
15	195	210	225	240	255	270	15	285	300	315	330	345	360	375	15
16	208	224	240	256	272	288	16	304	320	336	352	368	384	400	16
17	221	238	255	272	289	306	17	323	340	357	374	391	408	425	17
18	234	252	270	288	306	324	18	342	360	378	396	414	432	450	18
×	13	14	15	16	17	18	×	19	20	21	22	23	24	25	×
19	247	266	285	304	323	342	19	361	380	399	418	437	456	475	19
20	260	280	300	320	340	360	20	380	400	420	440	460	480	500	20
21	273	294	315	336	357	378	21	399	4	441	462	483	504	525	21
22	286	308	330	352	374	396	22	418	440	462	484	506	528	550	22
23	299	322	345	368	391	414	23	437	460	483	506	529	552	575	23
24	312	336	360	384	408	432	24	456	480	504	528	552	576	600	24
25	325	350	375	400	425	450	25	475	500	525	550	575	600	625	25
×	13	14	15	16	17	18	×	19	20	21	22	23	24	25	×

The above table gives, at a glance, the product of any two numbers from 13 to 25 inclusive. Find one of the numbers in one of the vertical lines marked × × × and the other in one of the horizontal lines marked × × ×, and where these lines cross will be found the product. Thus the product of 23 × 19 will be found to be 437.

The square of each number will be found enclosed in a thick lined space. Thus the square of 21 = 441.

READY RECKONER.

No.	@ ¼d.			@ ½d.			@ ¾d.			@ 1d.			@ 2d.			No.	@ 3d.			@ 4d.			@ 5d.			@ 6d.			@ 7d.			No.
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.		£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	
¼	.	.	.	0	0	0¼	0	0	0¼	0	0	0¼	0	0	0½	¼	0	0	0¾	0	0	1	0	0	1¼	0	0	1½	0	0	1¾	¼
½	.	.	.	0	0	0½	0	0	0½	0	0	0½	0	0	1	½	0	0	1½	0	0	2	0	0	2½	0	0	3	0	0	3½	½
¾	.	.	.	0	0	0¾	0	0	0¾	0	0	0¾	0	0	1½	¾	0	0	2¼	0	0	3	0	0	3¾	0	0	4½	0	0	5¼	¾
1	0	0	0¼	0	0	0½	0	0	0¾	0	0	1	0	0	2	1	0	0	3	0	0	4	0	0	5	0	0	6	0	0	7	1
2	0	0	0½	0	0	1	0	0	1½	0	0	2	0	0	4	2	0	0	6	0	0	8	0	0	10	0	1	0	0	1	2	2
3	0	0	0¾	0	0	1½	0	0	2¼	0	0	3	0	0	6	3	0	0	9	0	1	0	0	1	3	0	1	6	0	1	9	3
4	0	0	1	0	0	2	0	0	3	0	0	4	0	0	8	4	0	1	0	0	1	4	0	1	8	0	2	0	0	2	4	4
5	0	0	1¼	0	0	2½	0	0	3¾	0	0	5	0	0	10	5	0	1	3	0	1	8	0	2	1	0	2	6	0	2	11	5
6	0	0	1½	0	0	3	0	0	4½	0	0	6	0	1	0	6	0	1	6	0	2	0	0	2	6	0	3	0	0	3	6	6
7	0	0	1¾	0	0	3½	0	0	5¼	0	0	7	0	1	2	7	0	1	9	0	2	4	0	2	11	0	3	6	0	4	1	7
8	0	0	2	0	0	4	0	0	6	0	0	8	0	1	4	8	0	2	0	0	2	8	0	3	4	0	4	0	0	4	8	8
9	0	0	2¼	0	0	4½	0	0	6¾	0	0	9	0	1	6	9	0	2	3	0	3	0	0	3	9	0	4	6	0	5	3	9
10	0	0	2½	0	0	5	0	0	7½	0	0	10	0	1	8	10	0	2	6	0	3	4	0	4	2	0	5	0	0	5	10	10
11	0	0	2¾	0	0	5½	0	0	8¼	0	0	11	0	1	10	11	0	2	9	0	3	8	0	4	7	0	5	6	0	6	5	11
12	0	0	3	0	0	6	0	0	9	0	1	0	0	2	0	12	0	3	0	0	4	0	0	5	0	0	6	0	0	7	0	12
13	0	0	3¼	0	0	6½	0	0	9¾	0	1	1	0	2	2	13	0	3	3	0	4	4	0	5	5	0	6	6	0	7	7	13
14	0	0	3½	0	0	7	0	0	10½	0	1	2	0	2	4	14	0	3	6	0	4	8	0	5	10	0	7	0	0	8	2	14
15	0	0	3¾	0	0	7½	0	0	11¼	0	1	3	0	2	6	15	0	3	9	0	5	0	0	6	3	0	7	6	0	8	9	15
16	0	0	4	0	0	8	0	1	0	0	1	4	0	2	8	16	0	4	0	0	5	4	0	6	8	0	8	0	0	9	4	16
17	0	0	4¼	0	0	8½	0	1	0¾	0	1	5	0	2	10	17	0	4	3	0	5	8	0	7	1	0	8	6	0	9	11	17
18	0	0	4½	0	0	9	0	1	1½	0	1	6	0	3	0	18	0	4	6	0	6	0	0	7	6	0	9	0	0	10	6	18
19	0	0	4¾	0	0	9½	0	1	2¼	0	1	7	0	3	2	19	0	4	9	0	6	4	0	7	11	0	9	6	0	11	1	19
20	0	0	5	0	0	10	0	1	3	0	1	8	0	3	4	20	0	5	0	0	6	8	0	8	4	0	10	0	0	11	8	20
30	0	0	7½	0	1	3	0	1	10½	0	2	6	0	5	0	30	0	7	6	0	10	0	0	12	6	0	15	0	0	17	6	30
40	0	0	10	0	1	8	0	2	6	0	3	4	0	6	8	40	0	10	0	0	13	4	0	16	8	1	0	0	1	3	4	40
50	0	1	0½	0	2	1	0	3	1½	0	4	2	0	8	4	50	0	12	6	0	16	8	1	0	10	1	5	0	1	9	2	50
60	0	1	3	0	2	6	0	3	9	0	5	0	0	10	0	60	0	15	0	1	0	0	1	5	0	1	10	0	1	15	0	60
70	0	1	5½	0	2	11	0	4	4½	0	5	10	0	11	8	70	0	17	6	1	3	4	1	9	2	1	15	0	2	0	10	70
80	0	1	8	0	3	4	0	5	0	0	6	8	0	13	4	80	1	0	0	1	6	8	1	13	4	2	0	0	2	6	8	80
90	0	1	10½	0	3	9	0	5	7½	0	7	6	0	15	0	90	1	2	6	1	10	0	1	17	6	2	5	0	2	12	6	90
100	0	2	1	0	4	2	0	6	3	0	8	4	0	16	8	100	1	5	0	1	13	4	2	1	8	2	10	0	2	18	4	100

No.	@ 8d.			@ 9d.			@ 10d.			@ 11d.			@ 1/-			No.	@ 1/6			@ 2/			@ 2 6			@ 3/-			@ 3/6			No.
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.		£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	
¼	0	0	2	0	0	2¼	0	0	2½	0	0	2¾	0	0	3	¼	0	0	4½	0	0	6	0	0	7½	0	0	9	0	0	10½	¼
½	0	0	4	0	0	4½	0	0	5	0	0	5½	0	0	6	½	0	0	9	0	1	0	0	1	3	0	1	6	0	1	9	½
¾	0	0	6	0	0	6¾	0	0	7½	0	0	8¼	0	0	9	¾	0	1	1½	0	1	6	0	1	10½	0	2	3	0	2	7½	¾
1	0	0	8	0	0	9	0	0	10	0	0	11	0	1	0	1	0	1	6	0	2	0	0	2	6	0	3	0	0	3	6	1
2	0	1	4	0	1	6	0	1	8	0	1	10	0	2	0	2	0	3	0	0	4	0	0	5	0	0	6	0	0	7	0	2
3	0	2	0	0	2	3	0	2	6	0	2	9	0	3	0	3	0	4	6	0	6	0	0	7	6	0	9	0	0	10	6	3
4	0	2	8	0	3	0	0	3	4	0	3	8	0	4	0	4	0	6	0	0	8	0	0	10	0	0	12	0	0	14	0	4
5	0	3	4	0	3	9	0	4	2	0	4	7	0	5	0	5	0	7	6	0	10	0	0	12	6	0	15	0	0	17	6	5
6	0	4	0	0	4	6	0	5	0	0	5	6	0	6	0	6	0	9	0	0	12	0	0	15	0	0	18	0	1	1	0	6
7	0	4	8	0	5	3	0	5	10	0	6	5	0	7	0	7	0	10	6	0	14	0	0	17	6	1	1	0	1	4	6	7
8	0	5	4	0	6	0	0	6	8	0	7	4	0	8	0	8	0	12	0	0	16	0	1	0	0	1	4	0	1	8	0	8
9	0	6	0	0	6	9	0	7	6	0	8	3	0	9	0	9	0	13	6	0	18	0	1	2	6	1	7	0	1	11	6	9
10	0	6	8	0	7	6	0	8	4	0	9	2	0	10	0	10	0	15	0	1	0	0	1	5	0	1	10	0	1	15	0	10
11	0	7	4	0	8	3	0	9	2	0	10	1	0	11	0	11	0	16	6	1	2	0	1	7	6	1	13	0	1	18	6	11
12	0	8	0	0	9	0	0	10	0	0	11	0	0	12	0	12	0	18	0	1	4	0	1	10	0	1	16	0	2	2	0	12
13	0	8	8	0	9	9	0	10	10	0	11	11	0	13	0	13	0	19	6	1	6	0	1	12	6	1	19	0	2	5	6	13
14	0	9	4	0	10	6	0	11	8	0	12	10	0	14	0	14	1	1	0	1	8	0	1	15	0	2	2	0	2	9	0	14
15	0	10	0	0	11	3	0	12	6	0	13	9	0	15	0	15	1	2	6	1	10	0	1	17	6	2	5	0	2	12	6	15
16	0	10	8	0	12	0	0	13	4	0	14	8	0	16	0	16	1	4	0	1	12	0	2	0	0	2	8	0	2	16	0	16
17	0	11	4	0	12	9	0	14	2	0	15	7	0	17	0	17	1	5	6	1	14	0	2	2	6	2	11	0	2	19	6	17
18	0	12	0	0	13	6	0	15	0	0	16	6	0	18	0	18	1	7	0	1	16	0	2	5	0	2	14	0	3	3	0	18
19	0	12	8	0	14	3	0	15	10	0	17	5	0	19	0	19	1	8	6	1	18	0	2	7	6	2	17	0	3	6	6	19
20	0	13	4	0	15	0	0	16	8	0	18	4	1	0	0	20	1	10	0	2	0	0	2	10	0	3	0	0	3	10	0	20
30	1	0	0	1	2	6	1	5	0	1	7	6	1	10	0	30	2	5	0	3	0	0	3	15	0	4	10	0	5	5	0	30
40	1	6	8	1	10	0	1	13	4	1	16	8	2	0	0	40	3	0	0	4	0	0	5	0	0	6	0	0	7	0	0	40
50	1	13	4	1	17	6	2	1	8	2	5	10	2	10	0	50	3	15	0	5	0	0	6	5	0	7	10	0	8	15	0	50
60	2	0	0	2	5	0	2	10	0	2	15	0	3	0	0	60	4	10	0	6	0	0	7	10	0	9	0	0	10	10	0	60
70	2	6	8	2	12	6	2	18	4	3	4	2	3	10	0	70	5	5	0	7	0	0	8	15	0	10	10	0	12	5	0	70
80	2	13	4	3	0	0	3	6	8	3	13	4	4	0	0	80	6	0	0	8	0	0	10	0	0	12	0	0	14	0	0	80
90	3	0	0	3	7	6	3	15	0	4	2	6	4	10	0	90	6	15	0	9	0	0	11	5	0	13	10	0	15	15	0	90
100	3	6	8	3	15	0	4	3	4	4	11	8	5	0	0	100	7	10	0	10	0	0	12	10	0	15	0	0	17	10	0	100

READY RECKONER (*continued*).

No.	@ 4/-			@ 5/-			@ 6/-			@ 7/-			@ 7/6			No.	@ 8/-			@ 9/-			@ 10/-			@ 10/6			@ 11/-			No.
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.		£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	
¼	0	1	0	0	1	3	0	1	6	0	1	9	0	1	10½	¼	0	2	0	0	2	3	0	2	6	0	2	7½	0	2	9	¼
½	0	2	0	0	2	6	0	3	0	0	3	6	0	3	9	½	0	4	0	0	4	6	0	5	0	0	5	3	0	5	6	½
¾	0	3	0	0	3	9	0	4	6	0	5	3	0	5	7½	¾	0	6	0	0	6	9	0	7	6	0	7	10½	0	8	3	¾
1	0	4	0	0	5	0	0	6	0	0	7	0	0	7	6	1	0	8	0	0	9	0	0	10	0	0	10	6	0	11	0	1
2	0	8	0	0	10	0	0	12	0	0	14	0	0	15	0	2	0	16	0	0	18	0	1	0	0	1	1	0	1	2	0	2
3	0	12	0	0	15	0	0	18	0	1	1	0	1	2	6	3	1	4	0	1	7	0	1	10	0	1	11	6	1	13	0	3
4	0	16	0	1	0	0	1	4	0	1	8	0	1	10	0	4	1	12	0	1	16	0	2	0	0	2	2	0	2	4	0	4
5	1	0	0	1	5	0	1	10	0	1	15	0	1	17	6	5	2	0	0	2	5	0	2	10	0	2	12	6	2	15	0	5
6	1	4	0	1	10	0	1	16	0	2	2	0	2	5	0	6	2	8	0	2	14	0	3	0	0	3	3	0	3	6	0	6
7	1	8	0	1	15	0	2	2	0	2	9	0	2	12	6	7	2	16	0	3	3	0	3	10	0	3	13	6	3	17	0	7
8	1	12	0	2	0	0	2	8	0	2	16	0	3	0	0	8	3	4	0	3	12	0	4	0	0	4	4	0	4	8	0	8
9	1	16	0	2	5	0	2	14	0	3	3	0	3	7	6	9	3	12	0	4	1	0	4	10	0	4	14	6	4	19	0	9
10	2	0	0	2	10	0	3	0	0	3	10	0	3	15	0	10	4	0	0	4	10	0	5	0	0	5	5	0	5	10	0	10
11	2	4	0	2	15	0	3	6	0	3	17	0	4	2	6	11	4	8	0	4	19	0	5	10	0	5	15	6	6	1	0	11
12	2	8	0	3	0	0	3	12	0	4	4	0	4	10	0	12	4	16	0	5	8	0	6	0	0	6	6	0	6	12	0	12
13	2	12	0	3	5	0	3	18	0	4	11	0	4	17	6	13	5	4	0	5	17	0	6	10	0	6	16	6	7	3	0	13
14	2	16	0	3	10	0	4	4	0	4	18	0	5	5	0	14	5	12	0	6	6	0	7	0	0	7	7	0	7	14	0	14
15	3	0	0	3	15	0	4	10	0	5	5	0	5	12	6	15	6	0	0	6	15	0	7	10	0	7	17	6	8	5	0	15
16	3	4	0	4	0	0	4	16	0	5	12	0	6	0	0	16	6	8	0	7	4	0	8	0	0	8	8	0	8	16	0	16
17	3	8	0	4	5	0	5	2	0	5	19	0	6	7	6	17	6	16	0	7	13	0	8	10	0	8	18	6	9	7	0	17
18	3	12	0	4	10	0	5	8	0	6	6	0	6	15	0	18	7	4	0	8	2	0	9	0	0	9	9	0	9	18	0	18
19	3	16	0	4	15	0	5	14	0	6	13	0	7	2	6	19	7	12	0	8	11	0	9	10	0	9	19	6	10	9	0	19
20	4	0	0	5	0	0	6	0	0	7	0	0	7	10	0	20	8	0	0	9	0	0	10	0	0	10	10	0	11	0	0	20
30	6	0	0	7	10	0	9	0	0	10	10	0	11	5	0	30	12	0	0	13	10	0	15	0	0	15	15	0	16	10	0	30
40	8	0	0	10	0	0	12	0	0	14	0	0	15	0	0	40	16	0	0	18	0	0	20	0	0	21	0	0	22	0	0	40
50	10	0	0	12	10	0	15	0	0	17	10	0	18	15	0	50	20	0	0	22	10	0	25	0	0	26	5	0	27	10	0	50
60	12	0	0	15	0	0	18	0	0	21	0	0	22	10	0	60	24	0	0	27	0	0	30	0	0	31	10	0	33	0	0	60
70	14	0	0	17	10	0	21	0	0	24	10	0	26	5	0	70	28	0	0	31	10	0	35	0	0	36	15	0	38	10	0	70
80	16	0	0	20	0	0	24	0	0	28	0	0	30	0	0	80	32	0	0	36	0	0	40	0	0	42	0	0	44	0	0	80
90	18	0	0	22	10	0	27	0	0	31	10	0	33	15	0	90	36	0	0	40	10	0	45	0	0	47	5	0	49	10	0	90
100	20	0	0	25	0	0	30	0	0	35	0	0	37	10	0	100	40	0	0	45	0	0	50	0	0	52	10	0	55	0	0	100

No.	@ 12/-			@ 13/-			@ 14/-			@ 15/-			@ 16/-			No.	@ 17/-			@ 18/-			@ 19/-			@ £1			@ £1 1 0			No.
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.		£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	
¼	0	3	0	0	3	3	0	3	6	0	3	9	0	4	0	¼	0	4	3	0	4	6	0	4	9	0	5	0	0	5	3	¼
½	0	6	0	0	6	6	0	7	0	0	7	6	0	8	0	½	0	8	6	0	9	0	0	9	6	0	10	0	0	10	6	½
¾	0	9	0	0	9	9	0	10	6	0	11	3	0	12	0	¾	0	12	9	0	13	6	0	14	3	0	15	0	0	15	9	¾
1	0	12	0	0	13	0	0	14	0	0	15	0	0	16	0	1	0	17	0	0	18	0	0	19	0	1	0	0	1	1	0	1
2	1	4	0	1	6	0	1	8	0	1	10	0	1	12	0	2	1	14	0	1	16	0	1	18	0	2	0	0	2	2	0	2
3	1	16	0	1	19	0	2	2	0	2	5	0	2	8	0	3	2	11	0	2	14	0	2	17	0	3	0	0	3	3	0	3
4	2	8	0	2	12	0	2	16	0	3	0	0	3	4	0	4	3	8	0	3	12	0	3	16	0	4	0	0	4	4	0	4
5	3	0	0	3	5	0	3	10	0	3	15	0	4	0	0	5	4	5	0	4	10	0	4	15	0	5	0	0	5	5	0	5
6	3	12	0	3	18	0	4	4	0	4	10	0	4	16	0	6	5	2	0	5	8	0	5	14	0	6	0	0	6	6	0	6
7	4	4	0	4	11	0	4	18	0	5	5	0	5	12	0	7	5	19	0	6	6	0	6	13	0	7	0	0	7	7	0	7
8	4	16	0	5	4	0	5	12	0	6	0	0	6	8	0	8	6	16	0	7	4	0	7	12	0	8	0	0	8	8	0	8
9	5	8	0	5	17	0	6	6	0	6	15	0	7	4	0	9	7	13	0	8	2	0	8	11	0	9	0	0	9	9	0	9
10	6	0	0	6	10	0	7	0	0	7	10	0	8	0	0	10	8	10	0	9	0	0	9	10	0	10	0	0	10	10	0	10
11	6	12	0	7	3	0	7	14	0	8	5	0	8	16	0	11	9	7	0	9	18	0	10	9	0	11	0	0	11	11	0	11
12	7	4	0	7	16	0	8	8	0	9	0	0	9	12	0	12	10	4	0	10	16	0	11	8	0	12	0	0	12	12	0	12
13	7	16	0	8	9	0	9	2	0	9	15	0	10	8	0	13	11	1	0	11	14	0	12	7	0	13	0	0	13	13	0	13
14	8	8	0	9	2	0	9	16	0	10	10	0	11	4	0	14	11	18	0	12	12	0	13	6	0	14	0	0	14	14	0	14
15	9	0	0	9	15	0	10	10	0	11	5	0	12	0	0	15	12	15	0	13	10	0	14	5	0	15	0	0	15	15	0	15
16	9	12	0	10	8	0	11	4	0	12	0	0	12	16	0	16	13	12	0	14	8	0	15	4	0	16	0	0	16	16	0	16
17	10	4	0	11	1	0	11	18	0	12	15	0	13	12	0	17	14	9	0	15	6	0	16	3	0	17	0	0	17	17	0	17
18	10	16	0	11	14	0	12	12	0	13	10	0	14	8	0	18	15	6	0	16	4	0	17	2	0	18	0	0	18	18	0	18
19	11	8	0	12	7	0	13	6	0	14	5	0	15	4	0	19	16	3	0	17	2	0	18	1	0	19	0	0	19	19	0	19
20	12	0	0	13	0	0	14	0	0	15	0	0	16	0	0	20	17	0	0	18	0	0	19	0	0	20	0	0	21	0	0	20
30	18	0	0	19	10	0	21	0	0	22	10	0	24	0	0	30	25	10	0	27	0	0	28	10	0	30	0	0	31	10	0	30
40	24	0	0	26	0	0	28	0	0	30	0	0	32	0	0	40	34	0	0	36	0	0	38	0	0	40	0	0	42	0	0	40
50	30	0	0	32	10	0	35	0	0	37	10	0	40	0	0	50	42	10	0	45	0	0	47	10	0	50	0	0	52	10	0	50
60	36	0	0	39	0	0	42	0	0	45	0	0	48	0	0	60	51	0	0	54	0	0	57	0	0	60	0	0	63	0	0	60
70	42	0	0	45	10	0	49	0	0	52	10	0	56	0	0	70	59	10	0	63	0	0	66	10	0	70	0	0	73	10	0	70
80	48	0	0	52	0	0	56	0	0	60	0	0	64	0	0	80	68	0	0	72	0	0	76	0	0	80	0	0	84	0	0	80
90	54	0	0	58	10	0	63	0	0	67	10	0	72	0	0	90	76	10	0	81	0	0	85	10	0	90	0	0	94	10	0	90
100	60	0	0	65	0	0	70	0	0	75	0	0	80	0	0	100	85	0	0	90	0	0	95	0	0	100	0	0	105	0	0	100

RELATIVE TIMES.

AT DIFFERENT PLACES COMPARED WITH GREENWICH.

PLACE.	Longitude.	Difference.	Time when it is noon at Greenwich.
		hrs. min.	
Aberdeen	2° 6′ W.	— 0. 8	11.52 A.M.
Acapulco	99° 46′ W.	— 6.39	5.21 A.M.
Adelaide	138° 38′ E.	+ 9.15	9.15 P.M.
Aden	45° 10′ E.	+ 3. 1	3. 1 P.M.
Alexandria	29° 52′ E.	+ 1.59	1.59 P.M.
Algiers	3° 5′ E.	+ 0.12	12.12 P.M.
Amsterdam	4° 53′ E.	+ 0.20	12.20 P.M.
Antwerp	4° 15′ E.	+ 0.17	12.17 P.M.
Archangel	40° 33′ E.	+ 2.42	2.42 P.M.
Ascension	14° 23′ W.	— 0.58	11. 2 A.M.
Athens	23° 44′ E.	+ 1.35	1.35 P.M.
Bagdad	44° 24′ E.	+ 2.58	2.58 P.M.
Baltimore	76° 36′ W.	— 5. 6	6.54 A.M.
Bangkok	100° 20′ E.	+ 6.41	6.41 P.M.
Barbadoes	59° 37′ W.	— 3.58	8. 2 A.M.
Belfast	5° 56′ W.	— 0.24	11.36 A.M.
Belgrade	20° 28′ E.	+ 1.22	1.22 P.M.
Berlin	13° 23′ E.	+ 0.54	12.54 P.M.
Bermuda	64° 50′ W.	— 4.19	7.41 A.M.
Berne	7° 25′ E.	+ 0.30	12.30 P.M.
Birmingham	1° 48′ W.	— 0. 7	11.53 A.M.
Bombay	72° 52′ E.	+ 4.51	4.51 P.M.
Bordeaux	0° 25′ W.	— 0. 2	11.58 A.M.
Boston	71° 4′ W.	— 4.44	7.16 A.M.
Boulogne	1° 36′ E.	+ 0. 6	12. 6 P.M.
Brighton	0° 8′ W.	— 0. 1	11.59 A.M.
Brindisi	18° 0′ E.	+ 1.12	1.12 P.M.
Brisbane	152° 0′ E.	+ 10. 8	10. 8 P.M.
Bristol	2° 35′ W.	— 0.10	11.50 A.M.
Brussels	4° 22′ E.	+ 0.17	12.17 P.M.
Bucharest	26° 5′ E.	+ 1.44	1.44 P.M.
Buda-Pesth	19° 3′ E.	+ 1.16	1.16 P.M.
Buenos Ayres	58° 18′ W.	— 3.53	8. 7 A.M.
Cabul	69° 6′ E.	+ 4.36	4.36 P.M.
Cadiz	6° 18′ W.	— 0.25	11.35 A.M.
Cairo	31° 15′ E.	+ 2. 3	2. 3 P.M.
Calais	1° 51′ E.	+ 0. 7	12. 7 P.M.
Calcutta	88° 24′ E.	+ 5.54	5.54 P.M.
Cape Coast Castle	1° 14′ W.	— 0. 5	11.55 A.M.
Cape Town	18° 28′ E.	+ 1.14	1.14 P.M.
Cardiff	3° 10′ W.	— 0.13	11.47 A.M.
Chicago	87° 34′ W.	— 5.50	6.10 A.M.
Christiania	10° 45′ E.	+ 0.43	12.43 P.M.
Colombo	79° 45′ E.	+ 5.19	5.19 P.M.
Constantinople	28° 59′ E.	+ 1.56	1.56 P.M.
Copenhagen	12° 36′ E.	+ 0.50	12.50 P.M.
Cyprus	33° 0′ E.	+ 2.12	2.12 P.M.
Delagoa Bay	33° 0′ E.	+ 2.12	2.12 P.M.
Demerara	58° 0′ W.	— 3.52	8. 8 A.M.
Dieppe	1° 5′ E.	+ 0. 4	12. 4 P.M.
Dover	1° 18′ E.	+ 0. 5	12. 5 P.M.
Dublin	6° 17′ W.	— 0.25	11.35 A.M.
Durban	31° 2′ E.	+ 2. 4	2. 4 P.M.
Edinburgh	3° 11′ W.	— 0.13	11.47 A.M.
Florence	11° 14′ E.	+ 0.45	12.45 P.M.
Flushing	3° 30′ E.	+ 0. 6	12. 6 P.M.
Foochow	119° 20′ E.	+ 7.56	7.56 P.M.
Galway	9° 4′ W.	— 0.36	11.24 A.M.
Geneva	6° 10′ E.	+ 0.25	12.25 P.M.
Gibraltar	5° 21′ W.	— 0.21	11.39 A.M.
Glasgow	4° 18′ W.	— 0.17	11.43 A.M.
Hague	4° 20′ E.	+ 0.17	12.17 P.M.
Halifax (Nova Scotia)	63° 50′ W.	— 4.15	7.45 A.M.
Hamburg	9° 58′ E.	+ 0.40	12.40 P.M.
Harwich	1° 18′ E.	+ 0. 5	12. 5 P.M.
Havana	82° 33′ W.	— 5.30	6.30 A.M.
Hobart	147° 21′ E.	+ 9.49	9.49 P.M.
Holyhead	4° 38′ W.	— 0.19	11.41 A.M.
Hong Kong	114° 18′ E.	+ 7.37	7.37 P.M.
Honolulu	157° 53′ W.	— 10.32	1.28 A.M.
Inverness	4° 15′ W.	— 0.17	11.43 A.M.

PLACE.	Longitude.	Difference.	Time when it is noon at Greenwich.
		hrs. min.	
Jerusalem	35° 13′ E.	+ 2.21	2.21 P.M.
Khartum	22° 54′ E.	+ 1.32	1.32 P.M.
Kingston (Jamaica)	76° 50′ W.	— 5. 7	6.53 A.M.
Land's End	5° 42′ W.	— 0.23	11.37 A.M.
Leeds	1° 35′ W.	— 0. 6	11.54 A.M.
Limerick	8° 38′ W.	— 0.35	11.25 A.M.
Lisbon	9° 5′ W.	— 0.36	11.24 A.M.
Liverpool	3° 0′ W.	— 0.12	11.48 A.M.
Londonderry	7° 12′ W.	— 0.29	11.31 A.M.
Lucerne	8° 16′ E.	+ 0.33	12.33 P.M.
Madeira	16° 55′ W.	— 1. 8	10.52 A.M.
Madras	80° 15′ E.	+ 5.21	5.21 P.M.
Madrid	3° 42′ W.	— 0.15	11.45 A.M.
Malta	14° 30′ E.	+ 0.58	12.58 P.M.
Manchester	2° 14′ W.	— 0. 9	11.51 A.M.
Manila	120° 52′ E.	+ 8. 3	8. 3 P.M.
Marseilles	5° 22′ E.	+ 0.21	12.21 P.M.
Mauritius	57° 30′ E.	+ 3.50	3.50 P.M.
Melbourne	144° 59′ E.	+ 9.40	9.40 P.M.
Milan	9° 6′ E.	+ 0.36	12.36 P.M.
Monte Video	56° 40′ W.	— 3.47	8.13 A.M.
Montreal	73° 32′ W.	— 4.54	7. 6 A.M.
Moscow	37° 37′ E.	+ 2.30	2.30 P.M.
Munich	11° 35′ E.	+ 0.46	12.46 P.M.
Naples	14° 16′ E.	+ 0.57	12.57 P.M.
Newcastle	1° 35′ W.	— 0. 6	11.54 A.M.
New Orleans	90° 30′ W.	— 6. 2	5.58 A.M.
New York	74° 0′ W.	— 4.56	7. 4 A.M.
Odessa	30° 44′ E.	+ 2. 3	2. 3 P.M.
Oporto	8° 37′ W.	— 0.34	11.26 A.M.
Ostend	2° 56′ E.	+ 0.12	12.12 P.M.
Ottawa	75° 42′ W.	— 5. 3	6.57 A.M.
Paris	2° 20′ E.	+ 0. 9	12. 9 P.M.
Pekin	116° 27′ E.	+ 7.46	7.46 P.M.
Philadelphia	75° 9′ W.	— 5. 1	6.59 A.M.
Plymouth	4° 8′ W.	— 0.17	11.43 A.M.
Port Elizabeth	25° 30′ E.	+ 1.42	1.42 P.M.
Port Said	32° 50′ E.	+ 2.11	2.11 P.M.
Portsmouth	1° 6′ W.	— 0. 4	11.56 A.M.
Prague	14° 25′ E.	+ 0.58	12.58 P.M.
Pretoria	29° 0′ E.	+ 1.56	1.56 P.M.
Quebec	71° 14′ W.	— 4 45	7.15 A.M.
Rio de Janeiro	43° 9′ W.	— 2 53	9. 7 A.M.
Rome	12° 30′ E.	+ 0.50	12.50 P.M.
Rotterdam	4° 29′ E.	+ 0.18	12.18 P.M.
St. Helena	5° 42′ W.	— 0.23	11.37 A.M.
St. Johns, N.B.	66° 3′ W.	— 4.24	7.36 A.M.
St. Louis	90° 30′ W.	— 6. 2	5.58 A.M.
St. Petersburg	30° 40′ E.	+ 2. 3	2. 3 P.M.
San Francisco	122° 26′ W.	— 8.10	3.50 A.M.
Shanghai	121° 27′ E.	+ 8. 6	8. 6 P.M.
Sierra Leone	13° 14′ W.	— 0.53	11. 7 A.M.
Singapore	104° 0′ E.	+ 6.56	6.56 P.M.
Southampton	1° 40′ W.	— 0. 7	11.53 A.M.
Stockholm	18° 0′ E.	+ 1.12	1.12 P.M.
Suez	32° 30′ E.	+ 2.10	2.10 P.M.
Sydney	151° 12′ E.	+ 10. 5	10. 5 P.M.
Tangier	5° 20′ W.	— 0.21	11.39 A.M.
Teneriffe	14° 0′ W.	— 0.56	11. 4 A.M.
Tokio	139° 46′ E.	+ 9.19	9.19 P.M.
Toronto	79° 24′ W.	— 5.18	6.42 A.M.
Valparaiso	71° 41′ W.	— 4.47	7.13 A.M.
Vancouver	126° 0′ W.	— 8.24	3.36 A.M.
Venice	12° 20′ E.	+ 0.49	12.49 P.M.
Vera Cruz	96° 20′ W.	— 6.25	5.35 A.M.
Victoria, B.C.	123° 22′ W.	— 8.13	3.47 A.M.
Vienna	16° 23′ E.	+ 1. 6	1. 6 P.M.
Warsaw	20° 30′ E.	+ 1.22	1.22 P.M.
Washington	77° 0′ W.	— 5. 8	6.52 A.M.
Wellington	174° 47′ E.	+ 11.39	11.39 P.M.
Zanzibar	39° 50′ E.	+ 2.39	2.39 P.M.

STANDARD TIME.—In Great Britain, Greenwich Time is adopted as the *Standard Time* all over the country. The same is also adopted over Belgium, Holland, and Spain. In France, Paris time (9 minutes *fast* of Greenwich) is the standard. In countries of great extent it is impossible to adopt one *Standard Time* and meridians 15° apart have been chosen, and each place within 7½° of these meridians have the same *Standard Time*. Thus: Mid Europe (Sweden, Denmark, Germany, Austria, Switzerland Italy, and Servia), 1 hour *fast* of Greenwich; East Europe (Roumania, Bulgaria, Turkey, Egypt), 2 hours *fast* of Greenwich; Cape Colony, 1½ hours *fast* of Greenwich; Natal, 2 hours *fast* of Greenwich; India, 5½ hours *fast* of Greenwich; Burma 6½ hours *fast* of Greenwich; Japan, 9 hours *fast* of Greenwich; West Australia, 8 hours *fast* of Greenwich; South Australia, 9½ hours *fast* of Greenwich; New South Wales, Queensland, Victoria, and Tasmania, 10 hours *fast* of Greenwich, New Zealand, 11½ hours *fast* of Greenwich; America—Newfoundland 4 hours, Eastern 5 hours, Central 6 hours, Mountain 7 hours, and Pacific 8 hours *slow* of Greenwich.

GUIDE TO EDUCATION AND THE PROFESSIONS.

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GUIDE TO EDUCATION AND THE PROFESSIONS.

PREFATORY REMARKS ON CHOOSING A CALLING.

This section of the work consists of two distinct parts which are, however, closely related to each other. The first part is intended to show how best to obtain a good general education, whilst the aim of the second part is to indicate how best to turn this education to practical account. In the part on EDUCATION a parent may ascertain the facilities offered for enabling a boy or girl of more than ordinary ability to ascend the educational ladder at the least expense. In the part on the PROFESSIONS a parent, it is hoped, may be guided in selecting that career for his son (or daughter) which seems to accord best with his natural aptitude and ability, and which, in view of financial considerations and local circumstances, seems most practicable. No attempt has been made to include all kinds of callings suited to a well-educated man or woman, but only such as admit of the employment of a large number of persons, whilst limited to those who follow a particular course of study and training.

It may be useful to indicate here some of the points to be considered in *Choosing a Calling* even before treating of Education, for to a certain extent the proposed calling should determine the kind of Education to be given at school or college. At the outset it must be clearly understood that there is no royal road to success, and that whatever the occupation adopted, everything will depend upon the qualities brought to bear in working it. It is not of course true that all occupations offer equal chances of success, but each one has its advantages and disadvantages, and these are more evenly balanced than is generally supposed. No one can formulate any exact rules to be followed in the choice of a calling. In practical life we must be guided by probabilities. Certainty in regard to the future is unattainable. Businesses are ever altering in circumstances and character. Time, locality, discovery, invention, political and social changes, and a hundred other matters are ever affecting the prospects of trades and professions. Nevertheless, much may be done to avoid fatal blunders in the choice of a profession. There are considerations which will affect different persons in different ways, but which none can wisely ignore.

If this question of choosing a calling affects one class more than another, it is that large section of the community known as the "Middle Class." Among the upper circles of society a parent has usually some clear course before him. It is a part of the traditions of his order that his sons shall go into the Church, the Army, the Navy, or the Diplomatic service, although of late there has been less reluctance to engage in trade. The case of the "Lower Class" is different, but, perhaps, not more difficult. The boy either follows the employment of his father, or else is placed in the most eligible position that offers, eligibility being usually determined by the amount of wages that can be forthwith obtained. It is, therefore, to parents of the Middle Class that we especially address our remarks in the hope of assisting them to solve the problem of what to do with "our boys." Now let us glance at some of the considerations, which must carefully be weighed, if a wise decision is to be made.

BETTERING HIS POSITION. Every parent is naturally anxious that his son should better his position. But what does this bettering one's position mean. Speaking broadly, it means one of two things—improving one's financial resources or rising in the social scale. Few parents clearly distinguish between these alternatives, and fewer still, perhaps, see that as a rule they are alternatives. But as a matter of fact, a choice has to be made between these two. One or the other must become the primary object to be aimed at and worked for. Parents who have bettered their position by financial success can afford, it may be, to aim at a rise in the social scale for their son. On the other hand, those who have found their income too narrow for the comfortable maintenance of their position in society may think it well to place their son in the way of bettering his position by success in a "paying" business, leaving the social question to take care of itself. The point we are insisting on is the wisdom of making a deliberate choice between the alternatives we have mentioned. It is well for every one to realise as early as possible that as a rule financial success and a rise in the social scale are incompatible as aims in the choice of a calling, although the former may ultimately lead to the latter.

The desire of bettering one's position from a social point of view is answerable for many irremediable blunders. It has ruined the once honourable position of a clerk, and lowered certain other professions in the estimation of the public on account of the excessive number of applicants for "genteel" employments. In thus straining after a higher social position, the substance is sacrificed for the shadow. In your desire to see your son take a good position in society, you throw on him responsibilities which for lack of means he is unable to bear. The dismal result may be summed up in two words—*straitened circumstances*. How many a poor lad has been devoted to a life of anxious care because his mother set her heart on seeing him a clergyman, or his uncle wanted a doctor in the family! Before coming to a decision then it is of the utmost importance that you should make perfectly sure that you are really considering your son's interest, and

not your own personal ambition. Success alone will justify you in the attempt to place your son on a higher rung of the social ladder; and success, remember, can only be reasonably expected when one or both of the following conditions are fulfilled: (1) The possession of sufficient means to enable your son to keep up to the right level while waiting for an adequate income from the practice of his profession; (2) The possession on his part of exceptional ability of the right kind for the particular profession he has adopted. Supposing you have decided which shall be the chief aim—financial success or social advancement, you have next to consider which career in particular is most likely to lead to the desired result. In working out this problem there are certain questions which deserve your close attention, on each of which we propose to offer a few suggestions.

INFLUENCE smooths and shortens the road to success. A parent's own personal or family influence may be of the greatest service when the boy has passed through his novitiate and is anxious to start business on his own account. A parent's influence is often confined to his own calling in life, and, therefore, such influence is lost in the case of a son who follows another calling. Too often another calling is chosen because it looks easier and less taxing. This is frequently a false assumption arising from the fact that we are naturally prone to exaggerate the difficulties of our own business or profession and to imagine that others are less irksome and exigent.

HEALTH is an important factor; with weakly children the most important. Country life, or at least, outdoor employment, is to be desired for the weakly. Occupations demanding both physical and mental energy should in such cases be especially avoided. The medical profession, for instance, is one in which bodily health and stamina are of vital moment, since it involves both mental and physical strain, much anxiety, long hours, and a life spent among unhealthy surroundings. The mortality of doctors is conspicuously high, and yet numbers of weakly young fellows are continually being thrust into the profession. The Civil Service may be found a suitable occupation for lads not naturally robust, as although the working hours are spent indoors, the work is regular and mostly easy. It does not involve strain and worry—a great consideration where health is concerned.

BENT AND APTITUDE. These form a most important element when they can be discovered, but the generality of boys display no decided bent whatever. Bent, like genius, is sure to assert itself when it exists. If in any case the bent is strong and unmistakable, and the requisite aptitude, as usually happens, accompanies it, then nothing but the strongest necessity would justify a parent in ignoring nature's signals. Such cases, however, are exceptional. Boys, indeed, are not slow in naming a pursuit they wish to engage in, but too often it is the outcome of some passing fancy arising from a conversation with some schoolfellow, whose opinion he regards as infallible. Many are the instances in which parents have to blame themselves in after years for having permitted such fancies to overrule their better judgment. Too late they perceive that the boy has been misled by imperfect knowledge and mere glamour. We all know, for instance, the charm a sailor's life has for a spirited boy, and how little he knows of what that life really means. It is scarcely necessary to add that in making his choice, the lad has never for one moment considered the *financial* prospect of the calling. No such mercenary ideas find a place in the ingenuous mind of youth. The wisest way is to hear sympathetically all the lad has to say, and then ascertain, as far as possible, what special qualifications he has for the proposed pursuit, not relying wholly on your own judgment, which is naturally biassed, but sharing your counsels with a friend or two to whom your son is well known. If on due reflection you come to the conclusion that your son is well-fitted for the career he has named, it still remains for you to take into careful consideration the question of health, financial prospects and resources, and other matters which he ignores, and then decide for him.

CAPITAL. The amount of capital at command is a factor that should never be left out of account. It is obvious that the wholesale and manufacturing businesses for the most part require large capital. To a less extent the same may be said of most of the Professions. The preliminary education and training entails considerable outlay, and the subsequent progress is exceedingly slow. The public, as a rule, look askance at the young professional, and the parent must not be surprised if he is called upon to supplement his income for no inconsiderable period. Retail trades are the best for small capitalists who desire to early become their own masters, but for those who are willing to act as subordinates, the wholesale and manufacturing businesses are open, as they offer many more or less remunerative positions as departmental managers, etc., and these may even lead up to partnerships. Putting aside the question of capital, there is much to be said in favour of placing a lad into the retail as a start. In this way he will learn more of the details of the business than if placed at once into a wholesale house, where he will be placed in a department and kept there, acquiring as a rule but little knowledge of the general trade.

In concluding these general remarks on Choosing a Calling we would warn parents against the danger of being influenced by what we may term *surface considerations*. A friend, for instance, has made a fortune in some given line of business, and it is at once assumed without further inquiry that this business is an exceptionally good one. Then there are certain *showy* trades which attract the unwary, such as the jeweller's and the bookseller's, but in reality such businesses are often the least remunerative.

After all we may say or do, much, very much, must depend upon the lad himself. It is not merely the calling, but rather what he makes of it that is the main consideration. Energy, perseverance, adaptability and tact usually ensure success; but without these qualities there is but little hope of any good result. Parents can do much, during his apprenticeship, to foster and develop these qualities and so awaken in him the true business instinct without which there is seldom any great financial success. This business instinct, it must be remembered, is required in professional as well as in commercial life.

NOTE. For much of the foregoing the writer is indebted to a book entitled "Choosing a Calling," published by the Educational Supply Association, 42 Holborn Viaduct—a book, in which the whole question is fully and ably discussed.

EDUCATION.

INTRODUCTORY.

There are two standards commonly applied to measure the value of education—how far it succeeds in developing the powers of the individual pupil, and how far it fits him for his particular work in life. But there is a close connection between the two; for the sake alike of each citizen and of the State it is necessary that the life's work of the individual should be what his particular faculties best fit him for. These depend partly on circumstances, such as rank or wealth, but much more on inborn powers of intellect and character, and personal tastes; and often it is difficult to estimate the nature of these powers until a child has reached the age of 14 or 15. Consequently up to that age education needs to be of a general character, while from that time it is often possible to begin specializing in whatever direction is selected; yet even then the danger of over-specializing is great, and it is well to bear in mind the old definition of a well-educated man, even though the advance of knowledge makes its realization increasingly impossible—"he knows something of everything, and everything of something." The purpose then of this article is to deal with the first half of the problem—how to obtain a good general education, that shall both discover and develop the particular powers of the individual. A *good* education must therefore be relative to the circumstances and faculties of the pupil. The other half of the problem is left to later treatment—how on this groundwork to superadd the special training necessary for work which demands highly developed skill or special technical training.

It is commonly supposed that England falls behind many nations (e.g., Scotland or Germany) in the educational advantages it can offer. To whatever extent this reproach may have been true, it is fast being wiped out by the enthusiastic efforts of many public bodies as well as private persons, and by a general eagerness to make our system of education comprehensive and elastic. At the present moment the most serious drawback lies in another direction—comparatively rarely do parents either know, or trouble to find out, what opportunities are within their children's reach; they are often accustomed to let education go on in a haphazard way until it is time for the child to leave school, when they begin to consider what is best for the future; and then often they discover that the future might have been made far different, if they had taken thought a year or two earlier for the child's career. It is the case now, as numerous examples in history show it to have always been so, that accidents of birth and wealth need bar no one from almost any position in the land, however exalted; and though the machinery which made this possible five or six centuries ago has been much altered, the possibility still remains and is perhaps greater that ever. There is in existence an "educational ladder" leading from the bottom of the social scale to the top. Every year some of the highest honours at the universities, and some of the most promising positions in the professions, are won by those who have started in the primary schools—as, for instance, the Senior Wrangler of 1902, who won his way entirely by scholarships from a Board School to a Secondary School, and thence again to Cambridge—and this is rather an example of what is practicable than an exception, as numerous instances would show. While on the one hand the various authorities are now more than ever alert to co-ordinate the different grades of schools, and to make the passage from one to another easier and simpler for those who have the ability to rise, yet their efforts must necessarily be comparatively fruitless, unless parents inform themselves, before it is too late, of the possibilities that have been created. To help them in this task, the present article proceeds to trace the steps of this ladder from the lowest to the highest.

ELEMENTARY OR PRIMARY SCHOOLS.

A brief review of the events of the last hundred years may help one most effectually to gain an understanding of the present condition of Elementary Education. In many respects, and not least in education, the 18th century witnessed a set-back in our national progress. In the previous two centuries numerous grammar-schools had been founded throughout the country, and facilities for a higher education were fairly within the reach of any who showed a marked aptitude; but various causes, religious, social and political, prevented a development of this state of things under the Georges, and probably opportunities of education for the poorer classes were less during the 18th century than at any time during the previous 500 years. The revival from this depression commenced with the 19th century in the work of Joseph Lancaster and the British and Foreign School Society among non-Churchmen, and of Andrew Bell and the National Society (developed from the Education Committee of the S.P.C.K.) among Churchmen. Town and village schools again sprang up to provide the rudiments of education; and gradually these voluntary efforts received first the help and then the direction of the State. So there grew up the system of Government grants in aid of education, administered according to the results of inspection by the Education Department. Hitherto the schools had been all voluntary and all distinctively denominational—Church, Wesleyan, British, Roman Catholic, &c. But voluntary effort proved inadequate for a task which was peculiarly national, and so Mr. W. E. Forster's Education Act of 1870 was passed, which created School Boards to build schools to supplement the existing Voluntary ones, these Board Schools being supported partly by Government grants and partly by the rates. In them the Cowper-Temple Clause forbade the teaching of any catechism or formulary distinctive of any religious denomination, while the Conscience Clause enabled parents to withdraw their children from religious instruction in any schools—Board or Voluntary—if they chose. In 1876 attendance at school was made compulsory, unless other provision was made for the child's education, while in 1891 it was made free. The education Act of 1902 (applied, with modifications, to London in 1903) replaced the School Boards, which had been elected *ad hoc*, i.e., specially for educational business, by the County, Borough, and Urban District Councils acting through committees. The Act placed under their control the secular education in all elementary schools, Voluntary and Board alike (now called Non-Provided and Provided respectively), giving to all these Council Schools an equal title to rate-aid. It also brought them into closer relation with the Secondary Schools which had been already largely helped and controlled by the Councils through their Technical Instruction Committees. Meanwhile the Board of Education Act of 1899 had amalgamated the Science and Art Department at South Kensington with the Education Department at Whitehall, the duty of this "Board of Education" being to ensure the educational efficiency of all Primary, Technical, Secondary, and Higher Schools in the country, while leaving their financial and particular administration to the local authorities already described.

These public elementary schools provide, on the whole, an excellent elementary education for children up to the age of

15. The quality of their work of course has varied greatly, according to the personnel of the staff, the buildings and appliances, the neighbourhood, &c. It has been by no means rare, and is growing commoner, for professional and business men of narrow means to begin their children's education at such schools; while there is developing an organized system of scholarships to enable the more promising pupils to pass up from the primary to the secondary schools—a change which is best made at the age of 11 or 12 at the latest, as that leaves time for the pupil to get acclimatized to his new surroundings, and to derive real benefit from them. The system of the London County Council's scholarships may be taken as an illustration of what is going on in most parts of the country.

JUNIOR COUNTY SCHOLARSHIPS. These scholarships are awarded each year to such as attain a certain standard of proficiency, and are between the ages of 11 and 12. They entitle each holder to free education in a secondary school for three years, and they are "subject to renewal for two more years provided that the scholar is satisfactory alike in conduct and attainments." Candidates not coming from public elementary schools must be the children of parents whose income is less than £160 a year; and an annual maintenance allowance of £6 for three years and £15 for two is attached to the scholarship held by the children of such parents. In the examination held for determining the winners of these scholarships an English composition exercise and a problem paper in arithmetic take a foremost place.

PROBATIONER SCHOLARSHIPS. These are open to boys and girls who are not less than 14 and not more than 16 years of age. They are confined to candidates who promise to become certificated teachers, and are offered on the results of an examination of an elementary character. These scholarships, which are tenable for two years, provide free education at a secondary school or pupil-teacher centre, and a maintenance grant of £15 a year.

INTERMEDIATE SCHOLARSHIPS. These scholarships (we are still speaking of the regulations of the London County Council) are offered to candidates between 15 and 17 years of age. There is no restriction as to the nature of the school at which candidates have been in attendance, but in no case must the parent's income exceed £400 a year. The scholarships are tenable to the end of the school year in which the scholar attains the age of 18. They provide free education at an approved secondary school or technical college and a maintenance grant ranging from £25 to £35 a year. About 100 such scholarships are awarded each year.

SENIOR SCHOLARSHIPS. These are intended to assist candidates to proceed to a university, technical college, or institution of university rank. They must, as a rule, be less than 22 years of age on 31st July in the year of the competition. The value of the scholarships will vary with the needs and qualifications of the candidate, but in no case will exceed £60 a year for maintenance and £30 a year for fees, &c. The scholarships are confined to candidates whose parents' annual income does not exceed £400. They are not awarded on the results of a competitive examination, but on past achievements, financial requirements, and the recommendations of the teachers under whom they have worked. About 50 of these scholarships are awarded each year.

OTHER SCHOLARSHIPS. Special attention should also be given by parents to the Christ's Hospital Scholarships, awarded to boys and girls on the recommendation of the London County Council. They are tenable for four years and are worth about £70 per annum. The examination for Junior County Scholarships is utilised for the purpose of awarding these scholarships. Candidates must be not less than 9 and not more than 12 years of age on the first day of the examination, and must have attended for three consecutive years at public elementary schools in London. Similar facilities to these are to be found in greater or less degree throughout the country, and it is hoped that one result of the Education Acts of 1902 and 1903 will be to bring primary and secondary education into still closer accord, and to make the passage from the one to the other much easier than it has been. The Gilchrist Education Trust also provides numerous scholarships of various grades from those of University rank downwards (offices at 1 Plowden Buildings, Temple, E.C.), while the London Parochial Charities (office at 3 Temple Gardens, E.C.), award scholarships in the Faculty of Economics in the University of London.

CONTINUATION SCHOOLS. However, in the case of a pupil who has not been able to win such a scholarship or for other reasons has been unable to go to a Secondary School, but has had to leave the Primary School at the age of 14 or 15, there is no reason why education should come entirely to a standstill. The various School Authorities have provided evening classes to form continuation schools, where for almost nominal fees the various subjects of the day school's curriculum can be further studied: book-keeping, drawing, manual work of all sorts, modern languages, &c., are thus provided for. The chief need at present is that pupils should be urged not to let their studies drop for a year or two, and then try to resume them—a disheartening task—but to continue them without any interval on leaving school. Here, too, the value of the various Polytechnic and similar institutions that are springing up in all large centres of population is great. The fees are within the reach of almost every one, and the subjects taught cater for nearly every taste or requirement; while the classes are held in the evening as well as in the day, to meet the necessities of those who have to earn their own living. To judge from the report of the Mosely Commission (consisting, with others, of members of British trades unions who in 1902 made a tour of the United States to inspect the conditions of life and labour there) our crying need at present is for a more general system of technical education. The children of the working classes in America often remain at school until the age of 17 or 18, without costing their parents anything. Similar provision is to some extent being made among ourselves, and would doubtless be made to a much more adequate extent, were there manifested among our workers more signs of the self-denial necessarily involved in utilising such advantages. Indeed this is the most hopeful direction in which to look for any permanent rise in the condition of the working-classes, or for any increase in our ability to maintain our ground against foreign competition. Here, therefore, we turn aside from the course of the "educational ladder" to speak of the provision made for technical education.

TECHNICAL EDUCATION.

This is a wide term, and may be taken to include such humble matters as manual training, wood work, metal work, &c., and to extend to the highly specialised work done in the laboratories for research, attached to some of our leading manufacturing businesses. The advanced work done by our Universities and University Colleges will be referred to when those bodies are described; here an outline will be given of the other efforts which are being made to render our technical instruction systematic and efficient. In addition to private benevolence, endowments, and special assistance from educational bodies, public funds have been largely and increasingly utilised for this purpose. The Technical Instruction Act of 1889 empowered County Councils to levy a rate of 1d. in the £, while the Education Act of 1902 allows the local educational authorities to spend on technical and secondary education such sums as they deem necessary (limited in the case of counties, but not of County boroughs, to the proceeds of a rate of 2d. in the £). Further, the Local Taxation (Customs and Excise) Act of 1890 directs an annual sum to be contributed from the Treasury to the Councils, which now amounts to about a million sterling. This money is expended partly on the provision of the Senior, Intermediate, and Junior Scholarships already described, and partly on the maintenance or subsidising of the various Polytechnics and Technical Institutes which are being created in many

districts, though some of these bodies receive no such help. Among them the pioneer was the *City and Guilds of London Institute*, Gresham College, E.C., in connection with which are the *Finsbury Technical College*, Leonard Street, E.C. (which is famous for its work in Chemistry and Electrical and Mechanical Engineering), and the *City and Guilds Central Technical College*, Exhibition Road, S.W.

TECHNICAL INSTITUTES. In the Metropolis the chief Technical Institutes maintained in whole or part by the County Council are the following :—

The Battersea Polytechnic, Battersea Park Road, S.W. ; the Borough Polytechnic, Borough Road, S.E. (including Herold's Institute for the Leather Trades, Drummond Road, Bermondsey, and the West Norwood Technical Institute) ; the City Polytechnic (including the Birkbeck College, Bream's Buildings, Chancery Lane, W.C. ; the City of London College, White Street, Moorfields, E.C. ; and the Northampton Institute, Clerkenwell, E.C.) ; the Northern Polytechnic, Holloway Road, N. ; the Regent Street Polytechnic, W. ; the South-Western Polytechnic, Manresa Road, Chelsea, S.W. ; the Woolwich Polytechnic ; the Brixton Technical Institute, Ferndale Road, S.W. ; the Hackney Institute at Hackney Downs, and at Cassland Road, N.E. ; the Paddington Technical Institute, Saltram Crescent, N.W. ; the Shoreditch Technical Institute, Pitfield Street, Hoxton, N. ; the Sir John Cass's Technical Institute, Aldgate, E.C., ; the Wandsworth Technical Institute, High Street, S.W. ; and the Westminster Technical Institute, Vincent Square, S.W, ; also the Blackheath (S.E.), Camden (N.), Clapham (S.W.), Clapton (N.E.), Hammersmith (W.), Lambeth (S.W.) and Putney (S.W.) Schools of Art ; the Camberwell School of Arts and Crafts, Peckham Road, S.E. ; the Central School of Arts and Crafts, Regent Street, W. ; the St. Bride Foundation Institute for Printing Trades, Bride Lane, E.C. ; the Carriage-Building School, Balderton Street, W. ; and the School of Photo-Engraving and Lithography, Bolt Court, Fleet Street, E.C. Connected with the City and Guilds of London Institute are Schools of Art at the Finsbury Technical College, and at 122 Kennington Park Road, S.E. ; and other Metropolitan Institutions are the Goldsmith's Institute, New Cross, S.E. (recently transferred from the Goldsmith's Company to the University of London) ; the People's Palace (East London Technical College), Mile End Road, E. ; the Morley Memorial College, Waterloo Road, S.E. ; the Working Men's College, Great Ormond Street, W.C. ; the Crystal Palace School of Practical Engineering ; the Electrical Training Institution, Faraday House, Charing Cross Road, W.C. ; the Bell Lane Trade and Technical School, Spitalfields, E. ; the City and Guilds Leather Trade School, Bethnal Green Road, N.E. ; the Trades Training School, Great Titchfield Street, W. ; the Aldenham Institute, Pancras Road, N.W. ; and the Westbourne Park Institute, Porchester Road, W.

Outside the metropolitan area, to give the more prominent instances, may be named the Technical Schools or Colleges at :—

Ashton under Lyne (the Heginbotham Technical School), Bath, Birmingham, Blackburn, Bolton, Bradford (with over 300 scholarships, conferring free tuition in the day or evening classes), Brighton, Bristol (the Merchant Venturers' College, at which the Bristol County Scholarships are tenable), Bury, Cambridge, Cardiff, Coventry, Darlington, Darwen, Derby, Dewsbury, Halifax, Huddersfield, Hull, Leicester, Lincoln, Liverpool, Longton, (the Sutherland Technical Institute), Manchester (with 15 entrance scholarships of £30 a year for three years ; the new buildings have cost £300,000), Northampton, Norwich, Oldham, Plymouth, Portsmouth, Rochdale, Stockport, Swansea, Swindon, Warrington, West Bromwich, West Ham, and Wolverhampton—nearly all of these being Municipal ; and in addition there are the Mechanics' Institute, Burnley ; the Keighley Institute ; the Leeds School of Science and Technology ; the Harris Institute, Preston ; the Royal Technical Institute, Salford ; the Gamble Institute, St. Helens ; the Rutherford College, Newcastle-on-Tyne ; and Technical Departments in various University Colleges, such as those at Nottingham, Reading, and Southampton. In Scotland may be mentioned the George Heriot's and Heriot-Watt Colleges at Edinburgh ; the Glasgow and West of Scotland Technical College at Glasgow ; and the Technical School at Paisley ; while in Ireland there is the Municipal Technical Institute at Belfast.

In nearly all these institutions, both Metropolitan and Provincial, there are Schools of Art as well as of the Applied Sciences, and the instruction is thoroughly practical throughout, and adapted to every grade of proficiency.

Attached to many of the Technical Institutes above mentioned are DAY SCHOOLS, where the pupils can commence their technical education at an early age, and have the use of appliances and apparatus mostly out of the reach of less favoured schools. Appended is a list of the more important of such schools in the Metropolis and elsewhere. The school age is mostly from 8 to 17 ; the fees per annum are added in the case of some of the London Schools, so as to be a guide for the rest ; and schools marked (‡) are for both boys and girls.

DAY SCHOOLS attached to Technical Institutes in the Metropolis :—

Battersea Polytechnic ‡, 13–18, £4 10s.
Beckenham Technical Institute, 12–17, 5 guineas.
Borough Polytechnic, Borough Road, Southwark, S.E.
Northern Polytechnic ‡, Holloway, N., 11–17, £7.
Paddington Technical Institute ‡. N.W.
Regent Street Polytechnic, W., 5 to 12 guineas.
South Western Polytechnic, Manresa Road, Chelsea, S.W.
Technical Institute ‡, Leyton, E., 12–17, £4 3s.
Tottenham Polytechnic, N., (Tottenham County School), 4½ guineas.
Walthamstow Technical Institute ‡, E., 13–17, £2 5s.
Wandsworth Technical Institute ‡, S.W., £3.
Woolwich Polytechnic ‡, £4 10s.

There are schools of a similar character at the following places :—

Accrington ‡, Banbury ‡, Bideford ‡, Birmingham, Blackburn, Bournemouth ‡, Bristol (the Boys' Day School connected with the Merchant Venturers' College), Chester, (School of Science), Claycross, Dover, Durham ‡ (Johnson Technical School), Glossop, Gravesend ‡, Handsworth, Heanor ‡, Huddersfield (Technical College), Hull, Keighley (Trade and Grammar School), King's Lynn, Leamington ‡, Lincoln, Longton ‡ (Staffordshire), Lowestoft, Mansfield ‡ (Brunt's Technical Institute), Nelson ‡ (Lancashire), Newcastle-on-Tyne ‡ (Rutherford College), Oxford ‡, Plymouth, Runcorn, Scarborough ‡, Southampton (Taunton's Trade School), Southend ‡, Stockport ‡, Swindon ‡, Trowbridge ‡, Ulverston ‡ (Victoria Institute), Walsall, West Lavington ‡ (Wiltshire : the Dauntsey Agricultural College), Winsford ‡ (Cheshire ; the Verdin Technical School), Wolverton ‡, and Worcester ‡ (Victoria Institute).

TRADE SCHOOLS. In London and other large towns trade schools have been established by means of which boys and girls leaving the Elementary School at the age of about 14, can receive a training which will fit them to take up work as apprentices or improvers in skilled trades. Employment in skilled trades is more likely to be regular and permanent than employment of an unskilled nature, and therefore parents and guardians would do well to take advantage of the facilities offered by these Trade Schools. These schools provide a course of technical instruction for two or three years involving principles of science applicable to particular trades or industries. The course of training for boys is intended to lead up to, rather than supersede, apprenticeship, and to provide instruction preparatory to workshop practice. The course of training for girls is intended to be an apprenticeship, and it is hoped that girls who have satisfactorily taken a course of two years' instruction will be able to obtain good positions at least as improvers. The general fee for admission to the London County Council Schools is 10s. a term. The schools are open five days a week, and almost one-half of that time is devoted to instruction under a skilled trade teacher, and the other half is given to the improvement of the general education of the pupil, with special reference to the requirements of his particular trade.

The Trade Schools already established by the L. C. C. are as follows :—

Central School of Arts and Crafts, Southampton Row, W.C. ; Trade School for girls at the Westminster Technical Institute, Vincent Square, S.W. ; Paddington Technical Institute, Saltram Crescent, W. ; Shoreditch Technical Institute, Pitfield Street, Hoxton, N. ; School of Building, Ferndale Road, Brixton, S.W.

The L. C. C. offers 138 scholarships to boys and 126 to girls, tenable at Trade Schools.

For particulars, see "Scholarshisp Handbook," to be obtained from P. S. King & Son, 2 Great Smith Street, Westminster, price 1d., post free 3d.

SCHOLARSHIPS IN SCIENCE AND TECHNOLOGY. Much has been done to stimulate the study of Pure and Applied Sciences by means of the Whitworth Scholarships and Exhibitions. Thirty of these exhibitions, value £50, and four scholarships of £125 a year, tenable for three years, are open for competition annually to all British subjects, and are awarded on the results of the May Examination of the Board of Education. The Board also offers annually to the most successful at these examinations six Royal Exhibitions, value £50, and twenty-two National Scholarships worth about £56 per annum each, for three years, with free admission to the Royal College of Science, South Kensington. The City and Guilds of London Institute award certificates and medals on the results of the annual examination held by the Institute in technical subjects. The L. C. C. also award annually about 250 Evening Exhibitions in Science and Technology. They are tenable for two years and are worth £5 a year.

SECONDARY EDUCATION.

The term "secondary" can be applied to all education lower than that of university rank and higher than that given in the primary schools. It really includes technical instruction, which as a matter of fact is given in greater or less degree in all our secondary schools; but it has been convenient for purposes of arrangement to deal separately with those institutions in which the curriculum has been mainly technical, i.e., chiefly concerned with the practical application to industries of the principles of science and art. The Board of Education has recently defined the term "Secondary School" as including "any Day or Boarding School which offers to each of its scholars, up to and beyond the age of 16, a general education, physical, mental, and moral, given through a complete graded course of instruction of wider scope and more advanced degree than that given in Elementary Schools"; and the Board specially emphasises the fact that "the instruction must be *general*, i.e., must be such as gives a reasonable degree of exercise and development to the whole of the faculties, and does not confine this development to a particular channel, whether that of pure and applied science, of literary and linguistic study, or of that kind of acquirement which is directed simply at fitting a boy or girl to enter business in a subordinate capacity with some previous knowledge of what he or she will be set to do." Considering, then, secondary education in its broader sense, the problem that lies before the Education Committee of the County and Borough Councils is to define more exactly and to organise more thoroughly this branch of education; to see that there is no overlapping among the various institutions engaged in it in any district, and no consequent waste of effort; to see that there is sufficient provision to meet the needs of each locality, and provision of such special character as is required by the peculiarities of that locality; and finally, to take care that such education shall be within the reach of all pupils who are qualified to benefit by it, without hindrance on the ground of inadequate means. This latter point has already received considerable attention, and hence has arisen the scheme of Junior Intermediate, and Senior Scholarships previously described under the heading of Primary Schools.

Leaving out of count the great public schools, which will be dealt with in a separate section, secondary education has been hitherto imparted in schools which may conveniently fall into four classes: Higher Elementary Schools, true Secondary Schools (including the day schools often attached to the Polytechnics and Technical Institutes), the older established Grammar Schools, and numerous Private Schools; but in many cases these institutions have been hampered by having to provide both primary and secondary instruction.

PRIVATE SCHOOLS. A parent needs to exercise considerable judgment in availing himself of their help. Very many of them are most efficient, and afford the great advantage of a wider freedom in the arrangement of timetables, and in the cultivation of particular studies, than is possible to a school under public control. The classes also in private schools are mostly smaller, and consequently each pupil can get a greater share of individual attention and help from his teacher, while it is easier for eccentricities of mind or character to be duly kept in check. Of course, as these schools receive no public financial aid, their fees are bound to be higher; but in many cases the extra expense in which the parent is involved is well worth incurring, for the sake of the benefits named. It is to be hoped, however, that some amount of public money may, under suitable restrictions, find its way to these schools, at least as an aid to their permanent equipment, apparatus, &c.

But care should be exercised in ascertaining that the private school selected is really a good one: the qualifications of the head teacher and staff (university degrees, teaching diplomas, &c.) should be considered; it should be seen that the number of qualified members of the staff is adequate to the variety of ages and attainments of the pupils; and that the provision of apparatus, class-rooms, laboratories, &c., is adequate. Above all, special enquiry should be made as to the results of the teaching, when submitted to the test of public examinations.

> For children between 14 and 16 years of age, the Oxford Junior Local Examination (held in July by a delegacy of examiners commissioned from the University), the Cambridge Junior Local Examination (held in December), or the examinations of the College of Preceptors (Bloomsbury Square, W.C.), or of the London and other Chambers of Commerce, afford a satisfactory means of estimating the quality of the instruction imparted. It should be seen that the results in these examinations are not due to the successes of a few brilliant pupils, but that a fair proportion (to hazard a figure, not less than 8 per cent.) of the scholars are entered for such examinations, with a fair average of success all round. And these examinations may specially be selected, as the syllabus of study on which they are based is wide, and makes ample provision for individual requirements, while the reputation of the examining bodies themselves is deservedly high. For pupils over 16 years of age, the Oxford Senior Local, the Cambridge Senior Local, the London University Matriculation, and, for those more advanced, the Oxford and Cambridge Higher Locals, or the various Civil Service Examinations, enable one to gauge the quality of the teaching given in a secondary school.

Of course, the scope and aims of private schools vary widely: some give an excellent preparation for the universities; others for more professional studies (law, medicine, agriculture, applied science, &c.); others for the Civil Service (first or second class clerkships, the Excise, Customs, Post Office, &c.), the Army or the Navy, &c., and these points must be taken into consideration in selecting such a school. For girls also they often give a thorough training in music, and here their value can be estimated by enquiry as to results in such examinations as are held by the Royal Academy of Music (Tenterden Street, Hanover Square, W.), the London College of Music (Great Marlborough Street, W.), Trinity College of Music (Mandeville Place, Manchester Square, W.), and for more advanced students the Royal College of Music (Kensington Gore), or the Guildhall School of Music (Victoria Embankment). Perhaps before long a satisfactory scheme may be drawn up for the registration and inspection of private schools by public authority, and then it will be quite easy for a parent to distinguish the efficient (and highly valuable) schools from those which are incompetent; while the efficiency of the former class will be still more promoted if a judicious measure of public financial aid and inspection can be extended to them.

HIGHER ELEMENTARY SCHOOLS. As to these schools, little need here be said. They give valuable help to promising pupils who can be kept at School until the age of fifteen or sixteen. They mostly begin with Standard VI., and work upwards, and they give opportunities for the children to use the last three or four years of their school-life to greater advantage than if they remained at the ordinary primary school. From these schools three courses often open out: (1) to take one of the lower Civil Service examinations, such as the Second Division Clerkships, the Customs, or the Excise;

(2) to win one of the Intermediate Scholarships already described, and thus be able to proceed to some Technical Institute; or (3) to go to work at the age of 15 or 16, qualified, not only to make a better start in life, but also to take full advantage of the opportunities given in the evening classes, either of Continuation Schools or of Polytechnics, Literary Institutes, &c., and so perhaps to proceed later to a more highly-skilled and remunerative employment.

GRAMMAR SCHOOLS. No hard and fast line can be drawn between the two remaining classes of schools engaged in the task of secondary education—the Grammar Schools, and the so-called Secondary Schools: the former are as a rule of more ancient foundation, and often are endowed (in some cases richly), while not infrequently they make provision at very moderate charges for boarders as well as for day-scholars; the latter usually depend for their maintenance on subsidies from the County Councils, and grants from the Board of Education. In both cases the fees are nearly always far below the total cost of the education given; while neither class can be wholly differentiated from the other, or from what are more generally called the "Public Schools."

The bulk of their pupils leave school about 17, but it is often possible for them to remain till 18, or in some cases 19, and then to proceed direct to the universities. There are numerous entrance scholarships, which cover the cost of tuition and books, and perhaps part of the cost of maintenance as well; and, not infrequently, there are leaving scholarships to help the holders to a university or university college, or to professional education at a medical school, &c. The curriculum in both classes of schools is much about the same. Some grammar schools still pay special attention to the classics, but they nearly always have a modern or commercial side, in which modern languages, science, and mathematics receive attention. There are few secondary schools, whether of ancient or modern foundation, that do not make provision for the study of Latin.

In the selection of such a school, a parent should be guided by the considerations already named for private schools. Further, it is well worth enquiring what provision there is of leaving scholarships or exhibitions; and finally, if any particular career in life is already in view for the pupil, it must be seen whether the school makes special provision for such requirements—whether, for instance, if it is intended to keep the pupil at school till 18 or 19, the upper forms of the school are so arranged as to afford suitable instruction for pupils of that age. Indeed, herein lies the real differentiation of such schools: it is not primarily a question of classical studies versus modern, for most schools include both elements though in varying proportions; it is rather a question of whether the top form in the school has an average age of about 16, or of about 18. If the former, the school will usually lead more suitably to ordinary business in "the City," to clerkships in banks, or to the lower branches of the Civil Service; but if the latter, it will probably give suitable preparation for the Universities and Professions, the Army, or the higher branches of the Civil Service.

THE PUBLIC SCHOOLS. The line of demarcation between what are generally known as "Public Schools" and the Secondary Schools, which have been already described, is an arbitrary and even a shifting one. In its narrowest sense the term is limited to the great foundations of Winchester College, founded 1387, Eton College (1440), Rugby School (1587), and Harrow School (1571). But the name is now popularly extended in England to such institutions as are modelled upon one or other of these historic foundations, and in some cases possess venerable traditions; always give a first-class education, leading on to the great Universities or to "the Services," and are officered by a staff composed of high University Graduates; and afford a common life for the pupils and all the means for the pursuit of athletics, which has become more and more a passion with the youth of England. It would be invidious to make any selection of schools that fully answer to this description, and to make the attempt would be futile. Really some hundred schools, whose head masters are members of the Head Masters' Conference, are entitled to be classed together as the "Public Schools" of the country. No country in the world has institutions comparable to the great Public Schools of Great Britain, either in the character of their aim, the singular blending of freedom and discipline in the daily life of the scholar, the attention given to the formation of lofty character, which seems to be acquired almost automatically, through the action of environment rather than of formal instruction; the survival of antique customs and terms, and above all the brilliant bead-roll of past and present pupils. With the exceptions natural to even the best of human institutions, the "public school man" bears a stamp moral, mental and physical which is easily recognised.

These schools are usually organized in three departments: (1) **Classical**, preparing for the universities, certain professions, and higher branches of the Civil Service; (2) **Modern**, preparing for the army, engineering, and the leading positions in commercial and industrial pursuits; and (3) **Junior**, for the younger boys who have not yet decided whether to enter the Classical or the Modern side. The usual age for admission, except to the Junior School, is twelve, with fifteen as the extreme limit; pupils remain as a rule till nineteen. Application for admission has often to be made three or four years or even longer beforehand. Entrance Scholarships and Exhibitions are in some cases fairly numerous, but they are rarely won except by boys who have attended a preparatory school practically connected with some public school, or who have worked with a private tutor, whose tuition has been especially directed towards this particular object. A list of well-known preparatory schools can be found in the *Public Schools Year Book* (Swan Sonnenschein & Co., 2s. 6d.), where also can be obtained full information about more than one hundred of the most important Public Schools.

THE UNIVERSITIES.

As the expansion of trade in the Middle Ages both led to, and was fostered by, the formation of Trade Guilds, so also the prosecution of learning by the Schoolmen both produced, and was developed by, the formation of Universities; for to these could Scholars and pupils alike resort, the former to benefit by the exchange of ideas, the latter by the communication of the best knowledge that the time afforded. It was in the 13th century that Oxford and Cambridge followed the example already set by Italy and France, and speedily won a commanding position in the world of letters; yet, throughout their history, the instruction they have been able to impart has been at least equalled in value by the mutual intercourse and social life they have been able to promote among their members. Within the Universities, the benevolence of "pious founders" left endowments of land or money, and often made provision of buildings as well, to enable scholars to devote their time exclusively to the pursuit of learning.

Thus arose the "colleges," whose members were all on "the foundation," the pecuniary help they received being their "scholarship," which now is only sufficient to pay some part of the expenses of a university career. All the members of such a college were "scholars," the senior ones being engaged in teaching, the junior in learning; the former were, as equals of one another, designated "fellows," but the old comradeship between seniors and juniors has left its mark in the name "students," which is still the title of the Fellows of Christ Church, Oxford. When the pupils (said to be in "statu pupillari") had satisfactorily completed their course of study, their proficiency was marked by the "degree" conferred on them, and they became "graduates"; till that was accomplished, they were "undergraduates."

After a time, the colleges began to admit to their lectures other persons, who paid for this privilege, but were not on the foundation. These people lived in private lodgings, or in "halls" specially made for their accommodation.

Received at first on sufferance, they now constitute the large majority of the junior members of either university, being called "commoners" at Oxford and "pensioners" at Cambridge. Here again a relic of the old days survives at Oxford, for at All Souls' College no commoners are admitted, its four undergraduate members being Bible-Clerks on the foundation.

At the present time the teachers appointed by the University are styled "professors," and they are largely assisted by "readers" or "lecturers"; but each College also provides teachers, who are called "tutors," and are mostly drawn from the number of the Fellows. However, the Colleges now mostly combine to divide the lecturing work among their tutors, and admit equally to these lectures all the students of the combining colleges, thus preventing overlapping or waste of power, and promoting efficiency. The existence of this historical collegiate system, side by side with the professorial university system, and the constitution of the university as a collection of corporate bodies or colleges, not as a mere aggregation of individuals, are the two marks which chiefly distinguish Oxford and Cambridge from the Scotch and German university systems; and hence arises the characteristic value of the former in their community of life and wider "humanity." Discipline over those "in statu pupillari" is maintained in public by the university officials—the Proctors or Procurators, with their assistants the Pro-Proctors, each attended while patrolling the streets by a couple of college servants or "bull-dogs"; within the college precincts, the conduct of the students is under the control of one of the tutors, often the Dean.

In later times the conferring degrees has frequently been viewed as the main duty of a University, whence came into existence a purely examining body such as the University of London was a few years ago; but the value of a University *training* is now more widely recognised, and numerous attempts are being made to put it within the reach of those who cannot afford the time or money necessary for three years' residence at Oxford or Cambridge. Thus London University now makes teaching as well as examining a part of its business; and several new universities are springing up, such as the University of Wales, by means of which Colleges already at work in various places have been brought into union, or at least co-ordination, with one another, so as to adopt a common course of study, and a common standard of examination. Yet this method of constitution of a university by affiliation of pre-existent colleges is, historically at least, distinct from the older method, whereby each collegiate body was created as a sort of nucleus within the pre-existent organism of the university.

The last thirty years have witnessed the triumph of women's demands for the advantages of a university training on an equal footing with men. The University of London was the first to admit women to degrees, and Durham has followed suit, with all the modern universities as well as the Scotch ones. Oxford and Cambridge still withhold the degree, but make ample provision for women to pursue the same courses of study as men (see the section on Women's Education and the remarks on each university).

The minimum length of a university course is usually three years (two at Durham), but five (combined with hospital practice) for medical degrees. Each year or session consists of three terms (nominally four at Oxford), commencing in October and ending in June. Each term lasts for about eight weeks at the older universities and about eleven weeks at the younger. Students have usually to be over 16 years of age, and in the case of women often over 21, unless they are residing with their parents or guardians. Before admission the candidate or his friends have mostly to forward certificates of birth and good character, and often there is an entrance examination to prove that the candidate is sufficiently advanced to be able to benefit by the prescribed course of study. If there is an examination for Matriculation, this usually serves as the entrance examination. Then for the degree there are usually two subsequent examinations—the Intermediate, to be taken about the end of the first year; and the Final, about the end of the third year. The regulations on these and other points differ widely at different colleges and universities, but the various authorities are always ready to afford every possible information, if communication is made with them, and the earlier this is done the better.

SCHOLARSHIPS AND EXHIBITIONS. University scholarships are numerous, and a fairly well-educated candidate has an excellent chance of obtaining one; but if he is not at a school where there is special preparation, he should make enquiries widely at various colleges, a year or two before he intends to commence residence, and so he will obtain capital advice and guidance. Most scholarships are now "open" to competition, and are awarded on the results of examination. Candidates usually must be under 19 years of age, and the scholarship is awarded either definitely for two or three years (as at the modern universities), or for two years renewable for another two in case of good conduct and satisfactory progress, and for a fifth year if the circumstances warrant it (as mostly at Oxford and Cambridge). Some scholarships are "close," i.e., confined to candidates of certain parentage, or from a particular school or district.

Exhibitions are similar to scholarships, but commonly are subject to no limit of age, and are given only to candidates in need of pecuniary assistance. Usually there is at a college a fund for awarding prizes and money help to deserving candidates. The tendency is to award scholarships and exhibitions rather to those who discover signs of promise, than to those who merely show some amount of acquired knowledge. Often a candidate for a classical scholarship has the opportunity of displaying his acquaintance with mathematics, and vice versa, while an English essay and a paper to show general intelligence and reading are commonly set. But here again, a note of enquiry addressed to one of the college tutors will elicit the fullest and most accurate information possible.

Besides university and college scholarships and exhibitions, most of the public schools have awards at their disposal to help their pupils to the universities; while public bodies, such as the London County Council, are increasingly devoting their funds to a system of Senior Scholarships, with a similar end in view. The City Companies also often offer Exhibitions to help students at Oxford or Cambridge. Usually there is no limit of age, but candidates must be necessitous, and mostly must have already commenced residence. The exhibitions are awarded sometimes by examination, sometimes on recommendation of the college authorities, often on the Company's nomination (after consideration of the candidate's pecuniary circumstances, qualifications, testimonials, &c.). Application should be made to the Clerk of the Company at the Company's Hall (the addresses can be seen in Whitaker's Almanack), who will forward the regulations and a form of petition. As there is a general ignorance about this valuable source of help, the following list has been drawn up which, we believe, is exhaustive. It must be remembered that the exhibitions are mostly granted for three or four years, and that the number given below is the total number, not the number vacant each year, unless specially so stated. The exhibitions are tenable at either university, unless it is said otherwise.

CARPENTERS, 1 of £35 at Cambridge, 2 † of £25; CORDWAINERS, 3 of £25; CLOTHWORKERS, 4 * † each year of £30 for non-Collegiate students (apply to the Censors at the University); DRAPERS, 1 of £30 at Oxford and Cambridge in rotation (Russell's); FISHMONGERS, of £40 at Oxford, Cambridge, King's and University Colleges, London; GOLDSMITHS, 16 † each year of £50 (after examination in Classics, Mathematics and Divinity); GROCERS, of £50; HABERDASHERS, 3 of £50 at Trinity, Cambridge (Jeston); 11 of £11 or under, at various prescribed Colleges; IRONMONGERS, 2 † of £15 (Lewin's); 1 * of £9 (Price's); 2 of £4 (Hallwood's); LEATHERSELLERS, 8 † of £25, for Non-Collegiate students (apply to the Censors); 4 * † of £40; 2 of £65; 2 † of £30; MERCERS, 4 * of £40 at Cambridge (Mrs. Robinson); 4 of £25 (Lady North); 1 * of £25 at Magdalen, Oxford (Mrs. Barrett); SALTERS, £10 a year paid into the

Scholarship Funds of Jesus College, Oxford, and S. John's College, Cambridge, and since the Royal Commission of 1877, entirely merged in those funds (apply to the Heads of these Colleges for general particulars as to Scholarships); SKINNERS, 4 * † of £21 (Sir James Lancaster); 1 of £21 at Cambridge (Lewis). There are also various Charities which give assistance to poor students, such as the Tancred's Charities: these, when vacant, are mostly advertised in the leading London Papers, and a list of some of them with much other very useful information, can be found in the section on Education in the Annual Charities Register and Digest (Longmans, Green & Co., 5s.).

* For students intending to take Holy Orders in the Church of England.

† Half of this number tenable at Oxford and half at Cambridge.

CHOICE OF A UNIVERSITY. On this topic little can be said to help the enquirer, because so much must be regulated by individual circumstances. Much depends on the personal character and intellectual tastes of the student. Oxford is pre-eminently devoted to classics and philosophy, Cambridge to mathematics and science, but by no means exclusively so in either case; whilst the modern universities are specially cultivating the application of science to industry and commerce. Theology is ably pursued, yet with characteristic differences, at Oxford, Cambridge, and Durham, (to take a few prominent examples), whilst medical schools exist in connection with nearly every university. Provision for the training of elementary and secondary teachers in the art of education is almost universal, as also is some scheme for post-graduate study and research. Broadly it may be put that there are three avenues which open to a degree: (1) to go through the course of a residential University, such as Oxford or Cambridge, which affords special advantages in the collegiate system and consequent corporate life, and in the prestige and historical associations connected with the place. This can be done with strict economy for £100 a year or even less, while an income of £120 to £150 will enable a careful student to reap full benefit from the life of the university; (2) to join one of the modern universities, thus receiving systematic tuition and training in the course of study adopted, but living an isolated life in lodgings. This can be done for as little as £50 a year, and the numerous clubs and societies in each university go far to supply the social influence which is so valuable; or (3) to map out one's course of study according to the requirements of such universities as London and Dublin, and by private study with help from any teaching bodies available to pass the prescribed examinations. This can be done by a diligent student endowed with good working powers by evening study alone, while in the day-time he is pursuing his ordinary occupation.

EXPENSE. As the question of finance is mostly a vital factor in the choice of a university, it may be well to tabulate the chief headings under which the expenses fall: (1) *fixed university charges*—examination and degree fees, dues, &c.; (2) *fixed college charges*—entrance fee, caution deposit (returnable in whole or part on taking the degree, or on removing one's name from the college books), tuition fees, degree fee, &c.; (3) *varying college charges*—rent of rooms (with rates and taxes), varying according to situation and accommodation; charge for necessary furniture, which is either taken over at a valuation from the college or from the outgoing tenant, or else is let out on hire by the college at a fixed charge; expenses of board, the account of which is given in the weekly "battels" or bills, and which vary according to the style of living and amount of entertaining done by the student. These varying college charges are escaped by students who live in lodgings, where the scale of expense is as varied as in London, some being quite cheap, some very expensive; (4) *optional expenses*—fees to servants (often a prescribed amount), and tips (which cannot be altogether omitted); subscriptions to college clubs, which are mostly amalgamated into one total, and sometimes included in the battels, but are always optional: outside subscriptions, such as to the Union Debating Society, &c; and (5) *personal expenses*—for clothes, books, travelling, and vacations (which amount to about half the year).

Often the cost of living during the vacations can be covered by work in tuition, which the college authorities can sometimes assist a diligent, well-qualified student to obtain. In selecting a college, of course many points will have to be considered; but as far as expense goes, the Unattached or Non-Collegiate system of Oxford, Cambridge or Durham presents the cheapest course. Colleges with a fixed inclusive charge, such as Keble College, Oxford, enable one to ascertain the cost beforehand more exactly; and as a rule the larger colleges give greater opportunities for economy than the smaller ones, as in them a poor man *need* do little entertaining, and can find a larger circle of men similarly situated to himself. The college authorities are always ready to give applicants an estimate of necessary expenditure, while they use their influence (in which they are supported by the feeling of the better men) to maintain a tradition for plain living, and to discourage unnecessary extravagance.

The following brief account of the Universities of the United Kingdom needs to be supplemented from the respective Calendars and other sources of information indicated; especially is this the case with regard to scholarships, exhibitions, and prizes, the regulations for which vary so widely in different cases; but an attempt has been made to sketch the characteristic features of each university, and to present an approximate estimate of the expenses necessarily involved. The universities of Oxford and Cambridge are more fully treated than the other universities, but much that is said of those two will also apply to the others, *mutatis mutandis*.

I. THE UNIVERSITY OF OXFORD.

The head of the University is the Chancellor, but as he is non-resident his duties are performed by the Vice-Chancellor, who is selected in rotation from the Heads of Colleges. The supreme governing body of the University is the *Hebdomadal Council*, which consists of the Chancellor, Vice-Chancellor, ex-Vice-Chancellor, Proctors, various Heads of Colleges, and others. The Masters of Arts and Doctors of Divinity, Medicine, and Civil Law form the *Convocation* of the University, which body has the power of either accepting or rejecting the proposals of the Hebdomadal Council; while the resident members of Convocation form the *Congregation* of the University, and this body can not only accept or reject, but also amend the proposals laid before it. The University has the privilege of sending two members to Parliament.

The ACADEMICAL YEAR commences in October, and consists of four terms—*Michaelmas* (October 10 to December 17); *Hilary* or *Lent* (January 14 to Saturday before Palm Sunday); *Easter* (Wednesday in Easter week to Friday before Whit Sunday); and *Trinity* or *Act* (Saturday before Whit Sunday to a day near the end of July). Forty-two days' residence is required in each of the former two terms, 21 days' in each of the latter two (or 48 days' in the two together), to enable them to be counted as completed TERMS OF RESIDENCE. The colleges, however, mostly require a minimum of eight weeks in each of the Michaelmas and Lent Terms, and of eight weeks in the Easter and Trinity Terms conjointly. Residence consists of sleeping within a radius of 1½ miles from Carfax, either within the College precincts, or in lodgings licensed by the University. TERMS OF STANDING are counted from the date of Matriculation, and are those during which one's name has been kept on the College books, irrespective of residence.

EXAMINATIONS. Membership of the University is obtained by Matriculation, for which there is not (as there is in most of the younger Universities) any examination, but which is granted on the recommendation of the College authorities (University fee, £3 10s.). A student desiring to enter on residence must therefore first select his College, and satisfy its requirements by passing either its entrance examination, or some examination recognised as an equivalent (e.g., Responsions). To attain the degree of Bachelor of Arts (B.A.), it is necessary to have kept twelve terms of residence, and to have passed three examinations:

(1) Responsions (familiarly known as "Smalls"); (2) the First Public Examination or Moderations (Pass or Honours); (3) the Second Public Examination (Pass or Honours), which is often called "Greats."

1. **Responsions** are held four times a year, and can be taken by any one who intends to enter the University. For those who wish to read for Honours, it is a great advantage to pass Responsions before matriculating, so as to have no hindrance to one's more serious studies; while for all it is very useful, as Responsions mostly excuses from the College Entrance Examination. The subjects are Arithmetic, Euclid or Algebra, and Greek and Latin Grammar and Translation, with Latin Prose Composition. Various public examinations are accepted as substitutes for Responsions. The fee is two guineas.

2. **The First Public Examination** (Moderations) falls into two parts—(1) Holy Scripture (two Gospels in Greek, and the subject matter of the Acts or some portion of the Old Testament), *or*, in case of religious objections, a Greek author; fee, £1: (2) Pass or Honours Moderations; fee, £2. The Pass Examination, like that in Holy Scripture, is held three times a year; its subjects are Greek, Latin, and Logic (or Algebra and Euclid). The Honours Examination is in either Classics or Mathematics: the former is held in March, and comprises the works of Homer, Virgil, Demosthenes, and Cicero, with at least three special authors selected by the candidate, and Prose and Verse Composition; the latter is held in June, and includes Algebra, Trigonometry, Geometry, Calculus and Mechanics. A candidate who takes honours in Mathematics is required to take an "additional subject" in Responsions, before proceeding to the degree examination.

3. **The Second Public Examination**, which is really the degree examination, can be taken in Pass subjects or Honours. The Pass Examination is held twice a year, at the close of the Michaelmas and Trinity Terms, in four groups, of which the candidate must take three (not necessarily at one time)—Group A, Classics; Group B, Modern Languages; Group C, Mathematics; Group D, Theology. The fee for each group is £1, and on receiving the degree of B.A., a fee of £7 10s. has to be paid to the University (in addition to the degree fees of the College).

4. **The Final Honours Examinations** are held in the Trinity Term, and are in eight Schools or subjects, of which the candidate takes one. He is not eligible till his 11th term of standing, nor after his 16th; but if, having already taken one school (which is sufficient for the degree), he elects to take a second, he is eligible for this till his 20th term of standing. The eight Schools are:—Literae Humaniores (Classics, Philosophy, and History—the Oxford ideal), known as "Lit. Hum."; Mathematics; Natural Science; Jurisprudence; Modern History; Theology; Oriental Studies; and English Language and Literature; while a ninth School, in modern European Languages, is just being established.

For all Pass Examinations there is simply drawn up a list of candidates who have passed without any division into classes; for the Honours Examinations, the names of successful candidates are arranged in three (sometimes four) classes, alphabetically in each class.

Undoubtedly the ideal course for an able student, who can afford the time and money, is to take Responsions before matriculating; enter on residence in October; take Honour Moderations in his second year (preferably Classics); and take one Final Honour School at the end of his fourth year (preferably Lit. Hum.), and another at the end of his fifth.

DEGREES. Besides the B.A., the University confers the following degrees:—Master of Arts (M.A.), for which every B.A. is eligible when in his 27th term of standing (fee to University, £12); Bachelor of Divinity (B.D.), for which candidates must have been M.A. for three years, be in Priest's Orders, and read two public dissertations; Doctor of Divinity (D.D.), for which candidates must have been B.D. for four years, and give three public expositions in Theology; Bachelor of Civil Law (B.C.L.), for which candidates must be of 27 terms' standing, and if not B.A. must have taken a similar course in which legal subjects predominate; Doctor of Civil Law (D.C.L.), for which candidates must have been B.C.L. for five years, and read a public dissertation on Civil Law, or submit a book written by them; Bachelor of Medicine (B.M.), for which candidates must be B.A., and pass two further examinations; a B.M. becomes *ipso facto* a Bachelor of Surgery (B.Ch.), and when of standing for the M.A., a Master of Surgery (M.Ch.); Doctor of Medicine (D.M), for which candidates must be B.M. of 39 terms' standing, and must read a public dissertation. For the degrees in Music residence is not necessary: bachelors (B.Mus.) have to pass a general preliminary examination, and three other examinations in Music; Doctors (D.Mus.), must have been B.Mus. for five years, and must pass two examinations. Also the degrees of Bachelor and Doctor of Letters (B. Litt., D. Litt.), and Bachelor and Doctor of Science (B. Sc., D. Sc.), are conferred for special post-graduate study and research, which can be conducted under the guidance of the University Professors, and under conditions which give the student every opportunity of specializing in whatever direction his tastes may lead him. The University fees for these degrees vary from £8 to £14 in the case of Bachelors (in addition to a fee of about £2 for each examination), and £25 to £40 for Doctors. The University also grants diplomas in Education, Geography, Public Health, and Economics.

HIGHER SCHOLARSHIPS AND PRIZES. The most famous University Scholarships and Prizes (granted to members of the University, not on entrance, as are the College Scholarships) are:—*In Classics*, the Hertford, Ireland and Craven Scholarships, and to those who are qualified for a degree, the Derby Scholarship and the Craven Fellowships; the Gaisford Prizes for Greek Prose and Verse; the Chancellor's Prizes for Latin Verse and Latin Essay: *in History*, the Stanhope, Lothian, and Arnold Prizes: *in Law*, the Vinerian Scholarship: *in Divinity*, the Denyer and Johnson Scholarships, the Ellerton, Hall, and Hall-Houghton Prizes: and *in English Verse*, the Newdigate Prize. There are also various prizes in Political Economy, Physical Science, Mathematics, Geography, Modern and Oriental Languages, &c.

FELLOWSHIPS. Each College can confer Fellowships on Bachelors of Arts whose academical careers have been distinguished. These are awarded mostly by open examination, and may be either "Prize" Fellowships, i.e., they involve no collegiate duties, or "Official" Fellowships, i.e., they are attached to tutorial, and sometimes to professorial, work. Their value is mostly at least £200 a year, with allowances and often rooms, and they are conferred for periods of from 7 to 15 years. Honorary Fellowships and Degrees (*honoris causâ*) are often conferred on distinguished persons.

The best books for further reference are the "Examination Statutes," (Clarendon Press, 1s.) which give all regulations as to the examinations; the "Oxford University Gazette," (Clarendon Press, 7s. 6d. per annum, post free), which is the official record of dates of university terms and examinations, approaching examinations for scholarships, lists of lectures by professors and tutors, &c.; the "Calendar" (ready in November each year, 5s.); but, practically, the most useful book for enquirers is the "Student's Handbook to the University of Oxford," (Clarendon Press, 2s. 6d., post free 2s. 9d.), which contains full information as to the various College and University Scholarships, Prizes, and Examinations, with ample details as to the course and expense of university life, and the different college regulations. Any questions that may still arise are best referred to the particular authority involved, by whom they are always courteously answered. The Examination Questions are published year by year, and can be obtained from any of the Oxford booksellers.

The COLLEGES OF OXFORD, with the dates of their foundation, are as follows (the numbers in brackets showing how many undergraduates were on the College books in 1903):—

1249, University (300); 1262, Balliol (244); 1264, Merton (129); 1314, Exeter (165); 1326, Oriel (136); 1340, Queen's (138); 1379, New (290); 1427, Lincoln (98); 1437, All Souls' (4); 1456, Magdalen (186); 1509, Brasenose (180); 1516, Corpus Christi (100); 1532, Christ Church

(298); **1554**, Trinity (192); 1555, St. John's (151); 1571, Jesus (134); 1612, Wadham (103); 1624, Pembroke (97); 1714, Worcester (92); 1874, Hertford (121); 1269, St. Edmund Hall (36); 1870, Keble (230); 1868, Non-Collegiate (207). There are also private Halls—Grindle's, Marcon's, Pope's, Hunter-Blair's, and Addis'—which are simply licensed lodgings for groups of undergraduates, under the supervision of a senior member of the University.

The halls for the residence and education of women at Oxford are Lady Margaret Hall, Somerville College, St. Hugh's Hall, and St. Hilda's Hall, (see section on Women's education). The colleges affiliated, in whole or in part, to the University are St. David's College, Lampeter; University College, Nottingham; University College, Sheffield; and Reading College.

EXPENSE. To revert to the question of expense. It will be seen from the above particulars that the *fixed university charges*, from Matriculation to the B.A. degree inclusive, amount to £16 2s. As to *fixed college charges* (1) the entrance fee is mostly between £3 and £5 (Lincoln, Magdalen, and Corpus Christi have no entrance fee); (2) the caution deposit varies from £20 to £30, but is often lower for scholars (All Souls', Magdalen, Corpus Christi, and St. John's charge their scholars nothing, whilst the caution deposit at St. Edmund Hall is as low as £14, and for Non-Collegiate students is merely £2); (3) tuition fees lie between £21 and £27 a year (St. Edmund Hall, 15 guineas, Non-Collegiate, 6 guineas, with £6 10s. 6d. for University and Delegacy dues); (4) the college fee on taking the B.A. degree is from £1 to £7 (none to Non-Collegiate).

Under the heading of *varying college charges*, the rent of furnished rooms, with establishment charges, sometimes reaches nearly £60 a year (as at Exeter), but is as low as £25 at Jesus. Comparisons here are fallacious, as items are sometimes included by one college under this head, and excluded by another. In some colleges a student is allowed to live in lodgings throughout his course; in others only during his last year. If he has rooms in college, he has to provide his own linen, china, glass, cutlery, and plate. Battels (including kitchen, buttery, coal, laundry, and all other necessary charges) can with economy be kept between £1 10s. and £2 a week.

Sometimes there is a prepayment system: e.g., at *Queen's*, entrance fee £5, caution deposit £10, tuition £7 10s. a term, and all other charges (except fuel, laundry, groceries, and beer) £30 a term; at *Keble*, entrance fee £5, no caution deposit, and a fixed annual charge for everything else (except laundry, lights, and beer) of £82, a third of which has to be paid in advance at the beginning of each term; and at *St. Edmund Hall* no entrance fee or caution deposit, an inclusive charge of £24 a term for everything else (except fuel, laundry, and lights), paid in advance.

Thus at the cheaper colleges an economical student can keep his total college account between £80 and £90, while a Non-Collegiate student may, if necessary, bring his whole expenses while in residence down to as little as £50 a year (including *fixed university charges*, but of course excluding *optional expenses* and *personal expenses*), but so low a figure is by no means desirable. Lodgings can be procured at from 10s. to 15s. a week, and board and lodging at from 25s. to 30s.

The usual value of a university scholarship is £80 a year, and it is generally granted for four or five years, as already explained. Mention may here be made of the Rhodes Scholarships, which are tenable at any College in the University of Oxford for three years: 20 each year of £300 for candidates from the colonies; 24 each year of £300 for candidates from the United States; and 5 each year of £250 for German candidates nominated by the German Emperor (apply to the Secretaries of the Rhodes Trust, 171 Temple Chambers, Temple Avenue, E.C.).

II. THE UNIVERSITY OF CAMBRIDGE.

At the head of the University are the Chancellor and Vice-Chancellor. The supreme governing body is the *Senate*, which, like Convocation at Oxford, consists of all Masters of Arts or Laws of the University, whether resident or non-resident. The decrees of the Senate are called "Graces," but no proposal can be made in the Senate which has not first received the approval of the *Council*—an executive committee of the Senate consisting of the Vice-Chancellor and sixteen members. These members are elected by the *Electoral Roll*, or resident members of the Senate, corresponding to Congregation at Oxford. The Senate has the privilege of sending two representatives to Parliament.

The ACADEMICAL YEAR commences in October, and consists of three terms—Michaelmas (October 1 to December 19); Lent (January 8 to about the end of March); and Easter (about middle of April to June 24). "Full Term," during which undergraduates have to be in residence, consists of a period of about 60 days within the limits fixed by the Council of the Senate. Residence is also permitted in the Long Vacation during July and August, but only to students who are reading for Honours or to Medical students. Such residence is chiefly valuable for those whose studies necessitate resort to the University libraries or laboratories, and does not count towards the nine terms of residence necessary for a degree. For Matriculation (university fee, £5) there is no examination; the college recommendation is sufficient guarantee of the candidate's fitness. Each college, as a rule, has its own entrance examination, from which it exempts those who have won scholarships, or passed some recognised public examination (such as the Senior Local), or the University "Previous Examination," which can be taken before entering on residence. Some colleges, such as St. John's, will accept a Certificate of Attainments signed by the Head Master or House Master of the school at which the candidate has been for the previous two years; others, such as Downing, Magdalene, Peterhouse, and St. Catharine's only require satisfactory evidence of the candidate's being able to pass the Previous within reasonable time. To attain the degree of B.A., it is necessary to have kept nine terms of residence (i.e., to live in College, or in licensed lodgings situated not more than 2½ miles from Great St. Mary's Church), and to pass the examinations here described. The letters indicating the degree a man has gained do not fully show its worth. That depends on the examinations which have been passed in order to gain it. Degrees accordingly are divisible into *Pass Degrees* and *Honours Degrees*.

FOR A PASS DEGREE the following Examinations must be successfully taken:—

1. **The Previous Examination**, known as the "Little Go," in two parts, held four times a year, in October, December, March and June; university fee, £1 5s. each part. This examination, as already stated, can be taken before a student enters on residence. PART I. *Classics*.—A Gospel in Greek, or instead a Greek author; a set author in Greek, and another in Latin, with grammar questions in each language chiefly arising out of the set authors; Latin Unprepared Translation, for which the use of a dictionary is permitted. PART II. *Mathematics*:—Paley's Evidences or Elementary Logic; Practical and Theoretical Geometry; Arithmetic; Elementary Algebra; English Essay, on a subject arising from a set English author, such as one of Shakespeare's plays. Various public examinations exempt from either or both parts or from portions of them. Candidates who pass are placed in four classes, the names in each class being arranged alphabetically.

2. **The General Examination** in two parts, held twice a year, in June and December; university fee, £1 each part. Candidates must be in at least their third term of residence. PART I:—A set author in Greek and another in Latin; Algebra, Elementary Statics and Trigonometry; Latin Prose Composition (optional). PART II: The Acts of the Apostles, in Greek; a selected portion of English History; an English essay, on a subject taken from the period of English History; Elementary Hydrostatics and Heat; a paper on some play of Shakespeare, or on some portion of Milton's works (optional). The class lists in each part are arranged as in each part of the Previous examination.

3. **Special Examinations:** university fee, £3. The candidate has to select one of the following subjects:—Chemistry, Classics, History, Law, Mathematics, Mechanics,

and Applied Science, Modern Languages, Physics, Political Economy, Theology (in each of these the examination is held twice a year, beginning at the end of November and at the end of May; each examination is in two parts), Botany, Geology, Logic, Physiology, Zoology (in each of these the examination is held once a year in the Easter Term, and is part of the corresponding Tripos examination; each examination is undivided into any parts), Agricultural Science (held twice a year like the former group, but undivided like the latter), and Music (held in December and May) in two parts. Candidates who pass are divided into three classes (only two in Music), the names in the first class being arranged in order of merit, and in the other classes alphabetically. If the examination is not in two parts, candidates must have entered on their eighth term of residence; if in two parts, they cannot take Part I. before their sixth term, nor Part II. before their ninth.

FOR AN HONOURS DEGREE students are required to keep their nine terms of residence consecutively, except in special cases of illness, &c. and to pass the following examinations:—

1. **The Previous Examination**, in Parts I. and II., as described above, with an extra examination in an additional subject—either Mechanics (with some Trigonometry), or French or German (including a set author); university fee for the additional subject, £1 5s.

2. **The Tripos Examination**, held once a year in the Easter Term. For their first Tripos examination candidates must usually be in not less than the sixth or more than the ninth term of residence; university fee, £3. The Triposes are eleven in number:—Mathematics (the most famous of the Cambridge faculties), Classics, Moral Sciences, Natural Sciences, Theology, Mechanical Sciences (each of these Triposes is in two parts, but Part I. alone qualifies for a degree; comparatively few students stay up a fourth year in order to take Part II.), Law, History, Economics (each in two parts, but Part I. alone does not qualify for the B.A.), Mediæval and Modern Languages (in six sections, two of which qualify for a degree), and Oriental Languages (undivided). The successful candidates in each Tripos are divided into three classes; the names in each class being arranged alphabetically. The Mathematical Tripos is now no exception to this arrangement, and the proud distinction of being *Senior Wrangler* will, therefore, be no longer attainable. The members of Class I., however, will still be called "Wranglers," of Class II. "Senior Optimes," and of Class III. "Junior Optimes." Students can take Part I. of the Tripos at the end of their second year, but if they do so, they must add a "Special Examination" (see above) in their third year to qualify for a degree, even in those Triposes in which Part I. alone (when taken at the end of the third year) would qualify for the B.A.

The best course is, for those who can afford the time and money, to take Part I. of the Tripos at the end of the third year, and then to remain in residence as Bachelors for a fourth year, reading either for Part II. of the same Tripos, or for Part I. or II. of some other Tripos (for which they are then eligible). The fee to the University on taking the B.A. degree is £7, in addition to the fee charged by each college.

For full information as to examinations, courses of study, expenses, scholarships, &c., the most convenient book is the "Student's Handbook to the University and Colleges of Cambridge," 3s.; the "University Reporter," (2s. 6d. a term) corresponds to the Oxford University Gazette; the "Compendium of University Regulations," (6d.) is full and official; the "Cambridge Pocket Diary," (1s.) is useful for dates; all these books are published by the University Press, and are also issued by C. J. Clay and Sons, Ave Maria Lane, London, whence also can be obtained sets of examination questions, at 2s. 6d. each; the 'Calendar" is published by Deighton, Bell, & Co., (7s. 6d.); while for those unacquainted with "Varsity Life," and its etiquette, a little book called the "Fresher's Don't" (Redin & Co., Trinity Street, Cambridge, 6d.), contains some valuable hints.

DEGREES. The other degrees of the University are M.A.; in Divinity, B.D. and D.D.; in Law, LL.B., LL.M. (Master of Law), and LL.D.; in Medicine, M.B., B.C. (Bachelor of Surgery), M.D. and M.C.; in Music, Mus. B., Mus. M. (Master of Music), and Mus. D.; and for advancement of Science or Learning, Sc. D. and Litt. D. For the M.A. a candidate must be in at least the nineteenth term from his matriculation, and pay a University fee of £12. For the B.D. a candidate must be in Priests' Orders, and must either "keep an Act" (i.e., read a Latin thesis before the Regius Professor of Divinity) or print a dissertation on some theological subject; a B.D. of five years' standing can proceed to the D.D. on printing another dissertation approved by the Regius Professor. In Law, students who obtained honours in both parts of the Law Tripos, or in one part of it and in another Tripos, are entitled to the LL.B., and if in the first class to the LL.M.; while they can submit any original work in Law as a qualification for the LL.D. In Medicine, three years' residence with five years' medical study (in or out of the University) is required for the B.C.; besides the Previous Examination, three medical examinations have to be passed, much of the ground of which is covered by the Natural Sciences Tripos; and if in addition the candidate "keeps an Act" before the Regius Professor of Physic, he is entitled to the M.B.; while after three more years, and after keeping another Act, he can proceed to the M.D.; and a B.C. can, after three years, become an M.C. In Music, nine terms of residence are required for the Bachelor's degree, while candidates have to pass the Previous Examination, and an examination in Music in two parts (held in the Easter Term); after two years a Mus. B. can proceed to the Mus. M. by passing a further examination in two parts; and the Mus. D. is conferred for distinction in musical composition on any graduate who submits three satisfactory original works. The research degrees of Sc. D. and Litt. D. are obtainable by Masters of Arts, Law, Surgery, or Music of five years' standing, who submit satisfactory original contributions to the advancement of science or learning. The fees for the various examinations are mostly two or three guineas; for C.M. and Mus. D., five guineas; for LL.D., ten guineas. Diplomas are also granted in Agriculture and in Public Health, to persons who are not members of the University (apply respectively to the Secretary to the Department of Agriculture, University Chemical Laboratory; and to the Secretary to the State Medicine Syndicate).

FELLOWSHIPS AND PRIZES. Fellowships are awarded much as at Oxford, while the chief University Scholarships and Prizes are:—the Chancellor's Gold Medals for Classics, English Verse, and English Law; the Browne Medals for Greek and Latin Epigrams and Greek and Latin Verse; the Craven, Browne, and Porson Scholarships for Classics; the Bell Scholarships for Classics, Mathematics, and Divinity combined; and the Norrisian, Burney, and Maitland Prizes in Divinity. But the blue riband of the University is the Senior Wranglership, won by the student who heads the first class of Part I. of the Mathematical Tripos. The Colleges of Cambridge, with the dates of their foundation, are as follows (the numbers in brackets shewing how many undergraduates were on the College books in 1903):—

1284, Peterhouse (55); 1326, Clare (186); 1347, Pembroke (236); 1348, Gonville and Caius (243); 1350, Trinity Hall (181); 1352, Corpus Christi (36); 1441, King's (149); 1448, Queen's (91); 1473, St. Catharine's (54); 1496, Jesus (107); 1505, Christ's (169); 1511, St. John's (231); 1519, Magdalene (42); 1546, Trinity (634); 1584, Emmanuel (186); 1596, Sidney Sussex (75); 1800, Downing (53); 1882, Selwyn, for members of the Church of England, (90); and 1869, Non-Collegiate (82). Also for women there are Girton and Newnham Colleges (see section on Women's Education). The Colleges affiliated to the University in whole or in part are the University College, Nottingham; St. David's College, Lampeter; Hartley University College, Southampton; and St. Edmund's College, Old Hall, Ware. Through these affiliated colleges, one year's residence and part or the whole of the previous Examination are often excused.

EXPENSE As to expenses, the *fixed university charges*, from Matriculation to the B.A. degree inclusive, amount

to about £19. In the *fixed college charges* the entrance fee is mostly £2, the caution deposit about £15 (some Colleges allow payment in advance as an alternative), the tuition fee between £18 and £24 a year, establishment charges about 10 guineas a year, the university capitation tax £2 a year, and the college degree fee mostly £5. In the *varying college charges*, rent of unfurnished rooms would rarely be as low as £10 a year, and might well reach £25 to £30, furniture being taken at a valuation from the preceding tenant. Furnished lodgings in the town are mostly between £6 and £15 a term, the tenant providing his own linen, cutlery, glass, and crockery.

A student reading for the Mathematical Tripos may need a private tutor, whose charge (for three hours a week) is mostly £9 a term, and 10 guineas in the Long Vacation, while a student making use of the university laboratories will have to pay about 20 guineas a year extra.

At *Emmanuel*, a hostel for 33 students has been started, with fixed charges of £75 to £85 a year to cover the fixed and varying college charges, providing meat-breakfast and lunch in the Common Room and dinner in the College Hall (no caution deposit: entrance fee £1 15s.). At *Selwyn*, as at Keble College, Oxford, the equivalent charge is £81 a year, all meals being taken in Hall. *Queen's* and *Downing* have a similar prepayment system.

Non-Collegiate students have been known to bring all their expenses down to about £12 a term (apart from the fixed university charges and dues to the Non-Collegiate Students' Board), thus making the three years' course cost from £165 to £180. The only satisfactory way to estimate expenses is to write to the College selected, whence all information may be gained, and also all particulars of College Scholarships, Sizarships, Exhibitions, &c. The Student's Handbook mentioned above also gives full details of these matters.

III. THE UNIVERSITY OF DURHAM.

It was founded by Act of Parliament in 1832, the Dean and Chapter devoting to it £3,000 a year of the Cathedral revenues. The Dean still is *ex officio* the Warden, and the chairs of Greek and Divinity are filled by two of the Canons. The governing body is the Senate (consisting of the various Professors, Principals, &c.), while Convocation is constituted much as at Oxford. Residence is compulsory, except for degrees in Law or Music, but the system of instruction is professorial, as in Germany, not tutorial, as at Oxford and Cambridge. Commissioners were appointed by Act of Parliament, 1908 to revise the constitution of the University.

The **Faculties** are Theology, Arts, Law, Medicine, Science, Music, and Letters. The **Degrees** in all these faculties, except Theology, are open to both sexes equally (since 1895). The degree of B.A. is obtainable after residence for two years, i.e., six terms of about eight weeks each, on passing two examinations (Pass or Honours). Residence for a seventh term, and a further examination, entitle to the Licentiate in Theology (L. Th.) The other degrees granted are M.A. (no examination), B.D. and D.D. (for which graduates of other universities are eligible), B.C.L., B.Litt., B.Mus., D.Mus., and after study at one of the Newcastle Colleges, M.B., M.D., B.S. (Surgery), M.S., B.Hy. (Hygiene), D.Hy. and B.Sc.

The **University Fees** are £2 on entrance, £7 per term for degree tuition, £1 10s. for each examination, and £3 fee—thus totalling £50 for the degree of B.A. There are numerous **Scholarships and Exhibitions** from £70 a year downwards, mostly without any age-limit: full particulars of these and other university matters can be found in the Calendar (Andrews Durham, 1s. 6d.), or the Student's Guide to the University of Durham (Andrews, Durham, 1s. 6d.). The constituent bodies of the University are as follows:—

(1) **University College**, founded in 1837, when the Hall and Chapel of the old Castle were devoted to the use of the College. Nearly all students reside within the College. There is a caution deposit of £15 (returnable on leaving), rent of furnished rooms is £6 a term, and College charges about seven guineas (including club subscriptions), while the cost of board varies between £10 and £18 a term. Apply to the Master, the Castle, Durham.

(2) **Bishop Hatfield's Hall** opened in 1846, to provide as economical a course as possible. All rooms are let furnished, and meals are taken in common. The caution deposit (returnable) is £15, and there is an inclusive charge of £15 16s. a term for Battels, which covers board, furnished rooms, club subscriptions, &c. Apply to the Principal.

(3) **St. Chad's Hall**, opened in 1904, to assist earnest Candidates for Holy Orders who have not sufficient means for the necessary training. Apply to th Principal.

(4) **St. John's Hall** opened in 1909, for Students in Theology and Arts. Apply to the Principal.

(5) Unattached or **Non-collegiate Students** first admitted in 1871. They must be at least 23 years old, and reside in lodgings approved by the Warden and Proctors. Cost of board and lodging varies from £25 to £50 a year. Apply to the Censor.

Thus the cost of the two years' course necessary for the B.A. degree is, in addition to £50 for University fees, between £150 and £190 at University College, £95 upwards at Hatfield Hall, and £50 upwards as Unattached.

In 1852 the Newcastle-upon-Tyne College of Medicine was affiliated to the University, and in 1892 students of what is now known as the Armstrong College, Newcastle, were permitted to proceed to the degree of B.A. as well as to the various science degrees, the courses of training being in the various branches of Engineering, Mining, Metallurgy, Naval Architecture, Agriculture, &c., as well as in Literature and the Fine Arts. Codrington College, Barbados, was affiliated in 1875, and Fourah Bay College, Sierra Leone, in 1876.

A Hostel for women has been opened at *Abbey House*. The fees are £16 a term for a study-bedroom, but £12 a term if study and bedroom are shared between two. There is a scholarship of £70 and an exhibition of £20. Apply to the Lady Principal.

IV. THE UNIVERSITY OF LONDON.

Until the early years of the 19th century, the only body in the Metropolis which approached university rank was Gresham College, Basinghall Street, named after Sir Thomas Gresham, who in 1548 founded seven Professorships (in Divinity, Music, &c.), to bring university advantages within reach of Londoners. In 1826 University College, Gower Street, was founded on an undenominational basis, with faculties in Arts, Laws, and Medicine. Three years later witnessed the incorporation of King's College, Strand, which was definitely associated with the Church of England. At last, in 1836, the University of London was constituted by Royal Charter, empowering the Senate to confer degrees on qualified pupils from these colleges or from any other colleges which might be affiliated. Most of the Nonconformist and Roman Catholic colleges were thus enrolled, but the University could exercise little control over its constituent elements, and consequently the supplemental Charter of 1858 abolished the affiliation of those colleges, and threw the University's examinations and degrees open to all persons equally, without regard to their place of study. In 1878 the door of the university was opened to women, who were placed on precisely the same footing with men for degrees, honours, etc.

Thus the four main features of the university were—the absence of religious tests, the conferring degrees after examination only, the entire equality of the sexes, and the dispensing with any requirements as to residence or tuition.

Its Re-Organisation. But it became clear that such a body could not meet the educational needs of the Metropolis, and after lengthy deliberation and two Royal Commissions (which reported in 1888 and 1894), the University was modified and re-organised, under the Act of 1898, so as to add to its functions of awarding degrees by examination the task of organising, improving, and extending higher education within the limits of its jurisdiction, that is, within a radius of 30 miles from the head-quarters of the University (which were moved in 1900 to the Imperial Institute Buildings, South Kensington).

Its students, therefore, fall into two classes: Internal, who are studying either in the Schools of the University or under teachers who have been appointed or recognised by it (see below); and External, i.e., any other persons who can satisfy the examiners' tests. There are different examinations for external and internal students, but an endeavour is made to maintain in the two classes the same standard of knowledge and attainments.

FACULTIES AND DEGREES. There are eight Faculties (1) Theology, (2) Arts, (3) Laws, (4) Music, (5) Medicine, (6) Science, (7) Engineering, (8) Economics and Political Science (including Commerce and Industry). The Degrees granted are: (1) Bachelor and Doctor of Divinity, (2) Bachelor and Master of Arts and Doctor of Literature, (3) Bachelor and Doctor of Laws, (4) Bachelor and Doctor of Music, (5) Bachelor and Doctor of Medicine, Bachelor and Master of Surgery, (6) Bachelor and Doctor of Science. These Science degrees are granted in the Faculty of Science, of Engineering, and of Economics. No student is admitted to the Final Examination for a First Degree in less than three years from Matriculation.

MATRICULATION. Examinations are held three times a year—in January, June, and September. No one is registered as a matriculated student unless he has passed one of these examinations, or some other examination recognised as equivalent by the University, and has reached the age of sixteen.

THE SCHOOLS OF THE UNIVERSITY are as follows:—

In all faculties but Theology, Medicine, and Music: University College, Gower Street. Scholarships, &c., awarded annually, worth about £2300. Many facilities offered for research work; capital libraries.

In all faculties but Music and Economics: King's College, Strand. Scholarships, &c., awarded annually, valued at £1500.

In Theology: Hackney College, Hampstead (Congregational); New College, Hampstead (Congregational); Regent's Park College (Baptist); Wesleyan College, Richmond; St. John's, Highbury (Church of England).

In Arts, Science, and Engineering: East London College, Mile End Road, E.

In Arts and Science: Royal Holloway College, Englefield Green, Surrey (for women); Bedford College, Baker Street, W. (for women).

In Arts: Westfield College, Hampstead (for Women).

In Science and Engineering: Imperial College of Science and Technology, South Kensington (see below). For Agriculture only, the South Eastern Agricultural College, Wye, Kent.

In Economics: London School of Economics, Clare Market, Kingsway, W.C.

In Medicine: the medical schools of London Hospitals.

An explanatory note may be needed with regard to one or two of these schools. What is now termed the Imperial College of Science and Technology is a group of associated colleges including (1) The Royal College of Science and Royal School of Mines, (2) The City and Guilds College (formerly Central Technical College of the City and Guilds of London Institute). The students of the Royal College of Science are chiefly selected by the Board of Education on results of examinations throughout the country, and these receive free tuition. Some are Science teachers doing advanced work, who receive a maintenance allowance in addition, and there are some private students who pay fees.

An important step was taken in 1907, towards the conversion of the University into a "Teaching University," namely, the incorporation of University College, Gower Street, with the university itself. The large sums required for freeing the buildings from debt and adapting them to the work of the University have been supplied chiefly by Sir Donald Currie and the Drapers' Company. The Goldsmiths' Company has also done much to promote the same object, by presenting to the University their Institute at New Cross, with the promise of £5000 a year for five years towards its maintenance.

SCHOLARSHIPS AND EXHIBITIONS. Apply to the University for a copy of the *Scholarships Pamphlet*, which contains particulars of the Scholarships and Exhibitions awarded by the University and other Institutions connected with it.

V. THE UNIVERSITY OF MANCHESTER.

It obtained its charter in 1880, under the name of the Victoria University, and from 1887 to 1903 had three constituent colleges:—Owens College, Manchester; University College, Liverpool; and Yorkshire College, Leeds. These three colleges are now independent universities, and are entirely separate, except that they have a common Matriculation Examination, in which they are joined by the University of Sheffield. This examination is held twice in each year, in July and in September, in the buildings of each of these four universities. All information as to fees, &c., may be obtained by application to the Secretary, Joint Matriculation Board, 24 Dover Street, Manchester.

This University grants degrees in Arts and Science. In Science are three degrees: B.Sc., M.Sc., and D.Sc. A Training College for Teachers forms an important department of the University. Arrangements are made for Three-year Certificate Students to take courses leading to an Arts or Science degree. There is a considerable number of scholarships, exhibitions and prizes open to competition. Full information may be obtained from the Prospectuses sent free on application to the Registrar.

Residence is provided at *Dalton Hall*, Victoria Park, for fifty-two students, at £90 a year; at *Hulme Hall*, Victoria Park for forty students, at £63 a year; and for women, at *Ashburne House*, Victoria Park, for 50 students from thirty-six to fifty guineas a year. *Victoria Church Hostel*, 266 Oxford Road, for women students of the University Training College, £15 a year exclusive of University fees.

VI. THE UNIVERSITY OF BIRMINGHAM.

It was founded in 1900, being developed from the Mason University College, founded in 1875. Every candidate for a degree has to pass the Matriculation Examination (fee £2) or one of its equivalents—the Oxford Responsions, Cambridge Previous, Senior Locals, &c.

The Matriculation Examination is held twice a year, in July and September. Candidates should apply to the Registrar for a form of entry. Copies of previous examination papers may be obtained from Cornish Bros., New Street, Birmingham, price 6d.

There are four **Faculties**—Science, Arts, Commerce, and Medicine, the fee at an Intermediate Examination being £2, and at a Final Examination £2 and an admission fee. The fees for each subject in the prescribed courses of study are usually three or four guineas a year. These can be covered in the case of medical students by a Composition Fee of £85 (providing for five years' work), while the total cost of a degree in medicine can be as little as £155, which includes matriculation, membership, and all examination fees, university tuition and hospital practice; but of course does not include board and lodging.

The **Faculty of Commerce** is a novel and characteristic departure. It includes such subjects as Modern Languages, Science applicable to Manufacture, History, and Banking, and the degree of B. Com. is conferred. There is a special school of Modern Languages, and schools of Engineering, Metallurgy, Mining, and Brewing, in which subjects University Diplomas are granted at a moderate cost, e.g., the Diploma in Malting and Brewing can be obtained at an inclusive cost of £87 for three years' work. A register of suitable lodgings is kept by the Secretary of the University.

There is the Queen's College Hall of residence for men students, and a Hall of residence for women students, situated near the new University Buildings.

VII. THE UNIVERSITY OF LIVERPOOL.

It was originally University College, Liverpool, which was founded in 1881, and became a constituent College of the Victoria University in 1884. By its Charter of 1903 it was created an independent university, with the power of incorporating the Liverpool Royal Institution (founded in 1821), and of affiliating any qualified educational bodies (such as the School of Architecture and Applied Art).

The faculties are Arts, Science, Engineering, Law and Medicine, and there are honours courses in each faculty. Degrees are granted also in Commerce, Architecture, and Dental Surgery. For the Arts degree (to take a particular example) a composition fee of £57 is charged, payable in three annual instalments of £19. Full details respecting fees, courses of study, fellowships, scholarships, and prizes are given in the Calendar, price 1s., post free 1s. 4d. Affiliated to the University are the Training Colleges at Edge Hill and Mount Pleasant, in which special courses for the first year of study for the ordinary B.A. degree are held. (See "Joint Matriculation Board" under *University of Manchester.*)

Residence is provided for men at the *Hall of Residence*, 44–46 Upper Parliament Street, at £1 5s. a week; and for women at the *University Hall*, Holly Road, Fairfield, from £35 a year; apply to the Warden in each case.

VIII. THE UNIVERSITY OF LEEDS.

It was originally the Yorkshire College, but was constituted an independent university by Royal Charter, 1904. The university grants degrees in Arts, Science, Medicine, Commerce, and Law; and in accordance with its original intention specialises in the application of science to industries: civil, mechanical, electrical, mining and sanitary engineering; dyeing, cloth and leather manufactures; analytical chemistry; agriculture and commerce. There is also a capital Medical School, forming the oldest department of the University, having been founded in 1831. (See "Joint Matriculation Board" under *University of Manchester.*)

The fees can be ascertained from the calendar according to the subjects taken up. Residence is provided at *Lyddon Hall*, Virginia Road, at sixty guineas a year, in arts and science (thirty three-weeks); sixty-nine guineas in medicine (thirty-eight weeks); apply to the Warden.

IX. THE UNIVERSITY OF SHEFFIELD.

This university was constituted in 1905, and is a development of the University College, which was formed in 1897 by the amalgamation of the Sheffield School of Medicine (founded 1828), the Firth College (founded 1879), and the Sheffield Technical School (founded 1886). It holds both day and evening courses of lectures. The faculties are Arts, Science, Applied Science and Medicine. Besides the ordinary degrees in Arts, Science and Medicine, it grants degrees in Engineering (B. Eng., M. Eng., D. Eng.) and Metallurgy (B. Met., M. Met., D. Met.). The courses and degrees in Medicine are open to men and women alike. (See "Joint Matriculation Board" under *University of Manchester.* Refer also to p. 758.)

X. THE UNIVERSITY OF WALES.

It was founded by Royal Charter in 1893, and comprises the three constituent colleges named below. It grants degrees in Arts, Science, Laws, Music and Theology. Every candidate for the B.A., B.Sc., LL.B., or B. Mus. degree must have studied in one of the constituent colleges not less than three years; and for the B.D. degree not less than three years in a Theological College approved by the University Court, after obtaining a degree in Arts or Science. The fee for each ordinary examination for one of these degrees is 15s., and for the Honours Examination, 30s. Candidates for Matriculation must have attained the age of sixteen and passed the Matriculation Examination of the University or its equivalent. It is held twice a year, in June and September, at Aberystwyth, Bangor and Cardiff simultaneously. Fee for the examination is £2. For full information apply for Prospectus to one of the College Registrars. Students must reside either in the Halls or in licensed lodgings. The cost of living in lodgings for a year (i.e,. a session of three terms of about eleven weeks each) and tuition can (it is said) be kept between £30 and £40.

(1) University College, **Aberystwith**, founded in 1871. Registration fee, £1 a year: tuition fee, £10 a year, with extra charges for laboratory work. There is a Men's Hostel at 1 Marine Terrace, which charges from 39 to 51 guineas a year for board and residence (apply to the Warden). And for women the Alexandra Hall charges from 27 to 51 guineas (apply to the Warden).

(2) University College, **Bangor**, founded in 1884. Registration fee, a guinea a year; annual tuition fee, £10 in Arts, 14 guineas in Science. There is a Hall of Residence for women at *University Hall*, accommodating 50 students, opened by Miss Helen Gladstone in 1897, to which has been added an adjoining mansion, Caederwen, for 20 students. The cost of board and residence is 30 to 40 guineas a year; apply to the Lady Superintendent.

(3) University College, **Cardiff**, founded in 1882. Matriculation fee, one guinea; annual tuition fee, £10 in Arts, 13 guineas in Science. *Aberdare Hall* is a woman's hostel, charging from £32 to £42 10s. a year for board and residence, and offering scholarships of from £10 to £35; apply to the Lady Principal.

XI. VARIOUS COLLEGES OF UNIVERSITY RANK.

To make the account of the English Universities more complete, a few words must be added about certain Colleges whose work is definitely of a university standard, although they are not incorporated with any university.

1. St. David's College, **Lampeter**, is affiliated to Oxford and Cambridge Universities and has by charter the power of conferring the degrees of B.A. and B.D. It is open to students of any nationality and enforces no religious test. Whilst its primary object is to train candidates for ordination its courses of study are very far from being confined to theology. See *Lampeter*, p. 736.

2. The Hartley University College, **Southampton**, is open equally to men and women. It is affiliated to Oxford and Cambridge Universities (thus excusing a year's residence for students who have attended the College for three sessions, and passed certain examinations), and it has a Hall of Residence for Women students. Its courses of instruction are specially arranged with regard to the degrees of Oxford, Cambridge, London, and St. Andrews Universities; while it gives especial attention to Civil and Mechanical Engineering, and provides for the requirements of Medical and Dental Students. The fees per session are 12 guineas (15 guineas where use of the laboratories is needed), while the fees per term are 5 and 6 guineas respectively.

3. University College, Bristol, works on similar lines, and besides ordinary university courses, affords systematic instruction in the branches of Applied Science that are more nearly connected with the Arts and Manufactures; in Engineering, Surveying, &c., and in Medical studies. The fees for the university courses are about 13 guineas a session, while the three years' courses in Engineering cost from 75 to 80 guineas, and the Medical course, including Hospital practice, 133 guineas. There are numerous scholarships and exhibitions, particulars of which can be obtained from the prospectus (post free). A Day Training College for Teachers (men and women) forms part of the Institution.

4. Other institutions of the same rank and working on similar lines, are Reading College; the Royal Albert Memorial College, Exeter; the Rutherford College, Newcastle-on-Tyne; and the University College, Nottingham.

XII. THE SCOTTISH UNIVERSITIES.

The four universities of St. Andrews, Glasgow, Aberdeen, and Edinburgh can be treated together, as they are organised on the same basis and have much in common. Their present constitution is due to the arrangements of the Scottish University Commissioners in 1889, and their system is entirely professorial. No distinction is made as to creed, and women are admitted to degrees equally with men. The students have to attend the university courses of lectures in the subjects which they offer for examination, and must make their own arrangements for board and lodging.

The Faculties are five in number: Arts, Science, Medicine, Law, and Divinity, while Edinburgh adds Music. The Scottish Universities do not grant the degree of B.A. at all, but the M.A. is obtainable after the three years' course of study detailed below.

The other degrees are B. Sc., D. Sc., (in pure Science, Engineering, or Agriculture); D. Litt. and D. Phil.; B.D. (obtainable after a special course of study subsequent to the M.A. course); the usual Bachelor's and Doctor's degrees in Law, Medicine, and (at Edinburgh) Music; and the honorary degrees of LL.D. and D.D.; diplomas are also granted in Education, Public Health, &c.

The **Academical Year** consists of two sessions—the winter session of about 20 weeks, from October to March (with about 3 weeks' vacation at Christmas); and the summer session of about 10 weeks, from May to early in July. The curriculum for the M.A. and B.Sc. degrees extends over three winter sessions, or two winter and three summer sessions. Seven subjects have to be taken out of a long list, and a full course of lectures attended in each (100 lectures usually qualify in each course). Or if honours are sought, one of the nine honours groups has to be selected, consisting of two subjects (e.g., the Classics group comprises Greek and Latin); and, in addition, three of the ordinary or pass subjects must be offered by the candidate. Before admission to the University course each student has to pass the Preliminary Examination (fee, 10s. 6d.) which is held under the direction of a Joint Board of Examiners for the four universities twice in each year.

The *Fees* are moderate; there is a "Matriculation" fee of a guinea a year for three years; the fee for the course of lectures in each of seven subjects is mostly four guineas, but reaches as much as seven guineas in some of the science subjects requiring laboratory practice. The fees for the university examinations are for the M.A. degree five guineas and for the B.Sc. degree six guineas, with a registration fee in each case of one guinea. Thus the total cost of the M.A. or B.Sc. degree (besides board and lodgings) is from £39 to £50.

The **Carnegie Trust** was founded in 1901, by Mr. Andrew Carnegie, to improve and extend scientific study and research, and to enable the youth of Scotland, however poor, to have the advantages of a university training. One-half of its income is devoted chiefly to giving research scholarships in science, medicine, economics, history, or modern languages; the other half to paying the fees in whole or part of necessitous Scotch students who are over 16 years of age: any balance accruing may be devoted to paying for evening lectures or university extension work. (Offices of the Trust, 14 Hanover Street, Edinburgh.)

The Calendars may be obtained from the various universities for between 3s. and 4s., and these contain a list of bursaries, scholarships, and prizes, with the examination regulations and questions, &c. St. Andrews and Edinburgh unite in sending a member to Parliament, as do Glasgow and Aberdeen. A few details are appended about each university.

(1) **St. Andrews,** founded in 1411, and consisting of *St. Salvator's College* (founded 1450) and *St. Leonard's* (1512), which were united in 1747; *St. Mary's College* (1537); and *University College, Dundee* (1880), which was affiliated to the University in 1897. The Janitor at the United College keeps a list of suitable lodgings, and a common dining table is maintained, which provides dinners on five days a week at a charge of £3 15s. for the winter session, and half that amount for the summer session. At the *University Hall for Women* (opened in 1896), board and residence can be obtained for the winter session at a cost of between £30 and £50, and for the summer session at half that figure.

(2) **Glasgow,** founded in 1451. New buildings costing half a million, opened 1870. The lectures for women in Arts and Medicine are given chiefly at *Queen Margaret College*, to which is attached a *Hall of Residence*, which provides board and lodging for between £30 and £40 a year.

(3) **Aberdeen,** founded in 1494 by William Elphinstone, Bishop of Aberdeen, and consisting of *St. Mary's College* (founded 1505), later called King's, where now the Arts and Divinity courses are held; and *Marischal College* (1593), now used for Science, Law, and Medicine. The two colleges were united in 1858.

(4) **Edinburgh,** founded in 1582, and justly renowned for its medical faculty, to accommodate which splendid new buildings were opened in 1884.

Great importance is attached to collegiate residence. Accordingly, provision has been made at University Hall, for male students, consisting of five separate residences, the chief of which is Ramsay Lodge, 3, 4, 5 and 6 Ramsay Gardens. The rent of rooms, which are fully furnished, varies from 10s. to 18s. per week. Board averages about 13s. per week. The Halls for women are Masson Hall and Muir Hall, 31 and 12 George Square.

XIII. THE UNIVERSITY OF DUBLIN,

including only Trinity College, Dublin, was founded in 1591. In 1873 the previously existing restrictions which confined its advantages to members of the Church of Ireland were removed. And now all classes, examinations and degrees in Arts, Law, Medicine, are open to women. Its governing body consists of the Provost, Senior Fellows, Junior Fellows, and Professors, the two latter classes forming the lecturing body, while all take part in the examining work. Residence is optional, except for the four professional schools of Divinity, Law, Medicine, and Engineering, which require attendance at lectures as well as success in examinations.

Academical Year. There are three terms in each year—Michaelmas, Hilary, and Trinity. The academic year begins in November, with the lectures of the Michaelmas term; then comes Hilary term, commencing with examinations on the Michaelmas lectures; then Trinity term, commencing with examinations on the Hilary lectures; and finally, the November examinations on the Trinity term lectures, and these close the year. In the first and second years students are called Junior and Senior Freshmen respectively; in the third and fourth years, Junior and Senior Sophisters.

Fees. The entrance fee for Pensioners (ordinary students) is £15. Then follow eight half-yearly fees of eight guineas each, payable in April and October, and the degree fee is £1, thus making a total of £83 4s. Sizars (i.e., poor scholars) pay an entrance fee of £1 1s. 3d. and receive free tuition and commons. While the ordinary course is for four years, it is possible to reduce this period to two years and eight months; but the fees will be the same.

Degrees. To gain the degree of B.A., a student must pass the Matriculation or Entrance Examination, and "keep" eight terms. Terms can be kept either by attending with diligence the lectures, five-sixths of the maximum number being generally required; or by passing the examination held in the term. The former method involves residence, but, if it is adopted, at least two of the terminal examinations must be taken, viz., those of the final Freshman's term (November at end of second year), and of the final Sophister's term (the degree examination). The latter method does not require residence, but the student has to travel to Dublin to take the examinations. A student wishing to take honours may substitute one of the Moderatorships (the ten honours courses) for the ordinary degree examination. Moderators placed in the first class (Senior Moderators), receive gold medals; those in the second class (Junior Moderators), silver medals. The degrees granted by the University are the ordinary ones, and, in addition, those of Bachelor and Master in Obstetric Science (B.A.O.; M.A.O.), and in Civil Engineering (B.A.I.; M.A.I.).

From students residing within the University there is required a caution deposit of from £8 to £30; the rent of rooms varies from £4 to £18 a year (mostly providing accommodation for two students), and commons cost from 10s. a week. The Calendar is published by Hodges, Figgis, & Co., Grafton Street, Dublin (price 2s.), and contains all information about sizarships, scholarships, honours, prizes, etc., with the examination papers. The University elects two members of parliament.

XIV. THE ROYAL UNIVERSITY OF IRELAND.

This university is soon to be replaced by two new universities, having their headquarters at Dublin and Belfast respectively. But until the constitution of these two universities has been formulated, the Royal University will continue to fulfil its functions as an examining body. Its degrees are open to any candidates whatever, but its examinees come mostly from the three Queen's Colleges of Belfast, Cork and Galway.

No residence is required by the University, except that medical studies must have been pursued at one of the institutions recognised by the Senate. There are no religious tests, and women are admitted to degrees equally with men.

For the B.A. degree, four examinations have to be passed: the Matriculation, First and Second University, and the Degree examinations, a year at least elapsing between each; the fee for each examination is £1, and on taking the degree £2. At the expiration of another year, a B.A. can take the M.A. examination (examination fee and degree fee, each £2). The usual degrees in Law, Science, and Medicine are granted, with Bachelor and Master in Surgery (B.Ch.; M.Ch.), Obstetrics (B.A.O.; M.A.O.), and Engineering (B.E.; M.E.). Diplomas are issued in Engineering, Sanitary Science, Mental Diseases, Agriculture, and Teaching.

At each of the Queen's Colleges named above, the matriculation fee is 10s., the class fee for each course is from £2 to £5 per session, and the instruction is intended to prepare for the B.A., M.A., D.Litt., and D.Sc. degrees of the Royal University, or of London University. There are faculties in Arts, Law, and Medicine, and a school of Engineering.

The Irish Universities Act, 1908, provides for the establishment of two new universities, to be called respectively the Queen's University of Belfast and the National University of Ireland. Within two years from the passing of this Act it is to come into operation. And on the day appointed for the commencement of the two new universities the Royal University of Ireland will cease to exist. The National University of Ireland will have as its constituent colleges, Queen's College, Cork, Queen's College, Galway, and a new College having its seat at Dublin. This university is intended mainly for Roman Catholic Students. The new university at Belfast will be the present Queen's College, Belfast, with a new constitution, and will, no doubt, in time include other colleges. This university will be attended mainly by the Presbyterians and other Protestants of Ireland. At the same time it is enacted that "No test whatever of religious belief shall be imposed on any person as a condition of his becoming or continuing to be a professor, lecturer, fellow, scholar, exhibitioner, graduate or student of, or of his holding any office or emolument or exercising any privilege in, either of the two new universities, or any constituent college." At present the Roman Catholic colleges in Ireland of university rank are those at Maynooth, University College, (St. Stephen's Green, Dublin), Blackrock, Carlow, Clonliffe, and the Medical School at Cecilia Street, Dublin.

XV. UNIVERSITY EXTENSION SCHEMES.

A few words must be added on the work known as "University Extension." In the section on primary schools it was urged that the exigencies of earning a livelihood need debar few, if any, from continuing their education and carrying on at least one branch of study in which their school days had taught them to take pleasure. While the agencies already described are doing much to help on such a good object, the universities also are endeavouring to spread their light and learning beyond the areas immediately ministered to by them.

Competent lecturers are engaged to visit busy centres of population, and there give courses of lectures on the subjects with which they are specially qualified to deal. These lectures are mostly delivered in the evening, and the fees charged are so moderate as to be within the reach of all. The subjects are most varied, including not only science in all its developments, but also literature and history, both ancient and modern. All that goes to the making of a good citizen falls within their ken: economics, ethics, and political philosophy, as well as subjects of more general interest, such as geography and commerce.

The lectures are intended to help and stimulate the ordinary intelligent enquirer, while also giving direction and aid to the more professed student. Books are recommended for reading, courses of study mapped out, and examinations held (conferring university certificates) for those who choose to submit to the ordeal; while everything possible is done to make the lectures generally interesting and useful, by employing abundant illustrations, and by making excursions under skilled guidance, either to the various museums or on geological, botanical, and other such quests. After each formal lecture is held a class in which the subject of the lecture is treated in greater detail, and the students have an opportunity of receiving help in their individual difficulties. Paper work is set and corrected, each week, for those who wish to avail themselves of such an aid to methodical study. At the end of July is held the "Summer Meeting," mostly at Oxford or Cambridge, when students are able to spend a week or a fortnight under the same conditions as mark the every-day life of the more highly-favoured undergraduate.

The four universities specially engaged in this work are those of Oxford, Cambridge, London, and Manchester (the Victoria University).

The arrangements for their courses of lectures, and much other interesting matter, may be found in the *University Extension Journal* (Archibald Constable & Co., 2 Whitehall Gardens, S.W.), which is published, under the official sanction of the Universities, nine times a year—on the first of each month from October to May, and in July (3d. each number; 2s. 6d. per annum post free).

The universities of Wales and of St. Andrews are also taking up this work; and thus university teaching and a part of its culture are being placed within the reach of nearly every one. The system of Local Examinations of schools by the Universities has already been mentioned in the section of this article dealing with Secondary Schools.

THE EDUCATION OF WOMEN.

The last half century has reason to be proud of the progress it has made in the efficiency and extension of women's education. In men's education, as has already been mentioned, we of the present day are not far in advance of the 15th century. The educational ladder which we have been reconstructing was then in existence, and was quite as adequate to the needs of its own times as anything we have produced is to the needs of ours. But in women's education the case is far different. Except for what Egyptian and Babylonian records may have to tell us of ages that are at present called pre-historic, it may safely be asserted that never before has there been an age so advanced as our own in all that pertains to woman's intellectual development. And this triumph is the more complete, in that it is so universally welcomed; while opinions are still much divided on the thorny question of "woman's rights," educated men are as unanimous as any woman could be in cordially appreciating the aims, efforts and successes of the pioneers in the field of woman's education. And this must needs be the case, if true education has the double function that has been alluded to—the developing the best that there is in each individual and the qualifying as perfectly as possible each individual for life's work and station. It was only when this double function was ignored, and women's qualities and necessities were supposed to be identical with men's, that some of the early attempts at women's education became unfruitful. But now that the novelty has worn off, and that experience has accumulated to correct the mistakes inevitably associated with any movement in its early days, all are happily agreed on the value of the movement itself. The mother who has been well educated can be a far wiser guide and truer friend in early life to her children than the one who has not; while outside the limits of the home, most provinces of social activity are alike being penetrated and purified by women, whose native capacities have been developed under a generous education. As doctors and surgeons, as missionaries and teachers, as poor-law guardians and members of school-committees, in the work of sanitary inspection and in

factory reform, in City firms and in West End businesses, and in countless other callings, women have demonstrated conclusively that they can supply to the common life a healthy and beneficial influence that must otherwise be lost to the community, and do a work for the lack of which all alike would suffer. Here we propose to give a slight sketch of the system and organisation at present in existence for women's education, and specially to dwell on the facilities offered for overcoming any difficulties in the matter of expense.

Primary Education of Girls. In Primary Education little need be added to what has been already said. It should be specially noted that the system of Junior Scholarships (from primary schools to secondary); Intermediate Scholarships (for maintenance at secondary schools); and Senior Scholarships (leading to university education), which has been inaugurated by the London and other County Councils, makes provision for girls as well as boys. Similarly, the Christ's Hospital Scholarships (see p. 717) are open to both sexes. But while boys may quite well start in the primary schools, and thence proceed higher, many people qualified to judge consider that it is better for girls, when possible, to start at once in the secondary school; for, in the case of the latter, there is more danger of their losing delicacy of manner from the indiscriminate associations which are often to be found in a primary school.

Technical Education of Girls. Nor need more than a few words be said as to Technical Education of girls. As a rule, the various institutions give instruction to both sexes (as shewn by the mark ‡ in the list, p. 718). In the schools attached to the technical institutes, the system is what is known sometimes as dual, sometimes as mixed. Strictly, in dual schools, the classes are duplicated, for boys and girls respectively, though under a single organisation; while in mixed schools, boys and girls work together for most subjects in one class (though the girls have a separate entrance and playground). The latter is the system of many of the Welsh Intermediate or County Schools, although the name "dual" is commonly applied to it. It presents some advantages, but there is a considerable body of expert opinion which judges that on the whole girls lose more than they gain by it. These technical schools not only provide for those girls who wish it, the elements of a scientific education such as the boys receive, but also give special attention to Dressmaking and Dresscutting, Cookery, Hygiene, and the various other branches of Domestic Economy. They also provide excellent opportunities for the study of Art in the simpler forms of drawing, and in the more elaborate work of designing and colouring; while Physical Culture is an object of great care, and is attended with marked success, as any one can testify who has witnessed the gymnastic displays such as are given (to take a prominent example) by the South-Western Polytechnic, Chelsea. The commanding advantage of these schools is that, as they have been but recently built, they are planned on the best and most commodious models, and they contain an abundance of apparatus fitted for every age or need, such as is beyond the means of many other schools to provide.

Secondary Education of Girls. In Secondary Education, considered apart from the Higher-Elementary and Technical Schools, the conditions for girls are somewhat different from those for boys. Private Schools cover a far larger part of the ground, while publicly endowed schools, corresponding to the old Grammar Schools, are proportionally fewer; and till recent years the attempts to provide Public Schools for girls, similar to either the Major or Minor Public Schools for boys, have been lamentably few. As regards private schools, what has been said in the case of boys' schools applies with even more force to girls'. Some of them are excellent, while others are unsatisfactory and even absolutely inefficient. It is by no means always the case that the more expensive schools are superior to the less expensive; but there is great need of a common standard which shall be generally applied, so as to enable a parent justly to discriminate between the excellent, the good, and the inferior schools. A slight step in this direction has been attempted in the requirements for teachers' registration in schools desirous of gaining the recognition of the Board of Education; but this direct testimony to the teachers' capabilities is only an indirect evidence of a school's merits. And just because the day when private schools for girls can be dispensed with is far distant (even if such a thing were desirable), it is the more necessary that some means should be devised for according public recognition to such schools as deserve it—a matter which should not be impossible if public funds (for the provision of apparatus, etc.) were granted to those private schools which submit to official inspection and receive favourable reports. Meanwhile, the parent is left to exercise private judgment, and it is hoped that the tests which have been mentioned in connection with private schools for boys may be of considerable assistance in this task. (See p. 719).

In most of our towns of any size, there are now public schools for girls which have been established by public bodies, and are able to offer a good education at a moderate cost. The Girls' Public Day School Trust, and the Church Schools Company, have made valuable provision in many cases; so that, except in rural districts or the smaller towns, a parent ought to be able to procure a good education for girls at a fee of between 9 and 16 guineas per annum. A full list of these schools may be seen in the *Englishwoman's Year-Book* (A. & C. Black). Here can only be appended the names and particulars of a few of these schools, which may be taken as a fair sample of the rest:—

The High Schools of the Girls' Public Day School Trust (21 Queen Anne's Gate, Westminster, S.W.) are intended to provide for girls an education as thorough as that received by boys in public schools of the highest class. At each school there is a preparatory department for children under seven; at schools marked (*) there are licensed boarding-houses: the entrance fee is one guinea, and the annual fees for pupils under ten, 10 guineas; for those remaining after ten and for pupils entering between ten and thirteen £13 10s.; entering after thirteen £16 10s.

The Metropolitan Schools are at *Blackheath** (Wemyss Road), *Bromley* (Elmfield Road), *Clapham* (High School,* and Modern School, both on Clapham Common), *Dulwich** (Thurlow Park Road), *Highbury and Islington* (Canonbury Place), *Kensington** (St. Alban's Road), *Notting Hill and Bayswater* (Norland Square), *Paddington and Maida Vale* (Elgin Avenue), *East Putney* (Carlton Road and Upper Richmond Road), *South Hampstead* (Maresfield Gardens), *Streatham Hill and Brixton** (Wavertree Road) *Sydenham** (West Hill), and *Wimbledon** (Mansel Road). Outside the Metropolis there are schools at *Bath**, *Birkenhead*, *Brighton and Hove**, *Carlisle*, *Croydon*,* *Dover**, *Gateshead*, *Ipswich**, *Liverpool**, *East Liverpool*, *Newcastle*, *Norwich**, *Nottingham*, *Oxford**, *Portsmouth**, *Sheffield**, *Shrewsbury**, *Sutton**, *Tunbridge Wells**, and *York*.

The Church Schools Company (Church House, Dean's Yard, Westminster) charges annual fees of from 9 to 15 guineas, and has schools at—

*Kensington Park**, *Streatham*, and *Stroud Green* in the Metropolis; and, in the provinces, at *Derby*, *Durham*,* *Gloucester*, *Guildford*, *Hull*, *Kendal*, *Leicester*, *Newcastle-on-Tyne*, *Northampton*, *Reading*, *Reigate*, *Richmond* (Surrey), *St. Albans**, *Sunderland*, *Surbiton*, *Wigan*, *Yarmouth*, and *York*. To most of these schools Kindergarten Departments are attached (fees, 6 guineas.)

Various Anglican and Roman Catholic Sisterhoods supply an excellent education for girls. Mostly there is no question of creed for admission, nor is religious instruction given where not desired; still the religious atmosphere must have its influence, although no bias may be intentionally imparted. On the other hand, the sisters are mostly ladies who devote their lives to the work of education, and the example of their culture and refinement is of incalculable value. Among the Anglicans there are—

In the Metropolis *St. Mary's College*, *Paddington*, and the schools of the Sisters of the Church (Randolph Gardens, Kilburn), at *Harlesden*, *Kentish Town*, *Kilburn*, and *West Hampstead*; while outside the Metropolis, the most famous are at *Clewer** (Sisterhood of St. John the Baptist, fees from 60 guineas in St. Stephen's College, and from 30 guineas in St. Stephen's High School), *Ditchingham**

(Sisterhood of All Hallows), *East Grinstead** (St. Margaret's Convent: St. Agnes' School, £55 to £60; St. Margaret's College, £36), and *Wantage** (Sisterhood of St. Mary the Virgin · St. Mary's School, 40 to 60 guineas; St. Katharine's School, £30). Here should be named the Woodard School for Girls at *St. Anne's*, Abbots Bromley (£50–£60); *St. Mary's*, Abbots Bromley (24 guineas); *St. Michael's*, Bangor (£60–£75); and *St. Winifred's*, Bangor (£35–£42).

Among other Metropolitan Secondary Schools are:—

Aske's (the Haberdashers'), at New Cross and at West Acton; the *Burlington Middle*, Boyle Street, W.; *Catford and Lewisham; Central Foundation*, Spital Square, E.C.; *Coborn*, Bow; *Grey Coat Hospital*, Westminster; *Holborn Estate*, Houghton Street, Strand; *James Allen's*, Dulwich; *Lady Holles'*, Hackney; *Mary Datchelor*, The Grove, Camberwell; *Owen's*, Islington; *Roan*, Greenwich; *St. Martin's*, Charing Cross Road; and *St. Saviour's and St. Olave's*, New Kent Road.

Of schools which more strictly correspond to Public Schools for boys, there are in the Metropolis:—

*Baker Street High School** (tuition 18 to 24 guineas; board, 70 to 85 guineas extra); *Brondesbury and Kilburn High School; City of London School for Girls*, Victoria Embankment; *Graham Street High School**, Eaton Square (tuition 12 to 24 guineas; board, £80 to £90 extra); *North London Collegiate School**, (Frances Mary Buss Schools) at *Sandall Road*, N.W. (founded 1850), entrance fee £1, tuition 17 to 21 guineas, board 51 to 70 guineas extra, with £350 a year in Scholarships, besides one leaving scholarship each year of £50 for three years; and at *Prince of Wales' Road**, (the Camden School), tuition 9 guineas; *Queen's College School*, Harley Street, W., (12 to 24 guineas); and *St. Paul's*, Brook Green, Hammersmith.

Other schools for girls, which merit the title of Public Schools, and receive boarders, are at:—

Bath (High School), *Berkhamsted, Birkenhead, Blackburn, Blackheath, Bolton, Bournemouth*, (High School, and Collegiate School), *Bradford, Brighton* (Roedean), *Caversham* (Queen Anne's), *Chester* (Queen's School), *Clifton, Colwyn Bay, Ealing* (Princess Helena College), *Edgbaston, Exeter, Grimsby, Ipswich, Leamington, Leeds, Preston, Salisbury* (Godolphin), *Warwick* (King's High School), *Winchester*, and *Worcester*. Also there should be named the Clergy Daughters' Schools at *Bristol* (fees £23 on nomination); *Casterton*, Kirkby Lonsdale, Westmoreland (£28); and *Warrington* (£20 to £45); *Milton Mount College*, Gravesend, (for daughters of Congregational ministers, fees from £15); *St. Margaret's School*, Twickenham (for Naval and Marine Officers' daughters, fees £50), and *Lansdown Royal School*, Bath (for Army Officers' daughters, fees £45); *St. Margaret's*, Bushey, Hertfordshire, (Clergy Orphan Corporation); *St. Catherine's*, Bramley; and *St. Anne's*, Redhill.

Special mention should be made of two Colleges for Ladies which approach the rank of University institutions. **Queen's College**, Harley Street, London, W. (founded in 1848), gives a course of instruction for pupils up to the age of 20 or even higher, with the intention, not of preparing for particular examinations, but of fitting pupils for their duties in society: the fees are 30 guineas a year for tuition, with extras; boarders, 75 guineas extra. **The Cheltenham Ladies' College** (established in 1854), gives special preparation for the B.A. and B.Sc. courses of London University, as well as for the Cambridge Higher Local and other advanced examinations, and has highly successful departments in Art, Music, and Gymnastics. The fees are from 12 to 24 guineas per annum, while there are 14 boarding houses whose fees vary from 54 to 93 guineas. Each year there is awarded at least one scholarship of from £25 to £45 at St. Hilda's Hall, Oxford, which was originally founded to receive the elder students of Cheltenham College.

UNIVERSITY EDUCATION OF WOMEN

With regard to the Universities, woman's triumph has been almost complete. At Oxford and Cambridge women are examined and classed, but degrees are not yet granted them. In 1896 the proposal was made at both universities to admit women to the B.A., and was reported on favourably by the committees appointed to consider the question. But in each case the committee's recommendation was subsequently rejected by the governing body of the university—not on the ground of the lack of merit, but simply from unwillingness to admit women to a share in the government of the university, a result which, though disowned by the advocates of the change, would seem naturally to follow; for the B.A. would lead to the M.A., and the latter might be expected to confer membership of the Convocation or Senate. Still, it is undoubtedly a great hardship that women students at Oxford or Cambridge should be placed at a disadvantage with their rivals at other universities, who are entitled to place after their names the letters to mark the degrees which they have won. At the other universities, women are admitted to degrees on the same terms as men, almost without exception: London University led the way in 1878; the Scotch Universities followed suit in 1892; and Durham in 1895. Trinity College, Dublin, also, has admitted women on the same terms as men. The younger universities have throughout their existence received women; and the University of Wales admits them to a share in the management of the university, exactly as it does men. In most cases special provision has been made for the residence of women students, while usually they have shared the tuition offered to the men (though sometimes they have their own lectures, as at Cambridge and Glasgow). Account has already been given of the hostels for residence under the headings of Durham University, Manchester University, Liverpool University, the University of Wales, St. Andrews University, Glasgow University, and Edinburgh University. It has also been explained that women are admitted equally with men to lectures, though no special provision is made for their residence, at certain Colleges of university rank. It now only remains to give fuller details as to points connected with Oxford, Cambridge, London, and St. Andrews Universities.

UNIVERSITY OF OXFORD. Women are admitted to all the examinations (pass and honours), for B.A., B.Mus., and D.Mus., while a special honours examination is held for them in modern languages, but they are not admitted to examinations in medicine. They are under the guidance of the Council of the Association for the Education of Women (offices at the Clarendon Buildings, Broad Street, Oxford), and are admitted to nearly all the university or college lectures. There are four halls of residence: Lady Margaret Hall, Somerville College, St. Hugh's Hall, and St. Hilda's Hall. Other women students form the Society of Oxford Home-Students (like the Non-Collegiate men students), and live with parents or guardians, or arrangements are made for their accommodation in private families (for about 2 guineas a week), or in lodgings (from about 25s. a week).

1. **Lady Margaret Hall** was founded in 1879 according to the principles of the Church of England, but with full religious liberty for the members of other denominations. Each student has a bed-sitting room, while meals are served in common in the dining-hall. The Hall charges are £75 per annum inclusive (except personal expenses, and the tuition fees of about £28 per annum, which have to be paid to the Association), but two students sharing the same room pay £65 each. Some scholarships of from £25 to £50 for three years are awarded in March each year. For admission, students must have passed Responsions, or one of its equivalents, and as a rule they must intend to read for honours.

2. **Somerville College** was founded in 1879 as Somerville Hall, and took its present name in 1894. The buildings consist of the Old Hall (with three cottages adjacent) and the West Buildings, thus accommodating 72 students. The inclusive college charges are from £87 to £93 per annum, including tuition; each student has a separate bed-sitting room. The College is undenominational, and students are expected to read for honours. Responsions, or some equivalent examination (which includes two languages and mathematics), is taken for entrance; in April each year there are offered two scholarships of £50, and one or more exhibitions of £25 upwards, all for three years.

3. St. Hugh's Hall was founded in 1886, and is intended for members of the Church of England. The inclusive charge (with tuition) is £90 per annum, though a few small rooms can be had at £80, and students sharing the same room pay £70 each. There is accommodation for 34 students, but there is no staff of lecturers separate from those of the Women's Association. In March each year a scholarship of £25 for three years is awarded, and every third year one of £40 open, and one of £40 for pupils from the Worcester High School.

4. St. Hilda's Hall was founded in 1893 by Miss Dorothea Beale, on the same religious basis as Lady Margaret Hall. The fees are £75 per annum, with tuition extra; there are several scholarships and exhibitions, some of which are limited to pupils from the Cheltenham Ladies' College.

UNIVERSITY OF CAMBRIDGE. Women are admitted to the various Tripos or Honours Examinations (with their preliminary, the Previous Examination); to the Examination in Spoken French and Spoken German (after passing the Mediæval and Modern Languages Tripos); and to the Examinations for Bachelor and Master of Music, but not to any other examination for a Pass degree. There are two residential colleges for women—Girton and Newnham.

1. Girton College was founded at Hitchin in 1869, and moved to its present site in 1873. There is accommodation for 150 students beside the members of the staff. Lectures are given in the College for the Mathematical and Classical Tripos, Part I.; for the other Triposes, the students usually attend the university and inter-collegiate lectures. The inclusive charges (tuition as well) are 100 guineas per annum. The entrance examination is held in London each December, and at Girton in March and June (the London Matriculation, Oxford or Cambridge Senior Local, etc., are recognised as substitutes). Numerous scholarships are offered at entrance (one of £88 for four years, one of £45 for three years, two of £40 for three years, as well as three Clothworkers' Company's Exhibitions of £60 for three years, two Drapers' Company's Scholarships of £50 for three years, two Goldsmiths' Company's Exhibitions of £60 and £40 for three years, and one Skinners' Company's Scholarship of £50 for three years), while there are also awarded various studentships and prizes at different times in the three years' course.

2. Newnham College was founded in 1871, and consists of three Halls (Sidgwick Hall, Clough Hall, and Old Hall), each under a Vice-Principal, which communicate with one another, and each contains between 50 and 60 students. Out-students are also admitted, either those who live with their parents or guardians in Cambridge, or women over 30 years of age who for special reasons are allowed to live in lodgings. The fees, including tuition, are £90 or £96 a year, or £105 for a double set of rooms. Out-students pay £36; residence in the Long Vacation costs a guinea a week. The entrance examination is held at Newnham in June; exemption from it can be obtained by passing examinations similar to those accepted at Girton. There are various entrance scholarships of from £35 to £50 for three years offered each year for success in the Cambridge Higher Local Examination; also one of £50 in Classics, one of £50 in Literature, one of £40 and one of £60. There are besides various prizes and grants to students in need of assistance studentships to those who have passed their Tripos examination, and a Research Fellowship of £100 a year for three years.

UNIVERSITY OF LONDON. The "Schools of the University" for women are Bedford College, the Royal Holloway College, and Westfield College. In addition, there are the *College Hall*, Byng Place, Gordon Square, providing residence for forty women students at University College or at the London School of Medicine for Women; and the Women's Department of King's College at 13 Kensington Square, with a house of residence at *King's Hall*, 32 De Vere Gardens.

1. Bedford College, York Place, Baker Street, was founded in 1849, and is a School of the University in Arts and Science. The fees for the University courses are from 27 to 50 guineas a session (3 terms of 10 weeks each), while fees for special lectures are from 1½ guineas a term upwards. Board and residence are provided for fifty students at charges of from 58 to 68 guineas a year. There are eight entrance scholarships of from 30 guineas to £50 for three years, two or three of which fall vacant each year, as well as other scholarships and prizes.

2. The Royal Holloway College, Englefield Green, Surrey, was built by the munificence of Mr. Thomas Holloway (1887), to accommodate 200 residents, and is a School of the University in Arts and Science, also providing preparation for certain of the honours examinations at Oxford, or permitting students to follow special courses of study. There is an entrance examination, whose equivalents are the same as at Newnham College, Cambridge. The inclusive terms are £100 a year, and to non-residents £30. Every year there are awarded ten to twelve entrance scholarships of from £50 to £60 for three years, and bursaries of £30; for students who have completed one year's residence there are every year twelve Founder's Scholarships of £30 for two years, and three Driver Scholarships of £30 for three years.

3. Westfield College, Finchley Road, Hampstead, was established in 1882, and is a School of the University in Arts. Its religious teaching is "strictly Protestant, in conformity with the principles of the Reformation, and in harmony with the doctrines of the Church of England." There is accommodation for 44 students, each having a separate bed-room and sitting-room; the fees are 100 guineas a year, to non-residents £45. Entrance scholarships of from £40 to £60 for three years are offered every year. The entrance examination is similar to that of the Royal Holloway College.

UNIVERSITY OF ST. ANDREWS. The L.L.A. diploma for women was devised at a time when women found it impossible to obtain a degree or literary title at any university, but it is still recognised as a valuable testimonial to scholarship. A candidate has to pass in seven subjects, except that honours in one subject is reckoned as equivalent to a pass in two. The subjects are those taught in the university, with the addition of Italian, Astronomy, Fine Art, Music, and Hygiene. The subjects can be taken at separate examinations, and no residence is necessary. The examinations are held at the end of May at numerous centres (for all particulars apply to the Secretary, L.L.A. Scheme, The University), the fee for each subject being a guinea, with a further fee of four guineas for the diploma.

N.B.—For further information regarding the Education of Women refer to *Girls' School Year Book* published by Swan Sonnenschein & Co., at 2s. 6d. net.

THE PROFESSIONS.

THE CHRISTIAN MINISTRY.

The distinctive tenets of the various religious bodies amongst us will most conveniently be dealt with in the article on Religions: here we will take these differences for granted, and simply endeavour to show what steps are necessary for one who wishes to enter the ministry of one of these bodies. Accordingly, this article will be divided into three sections, dealing respectively with the Church of England, the Roman Catholics, and the more important Nonconformist bodies.

1. THE CHURCH OF ENGLAND.

Under this heading we shall include the sister churches of Scotland and Ireland. The educational requirements for Holy Orders in the Church of England depend entirely on each individual bishop's decision. The last twenty years have witnessed a marked tendency towards a uniformity of standard in the various dioceses, and this, happily, has been due to the laxer dioceses levelling up to the standard of the more exacting. Still it must be remembered that each bishop has full power to dispense with any of the conditions he ordinarily imposes, or to increase their stringency, and this power he not infrequently exercises. Consequently, any candidate for the ministry should at an early date place himself in communication with the bishop of the diocese which he selects (by writing to his domestic chaplain at the Bishop's Palace), and thus learn what exactly will be demanded in his own case. The Book of Common Prayer requires a man to be at least twenty-three years old before he is ordained Deacon, and twenty-four before he is raised to the Priesthood. As a rule bishops are unwilling to ordain any one after he is 30, unless he can show good reason for having so long deferred his candidature; but this limit is by no means invariable, even in dioceses where it is stated among the regulations. Likewise the bishop's discretion alone is the final arbiter as to whether an ordinand must have a degree, or must have passed through a theological college, &c. Accordingly we commence by giving a list of the dioceses in the United Kingdom, adding, in brackets, the abbreviation, or ancient name, that the bishop mostly uses in his signature.

DIOCESES. 1. **In England:** (*a*) PROVINCE OF CANTERBURY:—Canterbury (Cantuar), London (Londin), Winchester (Winton), Bangor, Bath and Wells (Bath. & Well.), Birmingham, Bristol, Chichester (Cicestr.), Ely, Exeter (Exon), Gloucester, Hereford, Lichfield, Lincoln, Llandaff, Norwich (Norvic), Oxford (Oxon), Peterborough (Petriburg), Rochester (Roffen), St. Albans (Alban), St. Asaph (Asaph), St. Davids, Salisbury (Sarum), Southwark, Southwell, Truro (Truron), and Worcester (Wigorn). (*b*) PROVINCE OF YORK:—York (Ebor), Durham (Dunelm), Carlisle, Chester (Cestr.), Liverpool, Manchester, Newcastle, Ripon, Wakefield, and Sodor and Man.

2. **In Scotland:** The dioceses of the Episcopal Church have been united as follows:—Aberdeen and Orkney; Argyle and the Isles; Brechin; Edinburgh; Glasgow and Galloway; Moray, Ross, and Caithness; and St. Andrews, Dunkeld, and Dunblane.

3. **In Ireland:** (*a*) PROVINCE OF ARMAGH: Armagh; Clogher; Derry and Raphoe; Down, Connor, and Dromore; Kilmore, Elphin, and Ardagh; Meath; and Tuam, Killala, and Achonry. (*b*) PROVINCE OF DUBLIN:—Dublin, Glendalough, and Kildare; Cashel, Emby, Waterford, and Lismore; Cork, Cloyne, and Ross; Killaloe, Clonfert, and Kilmacduagh; Limerick, Ardfert, and Aghadoe; and Ossory, Leighlin, and Ferns.

GOVERNMENT. The Church of England is nominally governed by Convocation, but nothing is legally binding on its members except what has been enacted by Parliament. The CONVOCATION OF CANTERBURY consists of two Houses, the *Upper*, comprising the bishops of the Province under their archbishop; and the *Lower*, whose members are all the deans and archdeacons, with three proctors from each diocese, one of whom is elected by the cathedral chapter and the other two by the beneficed clergy. The CONVOCATION OF YORK is similarly constituted, except that in the Lower House two proctors are elected by the clergy of each archdeaconry instead of by those of each diocese.

The Episcopal Church in Scotland is controlled in matters of finance (but not of doctrine, worship, or discipline) by the *Representative Church Council*, which consists of the bishops, all instituted and licensed presbyters, diocesan officials, and a lay representative from each congregation and mission in the Church.

The Church of Ireland (which was disestablished in 1869) is governed by its *General Synod* in two Houses—the Bishops, and the Representatives (208 clergy and 416 laymen.) This Synod elects and controls the Representative Body of the Church, and may alter or abrogate laws or canons or any act of the diocesan Synods. The *Representative Body* consists of the two archbishops and eleven bishops, with one clergyman for each of the thirteen dioceses elected by the clerical members of the House of Representatives; two laymen for each diocese, elected by the lay members; and thirteen co-opted members. This Representative Body controls finance, and can hold Church property in trust, and is really an executive committee of the Synod.

REQUIREMENTS FOR ORDINATION. Any one desiring to be ordained should first select the diocese in which he wishes to work, and write to the Bishop at least three (in some dioceses six) months before the proposed date of ordination. (Ordinations are held usually, but not always, at the four Ember Seasons, *i.e.*, on the Second Sunday in Lent, on Trinity Sunday, about the end of September, and on the Sunday before Christmas Day). From the Bishop alone can the candidate learn for certain whether he must (*a*) be a graduate; or (*b*) have been trained at a Theological College; or (*c*) have fulfilled any other requirements. Usually a B.A. of Oxford or Cambridge must produce certificates of having attended two courses of lectures by the Divinity Professors, unless he has taken honours in Theology, or spent a year at a Theological College, or passed the "Universities' Preliminary" [see Schedule B]. A graduate of Dublin must produce his DivinityTestimonium; a B.A. of Durham must produce his License in Theology; a graduate of any other university mostly has to pass the Universities' Preliminary. Non-graduates, or "Literates," must have spent two years at least at a Theological College (in some cases, three years), which period of residence must be preceded by passing the General Entrance Examination [see Schedule A], and is usually concluded by passing the Universities' Preliminary Examination. But in special cases the Bishop may be willing to accept other qualifications, and should one bishop refuse, another may possibly accede. If the Bishop on enquiry, is satisfied with the candidate's general fitness for the ministerial office, he will appoint a time for a personal interview and act accordingly. It should be noted, however, that in 1909, the Upper House of the Convocation of Canterbury, decided that eight years from that date Candidates must be graduates and have been trained for a year at least at a Theological College.

Some time within this preparatory period of three (or six) months, if not before, the candidate must procure a "title," *i.e.*, a nomination to a curacy by the incumbent of the parish in which he is going to serve. A post on the staff of certain schools, or as chaplain in some institution, will often

provide a sufficient title; but a title of some sort is indispensable, and what will be recognized as sufficient the Bishop alone can say. Great care should be exercised in the choice of a first curacy. It is all-important that the incumbent should be himself devout and earnest; for many a ministerial career is made or marred by the character, the pursuit or neglect of study and duty, and the business-like habits (or the reverse) of the man under whom the novice first works. Further, it should be remembered that a curate is expected to retain his first title for at least two years—the year of his diaconate and the first year of his priesthood.

About six weeks before the day of ordination the candidate has to transmit to the Bishop's Registrar the following papers:—(1) Certificate of baptism; (2) Testimonials as to character and attainments from the college at which he has been trained; (3) Certificates of his degree and other necessary qualifications; (4) Testimonials as to character and general fitness for the ministry from three beneficed clergymen to whom the candidate is personally known, such testimonials to cover the previous three years, or such shorter time as has elapsed since the candidate left college; and (5) Nomination to a curacy by the incumbent. Mostly about four weeks before the ordination, the Bishop's examination is held, as a rule at his palace [see Schedule C]. Candidates who are successful in this examination must get their *Si Quis* (public notice of their candidature, to enable any one to object to their fitness, for due reason shown) read in their parish church, signed by its minister, and transmitted to the Bishop's Registrar. It is becoming increasingly common for the three or four days previous to ordination to be spent by the candidates in retreat with the Bishop, free from any distraction or outside cares. On the day of ordination the candidates assemble in clerical attire, and robed in cassock, surplice, and hood; and they make on oath three declarations—(1) of general assent to the Articles and Prayer-Book; (2) of allegiance to the King; and (3) of canonical obedience to the Bishop.

There is no need to speak fully here of admission to the Priesthood. The candidate has to send a testimonial of character signed by three beneficed clergymen (for the time which has elapsed since ordination as a deacon), and to forward the *Si Quis*; while he has, of course, to pass the Bishop's examination (which is sometimes in two parts, one at the end of each half-year; but sometimes undivided, falling at the end of the year of the diaconate).

TRAINING FOR THE MINISTRY. The training in a Theological College falls under three heads—devotional, intellectual, and practical. As to the DEVOTIONAL TRAINING, the example and influence of the Principal and Tutors, aided by the general tone of the College, are important factors. The cultivation of good and regular habits in the spiritual life is the very *raison d'être* of the College. As to INTELLECTUAL PREPARATION, non-graduates are received as probationers at many of the colleges and prepared for the Central Entrance Examination; but the two years' course of study only commences when this has been passed, and concludes, usually, with the Universities' Preliminary Examination. Graduates are, as a rule, expected to reside for one year, but they are often received for shorter periods. The PRACTICAL TRAINING consists of reading the Lessons in Chapel, preaching in Chapel, preparing and criticising sermon outlines, practising speaking in debates, receiving training in elocution and singing, and gaining parochial experience through Mission services, Sunday-School teaching, catechizing, visiting, &c.

The inclusive terms per annum for tuition, board, and furnished rooms are mentioned below, the only extra charges being for washing, sometimes for fuel and lights, and for club and library subscriptions (about 15s. a term). The admission fee varies from £2 to £5, and there are mostly three terms in a year of ten weeks each. Application for admission to the more popular colleges has often to be made at least six months previously. Each college has a distinctive hood for its students who have completed their course. The regular scholarships and exhibitions are named below, but the various Principals are often able to procure additional assistance for deserving students who are in pecuniary need.

Following this will be found a list of Colleges and Institutions devoted, in whole or part, to the study of Theology and the training of candidates for Holy Orders. They are grouped according to their aims into four classes:—

I. **Theological Colleges**, most of which are closely associated with University Teaching.

[Those marked * are for graduates only. In those marked † the students (who have resided two years and passed all the College Examinations) may obtain the degree of B.A., at Durham by residing three terms (*i.e.* one year) there, and passing the Final Examination in Arts].

ABERDARE (St. Michael's, founded 1892): £70.

†BIRKENHEAD (St. Aidan's, founded 1846): £72; non-resident £42; probationers 20 guineas a term or 2 guineas a week. Four bursaries of £30 to graduates of Oxford or Cambridge, three of £25 for one year to non-graduates at the beginning of each year of residence.

*CAMBRIDGE (Ridley Hall, founded 1880): £75; lectures only, 15 guineas. Several bursaries are awarded. Undergraduates of the university can attend the lectures.

CHESHUNT (Bishop's College, founded 1909). For graduates of Oxford and Cambridge and for A. K. C. Fees £120 per annum.

†CHICHESTER (founded 1839): £90; non-resident £35. Exhibitions of £10 to £20 awarded to necessitous and meritorious students.

*CUDDESDON, Oxon (founded 1854): £120. Exhibition of £60 for organist. Students must be graduates.

*ELY (founded 1876): £120. Bursaries of £20 to £30.

†HIGHBURY (St. John's Hall, the London College of Divinity, founded 1863; recognised as a school in Theology by the University of London; avowedly "Protestant and Evangelical"): £75; non-resident £30. One exhibition of £30 and one of £25.

†ISLE OF MAN (Bishop Wilson School, Bishopscourt, Kirkmichael: re-founded 1879): £75; tuition only, 30 guineas. One scholarship of £10.

*LEEDS (Clergy School, founded 1876): £82 10s.

†LICHFIELD (founded 1857): £90; non-resident £40; probationers £30 a term, or £3 a week. Exhibitions of £15 to £40 for graduates, and of £20 for two years for non-graduates.

*LINCOLN (Scholae Cancellarii, founded 1874): £31; non-resident £30. Two bursaries of £60 for graduates, six of £40 for two years for non-graduates.

OXFORD (St. Stephen's House, founded 1876): 60 guineas; one exhibition of £15.

*OXFORD (Wycliffe Hall, founded 1878): £95. An Exhibition Fund to help necessitous students.

*RIPON (Ripon College): £75 for three Terms of 10½ weeks each. Exhibitions of from £15 to £30 a year for one or two years.

SALISBURY (founded 1860): £120; four exhibitions of £40. Graduates one year; non-graduates two years.

*WELLS (founded 1840): £100; exhibition of £30 for organist.

II. **Theological Institutions with special characteristics:**

†BIRMINGHAM (Queen's College): £75 first year, £63 second year; non-residents, who must live at home or with friends, 21 guineas; tuition for probationers, 3 guineas a term. Help is given for the B.A. course of the University of Birmingham.

CRANMER THEOLOGICAL COLLEGE, Burslem, distinctly *Protestant* in character. Men are here prepared for passing the entrance examination of the Durham University, and are assisted financially both here and at Durham in getting the necessary education for the ministry.

HOOTON PAGNELL, Doncaster (St. Chad's Hostel). The Principal endeavours to find financial assistance for all men who satisfactorily demonstrate their vocation to Holy Orders. Successful students are prepared in their first year either for the Durham Arts Matriculation or the Central Entrance Examinations. Those who pass the former proceed at once to St. Chad's Hall, Durham, while those who pass the latter remain for another year at Hooton Pagnell, and then proceed for a final year to a Theological College selected for them.

KELHAM, near Newark (House of the Sacred Mission, transferred from Mildenhall). Maintenance and tuition are almost free, and as a rule for five years, but students are expected after ordination to re-pay the cost of their training (up to £250) out of their stipends. While in residence they have to conform to the rule of the Community, which they may join, but they are not asked to do so. Other students are prepared for manual work in the Foreign Mission Field.

*MANCHESTER (Ordsall Hall, near Salford, given by Earl Egerton of Tatton to be a Clergy School): £80.

Some bursaries of £50. Intended to deepen the devotional life of candidates for Holy Orders, and providing special preparation for the B.D. course of the Victoria University, Manchester (after a two years' course of study).

MANCHESTER (Scholae Episcopi), provides instruction for candidates for Holy Orders who have passed the Central Entrance Examination, at a nominal charge of £1 a term. The lectures are given in the West Porch of the Cathedral by some of the Cathedral and City clergy, and direction in pastoral work is also provided. Apply to the Bishop's Secretary.

MIRFIELD, near Wakefield (Community of the Resurrection), also trains candidates for the ministry. The course is three years in Arts followed by two years in systematic Theology. The college is intended for men from all classes, and as far as possible provides maintenance and tuition, free of charge, for men who would otherwise be debarred from fulfilling their vocation.

*NEWCASTLE-ON-TYNE (the Bishop's Hostel): £75. Some exhibitions of £10 to £35. Students are required to serve the first two years of their ministry in the diocese.

III. Missionary Colleges. These mostly give a three years' course, which leads up to the Universities' Preliminary Examination. Suitable instruction is also given in medicine and handicrafts, such as printing or carpentry, music, riding, &c.

†BURGH, Lincoln, (St. Paul's, founded 1878): £45, as the College defrays the cost of tuition (£20); there is no fixed entrance examination.

†CANTERBURY (St. Augustine's, founded 1848): £50. Numerous scholarships and studentships of £16 to £50.

†DORCHESTER, near Wallingford (SS. Peter and Paul, founded 1878): £60. Six exhibitions of £20.

†ISLINGTON (Church Missionary College, founded 1825): cost of training defrayed for accepted candidates who need help. Four years' course for those seeking Orders, two years for lay evangelists.

WARMINSTER (St. Boniface, founded 1860): £52.

IV. Colleges with Special Classes in Theology. The following offer a general education, with special facilities for the study of Theology:—

CAMBRIDGE (Clergy Training School). Graduates can become members (5 guineas a term); undergraduates are received as associates (1 guinea a year), though they continue to share in the life of their respective colleges. The lectures cover the ground of the Universities' Preliminary Examination, and direction is given in pastoral work, &c., while the devotional life is specially cultivated.

†KING'S COLLEGE, LONDON (a recognised school of the University of London), provides a two years' course for its Theological Associateship (A.K.C.), and one of three years for the London B.D., but these courses may be arranged to proceed contemporaneously. Instead of the two years' day course, three years of evening classes, followed by one year of day classes, may be substituted. Fees: 30 guineas per annum for day classes. £18 for evening classes, besides matriculation fee of 5 guineas. There is a Hostel for residence at 42 Mecklenburgh Square, W.C. The charge for board and lodging is 25s. per week. There are six exhibitions of £50 for one year, and five of £20 for two years, besides many others.

LAMPETER (St. David's College), affiliated to Oxford and Cambridge Universities. It has the right of conferring the degrees of B.A. and B.D., and a Licentiate in Divinity. Fees for resident students can be brought down as low as £50 (inclusive); for non-residents £22. This is quite regardless of help from scholarships and exhibitions, the total annual value of which is over £500. Candidates for Holy Orders can obtain the same practical training as in a Theological College, and qualify in two years.

†EDINBURGH (the Theological College of the Episcopal Church of Scotland; founded in 1810, transferred to Glenalmond in 1848, and brought back to Edinburgh in 1876). Tuition fee £24 a year; board and residence can be procured in the Principal's Hall for £1 7s. 6d. a week. There are numerous bursaries, ranging up to £120, some of which are confined to Scotsmen. The preparation is intended for those seeking English Orders, as well as those seeking Scotch.

DURHAM UNIVERSITY confers a Licentiate in Theology (L. Th.) after two years' residence. The examination for admission as a student in theology is the Central Entrance Examination, and there are examinations at the end of each year. After one extra term's residence, a L. Th. can proceed to the B.A. In theology are awarded annually two scholarships of £70 and two of £30.

DUBLIN UNIVERSITY (T.C.D.) provides an excellent course in Divinity, success in which is expected from candidates for Orders in the Church of Ireland.

EXHIBITIONS. A few further particulars may be useful as to sources of assistance for necessitous candidates for Holy Orders. The exhibitions offered by various CITY COMPANIES, and many other similar ones, have been mentioned (p. 721) in the article on Education. The TANCRED CHARITIES provide four Divinity Scholarships of £50 to £100 at Christ's College, Cambridge (apply to the Secretary, 28 Lincoln's Inn Fields, W.C.). The CHOLMONDELEY CHARITIES augment certain Postmasterships at Merton College, Oxford, and grant £800 a year in university exhibitions to sons of clergymen (apply to the Treasurer, Corporation House, Bloomsbury Square, W.C.). The WORDSWORTH STUDENTSHIPS of £40, and the STEEL STUDENTSHIPS of £30 to £40, are to encourage Cambridge graduates in honours to continue their theological studies (apply to the Regius Professor of Divinity). The CAMBRIDGE GRADUATES ORDINATION FUND gives exhibitions of about £25 with a similar object (apply to the Regius Professor of Divinity). The CAMBRIDGE CLERICAL EDUCATION SOCIETY aids resident undergraduates in unforeseen difficulties (apply to the Secretary Sidney Sussex College). The ORDINATION CANDIDATES' EXHIBITION FUND gives exhibitions to students already in residence at Oxford, Cambridge, Durham, or a Theological College, and also endeavours to introduce necessitous cases to wealthy patrons, whereby help of £30 up to even £90 a year, may be obtained (apply to the Secretary, Albany Buildings, 39 Victoria Street, Westminster, S.W.). The BRISTOL CLERICAL EDUCATION SOCIETY assists candidates of Evangelical principles at the universities (apply to the Rev. A. E. Chapman, St. Nathanael's Vicarage, Bristol), as does the ELLAND SOCIETY (apply to Canon Lamb, Clapham Vicarage, Lancaster). The LONDON CLERICAL EDUCATION SOCIETY spends nearly £800 a year in aid (apply to the Rev. H. F. S. Adams, The Vicarage, Streatham Common, S.W.). There are diocesan societies to help local candidates in Bangor and St. Asaph, Carlisle, Exeter, St. Albans, and Worcester, while help to missionary candidates is given through the Missionary Associations in various parts of the country. Earnest candidates for Holy Orders of insufficient means for the cost of a university education, are advised to apply for information as to financial assistance to the Principal of St. Chad's Hall, Durham.

SCHEDULE A. CENTRAL ENTRANCE EXAMINATION for Non-Graduate Students in Theological Colleges. It has been explained that the two years' training in a Theological College required of non-graduates can only reckon from the time when this examination has been passed, though several Colleges will admit students on probation, and give them the preparation necessary for this examination, if they are ready to spend the extra time and money thus involved. The council which manages the examination consists of representatives of the Bishops and Principals of Theological Colleges, with the Examiners (who are appointed by the two Archbishops and the Principals). The examination is held three times a year—on the Tuesday and Wednesday in the week beginning with the 4th Sunday in Lent, in the last week of July, and in the first week of December. Candidates have to apply, at least a month previously, to the Principal of the College they have selected (or of the College at which they are already residing), and have to pay a fee of 15s. The following are accepted as equivalents:—

> The Oxford or Cambridge Senior Local Certificate; the Oxford and Cambridge Joint Board Higher Certificate; the London University Matriculation, if Latin and Greek were taken; Responsions at Oxford, the Previous at Cambridge, Part I. and Part II.; or the title of Associate in Arts at any of the University Colleges of England, provided that the candidate passed in Latin and Greek (See the section on the Universities in the article on Education).

To give an idea of the nature of the Entrance Examination, we give the subjects for 1909:—

> Plato's *Apology of Socrates*; Cæsar *De Bello Gallico*, IV. and V.; Scripture History; St. Mark, for translation and interpretation; Outlines of English History: and Euclid, Book I., *or* Elementary Logic. The Examiners have the power to recommend to the Principals for admission to a three years' course candidates for whom they deem

the ordinary two years' course an insufficient preparation. Copies of previous examination papers can be procured from Deighton, Bell, & Co. (Trinity Street, Cambridge), price 1s.: and any further details can be ascertained from the Secretary, Dulwich College, S.E.

SCHEDULE B. UNIVERSITIES' PRELIMINARY EXAMINATION of Candidates for Holy Orders. This examination has to be passed by (1) all *graduates*, except those of Oxford or Cambridge, who produce their divinity testimonials, or take honours in Theology, or spend a year at a Theological College; and also, except Dublin graduates who have their divinity testimonium, or Durham graduates who have their license in theology; (2) *non-graduate* members of Theological Colleges who have reached the last term of their two years' (or other period of) residence, for whom it serves as a leaving examination, and is necessary in order to obtain the College Testimonial required by the Bishops for ordination; and (3) any *other persons*, whom individual Bishops are prepared to ordain, to whom, consequently, they give a nomination admitting to the examination. The council controlling the examination consists of the Divinity Professors and two graduates in Divinity from Oxford and Cambridge, with one Examining Chaplain from each Bishop. The examination is held twice a year, about the beginning of April and of October. The centres hitherto have been Birkenhead, Canterbury, Chichester, Edinburgh, Lampeter, Lincoln, London (St. John's, Highbury, in April; King's College, in October), Manchester, Truro, and Warminster. Candidates have to pay a fee of 25s., and to send in their applications before March 1st or September 1st. To show the nature of the examination we give the subjects recently set:—

The Bible (general contents); *Old Testament*, Psalms cvii.–cl., and 2 Samuel; *New Testament* (in Greek), St. Mark and 1 Corinthians; *Creeds and Thirty-Nine Articles; Prayer Book* (history and contents); *Ecclesiastical History*, of the whole Church to 451 A.D., and of the English Church to 1702 A.D.; *Latin*, St. Augustine, in Johannis Evangelium, Tract lxvii.–lxxix., with a passage for Latin Prose Composition; and *Elementary Hebrew* (optional), with 2 Samuel vi., vii., xi., xii., and xviii. in the Hebrew text.

The names of candidates who pass are placed alphabetically in three classes, while an asterisk is awarded to those who do creditably in the Hebrew. Copies of previous examination papers can be procured from Deighton, Bell & Co. (Trinity Street, Cambridge), price 1s. (post free 13 stamps).

SCHEDULE C. THE BISHOP'S EXAMINATION for Candidates for the Diaconate. The subjects vary in details according to the diocese, and the special books are changed each year (but in most cases they are so chosen that the special books for the Preliminary Examination and for the Bishop's Examination coincide). A knowledge of Hebrew is always optional, but of Latin and Greek compulsory, except that in the case of candidates for work in the Mission Field, Greek is sometimes dispensed with. The papers that are of the most importance are the general ones on the Old and New Testaments. Subjects recently set in the diocese of London, which may be taken as a typical example, are as follows, the authors, which vary from year to year, being placed in brackets:—(1) *Old Testament:* General knowledge of the contents and interpretations; Special book [1 Samuel]; Hebrew (optional) [text of 1 Samuel vii.–xvi.]. (2) *New Testament*: General knowledge of the contents and interpretations; Special books [St. Mark and Galatians] in Greek; the four Gospels and the Acts, in Greek (oral examination) (3) *Prayer-Book and History:* History and contents of the Book of Common Prayer; History of the English Church to the accession of Queen Anne.' (4) *The Thirty-Nine Articles.* (5) *Waterland on the Eucharist* (an edition is published by the Oxford University Press). (6) *Latin:* St. Augustine [In Johannis Evangelium, Tract lxvii.–lxxix]; Latin Prose Composition (a continuous passage of about twenty lines length). (7) *Evidences*—such books as Paley's Evidences or Row's Manual of Christian Evidences being suggested. As to the examination, full information can always be obtained from the Bishop's Resident Chaplain, who will often recommend books for reading, or name the most useful editions of the authors. In many cases the Bishops draw up a list of books on the various subjects for the use of candidates.

2. THE ROMAN CATHOLICS.

In England and Wales the Roman Catholic Church is organized under the Archbishop of Westminster, who has under him fifteen diocesan, or rather suffragan, bishops. In Scotland there are two Archbishops—(1) St. Andrews and Edinburgh, (2) Glasgow—and four suffragans. In Ireland there are four Archbishops—Armagh, Dublin, Cashel, and Tuam—with twenty-four suffragans. No advantage would be gained by giving any account of the training given by Roman Catholics for the priesthood and minor orders; for their system is eminently characterized by the consideration of vocation as the essential for Holy Orders, and the disregard, or rather the surmounting, of all difficulties of birth, station, poverty, &c. We append a list of their ecclesiastical training institutions:—

Blairs, Aberdeen, St. Mary's. *Drumcondra*, All Hallows, for Foreign Missions. *Everton*, Liverpool, St. Edward's. *Hawkesyard*, Rugeley, St. Thomas's Formal College. *Hereford*, St. Michael's Priory. *Leeds*, St. Joseph's Seminary. *Maynooth*, St. Patrick's College. *Mill Hill*, St. Joseph's for Foreign Missions. *Oscott*, Birmingham, St. Mary's. *St. Asaph*, St. Bueno's. *Upholland*, Lancashire, St. Joseph's. *Ushaw*, Durham, St. Cuthbert's. *Ware*, St. Edmund's.

Special mention should be made of St. Edmund's House, Cambridge, which was founded by the Duke of Norfolk in 1896, to give an advanced University education to men already in Orders, or about to take Orders.

3. THE NONCONFORMIST BODIES.

Several of these denominations do not have a *professional* ministry, which is all that we are here concerned with. Some are rather inclined to distrust the existence of such a ministry, as tending to depreciate the value of a spiritual call, and leading to excessive centralization and organization. Consequently, much ministerial work, such as that of local preachers, class-leaders, &c., falls outside the scope of this article, but a few general remarks as to the more highly systematized ministries may be made.

With the CONGREGATIONALISTS, for example, a candidate must be at least eighteen years old, and must have been a member of his church for over a year. He must be recommended for the ministry by his church and its pastor. On proceeding to college he must answer a paper of questions which will be sent to him; and much importance is attached to any signs he may have given of preaching ability, and to any active work he may have done for his church. He must also submit a satisfactory medical certificate.

After passing an entrance examination (usually held in June), of about the standard of the London University Matriculation (or presenting a certificate of an equivalent examination), he is admitted to college as a probationer for three or six months. Then, if his aptitude is demonstrated, he settles down to his course of training. If not a graduate, he often begins by devoting three years to the obtaining a degree in arts, followed by three years' study in Theology. Frequently the former is dispensed with, and the regulations are always elastic enough to suit the special circumstances or abilities of any individual candidate. Often there are no fees for board, residence, or tuition, but the church recommending the candidate is required to contribute (by annual collections, &c.) a certain sum towards the cost of his training. In other cases, the candidate or his friends have to guarantee such a sum as the committee deem they can afford.

Let us take the WESLEYANS as another instance. A candidate for the ministry must be nominated by the superintendent of the Circuit in which he resides at its March Quarterly Meeting. Having received the recommendation of the Meeting, he has to preach a trial sermon before three ministers of his district, who report the result to the District Synod. In April is held the Preliminary Examination, the general paper on the Bible being required of all

candidates, but the literary paper (composition, grammar and analysis, history, geography, and arithmetic) need not be taken by graduates or those who have passed a recognized equivalent examination. In May there follows an oral examination before the district Synod—chiefly to test personal, rather than intellectual, qualifications. A second trial sermon has now to be preached, and a written sermon sent in to the General Examination Secretary. In July a second written examination is held at one of the colleges, (comprising a further literary paper and a paper on Christian doctrine), and the candidate has to undergo a medical examination and appear before the "July Committee" of ministers, which body recommends his acceptance or rejection by the Conference. The Conference makes its decision about the beginning of August, and successful candidates are expected to enter on residence at College in September. The cost of maintenance at college is £30 a year, and of tuition £35. If unable to meet this expense, the candidate has to make a confidential statement (to the July Committee) of his means, showing whether he is prepared to meet the maintenance charge in whole or in part, or what financial assistance he requires; rarely does expense bar the path of a well-qualified candidate. The course at college is for three or four years, during which the students have frequent preaching engagements on Sundays made for them. Then follows a four years' ministerial probation as a preacher on trial in a circuit, at the end of which time the candidate is ordained and received into full connexion.

In making a list of the Theological Colleges of the various Nonconformist bodies, we mention first three colleges closely connected with Oxford or Cambridge (though not constituent members of those universities), then the Metropolitan colleges, and lastly the provincial ones.

When a sum is specified in the following list of Colleges, it is the amount thus required per annum; and if it is called *inclusive*, it represents all payments (board, residence, tuition, &c.), except those of a purely personal character.

I. Theological Colleges connected with the Universities of Oxford and Cambridge:—

MANCHESTER COLLEGE, Oxford (does not insist upon the adoption of particular doctrines): three years' course for "regular" students, who must be graduate candidates for the ministry of some Christian body; "special" students are admitted for varying periods to study theology. All have to matriculate in the University. Each year four exhibitions of £40 for three years; also four of £75 for three years to undergraduates of Oxford (or of £50 to other undergraduates) who intend to enter Manchester College after graduation.

MANSFIELD COLLEGE, Oxford (Congregational). No fees: non-residential, but students must reside in licensed lodgings, and if graduates of other universities must matriculate at Oxford. Some undergraduates are received, and allowed to join one of the colleges of the University until graduation. Three years' course: scholarships (1) of £60 for graduates who are reading theology and (2) of £60 for undergraduates: exhibitions up to £50.

WESTMINSTER COLLEGE, Cambridge (Presbyterian Church of England: founded in London in 1844, moved to Cambridge in 1899). £45 inclusive; private students belonging to other denominations, £75. Three years' course: one scholarship of £50 for three years, three of £30, four of £25, and minor bursaries. Also for undergraduates of any university who intend to enter Westminster College after graduation, there are tenable the following scholarships for three years—two of £40, one of £30, one of £25, and three of £20.

II. Metropolitan Theological Colleges. (Those marked ‡ are recognised schools of Theology in the University of London.)

‡HACKNEY COLLEGE, Finchley Road, Hampstead (Congregationalist: but receives any "members of Christian Churches"): £15 inclusive. Two or three years' literary course for non-graduates, followed by three years' theological course. Two entrance exhibitions of £18, and scholarships of £28 and £25, and smaller ones.

‡NEW COLLEGE, Hampstead (Congregational). The Arts classes of New, Hackney, and Regent's Park Colleges meet in combination at New College. Ministerial students in the Theological course have all fees remitted. Five scholarships of £30 for three years, one of £75 for three years, one of £55 for one year, and exhibitions of £30, £25, and £20.

PASTOR'S COLLEGE, Temple Street, Newington, S.E. (Calvinistic Baptist). Students are expected to contribute to the College funds according to their ability. Only those who have already had experience in preaching are received.

‡REGENT'S PARK COLLEGE (Baptist). £50 inclusive, or less according to ability. Three years' course for London B.D.

‡RICHMOND, Surrey (Wesleyan). Three years: only admits candidates accepted by the Conference; chiefly for missionary candidates.

III. Provincial Theological Colleges (those marked ¶ are approved Theological Colleges of the University of Wales):—

ABERDEEN (United Free Church, Presbyterian). About £650 a year in scholarships: two fellowships of £50 to fourth-year students.

¶ABERYSTWITH (Calvinistic Methodist), including Trevecca College, Talgarth.

¶BALA (Calvinist Methodist). Free to Calvinist Methodists, to others £5. Three years: four scholarships of £50, and many others.

¶BANGOR (Baptist). No fees. Arts students attend University College, Bangor.

¶BANGOR (Independent College; Congregationalist).

BELFAST (Methodist): 44 guineas inclusive. Connected with the College is McArthur Hall, a first-grade boarding school for girls.

BELFAST (Presbyterian): two guineas for each class taken; free residence, &c., for forty students. Each year twenty scholarships of £10 to £25.

BRADFORD (Yorkshire United Independent College: Congregationalist): three years in theology, which may be preceded by a four years' literary course in any university; three scholarships of £60, four of £40, and various others.

¶BRECON (Memorial College; Congregationalist): no fees to ministerial students; scholarships of £40 to graduates, and three of £10.

BRISTOL (Baptist). Fees according to candidate's ability: two to six years.

BRISTOL (Western College; Congregationalist): £50 inclusive, or less according to candidate's ability. Full course, three years in Arts followed by three in Theology. Several scholarships from £23 downwards.

CAMBRIDGE. Cheshnut College (Congregational); Westminster College (Presbyterian).

¶CARDIFF (S. Wales Baptist College).

¶CARMARTHEN (Presbyterian College, but for "all Protestant Nonconformists without sectarian distinction"). Free to graduates preparing for B.D., for whom there are scholarships of £40 for three years; to others £8.

DERRY (Magee College; Presbyterian): two guineas for each class taken; three years' course in Arts, followed by three years in Theology, for the degrees of the Royal University. Numerous scholarships from £35 downwards.

DIDSBURY, Manchester (Wesleyan): three years; candidates must have been accepted by the Conference.

EDINBURGH (30 George Square · Congregationalist); no fees; non-residential; three summer and two winter sessions; three bursaries of £20 for two years.

EDINBURGH (New College: United Free Church, Presbyterian): £4 10s., four years.

GLASGOW (Baptist): no fees; non-residential; six years, for the M.A. degree, followed by a course in Theology; bursaries of £15 to £25.

GLASGOW (United Free Church, Presbyterian).

HANDSWORTH, Birmingham. As at Didsbury.

HEADINGLEY, Leeds. As at Didsbury.

MANCHESTER (Alexandra Road; Primitive Methodist).

MANCHESTER (Baptist).

MANCHESTER (Home Missionary College, Memorial Hall; Unitarian): £10 entrance fee; two years in Arts followed by two in Theology; one scholarship of £60 for three years, and one of £90 and one of £70 for one year.

MANCHESTER (Lancashire Independent College, Malley Range; Congregationalist); an associated college of Manchester University: £30 inclusive; several scholarships from £30 for three years downwards.

MANCHESTER (Victoria Park; United Methodist).

NOTTINGHAM (Midland College; Baptist). At least £10; five years.

NOTTINGHAM (Congregational Institute): at least £14; four years; specially for evangelistic and pastoral training.

RANMOOR, Sheffield (United Methodist).

RAWDON, Leeds (Baptist).

EXHIBITIONS. Besides the scholarships above mentioned, and other financial help that is given freely (as already explained) to deserving candidates, the following sources of aid should be borne in mind: DR. WILLIAMS' DIVINITY SCHOLARSHIPS of £50 for two years to graduates seeking a theological training for the "Ministry of Protestant Dissenters"; and his GLASGOW SCHOLARSHIPS of £40 for three years, tenable at the University of Glasgow (apply at Dr. Williams' Library, Gordon Square W.C.). The HEWLEY EXHIBITIONS for students in Congregational, Presbyterian, and Baptist Colleges (apply to Clerk to the Trustees, 2 Exchange Street, East, Liverpool). The ELMSLIE MEMORIAL SCHOLARSHIP, for Baptists, Congregationalists, or members of the Presbyterian Church of England (apply to Mr. G. Walter Knox, 16 Finsbury Circus, E.C.). The COWARD'S TRUST, with an income of £1,500 a year, to help candidates for the "Ministry among Protestant Dissenters" (apply to the Treasurer, 88 New Park Road, Brixton Hill, S.W.). And DR. WARD'S TRUST, which gives a preference to Baptists (apply to the Secretary, 16 Ellerdale Road, Hampstead, N.W.).

THE ARMY.

There is a wide-spread feeling that, speaking generally, the officers of our army have not hitherto taken their profession seriously enough, and compare badly in this respect with officers in the German army. The "playing fields of Eton" are excellent, no doubt, for a first course of training; but modern tactics and strategy require serious and prolonged study, and something more is required besides eminence in sports for success on a modern battlefield. It is quite certain, therefore, that boys who mean to enter the army as commissioned officers must be prepared for serious work. To such as are naturally of the right stamp and are prepared to work hard at their professional studies, the Army offers a splendid career. It has all the elements necessary to attract the generous-hearted boy of sound body and mind, with a love for adventure and a stirring life. His pay will not make him rich—nay, in some of the smart regiments it will not be sufficient to keep him; but such as cannot afford to supplement their pay can find regiments in which, after a year or two, it will be sufficient. At the present time "the one thing the British army lacks is enough trained commissioned officers"; and efforts are being made to limit the excessive expenditure which officers have hitherto been forced to incur, and to make the Army a possible profession to many who would enter it but cannot afford to do so.

ARMY ORGANISATION. The army is constituted on two distinct lines—the Regular Army and the Territorial Army:

1. THE REGULAR ARMY comprises (1) the Expeditionary and Striking Force, including a large number belonging to the Reserve; (2) the Special Contingent, forming part of the Army Reserve, and consisting of non-Regulars. The men belonging to it are called *Special Reservists*.
2. THE TERRITORIAL ARMY is composed of the forces formerly known as the Imperial Yeomanry and Volunteers. These forces are now placed on a new footing, and in training are brought into close association with the Regular Troops.

THE ADMINISTRATION of the army is vested in *The Army Council*, composed of the Secretary of State for War, four Military Members, the Finance Member, and the Civil Member. It holds the same position with respect to the Army as the Admiralty Board with respect to the Navy. At the head of it stands the Secretary of State for War, who is directly responsible to Parliament, and who could, in the last resort, over-rule all his colleagues of the Council.

THE GENERAL STAFF, created in September 1906, is the brain of the Army. It is composed chiefly of officers who hold a Staff College Certificate (see below), and whose names have been placed on a list of specially qualified officers called the General Staff List. The General Staff has for its chief functions to advise on the strategical distribution of the army, to supervise the education of officers and the training and preparation of the Army for war, to study military schemes, to collect and collate military intelligence and to direct the general policy in Army matters. Approved service on the General Staff is recognised by accelerated promotion.

THE PERSONNEL of the army may be divided into: (1) Commissioned officers—military and civil, (2) Warrant officers, (3) Non-commissioned officers, (4) "Rank and file."

THE COMMISSIONED OFFICERS, with whom in the following pages we shall mostly have to do, may be thus divided:—

1. COMBATANT OFFICERS: (1) *General Officers:* field-marshals, generals, lieutenant-generals, major-generals; (2) *Field Officers:* colonels, lieutenant-colonels, majors; (3) *Regimental Officers:* captains, lieutenants, second lieutenants.
2. OFFICERS OF VARIOUS DEPARTMENTS: (1) *Army Ordnance Department:* principal ordnance officer, 1st, 2nd, 3rd, and 4th class ordnance officers, commissaries; (2) *Medical Department:* director-general and surgeons-general—forming the staff, colonels, lieutenant-colonels, majors, captains, lieutenants; (3) *Veterinary Department:* as in (2); (4) *Chaplain's Department:* Chaplain-general and 1st, 2nd, 3rd, and 4th class chaplains and chaplains on probation. (5) *Educational Officers:* governors, commandants, professors, etc.

PAY. The following particulars will be all that are necessary for the consideration of those who contemplate a commission in the Army. In the official documents the rates *per diem* are given: we here give them to the nearest pound *per annum*.

REGIMENTAL PAY TABLE.

	Cavalry of the Line.	Royal Horse Artillery.	Royal Engineers.	Infantry.	Army Service Corps.	Royal Army Medical Corps.
	£	£	£	£	£	£
Lieutenant-Colonel	576	452	328	328	328	650 to 900
Major	274 to 328	338	292	248 to 310	248 to 292	650
Captain	237 to 274	274 to 310	211 to 248	212 to 248	211 to 248	200 to 274
Lieutenant . . .	164	161 to 179	125 to 143	119 to 137	119 to 137	200
Second Lieutenant	122	140	102	96	96	—

In addition to the above, there are many extra allowances for special duties, such as for acting as Adjutant, as Major second in command, etc. Staff officers receive much higher rates of pay—the Inspector-General being paid £4,500 a year; the Adjutant-General, £2,400; a Colonel on the Staff, £730; a Staff Lieutenant, £228.

The following particulars of pay in the other branches of the service may be found useful:—

Pay Department, £182 to £700.
Chaplains' Department, £182 to £411; the Chaplain-General, £1,000.
Educational Department, Professors, £300 to £600; Principals, £1,000 to £1,500.
Ordnance Officers, £400 to £1200.
Veterinary Officers, £250 to £456; the Director-General, £850.
The Director-General and Surgeon-General of the Army Medical Service receive £1,500 and £1,300 a year respectively; the rates for the other officers are given in the above table.

PROMOTION. Promotion from the ranks may be granted to men of not lower rank than corporals, who are specially recommended by the commanding officer, have two years' service, are unmarried, and hold a 1st Class certificate of education. Increase of regimental pay in any commissioned rank depends on length of service in that rank. Promotion from one rank to another, up to that of lieutenant-colonel, is by selection from amongst those who have passed the professional examination prescribed for the higher rank. The examination is sometimes

excused for distinguished service or for marked ability and gallantry. After the rank of lieutenant-colonel, promotion is by selection, but may always be granted to colonels, major-generals and lieutenant-generals for distinguished service, even when there are no vacancies on the establishment. Only the Sovereign can promote an officer to the rank of Field-Marshal.

HALF-PAY AND RETIRED PAY. Officers may be placed on half-pay on reduction of establishment, for medical unfitness and, in the case of lieutenant-colonels and colonels, at their own request. The age for compulsory retirement is forty-five for lieutenants and captains, and rises gradually for higher ranks to sixty-seven for a lieutenant-general. The retired pay at these ages begins at £200 for lieutenants and captains, and rises to £850 for lieutenant-generals, whilst generals get £1,000. Pensions to widows and compassionate allowances to children of officers are given where need of help is proved; those of officers killed in action receive the highest amounts. All particulars are given in the "Pay Warrant," published at 1s. by Wyman and Sons, Fetter Lane, E.C.

MILITARY COLLEGES AND SCHOOLS.

1. THE STAFF COLLEGE is close to Sandhurst. The surest way for an officer to get promotion is to graduate at this College; and those who have done so have the letters *P.S.C.* after their names in the Army List. Entrance is, in most cases, obtained by passing a competitive examination. Candidates must be recommended by their commanding officers, must have served five years, and must be under thirty-five. The course lasts two years, and thirty-two vacancies are filled annually, of which eight are by nomination.

2. THE ORDNANCE COLLEGE is at Woolwich. Its principal objects are to train officers for employment in the Ordnance Department, and to train military artificers for all the arms of the service. Officers who are candidates must be recommended by their commanding officers, must have served three years, and, if lieutenants, must, in most cases, have qualified for the rank of captain. If approved, they must pass a qualifying examination for entrance; and sixteen are admitted annually. The course lasts a year; but the best eight officers are retained for another year of study, and form the Advanced Class. These latter are denoted by the letters P.A.C. after their names in the Army List; the former by the letter O.

3. OTHER SPECIAL SCHOOLS for the instruction of officers are—(1) At Aldershot: the army service corps school, the school of gymnastics, the school of signalling, and the veterinary school. To gain admission into the first mentioned of these schools, candidates must have passed through the Staff College, or must be at least captains who have been recommended for that college. (2) At Chatham, the school of military engineering. (3) At Hythe, the school of musketry.

4. THE ROYAL MILITARY ACADEMY, WOOLWICH. Here are trained candidates for commissions in the Royal Artillery and Royal Engineers. The methods of entry are described below. The course lasts two years or four terms, and for the first three is the same for all cadets.

5. THE ROYAL MILITARY COLLEGE, SANDHURST. This is for the training of cadets who are candidates for commissions in the cavalry, infantry, and Army Service Corps. The standard of attainment necessary for entrance is not so high as for Woolwich; in fact those who fail to secure entrance into the latter, may have sufficient marks to get into Sandhurst. The course, as at Woolwich, now lasts two years—till recently it was one and a half years.

EDUCATION AND TRAINING FOR THE ARMY.

1. PRELIMINARY CONSIDERATIONS FOR PARENTS. Before deciding on a military career for a boy, his parents should make sure of the following points:—(1) That the boy is healthy, well-developed for his age, and without physical defect; (2) That he is of fully average intelligence; (3) That, unless connected with the army, they can afford to spend between £400 and £500 on him during his Military College course of two years; and that they can, after he has received a commission, supplement his pay to the extent of at least £100 a year till promotion brings him enough to do without help; (4) that they are of pure European descent.

2. EDUCATION AT SCHOOL TILL THE AGE OF SEVENTEEN OR EIGHTEEN. In order to see the kind of school education an Army candidate requires, we had better get a clear idea of what he must know for entrance into Woolwich or Sandhurst—the question of university candidates need not be discussed here (see below). The following remarks apply to the new regulations, in force after June, 1905. Hitherto any one who thought he had a chance of getting into one of the two colleges, could pay his entrance fee and try; but now all candidates for this competitive examination must have previously obtained a certificate of general knowledge, which cannot be granted to any boy who is under seventeen years of age. "The object of this," we are officially told, "is to secure for all candidates a fair standard of general education, while deferring, as far as possible, the special preparation which tends to separate Army candidates from other boys during their school career, and to render them less fitted for other callings, if unsuccessful in the Army examination."

The required certificate may be obtained by a boy before leaving school, on passing a certain examination held under the auspices of the principal universities of the United Kingdom and the Scottish Education Department. Such certificate is known as a "Leaving Certificate," and to be accepted by the Army Council must state (1) that the holder of such certificate was over seventeen years of age when it was granted, (2) that he had attended a course of three years' continuous instruction in a properly inspected school, and (3) that he had satisfied the examiners in English; English History and General Geography. Elementary Mathematics; and in two of the following subjects: Science, French *or* German, Latin *or* Greek. Hence it is desirable that a boy destined for the army should attend a school at which he will be able to get a "Leaving Certificate," and should stay at the school until he is at least seventeen years of age.

Those who fail to get a "Leaving Certificate" may try for a "Qualifying Certificate," which covers the same ground. Examinations for it are held by the Army Qualifying Board twice a year in March and September. Applications to attend the examination must be addressed to the Secretary, Army Qualifying Board, c/o London University, South Kensington. Either of these certificates, once obtained, is valid on all occasions on which the candidate is otherwise eligible to compete under the regulations.

The school education must keep in view not only the certificates we have mentioned, but the requirements of the competitive examination for Woolwich or Sandhurst. For Woolwich, the compulsory subjects are English, French *or* German, and Mathematics I., together with two optional subjects chosen from Mathematics II., Science, History, German *or* French, Latin *or* Greek. For Sandhurst the requirements are similar, but Mathematics is not in the compulsory list.

Hitherto, Latin has been practically compulsory and Greek optional; now French, or else German, is compulsory and Latin *or* Greek optional. No one can take both Latin *and* Greek; whereas both French and German may be taken—one as a compulsory and the other as an optional subject. Some colloquial knowledge of French or German is essential; but boys who have the opportunity should learn to speak well some Oriental or foreign language. As officers, they may pass an examination in it, and be noted as "interpreters"; and if called upon to use their knowledge, with an army in the field, they may increase their pay by as much as 15s. a day.

Mathematics I. is fairly comprehensive, and includes trigonometry, dynamics, and statics with practical work; whilst Mathematics II. takes in the Differential and Integral Calculus and a good deal of practical physics. Science requires theoretical and practical knowledge of physics and inorganic chemistry. History includes general English

history, general ancient history (or else a period of European history, defined beforehand by the Civil Service Commissioners, a military biography, prescribed annually, and the geography of all the countries studied. The questions in Latin or Greek are confined to (*a*) translation from and into the language, (*b*) its literature and (*c*) verse composition but (*b*) and (*c*) are alternatives.

We thus see the kind of educational foundation that must be gradually laid at school; and the course should include a good deal of physical training as well. The Competitive Examination for Woolwich or Sandhurst can be taken only between the ages of seventeen and a half and nineteen and a half. Little time is left for special coaching after the "Leaving Certificate" has been obtained, which is exactly what the Army Council desire. They wish to put a stop to the system of taking boys from school and putting them under a "crammer" for two or more years; but special coaching in one or two subjects may still be advisable; and a few months might be usefully spent in France or Germany, or both.

3. COMPETITIVE EXAMINATION FOR WOOLWICH AND SANDHURST. We have already given an outline of the syllabus for this Examination, and stated that the limits of age for admission to the Academy or College are from 17½ to 19½. It only remains to give a few more particulars. 2,000 marks are allotted to each subject taken and an additional 250 marks are given for freehand drawing; but this is a purely voluntary subject. The papers are the same for both colleges, and candidates who fail for Woolwich may still have enough marks to carry them into Sandhurst. The fee for the examination is £2 if taken in London but £3 if taken elsewhere.

4. THE MEDICAL EXAMINATION takes place after the Competitive Examination; and, as it is a searching one, intending candidates should make sure some time beforehand that they are likely to pass it. The best course is to undergo a preliminary medical examination by a military medical board not more than two years before they compete.

Applications for permission to do this must be addressed to the Under Secretary of State, War Office, and must be accompanied by a fee of £2 2s. Candidates found unfit by this board are not bound to accept its finding, but may continue their studies at their own risk. In any case, they *must* submit to the final medical examination. It would be out of place here to give a complete account of the physical tests to be satisfied by candidates who have passed the Competitive Examination. They can be seen in the Regulations for Woolwich or Sandhurst, which may be obtained, post free for 1½d., from Wyman and Sons, Fetter Lane, E.C.

It may, however, be useful to state that, at sixteen, a boy should be at least 64 inches high, and have a chest measurement of 34 inches when it is expanded and 32 inches when it is as empty as it can be made. At eighteen the corresponding figures must be at least 65, 35, 33. It is quite possible by proper training to bring boys up to these standards if they are not much below them. During the period of school training the teeth should receive constant attention, and any decayed ones immediately stopped. Loss or decay of ten teeth is a disqualification, but well-stopped teeth are considered sound. Eyesight and hearing must be good, and no impediment of speech. *No relaxation of the eyesight test can ever be allowed.*

5. COST OF TRAINING. The cost of uniform, books, etc., on entering at WOOLWICH or SANDHURST is £35; but the complete outfit will probably cost £100 besides. The fees for boys whose fathers are not, or have not been, connected with the army amount to £150 for each of the two years. The sons of officers pay only from £20 to £80, according to the rank held by the father.

6. KING'S CADETS. They are appointed by the Secretary of State for War from sons of military or naval officers killed in action, or who have died of wounds received in action or of disease contracted in foreign service. They are granted an educational allowance of £40 a year tenable between the ages of 13 and 18, and are entitled to free education at one of the military colleges. On receiving a commission they are granted an outfit of £50.

SPECIAL WAYS OF GETTING A COMMISSION.

1. COLONIAL COMMISSIONS. A certain number of commissions are offered annually to the principal Colonies, for example, seven commissions in the army are annually granted to the students of the Royal Military College at Kingston, Canada.

2. UNIVERSITY CANDIDATES. British Universities —some singly, others in groups—are empowered to nominate suitable candidates for commissions in the Cavalry, Royal Artillery, Infantry, Army Service Corps, and Indian Army, notice being given from time to time of the number of Commissions allotted to university candidates. Each university, or group of universities, appoints a nomination Board to which the War Office adds one or more military members, who have a veto on the selection. To be eligible for nomination a candidate must be between the ages of twenty and twenty-five, and unmarried. He must reside for three academic years at an approved university or college of the same, and qualify for a degree. Candidates may graduate in any subjects except Theology, Medicine, Music and Commerce. Candidates who have graduated with first-class honours or with other distinctions approved by the Secretary of State as being equivalent thereto, in any recognised branch of study, may, under certain conditions, be entitled to count one year of seniority on receiving their commissions.

First-class honours are defined as follows: (1) At Oxford, a first-class in any final school; (2) at Cambridge, a first-class in any tripos; (3) at Trinity College, Dublin, the standard of silver medal at the Degree Examination in Honours; (4) at the Scottish Universities, a first-class in any honours group; (5) any other distinction recognised by the Army Council as equivalent to first class honours in any approved branch of study.

A candidate for nomination is also required to present certificates of military qualifications, practical and theoretical. The following regulations are accordingly in force:

(1) During his residence at the university, the candidate must receive regular instruction in military subjects.

(2) He must be attached to a "Regular" unit for six weeks in each of two consecutive years, or twelve weeks in one year, and obtain a satisfactory report as to his proficiency.

(3) He is also required to qualify in military subjects, at one of the examinations held in March and October each year, under instructions from the War Office.

3. OFFICERS OF THE SPECIAL RESERVE AND OF THE TERRITORIAL FORCE. Commissions in the Regular Army (except in the Corps of Royal Engineers) are granted to officers of the Special Reserve and officers of the Territorial Force, who are successful candidates at a competitive examination, held twice a year, in March and October, at Aldershot, Dublin, Edinburgh, London, and Portsmouth. A candidate must be unmarried and between the ages of twenty and twenty-five. To be eligible he must have obtained a "leaving" or "qualifying" certificate, as in the case of candidates for admission to Woolwich or Sandhurst (see p. 740). He must also have been attached for a certain period to a "Regular" unit, and since its completion have served for at least a year, during which he must have performed the annual training required by the regulations governing the force to which he belongs. The subjects of the Competitive Examination are as follows:—

(1) Military History and Strategy; (2) Tactics; (3) Military Engineering; (4) Map Reading, Field Sketching and Reconnaissance; (5) Military Law and (6) Military Administration and Organisation. 250 marks assigned for (5) and for (6). and 1000 for each of the others.

The Medical Examination is very stringent and it is suggested that a candidate before commencing his course of study should undergo a thorough medical examination.

4. PROMOTION FROM THE RANKS (See above under *Promotion*, p. 739). This method of obtaining a commission is well worth the attention of well educated young men of grit and determination, who cannot afford to get one in the usual way. It is said that some seven hundred officers of our present army have won their commissions by promotion from the ranks.

N.B.—All Commissioned Officers of the Royal Marines

are now required to have passed through the course of training prescribed for Naval Officers (See under *Navy*).

OFFICERS' EXPENSES. Officers who go on foreign service can, and often do, live from the first on their pay. Those who remain in England should not be expected to do so; and even an infantry subaltern should receive at least £60 a year beyond his pay. Cavalry regiments are the most expensive; and a cavalry officer cannot do with less than £300 a year from private sources, unless he is stationed abroad. Even then this sum is not reduced by much more than £50. Parents whose means are limited should write to the colonel of the regiment their sons wish to join, and ascertain the amount they may be called upon to contribute. Much attention is being paid by our Army authorities to the possibility of limiting the expenditure of officers, and it is probable that it will be much reduced in the course of time.

THE NAVY.

The British Navy is by far the most powerful in the world; in fact, our policy is to make it sufficiently powerful to be more than a match for any probable hostile combination of powers. This policy is forced upon us by our circumstances; for it is no exaggeration to say that, not only the maintenance of our Empire, but our very existence as a nation depends on the efficiency of our Navy. In case of war it would have to attack our foes and preserve the various parts of our scattered Empire from invasion by sea. But this is by no means all. One of the main objects of our enemy would be to cripple our mercantile marine; and, could he succeed, we should be quickly starved into surrender, for we import far more of our necessary food than we produce. Our vast fleet of fast cruisers would have, then, to protect our merchant ships all over the world. Further, it would be necessary to transport troops to attack vulnerable parts of our enemy's dominions, e.g. his colonies; and these transports, too, would have to be protected by fighting vessels. Finally, a war with a hostile combination of maritime powers would be disastrous to our commerce, whatever the final result; consequently it is very much to our advantage to remain at peace as long as possible; and nothing will enable us to do so better than a navy that no combination of powers could hope to defeat.

OF WHAT OUR NAVY CONSISTS. The two great classes of fighting vessels are *Battle Ships* and *Cruisers*. The former are much more thickly plated with iron than the latter and carry heavier guns; but a Cruiser can steam three or four knots an hour faster than a Battle Ship. In case of war, it would be the business of the stronger vessels to try to blockade our enemy's warships in his own ports, and to engage his vessels of the same class, whilst the Cruisers would protect our mercantile marine and try to destroy his.

Besides Battle Ships and Cruisers we have a few *Gun Boats* for patrolling rivers and islands, protection of fisheries, &c., even in times of general peace; *Torpedo Boats*, built for speed and for launching the deadly torpedo; *Torpedo Destroyers*, faster still and originally designed to catch and destroy the former; and finally, *Submarines*, which are still at the experimental stage, but which bid fair to become of the greatest importance.

THE PERSONNEL OF THE NAVY may be divided into 1. Commissioned Officers—Military and Civil. 2. Chief Gunners, Boatswains and Carpenters. 3. Warrant Officers. 4. Ship's Company.

The Commissioned Officers, with whom, in the following pages, we are chiefly concerned, are thus divided:

1. Executive Branch: Flag Officers (Admiral of the Fleet, Admirals, Vice-Admirals, Rear-Admirals), Captains, Commanders, Lieutenants, Sub-Lieutenants, Acting-Sub-Lieutenants, Midshipmen, Naval Cadets. 2. Engineer Branch: Rear-Admirals (E), Captains (E), &c., as in Executive Branch. 3. Royal Marines: Lieutenant-Colonel, Major, Captain, Lieutenant, Sub-Lieutenants. 4. Medical Branch: Inspectors-General, Deputy Inspectors-General, Fleet Surgeons, Staff Surgeons, Surgeons. 5. Accountant Branch: Secretaries, Paymasters, Clerks, Assistant-Clerks. 6. Chaplains. 7. Naval Instructors.

PAY. The following table will show the various grades of the Naval and Marine Officers, and their ordinary pay, as settled by the New Regulations (1903). In addition to the sums stated below there are many extra allowances for special duties, which may amount to £45 in the case of a Sub-Lieutenant, to £73 in that of a Lieutenant, and so on, rising to as much as £328 in the case of a Captain. Midshipmen during their three years of service on board receive £32 a year, and afterwards as Sub-Lieutenants £91 a year.

PAY TABLE

for Executive, Engineer and Marine Officers.

NAVAL OFFICERS.	Pay.	
	Executive.	Engineers.
	£	£
Lieutenant	182 to 292	182 to 365
Commander	365	438 to 602
Captain	410 to 602	638 to 730
Rear-Admiral	1095	1095
Vice-Admiral	1460	—
Admiral	1825	—
Admiral of the Fleet	2190	—

ROYAL MARINE OFFICERS.	Pay.
	£
Lieutenant	182 to 200
Captain	219 to 274
Major	365 to 474
Lieutenant-Colonel	547 to 857

The following particulars of pay in the other branches mentioned above will give an idea of the opportunities they offer.

Medical Branch: £255 to £1300.

Accountant Branch: Assistant Paymasters receive from £91 to £210; Paymasters from £255 to £602.

Chaplains and Naval Instructors: £219 to £401.

The number of officers, seamen, boys, and marines provided for naval services in one year (taking 1905–6 as a fair example) amounted to 129,000, and the wages paid for their services totalled £6,672,000; whilst no less a sum than two millions was expended for half-pay, reserved and retired pay, naval and marine pensions, gratuities, and compassionate allowances.

PROMOTION, HALF PAY, AND PENSIONS. Increase of ordinary pay in any rank depends on length of service in that rank. Promotion from one rank to a higher, up to and including that of Lieutenant, depends absolutely on the results of examinations. Thence it is by selection up to the rank of Captain, after which it is by pure seniority. An officer unable, through illness contracted on service, to perform his duties, is allowed three months' leave on Full Pay, after which, if still incapacitated for duty, he is put on Half Pay. A few officers, fit and willing for active service, are obliged to go on Half Pay because there are not enough ships in commission to give them employment. The Retired Pay is on a liberal scale, and special pensions are granted to officers for distinguished service. Pensions to widows are given provided the parties were married whilst the officers were on the active List. Widows of officers killed in action receive a much greater pension than they otherwise would. For all particulars of Half and Retired Pay, see the "Quarterly Navy List."

DOCKYARDS (ROYAL). A complete dockyard is an enclosure containing every appliance for the building, repairing, fitting, victualling and coaling of ships. Most of our warships are built at the Royal Dockyards, situated at Sheerness, Chatham, Portsmouth, Pembroke, Devonport and Haulbowline (Cork Harbour), which are under the sole

control of the Admiralty; but many are built in private yards, such as those near, or at, Newcastle, Glasgow, Barrow, and Belfast.

A complete list of the warships afloat may be seen in such books as Whitaker's Almanac or the Navy List, and need not be given here. Look, in either of these publications at the long list of our warships of all kinds, try to imagine the vast army of designers, constructors, artificers, paymasters, clerks and unskilled labourers that must have been employed in their construction and equipment; notice that not more than half a dozen of these vessels are 20 years old, and that in 20 years' time others more numerous and powerful will have taken their places; think further of the work involved in arming, victualling and storing them with coal and in docking and repairing them, and, finally, of the works required to protect the enclosures, with their mazes of shops and store-houses, where all this work is performed, and you will be able to form some idea of what a modern dockyard must be like. And now think of the distribution of our Navy all over the Globe and of the necessity of having dockyards where vessels can be repaired and re-stored without having to return to England, and you will appreciate the activity of the Admiralty, especially since 1895, in providing and extending dockyard accommodation in such places as Gibraltar, Malta, Hong Kong and Simon's Bay (Cape of Good Hope).

All the best posts in these yards, as well as on the ships of the Navy, are given to officers who have undergone the training provided by the Admiralty for its Naval Officers.

NAVAL COLLEGES AND SCHOOLS.

1. ROYAL NAVAL COLLEGES, OSBORNE and DARTMOUTH. At Osborne is the Naval School in which practically all future cadets will receive their first professional training. They enter it at twelve years of age, and stay two years, after which they proceed to the Naval College at Dartmouth. Formerly cadets intended for the Executive Branch of the Service entered on their period of training at the age of 14½—15½ and spent the first two years on board the Britannia, off Dartmouth; but in 1905 the Britannia ceased to be used as a training ship, and the training, begun at Osborne, is now carried on at the magnificent Royal Naval College recently erected at Dartmouth. Osborne College consists of a number of bungalows erected on land belonging to the former Royal Residence of Osborne, near Cowes, in the Isle of Wight, which, on the death of Queen Victoria, was presented to the nation by King Edward VII. The house and surrounding grounds are used as a Convalescent Home for Naval and Military Officers; and the remainder of the estate belongs to the Naval College. The Cadets receive an excellent general education; but the time usually given in our Public Schools to classical studies is devoted at Osborne and Dartmouth to Seamanship, Navigation and Practical Engineering. Particulars as to fees, entrance, &c., are given below; see *Cost of Training*.

2. ROYAL NAVAL ENGINEERING COLLEGE, DEVONPORT, is usually called Keyham College, because it is situated at Keyham, a little north of Devonport. Under the old regulations, Engineer Cadets began their training at Keyham between the ages of 14½ and 16½. The last examinations under this scheme were held in March, 1905, and March, 1906, and now only those are eligible as Engineer Officers who have passed through Osborne and Dartmouth.

3. ROYAL NAVAL COLLEGE, GREENWICH, occupies the buildings of the former Greenwich Hospital, which was closed as such in 1869. The College is organised to provide for the instruction of Naval and Marine Officers in all branches of theoretical and scientific study bearing upon their profession. Even Flag Officers *may* here take a course of instruction. Arrangements, too, are made for the admission to the courses of study of private students in Naval Architecture; the fee, payable in advance, is £30 for each session. As far as the buildings will permit, Naval Officers pursuing courses of study are given free quarters within the precincts; and they are allowed, in addition to their full pay, 1s. 6d. a day towards mess expenses.

Examinations are held at the end of each course, although Captains and Commanders need not take them. In other cases, the class of Certificate gained determines, to some extent, the time of promotion, with accompanying increase of pay. Acting Sub-Lieutenants who fail twice in their First Examination are liable to be discharged from the service. There are many valuable prizes for those who do best in the Examinations.

EDUCATION AND TRAINING FOR THE NAVY.

1. PRELIMINARY CONSIDERATIONS FOR PARENTS. Before deciding on a Naval career for a boy, his parents should make sure of the following points:

1. That the boy is healthy, well developed for his age, and without physical defect. 2. That he is of fully average intelligence. 3. That they can give satisfactory proof that he is of good moral character. 4. That they can afford to spend an *average* of rather more than £100 a year on his training between the ages of 12 and 20, and then supplement his pay till it amounts to £150. 5. That he is of pure European descent; and that they are, themselves, either natural-born British subjects, or have been naturalized in the United Kingdom.

2. EDUCATION AT SCHOOL TILL THE AGE OF 12. The early education of the boy is of supreme importance. So far as the mere subjects of his instruction are concerned, they form part of the curriculum of any good Secondary School; but something more is wanted than ability to pass an examination. Before he is allowed, at the age of 12, to sit for the Qualifying Examination (see below), he will have to appear before a Committee appointed by the First Lord of the Admiralty, who will try to assure themselves, in conversation with him, that he is of the right stamp for a Naval Officer. The boy who appeared utterly dull and conspicuously awkward and self-conscious at this interview, would have but a small chance of a nomination; whilst the boy who exhibited that aplomb which is acquired by frequent and intimate association with well-bred people, would have a good chance of securing one. By the age of 12 he should be well grounded, for his age, in the subjects of the Qualifying Examination (see below). He need spend no time on Greek or Science, but must be taught either German, *or* French orally, and much attention should be paid to his physical development.

3. NOMINATION. As soon as a boy intended for a naval career is 12 years old, his parents should apply for a nomination to the First Lord of the Admiralty, addressing the application to his Assistant Private Secretary, Whitehall. The Interview mentioned above, and on which his Nomination depends, will not take place till he is 12 years and 8 months, and a few weeks before one of the three dates fixed for the Qualifying Examination. There is no such thing as special preparation for this interview. The candidate may be asked all sorts of queer questions designed to test his powers of self-possession. Influence *should* not count; but membership of the family of a well-known officer is a useful qualification. No nomination will be given to a boy whose parents or guardians do not promise on his behalf that he is prepared to enter any one of the three great branches of the Service—Executive, Engineers, Royal Marines—when he has completed his probationary period of service afloat.

4. MEDICAL EXAMINATION. Boys who have secured nominations must next undergo the Medical Examination and must be found physically fit for the Navy. Defects of body, speech, sight or hearing, and any predisposition to disease would disqualify them. "It should be particularly noted that full normal vision—as determined by Snellen's tests—is required."

5. QUALIFYING EXAMINATION. A boy who has secured a nomination and passed the doctor, will be required, within a few weeks, to present himself at one of the Qualifying Examinations, held every year in March,

July and December. He will be examined in the following subjects:—

1. English (dictation, composition, reproduction of a passage read out, &c.) 2. History and Geography, with special reference to the British Empire. 3. Arithmetic and Algebra (to Simple Equations). 4. Geometry, Practical and Theoretical. 5. French *or* German (with an oral examination). 6. Latin (easy translations from and into English and simple grammar).

6. PERIOD OF TRAINING. Having passed his Examination, the candidate for a naval training becomes a Naval Cadet and will be required in about six weeks to go into residence at Osborne, where he will remain for two years. The next two years will be passed at Dartmouth. And then he will spend two terms in the Training Cruiser. If approved he then becomes a Midshipman and spends the next three years at sea. At the end of this period, having passed a satisfactory examination, he is promoted to the rank of acting Sub-Lieutenant and once more becomes a student on shore, spending about a twelvemonth in studying at Portsmouth and Greenwich. If he again passes his examination satisfactorily he becomes a sub-lieutenant and is drafted into one of the three branches of the Service: if into the Executive, he goes to sea for two years, and is then eligible for promotion to lieutenant; if into the Engineers he goes through a special course of Engineering at Keyham; and if into the Royal Marines, he will spend the next two years in acquiring military training.

7. COST OF TRAINING. Although the cost of a naval training is considerable, it is less than that of education in most of the Public Schools. The following is a rough estimate of it, to which must be added travelling expenses and those incurred during the holidays, which amount to 13 weeks in each of the first four years.

1. First year at Osborne (12–13), total cost about £135. Fees £75, outfit £40, minor expenses £15, pocket money £5.

N.B.—To a limited number of cadets, who must be sons of officers of the Navy, Army, or Marines, or Civil Service under the Admiralty, the fees charged are £40. This also applies to the following period.

2. Next three years at Osborne and Dartmouth (13–16), total cost about £315:—Fees for the three years £225, minor expenses £75, pocket money £15.

3. First year as Midshipman (16–17), net cost about £115: compulsory private allowance £50, outfit and minor expenses £47, extra for messing and service £50. Pay received £32.

4. Second and third years as Midshipman (17–19), net cost about £216 —compulsory allowance (at £50 a year) £100, minor expenses and renewals, £80, extra for messing and service £100; pay received £64.

5. As Acting Sub-Lieutenant (19–20), the net cost will probably be about £90:—new uniform from £30 to £40; messing about 3s. a day beyond the government allowance (1s. 6d. a day); total expenditure can hardly fall below £180; against which must be set his pay of £91.

6. As Sub-Lieutenant (20–22) he cannot live on his pay (£91), and his parents may expect to have to contribute £50 a year till he becomes Lieutenant.

7. As Lieutenant, he *can* live on his pay (£182), and most Lieutenants do. The Admiralty discourages all extravagance in messing expenses.

ACCOUNTANT BRANCH. Candidates for admission to this Branch must receive a nomination from the Admiralty, must be between 17 and 18 years of age, pass the doctor, and be able to swim. Boys of good ability who have been educated at any good Secondary School should be able to pass the examination, provided they have taken Latin and have been taught French conversationally. Aptitude for accounts is essential for success in this branch of the Service.

The successful candidate begins as Assistant Clerk at £45 a year, and may rise through the grades of Clerk and Assistant Paymaster to the rank of Paymaster. As Assistant Paymaster the pay ranges from £91 to £210, and as Paymaster from £255 to £602.

THE MERCANTILE MARINE.

The Mercantile Marine consists of all the vessels—sailing or steam—engaged in the carriage by sea of goods and passengers. These range from little sailing smacks of 200 tons displacement to huge cargo steamers of a gross tonnage of 20,000 going 15 knots an hour, and stately liners of 31,000 going at the rate of 25 knots. The gross tonnage of the mercantile marine of the United Kingdom is something over 17,000,000, and is far greater than that of all the rest of Europe put together. If we include our Indian and Colonial merchant ships the gross tonnage amounts to 18,500,000, or nearly as much as that of all other countries. As might be expected, the number of sailing ships is on the decline. In 1886 the gross tonnage of registered sailing ships belonging to the United Kingdom was 35% of that of steam and sailing ships combined; whilst in 1908 it had fallen to 5·6%.

In 1902, the number of British seamen of all ranks—excluding Asiatics and Colonials—engaged in the Merchant Service was nearly 175,000. Many of the posts are extremely well paid—indeed the average pay is fairly high. Captains in the big liners (the P. & O. for instance) may get £800 a year; Chief Officers £200, and Second Officers, £132. Promotion depends upon (1) general physique and capacity, (2) early training, (3) obtaining the Board of Trade Certificates (see below), and (4) *very* much upon length and character of service.

THE PERSONNEL is divided into Officers, Midshipmen or Apprentices (there is usually little or no difference), and Crew (or Deck hands).

The Officers consist of the Captain, 1st Mate, 2nd Mate, and sometimes 3rd, 4th, 5th, and even 6th Mate; and, on steam ships, also of 1st Engineer, 2nd Engineer, and 3rd Engineer. On liners, Mates prefer the more dignified title of Officer—1st Officer, 2nd Officer, and so on. *Midshipmen or Apprentices* are lads training to become officers. *Deck Hands* consist of Petty Officers (Boatswain, Carpenters, Sailmakers, &c.), Able Seamen, Ordinary Seamen, and Boys.

THE PAY depends largely on the size and character of the vessel in which a man is serving. With the exception of Engineers in small vessels (under 500 tons), food and service are given in addition to the amounts stated below; so that the only considerable necessary expenditure is for clothing—a very different state of things from that which obtains in the Navy, where messing expenses and service may be heavy. The social position of Mercantile Officers is below that of Naval Officers; but their average pay is better. A Captain's pay on the large liners varies from £400 to £800, and, on the smaller, seldom less than £250. On sailing ships, Mates (1st, 2nd, and 3rd) get from £40 to £100 a year; on steam ships from £70 to £140. In the bigger steam ships, Engineers (1st, 2nd, and 3rd) draw from £80 to £220 a year. It must be noted that the above sums are *rates* only, wages being usually paid by the month. When on leave, between voyages, officers draw no pay.

TRAINING FOR THE MERCANTILE MARINE. Parents who think of sending their boys into the Merchant Service, should first make sure that they are not colour-blind. If they are, they can never become officers. They can be tested at the Mercantile Marine Offices, in any of the chief ports, for 1s. each. (For detailed information, see "Regulations for Examinations of Masters and Mates in the Mercantile Marine," price 1s. through any book-seller.) If their colour vision is normal, and their parents can afford the expense, they are strongly urged to send them to one of the Mercantile Training Ships. (*See below*).

Another course open to parents who can afford the outlay, is to get their sons taken as Midshipmen on one of the big sailing ships of Messrs. Devitt and Moore, 39 Fenchurch Street, E.C., from whom full particulars may be obtained. Boys are taken as Midshipmen on easier terms by Messrs. Elder, Dempster and Co., Colonial House, Liverpool. They must be well educated, of good physique, and willing to work hard. No premium is required and no wages paid. At the end of their apprenticeship, suitable lads are retained in the service of the Company. (A list of shipowners who take apprentices with the outlines of their terms is given in "The Sea," by F. W. Gardner, published at 1s. by Spottiswoode & Co., 54 Gracechurch Street, E.C.).

TRAINING SHIPS FOR THE MERCANTILE MARINE.

1. THE CONWAY is stationed in the Mersey, off Rock Ferry, Liverpool. She is under the general management of the Mercantile Marine Association; and parents of "Cadets" may rest assured that everything in reason is done for the health, education and happiness of their boys. Boys are received between the ages of 12 and 16. They must be fairly well educated for their age, must not be colour-blind and must be in good health. The fees are 65 guineas a year, and include uniform and outer clothing, food, medical attendance, washing, use of books and school stationery. A new complete outfit (not including cricket and football clothing) would cost nearly £18, of which articles costing £10 9s. must be bought at the Sailors' Home, Canning Place, Liverpool. Three nominations to cadetships in the Naval College, Dartmouth, are granted annually to the Conway.

2. THE WORCESTER lies off Greenhithe, Kent, in the mouth of the Thames. Boys are received between the ages of 11 and 15½ years. They are received at the early age of 11 so as to admit of being trained for Osborne. The fees vary slightly from those charged on board the Conway, and in both ships the advantages offered are nearly on a par. To ensure uniformity parents are expected to purchase the outfit at Silver & Co., Sun Court, Cornhill, E.C.

Among the various money and other prizes offered annually, special mention should be made of the King's Gold Medal awarded to the "Worcester" boy who shows the qualities most likely to make the finest sailor. These qualities consist of a cheerful submission to superiors, self-respect and independence of character, kindness and protection to the weak, readiness to forgive offence, desire to conciliate the differences of others, and, above all, fearless devotion to duty and unflinching truthfulness in all its aspects and bearings. The Admiralty present annually to the "Worcester" and "Conway" cadets several commissions as Midshipmen in the Royal Naval Reserve (see below). They must be between sixteen and eighteen years of age at the date of the appointment. Moreover, certified cadets of these two training-ships can be examined for a 2nd Mate's Certificate after passing three years at sea instead of four years as in ordinary cases.

In appointments made by the Secretary of State for India to the *Bengal Pilot Service*, preference is given to candidates who have passed through the Conway or the Worcester. In this service both social position and pay are good and the pensions fair.

3. THE MERSEY. This is a sea-going sailing-ship of the White Star Line designed as a cadet training-ship, in the belief that it is in sailing-vessels the knowledge of navigation and seamanship is most effectively acquired, and that the experience gained in such vessels is the surest way to acquire that courage and resource which are so essential in a marine officer. The "Mersey" cadets will be articled for four years, or for three years if duly certified from the Conway or Worcester. The four years' training will cost a lad £200 exclusive of outfit, books, instruments, and pocket-money. The Mersey, which is a fine clipper ship, was sent on her maiden voyage 20 August, 1908.

OFFICERS' CERTIFICATES. Midshipmen and apprentices who have reached the age of 17, and have served four years at sea (in the case of Conway and Worcester boys, three years) can sit for the Second Mate's Certificate; at 19, with one year's service more, for the First Mate's; and at 21, with six years' service, for the Master's. Without these certificates, promotion in the Mercantile Marine is impossible. [For particulars respecting these examinations consult the "Regulations for Examinations of Masters and Mates in the Mercantile Marine," already mentioned). It must not be supposed that the possession of any one of these Certificates carries with it the certainty of employment in the rank indicated thereon. In the P & O. nearly all the chief officers and second officers hold a Master's Certificate, and most of the third officers hold a First Mate's Certificate.

ROYAL NAVAL RESERVE OFFICERS consist of the *élite* of the Officers of the Mercantile Marine; and those who enter the latter as Midshipmen or Apprentices should join the Reserve if they can. If they succeed, they improve their social position, for Officers of the R.N.R. rank with, though after, Officers of the R.N. of their corresponding rank; they improve their chances of promotion in the Merchant Service, for many ship owners will give them the preference; they may increase their pay by £25 a year; in case of war, they may be appointed to the Royal Navy and receive precisely the same pay and treatment as Naval Officers of their own rank. The total number of R.N.R. Officers is about 2,000, of whom 400 or more may be Engineers. The remainder consists of lieutenants, sub-lieutenants and midshipmen. Direct entries as Lieutenants are not at present made.

Mates of British steam-ships are, under certain conditions as to sea-service, eligible for appointment as Sub-Lieutenants if they hold a Master's Certificate and are under 30 years of age. A Midshipman must, as a rule, have passed through a course of instruction for two years in either the *Worcester* or the *Conway*; those who have not, must have served for a year on board a First-Class British ship before their applications can be considered. And no application will be considered if the candidate is over 18½. Engineers, to be eligible, must possess a First-Class Engineer's Certificate of Competency, and must have served at least 7 years at sea as Engineer. For information as to qualifications apply to Secretary, Naval Reserve Office, Admiralty. Applications for admission into the R.N.R. should be made through the "Registrar General of Shipping and Seamen, Carlisle Place, Westminster." For full official information, see the *Quarterly Navy List*, 3s. through any bookseller.

THE CIVIL SERVICE.

The greatest attraction the Civil Service has to offer is the practical certainty of employment for life and of a pension to retire on. The salaries are not, as a rule, great, although the gifted and fortunate may get £1,000 a year, or more. The mass, however, will never rise to more than £300 or £400. The competition for the better posts is very keen; and those will have the best chance of success who deliberately train for it for years before the actual competition takes place. Generally speaking, not half of those who compete win prizes; and the proportion of successful ones tends to decrease with the increase of opportunities for getting an advanced education. In only one of the great Departments of the Service, the Post Office, are there appointments open to competition to women; and these must be given up on marriage. There are about 4,000 of them, with salaries ranging from 11s. a week to £500 a year. There are, however, a few female typists employed in the various Departments; but for these posts a nomination is required.

The general character of the work in the Government Offices is for some years, speaking generally of course, dull and of somewhat deadening effect; but the hours are not long—seven hours a day for the clerical staff, and at least a Saturday half holiday every other week. The very great majority of Civil Service appointments are given to those who do best in open competitive examinations, provided they can also pass the medical examination. All competitors must be natural-born or naturalised British subjects, and the limits of age are rigorously fixed; they must give satisfactory evidence of good character, and must pay an examination fee franging from 5s. for Boy Clerks to £6 for the best appointments. There are posts open to public competition to men of all ages from 14 to 50, but, as a rule, those over 25 and not already in the Service, are required to possess practical knowledge of the work of the Department into which they seek admission. In the case of women the higher limit of age is as a rule, 20.

PREPARATION FOR THE CIVIL SERVICE. Formerly those who wished to enter the Civil Service were almost bound to put themselves into the hands of special coaches; but the changes made within the last few years have made the crammer less and less indispensable. The great necessity is, in nearly every case, a good education of a

secondary type as a foundation, with additions according to the examination in view. For the majority of such as are taken between the ages of 15 and 19, no additions are necessary, all the subjects required for passing forming part of the curriculum of every good Secondary School. Now there is hardly a clever boy in the kingdom, however poor, who cannot, by means of scholarships, get into a Secondary School and qualify himself for a Civil Service appointment by simply working hard at the ordinary subjects he is required to take up. There is nearly always a choice; and he will soon find out which will suit him best. But there are certain subjects to which he must always pay very great attention, viz., handwriting, spelling, English composition and arithmetic. Greek is never, in the examinations of which we are now speaking, given, even as an alternative. Latin is seldom necessary, but often given as an alternative. A good knowledge of Latin and French or German may be of very great use for some of the better posts; but, if it is desirable that boys should enter the Service before they are 19, they should fix their chief attention on one language only.

Candidates, however, should remember that all the subjects of a good school curriculum, such as Latin, German, History, Geography and Science, even if unnecessary for the first examination taken, may be of great use in future ones for higher posts, and that they will never have so good an opportunity for laying a foundational knowledge of them as during their school days. The best posts, as will be shown below, are within the reach only of those who have been educated at a first-class school and at a University; and even those who aim at posts not so good as these will find that the longer they can remain at school, the better their chances of securing good appointments. But would-be candidates must never forget that health is of prime importance. It is quite possible for them to pass a given examination and be rejected by the doctor afterwards. General health, teeth, hearing and eyesight, should all be kept in good condition.

Girls who intend to compete for Civil Service Appointments in the Post Office as Women Clerks (18—20), or Girl Clerks (16—18) will, just as men, require a good all-round secondary education, including two languages (Latin, French, German) and either algebra or shorthand. Those, however, who are content to try for less well paid posts as Learners (15—18) or Sorters (15—18), require nothing beyond a good elementary school training; candidates must be at least 5 ft. in height without boots.

Particulars are given below of the best posts open to competition in the Civil Service; but, as it would be impossible in a work of this kind to give anything like an exhaustive account of all of them, intending candidates are advised to get the latest edition of the *Civil Service Year Book* (2s., through any bookseller), which will give them all the particulars they are likely to want of the Service in general. For notice of vacancies and approaching examinations refer to "The Civilian," a weekly journal.

It is useful occasionally to look through sets of recent examination papers, which can be purchased from the Civil Service Commissioners for 6d. or 1s. per set; and a good many will be found in the *Civil Service Year Book*. But too much time should not be wasted in hunting up answers to the questions: they should be used mainly to test the candidate's general state of preparedness. Special coaching is not necessary for those of good ability who find they usually do well in their school tests; and the more young people learn to depend upon their own efforts the more likely they are to rise in the Civil Service as elsewhere. Special training as arranged for in many good schools is not of the nature of cramming, and may safely be recommended.

PENSIONS may be given after ten years' service; but they are not granted to any under 60, unless they are incapable from infirmity of mind or body to discharge their duties. A pension amounts to $\frac{1}{80}$ of the annual salary for each year of service, but can never exceed $\frac{40}{80}$. But by the Superannuation Act, 1909, $\frac{1}{60}$ is substituted for $\frac{1}{80}$ in the case of all who enter the Service after the passing of this Act, thus making the maximum pensions one-half of the annual salary. If, for three years previous to retirement, a Civil servant has been in receipt of the same salary, his pension is computed thereon—if not, on the average for the three years preceding his last "rise." Compulsory retirement comes at the age of 65.

AGE OF COMPETITORS. Competitors must be, to *a day*, within the limits of age assigned to each examination, and will have to produce, as evidence that they are so, either their birth certificate or other satisfactory testimony. Persons who have been employed for at least two consecutive years in the Civil Service, may, when competing for other posts, if they entered the Service before 20th April, 1900, deduct from their actual age any time not exceeding *five* years, which they may have spent in such service; unless the post be that of Assistant of Excise, when only *one* year can be deducted; of Assistant of Customs, or of Second Class Clerk for Port Service, when only *two* can be deducted. Those who have entered the Civil Service since 20th April, 1900, unless they have served in the Army or Navy, can, in no case, deduct more than *two* years.

SOME HOME APPOINTMENTS OPEN TO COMPETITION.

1. CLERKSHIPS, CLASS 1. Age, 22—24. Fee, £6. The Examination, which is identical with that for the Indian Civil Service and for Eastern Cadetships, takes place in August and is extremely difficult. In fact, it is almost hopeless for any but distinguished University men to attempt it. There are no less than 33 subjects from which a choice may be made. Until 1906 a candidate might take any number of these subjects that he pleased; some had offered sixteen, and few had taken less than eleven. To each subject is assigned a maximum number of marks, and by the new regulations candidates are at liberty to choose any of the subjects provided that the maximum number of marks obtainable from the subjects chosen does not exceed 6,000. The result is that nine or ten subjects are now usually taken, and the ordinary work at the university is not seriously hampered by an attempt to cram a number of additional subjects. Further, a candidate is allowed no marks for a subject in which he is a mere smatterer. No amount of mere cramming will enable a candidate to stand high at these examinations. Considerable deductions of marks are made for bad handwriting.

It is possible for 2nd Division Clerks, after eight years' service, to be promoted to this higher Division; but such promotions do not amount to more than two or three a year. They can, of course, take the Examination, and are eligible to do so up to the age of 29, under the rule quoted above.

Successful candidates are allowed, according to their position on the list, to choose one of 22 offices in which there may be vacancies—and need not at once choose any. The best are the Home Office, India Office (Correspondence Department), the Treasury and the Colonial Office. In these the salary begins at £200 and may rise to £1,000 or £1,200. In other offices the minimum is £150, and the maximum from £800 to £1,000.

The prospects of Higher Division Clerks are not, however, limited to those offered by the fixed scales of pay: Secretaryships, Assistant Secretaryships and other posts may be offered to them; and they may increase their incomes by holding private Secretaryships or by doing special work.

Higher Division Clerks work seven hours a day, have Saturday afternoon once a fortnight, and holidays amounting to 36 week days in the year, exclusive of Christmas Day, Good Friday, and, probably, but not certainly, Bank Holidays. After ten years' service the annual leave amounts to 48 week days.

2. SECOND DIVISION CLERKSHIPS. Age 17—20. Fee, £2.

Obligatory Subjects: (1) Handwriting, Spelling, and Copying MS.; (2) Arithmetic; (3) English Composition.

Optional Subjects:—(4) Précis, Indexing and Digest of Returns; (5) Book-keeping and Shorthand; (6) Geography and English History; (7) Translation from and into

Latin, (8) French, (9) German; (10) Elementary Mathematics; (11) Inorganic Chemistry and Ppysics.

Only four of the eight optional subjects may be taken, which must not include more than two languages.

The examination is of a searching character; and no amount of mere cramming would enable a boy to pass. If a language is taken, the candidate must have read widely in it and must have had plenty of practice in composition; but there are no tricky grammatical questions and, at present, no oral tests. In the science subjects no practical tests are given; but a candidate would have no chance of passing unless he had done a good deal of practical work. We should advise intending candidates of good ability to learn Latin, and either French or German, even if they do not take them in the examination; as they will find themselves thus equipped for competitions which may be announced for better posts, and for which such languages are required. Thus the Junior appointments in the Supply and Accounting Departments of the Admiralty are better than Second Division Clerkships and may be competed for by any holding the latter at a later age than that prescribed for outsiders; but such candidates would have practically no chance without a fairly advanced knowledge of Latin *and* French or German. Those about to try for a Second Division Clerkship should ascertain if an examination is to be held at the same time for Clerkships for Port Service. If so, an extra fee of £1 will enable them to compete for both at the same examination, except that they may take five of the optional subjects instead of four, which must not, however, include more than two languages. In the Port Service they will have better prospects.

Successful Second Division Candidates may be drafted into any one of 32 London Offices; but, out of about 3,000 Second Division Clerks employed in London, nearly 1,000 are to be found in the Post Office. They are allowed, however, to select the departments in which they prefer to serve; and, *if possible*, effect is given to their preference.

The minimum salary in the Second Division is £70, and the maximum £300. After eight years' service a specially meritorious Second Division Clerk may be promoted to a First Class Clerkship, and there are other appointments in the Admiralty, Inland Revenue Department, War Office, and a few others, reserved for Clerks of this Division, and in which the salaries range from £300 to £500.

Second Division Clerks work for not less than seven hours a day, and have alternate Saturday afternoons free. Their annual holiday is 14 working days for the first five years, and 21 afterwards, with the addition of Christmas Day, Good Friday, King's Birthday, and *perhaps* the four Bank Holidays.

3. INTERMEDIATE APPOINTMENTS. Between the appointments to Class I. Clerkships and Second Division Clerkships there are now "Intermediate" appointments suitable for youths who have been educated at a good Public or Secondary School, and who do not intend to proceed to a University. There are nine classes of such appointments:—

(1) As Junior Clerks in the Supply and Accounting Departments of the Admiralty.
(2) As Junior Clerks in the Ecclesiastical Commission.
(3) As Examiners in the Exchequer and Audit Department.
(4) As Second Class Clerks in the Estate Duty Office (*a*) of London, (*b*) of Edinburgh, (*c*) of Dublin.
(5) As Second Class Clerks in the Commissioners' Office of the Metropolitan Police.
(6) As Second Class Assistant Accountants in the Army Accounts Department.
(7) As Junior Clerks in the Royal Ordnance Factories.
(8) As Assistant Surveyors of Taxes.
(9) As Clerks (3rd class) in the office of the Crown Agents for the Colonies.

The salary varies somewhat in these different departments, but as a rule it is as follows:—Salary begins at £100; after probationary period £120, with £10 annual increase to £200. Then if found competent an annual rise of £15 to £350. All are eligible for promotion to higher appointments in their respective departments, which will depend on efficiency and merit.

Examination. Age limit 18—19½ years; Fee £3. Candidates must pass a qualifying examination in Arithmetic and English. They may select from the following list of subjects, one of which must be a language: Mathematics, French, German, Latin, Greek, English or European History, Chemistry and Physics. Candidates will be allowed to choose according to their place on the list, among the vacancies for which they are duly qualified, or they may elect to wait for the chance of a vacancy.

4. BOY CLERKS. Age 15—16. Fee, 5s. *Subjects:*

(1) Writing and spelling; (2) Arithmetic; (3) English Composition; (4) Copying MS.; and *any two* of the following: (5) Geography; (6) English History; translation *from* (7) Latin, (8) French, (9) German; (10) Mathematics (subject matter of Euclid I. and II., Algebra to Simple Equations); (11) Rudiments of Chemistry and Physics.

A well taught boy of 15 who has spent two or three years in a Secondary School, would find little difficulty in passing the examination with no special preparation whatsoever; and, if he has been taught to read the languages at sight, we should advise him to choose one. If he takes science he must have done practical work in it, although no practical tests are given. Candidates should have been used to working examples in the Metric System: and those who take Mathematics should have some knowledge of Graphs.

Successful candidates are not necessarily employed at once: they are placed upon a register and summoned for employment in any of the Public Departments as they are wanted. The pay is small: 15s. a week for the first year, 16s. the next, and so on. No Boy Clerk will in future be retained as such after he has reached the age of 18. If by that time he has not successfully competed for a permanent post in the Service he must seek employment elsewhere; and no period of service as a Boy Clerk counts towards a pension. Consequently those who can stay at school till they are old enough to try for a higher post should not become Boy Clerks. Still, if they are forced to begin earning money at an early age they need not despair of promotion even though they begin as Boy Clerks, if they will make up their minds to work hard in their spare time to prepare themselves for the Examination for Assistant Clerks (or Abstractors) to which none but Boy Clerks are at present admitted; or better still, for Examinations for Clerkships in the 2nd Division or in the Customs Port Service, or for Assistantships in the Customs or Excise. If they take the 2nd Division Examination they are allowed "service marks" at the rate of so many marks for each period of three months' service up to a certain maximum. Both *rate* and *maximum* may vary: they are usually five and sixty respectively. If competing in any of the examinations for the four posts last named, they are allowed to make deductions from their actual age in accordance with the rule previously given on page 746.

Boy Clerks are engaged and paid by the week of 39 hours, viz.: seven hours a day on each week-day except Saturday, when they only work four hours. Their annual holiday cannot exceed 12 days.

5. ASSISTANT CLERKS (ABSTRACTORS). Age 17—18. Fee 10s. *Subjects:*

(1) Writing, (2) Spelling, (3) Arithmetic, (4) English Composition, (5) Digesting Returns into Summaries, (6) Précis and Indexing, (7) Book-keeping or Shorthand.

Salary, £45, rising by annual increments of £5 to £85. If a Clerk is promoted to the higher grade, his salary increases by £7 10s. a year to £150. Only Boy Clerks are allowed to compete for these Clerkships. The prospect is poor; but service as an Assistant Clerk counts towards a pension and there is a chance, after six years' service (of which two may have been as Boy Clerk), of promotion without examination to the 2nd Division. Assistant Clerks can also compete in any of the Examinations for the higher posts mentioned above. They are allowed "service marks" and the usual deductions from their age.

6. CUSTOMS: CLERKS FOR PORT SERVICE. Age, 17—20. Fee £3. The examination has already been described (See "Second Division Clerkships," above). The prospects are rather better than in the 2nd Division

and the work less monotonous. The salary begins at £70 and may possibly rise to £500.

7. CUSTOMS: ASSISTANTS OF CUSTOMS. Age 18—21. Fee £1. *Subjects*:—

(1) Writing, (2) Arithmetic, (3) English Composition and Spelling, (4) General Geography, (5) Digesting Returns into Summaries, (6) Copying MS.

Candidates must have normal sight, be at least 5 ft. 4 in. in height, and their chest measurement must not fall short of the normal standard corresponding to their height —not short of 34 inches.

Those who are successful spend six months on probation, and when definitely admitted as qualified Assistants are not allowed for two years to compete for posts in other departments of the service. Their salary begins at £70 and rises by £5 a year to £105. Assistants are promoted by seniority into the 2nd Class of Examining Officers, and their salary, starting at £100, *may* rise to £250 without further promotion. If promoted into the First Class their pay may rise to £340; but such promotion is subject to ability to pass a test examination of a technical nature. Senior Examining Officers may become Surveyors and Inspectors, with maximum salaries of £550 and £650 respectively. The hours of employment may be somewhat irregular, but seldom exceed eight hours a day.

(N.B.—The scheme and limits of age were under revision, 1909-10.)

8. INLAND REVENUE: ASSISTANTS OF EXCISE. Age 19—22. Fee £1. *Subjects*:—

(1) Writing, (2) English Composition and Spelling, (3) Arithmetic, (4) Higher Arithmetic, (5) General Geography.

Examinations are usually held in May and November, and the comparative simplicity of the syllabus brings numerous competitors into the field.

The salary begins at £50 and rises by £5 a year to £80, when the Assistant becomes a Second Class Officer with a salary of £115, rising by £7 10s. a year to £160. If he is then qualified for promotion he may become a First Class Officer with a salary of £180 rising to £250. If, however, there are no vacancies in the First Class his salary will increase after 15 years' approved service to £167 10s. and rise by £7 10s. a year till a vacancy occurs. First Class Officers of two years' seniority may pass an Examination and become Supervisors (£250 to £400); and First Class Supervisors may qualify themselves by examination for the rank of Inspectors (£450 to £700); and there are a few, very few, higher posts still. Second Class Inspectors may become Collectors, and as such will have salaries ranging from £500 to £800.

Since the work of an Excise Officer may lie in any part of the country, there are special allowances for travelling or for keeping a horse. Assistant Supervisors have "officiating allowances" of £25, if able to reside at home, otherwise, £75.

Assistants of Excise and of Customs may, after six months' service, take the Examination for entrance to the Government Laboratory and undergo a training as Government Analysts, with salaries ranging from £160 to £1,500. After one year's service, Assistants of Excise may get appointments on the Excise Clerical Staff, in which the salaries range from £100 to £400.

(N.B.—The scheme and limits of age were under revision, 1909-10.)

9. PATENT OFFICE: ASSISTANT EXAMINERSHIPS. Age, 20—25. Fee, £5. *Subjects*:

(1) English Composition, Spelling and Writing, (2) Plane and Solid Geometry, (3) Mechanics and Mechanism, (4) Chemistry, (5) Electricity and Magnetism, (6) General Physics, (7) French *or* German.

As will be seen, the examination is only suitable for those who have undergone a sound scientific training. The prospects are good, the salary ranging from £150 to £450. The difficulty of the examination limits the number of competitors; but none can pass who does not reach a qualifying standard of marks.

10. OTHER COMPETITIVE HOME APPOINTMENTS. We have now given particulars of the chief posts open to competition in the Home Service, and shall only briefly glance at others.

Those who have gained a certain amount of legal knowledge by three years' service in a solicitor's office, may compete for vacant posts in the Office of Woods as Second Class Clerks, and as such will receive salaries of from £100 to £300, and on promotion to the rank of First Class Clerks £350 to £430. For the numerous other posts for which technical knowledge is required see *Civil Service Year Book*.

THE POST OFFICE offers numerous chances of Employment as—

(*a*) MALE SORTERS. Age 18—21; fee 5s.; subjects: (1) Writing, Spelling and English composition. (2) Arithmetic, including Metrical Weights and Measures. (3) Geography. Wages from 20s. a week to 44s., but if found competent to discharge the highest duties may rise to 62s.

(*b*) MALE LEARNERS. Age 15—18; fee 5s.; examinations as for Sorters. They first learn telegraphy and then counter duties. Learners in London are paid 8s. a week on entry, and when appointed to the Established Class, 20s. a week rising to a maximum of 44s. in ordinary cases, and to 65s. if found competent for the highest duties as telegraphists.

N.B.—No officer is retained in the Service who is not at least 5 ft. 4 ins. in height on entering his 19th year.

COMPETITIONS OPEN TO UNMARRIED WOMEN OR WIDOWS.

1. WOMEN CLERKS. Age, 18—20. Fee, 10s. *Subjects*:

(1) English Composition, Spelling, and Writing, (2) Arithmetic, (3) Geography, (4) Latin, (5) French, (6) German, (7) English History, (8) Algebra, (9) Shorthand.

Only two languages may be taken and only two of the subjects 7 to 9. Candidates must be at least 5 feet in height without boots.

For well educated girls the examination is not really difficult, but the competition is, at some examinations, very keen. A successful competitor begins as Second Class Clerk at a salary beginning at £65 with an annual increase of £5 to £110, and if promoted to the rank of First Class Clerk her salary will rise by £5 per annum from £115 to £140. After this the various grades of promotion are: Principal Clerk (£150 to £200), Assistant Superintendent (£210 to £260), Deputy Superintendent (£270 to £330), Superintendent (£330 to £500). The best Branch, to which the above grades and salaries all apply, is the Savings Bank. Women Clerks are employed almost entirely in the Central Offices of the three capitals and are quite separated from the male staff. They are employed for seven hours a day and have no "counter" work. Their annual leave is a month, plus Bank Holidays. They must resign their position on marriage, but receive a wedding gratuity at the rate of one month's pay for each year of service up to a maximum of twelve months' pay, provided they have served six years. The rules as to pensions are the same as for men.

2. GIRL CLERKS. Age 16—18. Fee, 10s. The subjects of examination and general regulation are the same as for women clerks, Salary £42 rising to £45 in the second year of service, after which they are eligible for promotion to the rank of Women Clerks. If they fail to get promotion they become Female Sorters, probably in the Savings Bank and Money Order Branches, starting with the salary they were receiving as Girl Clerks.

3. FEMALE SORTERS. Age 15—18. Fee 3s. *Subjects*: (1) Reading and Copying MS., (2) Writing, (3) Spelling, (4) Simple Arithmetic, (5) Geography of United Kingdom. Candidates must be at least 5 ft. in height. Salary 14s. to 30s. a week. Female Sorters are employed for eight hours a day, mostly in the Savings Bank and Money and Postal Order Branches, but may be called upon to work in any department in London that may be assigned to them; they are not required to work on Sundays. The rule as to marriage is the same as for Women and Girl Clerks. They are not employed as letter-sorters.

4. FEMALE LEARNERS. Age, 15—18. Fee, 4s. *Subjects*: (1) English Composition, Writing and Spelling, (2) Arithmetic, (3) General Geography. Successful candidates, for about a year, spend half their time learning telegraphy and counter duties. When certified as efficient, they must wait for vacancies. Learners, in London, are paid 7s. a week on entry, and 16s. rising to a possible 40s. on appointment to the Established Class.

POSTS FILLED BY NOMINATION AND LIMITED COMPETITION.

Some posts are filled by nomination followed by only a qualifying examination or by no examination at all; but a far greater number are filled by limited competition between nominated candidates. Of all the posts filled in this way the most desirable are those for Clerks in the FOREIGN OFFICE and for Attachés in the DIPLOMATIC SERVICE (age, 22—25; fee, £6; Nominator, Secretary of State for Foreign Affairs). Only those are likely to be successful who have an advanced knowledge of Latin, and who have had exceptional opportunities of acquiring fluency in speaking German, French and at least one other foreign language (Italian, Spanish, Portuguese, Russian). Once a Junior Clerk in the Foreign Office (£200 to £600), a man may reasonably expect to become a Senior Clerk with £1,000 a year, or he may join the Diplomatic Service and ultimately become an Ambassador at a foreign capital with a salary of from £5,000 to £11,500 a year.

Those with expert knowledge of the work in any one of the departments of the BRITISH MUSEUM or of the NATURAL HISTORY MUSEUM may obtain appointments therein as Assistants (age, 20—25; fee, £5; nominators, Lord Chancellor, Archbishop of Canterbury, Speaker of the House of Commons). In most cases they must have a thorough knowledge not only of their favourite subjects, but of Greek, Latin, French and German as well. The commencing salary is £150 rising to £500, with a chance of securing still better paid posts.

There are appointments similar to the above in the VICTORIA AND ALBERT MUSEUM, South Kensington, (age, 18—25; fee, £5; nominator, President of the Board of Education), requiring advanced knowledge of Art or Science and of two languages (Greek, Latin, French, German). The salaries, as Assistants, range from £120 to £300, but there are good chances of promotion to higher posts.

For those who can face the examination for First Class Clerks there are occasional openings as Junior Clerks in the HOUSE OF COMMONS—two or three a year, perhaps. They must be between 22 and 24 and must be nominated by the Clerk of the House. The salary is small to start with, £100; but there is a good prospect of ultimately receiving £600 a year, and possibly £1,000.

The Board of Education have many appointments to offer as JUNIOR INSPECTORS OF SCHOOLS. Candidates for the appointment should be men who know how to teach with an inside knowledge of the working of Elementary Schools, so as to be able to sympathise with the teachers in their difficulties, to estimate rightly the quality of their work, and to offer useful suggestions for improving their methods. They should also possess considerable tact in dealing with children, besides having acquired the art of speaking in simple language, and of skilfully examining orally young and backward children. When applying for appointment they must be between 23 and 35 years of age, and furnish evidence of having received a liberal education and of having acquired knowledge of the theory and practice of teaching. An applicant's chance of success will much depend on his being able to show that he has a University degree in Honours, and a University Diploma in teaching, or the Elementary Teacher's Certificate of the Board of Education. The salary of a Junior Inspector ranges from £200 to £400, rising by £15 a year. He is eligible for the post of Inspector (salary £400—£800), and other important appointments in the service of the Board of Education.

There are excellent appointments as INSPECTORS OF FACTORIES for those who can obtain a nomination from the Home Secretary, and pass the necessary examination. Applicants must, as a rule, be between the ages of 21 and 30, but the age limit is extended to 38 in favour of those who have been engaged for seven years in a factory or workshop. They will be examined in English Composition and Arithmetic, and in four optional subjects. Salary ranges from £200 to £550. Some of these appointments are open to women (see p. 773). The same class of persons, if less ambitious, may apply to the same authority for a nomination to compete for the post of ASSISTANT TO INSPECTOR OF FACTORIES, for which the examination is very simple, but contains questions requiring a knowledge of the "Factory and Workshops Acts Consolidation Act." Salary, £110—£200. Inspector's Assistants are not, as a rule, promoted to Inspectors, but an Inspectorship is occasionally reserved for competition between themselves.

Only Second Division Clerks are allowed to compete for Clerkships in the METROPOLITAN POLICE COURTS. They must be between 20 and 30, must be nominated by the Head of one of the Departments, must have some acquaintance, which is easily acquired, with certain specified legal subjects, and must take one language (Latin, French or German). Successful competitors start at £120, and have a reasonable prospect of ultimately securing £650.

Any officer who has given two years' service in the Post Office may compete for a Clerkship in the SUPPLEMENTARY ESTABLISHMENT of the Secretary's Office of his Department, and in certain other offices. He must be between 19 and 26, and must be prepared for examination in the same subjects as are prescribed for Women Clerks. The salary varies with the office into which the successful candidate is drafted. It may start at £80 and rise to £400. Only a few can hope to get more.

WOMEN TYPISTS are employed in various departments of the service. They may be nominated singly by the Head of the Department in which a typist is required, and, in that case, will have to pass only a medical and a qualifying examination; or more may be nominated than there are vacancies to fill, and then a competitive examination is held in Typewriting, perhaps Shorthand, and in a few other elementary subjects. The pay ranges from 20s. to 26s. a week. Superintendents receive 35s. a week.

INDIAN CIVIL SERVICE. Age, 22—24. If a young man can contemplate, without misgiving, exile from home and the disadvantages of a hot climate, he could hardly do better than work hard for an appointment in the "I.C.S."; but he will have a poor chance of success unless he has had a first class education completed at one of the older Universities. The days of the crammer are probably numbered, for it is found that the proportion of successful uncrammed candidates is at least as great as that of the crammed. The first examination to be passed is that set for First Class Clerks in the Home Service and for Eastern Cadets in the Colonial Service; and the wise candidate enters his name for all three appointments, which he can do without extra charge—£6. If he is fortunate enough to be amongst the selected for the I.C.S., he will have to pass one year on probation; and if he spends it at an approved University, as he should, he will receive £150 towards his expenses. During this year he must learn to ride, if he has not already acquired that accomplishment, and must read up Indian Law and History and must learn the most important vernacular language of the Province to which he has been assigned—on his own choice, if possible. If he is going to Burma he must learn Hindustani: if not, he must prepare for examination in Hindu and Mohammedan Law *or* Sanskrit *or* Chinese *or* Arabic *or* Persian. If he took one of these last in his first examination he cannot choose it for his "Final." Having signed his "Covenant," and stamped it with a £1 stamp, he proceeds to India with a free First Class passage. Within a certain time of his arrival he will have to make his choice of service —either in the Judicial or the Executive Branch of the Administration. If he chooses the latter, he may rise to be Lieutenant-Governor of a Province, if the former, a Judge in the High Court. His salary will be reckoned in rupees *per mensem*, and may be taken at about £400 a year to begin with. It may ultimately rise to £2,000 or £3,000, perhaps much more. After 35 years' service the covenanted civilian *must* retire; but he *may* retire on £1,000 a year after 25 years' service, of which 21 must have been "active." Pensions are paid in pounds sterling—not rupees. The leave amounts to one-fourth of the active service.

OTHER INDIAN AND COLONIAL APPOINTMENTS which are obtained by means of open competitions, conducted by the Civil Service Commissioners, are the Indian Forest Service, the Indian Police Service and Eastern Cadetships. The examination for the last has been mentioned above (see *Indian Civil Service*). Eastern Cadets supply the Civil Service of Ceylon, Hong Kong, the Straits Settlements and the Protected States of the Malay Peninsula. Salaries and pensions are on a liberal scale.

For appointments in the India Forest Service candidates must be unmarried and between 19 and 23 years of age. They have to give proof of a good general education, preference being given to those who have taken a degree in honours in some branch of Natural Science. Selected candidates are required to undergo a special course of training, which will cost them between £600 and £700, and last three years, two of which must be spent at the University of Oxford. As excellent health and physique are essential for this Service, it is suggested that a candidate before beginning any special course of study should undergo a thorough medical examination, special stress being laid upon good vision and hearing. For appointment in the Police Service of India candidates must be unmarried and between 19 and 21 years of age, and pass a fairly stiff examination, and be able to ride well.

STUDENT INTERPRETERSHIPS. Candidates who select China, Japan, or Siam as their future sphere of work, after nomination by the Foreign Secretary, must pass the examination for the Home Civil Service, Class 1, between the age of 21 and 24. French is an obligatory subject and a high standard is required. Selected candidates proceed at once to their destination and are paid at first £200 a year. Those who look to Turkey, Persia, Greece, or Morocco as their future abode, after nomination by the Foreign Secretary, must pass the examination for the Home Civil Service, Class 1, between the age of 18 and 24. Successful candidates must proceed to a University selected by the Secretary of State, and also receive £200 a year in aid of their University expenses. Their University course lasts two years, after which they proceed to the country to which they have been assigned. Those who ultimately become Consuls will receive salaries ranging from £500 to £1,250.

LAW.

The legal profession embraces two classes of men—barristers and solicitors, who are sometimes said to form the upper and lower branches of their common profession. This distinction, true enough in the main, does not hold in every particular, the work of a solicitor being often not of a more elementary nature than that of a barrister, but different in kind. Still it is, as we say, true enough in the main. Thus both barristers and solicitors can practise in the lower courts—County and Police Courts—but only barristers in the higher courts. Here each has his own special function. The barrister conducts the case in open court, the solicitor previously ascertains the facts of the case for his information and guidance. The barrister takes the facts from the solicitor, decides their relative importance for the securing of a verdict, and uses them accordingly. In brief, solicitors do most of their work in private at their own office, barristers are chiefly engaged in open court in pleading the cases of their clients.

From what we have said it will be seen that barristers are employed by solicitors—a very important fact. A young barrister, backed by influential solicitors, has the best chance of showing his worth and of securing other briefs than those given him by his personal friends. Without such help he may have, however clever, to wait long for the recognition of his powers. So important to barristers is their acquaintance with solicitors, that legal etiquette forbids them to unduly cultivate it. The highest legal appointments are closed to solicitors: judgeships, stipendiary magistracies, recorderships, etc., are within the reach only of those who have been called to the bar.

We thus see that, though both classes of lawyers must have a firm grasp of law, the work of each differs materially from that of the other in all but the commoner cases, and that the natural qualities required are therefore different. So far as the cost of qualifying is concerned, there is little difference, as we shall show; but a barrister must, as a rule, wait longer than a solicitor for a fair return for the capital expended on his training. When, however, a barrister has made a really good start, his progress is far more rapid, and he is likely to go much farther.

So much by way of preface: now let us examine into the details of each class separately.

1. BARRISTERS.

QUALIFICATIONS AND EARLY EDUCATION. To be an eminent barrister, a man must be "a scholar and a gentleman"; he must have fluency of speech, a knowledge of men, and a keen insight into character; he must have the type of mind which, in Goethe's words, "sieht das Grosse gross, das Kleine klein"; he must have the power of "thinking on his legs," of fitting new facts at once into their right places in his scheme of attack or defence, and of modifying his plans to suit altered circumstances; he must have perfect confidence in himself—more important, for moderate success, than some of the finer qualities; he must have a good memory and a good physique. There is no such thing in his case as "sick pay": illness means loss of fees, and of that continuity of *touch* in the legal world which to him is all-important. The members of the bar form one of the most brilliant sections of society; and he who would be of it must be fit for it. He must have the best possible education at school and college; and, at both, the embryo barrister should train his powers of speech at debating societies connected therewith. He should by all means try to graduate either at Oxford or Cambridge. Here he will have opportunities of interchanging thought and shafts of wit with the brightest intellects, of forming valuable friendships, and of joining debating societies of world-wide reputation. Many successful barristers, it is true, have had no university training; but they are the exception, and can have neither the professional standing nor the prospects of their more fortunate fellows with equal natural gifts. Finally, he who means to live by law alone, must be prepared to spend £300 a year for at least ten years after being called to the Bar, independently of any income that might possibly accrue from the exercise of his profession.

To any one who is contemplating the Bar as his career, the following outline will indicate the general course to pursue. To one who has made up his mind to adopt this as his profession, further details are necessary. Such details may be found in some "Guide to the Bar"; the best we know, and quite up to date, is Ball's "Students' Guide to the Bar," published at 2s. 6d. by Macmillan.

CHOICE OF AN INN. ENTRANCE AS A STUDENT. Whilst still an undergraduate, or at the age of about twenty, the candidate should choose that one of the Inns of Court he desires to enter—it matters little which, except that available scholarships and prizes are more valuable at some than others (see below under "Scholarships"). There are four Inns (or Societies): Lincoln's Inn, Gray's Inn, Middle Temple and Inner Temple: all, except Gray's, close to the London Law Courts. Each Inn appoints five of its benchers to form the Council of Legal Education; and this Council arranges for the admission, training and examination of all students. The candidate should, therefore, before applying to any Inn for admission, send for the Regulations of the Council, addressing the letter to the Secretary of the Council of Legal Education, 15 Old Square, Lincoln's Inn. Before admission, he will have either to present a certificate showing that he has had a good general education, or else pass the special Entrance Examination held by the Council. Those who have passed certain university examinations—London Matriculation, Oxford Responsions, Cambridge Previous, etc.,—are exempted from the Entrance Examination. When a candidate has

somehow qualified for admission, paid his guinea for the Admission Form of the particular Inn he has chosen and returned it properly filled up, he will, in all probability, be entered as a student of the same. Women are not accepted as students; neither are men in Holy Orders unless, for a year, they have performed no clerical function and declare their intention of ceasing for the future to act as clergymen. Amongst others excluded are solicitors and their clerks, although not their pupils. Solicitors, however, can become eligible if they retire from practice as such, and have their names removed from the Roll.

ENTRANCE FEES. CAUTION MONEY. The entrance fee at each Inn is within a few shillings of £40. Each one requires its students either to deposit a certain sum as "Caution Money"—usually £50, but £100 at the Inner Temple—or else to give a personal bond for £50 with two sureties. Members of most British Universities are allowed the choice of a deposit or bond with sureties. When "called" a student gets back his caution money, less any sums due to his Inn; and in case of his withdrawal or death before call, the like amount is paid to him or to his representatives.

RESIDENTIAL QUALIFICATIONS FOR CALL. The student of an Inn of Court is a member of a kind of Legal University, of which his Inn is a constituent College. He can hire rooms therein, and, for £1 a year, can use the dining-hall, common-room, library, garden, chapel, etc. But he *need* not reside there: all he need do, so far as residential qualification for call is concerned, is to keep twelve terms, which will take him three years. But he can keep as many more than twelve as he likes, and he need not keep them consecutively. To keep any one term, all that is necessary is to eat so many dinners in the Hall of one's own Inn during that term. Members of British Universities need eat only three: others must eat six—not necessarily consecutively.

There are four dining terms in the year, called "Inns of Court Law (Dining) Terms." They do not begin and end on the same days every year; but they will be found on the first page after the index of Whitaker's Almanac. They are known by the following names: Hilary (about three weeks in January), Easter (about four weeks in April and May), Trinity (three weeks in June and July), and Michaelmas (about three weeks in November).

LEGAL STUDIES AND EXAMINATIONS. Before his call to the bar, every student must pass a written and oral examination, which is divided into four parts: (1) Roman Law, (2) English and Colonial Constitutional Law and Legal History, (3) Evidence, Procedure and Criminal Law, (4) certain departments of English Law and Equity, which are not the same every year. Part 4 cannot be taken till the end of six Terms, about 1½ years from admission; the others can be taken at any time. Exemption can be obtained from the examination in Part 1 by passing a satisfactory one elsewhere in Roman Law. Although no other exemptions are obtainable, members of universities could quite well get Parts 1 and 2 over before coming to London. There are various ways of preparing for these examinations:

1. LECTURES. The Council of Legal Education has arranged for its students a system of free lectures. Many law students have private coaches, and many others are still at universities, and need not or cannot attend the lectures; but all who can should attend them, as the examinations correspond to some extent with the work they have covered.

2. READING IN CHAMBERS. Those who mean to follow law as their profession, should spend a portion of their studentship as pupils of some practising barrister, or, better still, of two or three in succession; and the period of such pupilage often extends beyond the call. The cost of this "reading in chambers" is about £100 a year, including holidays. It is often possible, however, to arrange a six months' course for £50, which does not include holidays. A well educated, self-reliant man would pick up more in the chambers of a busy barrister than of one with less practice and more time to give to his pupils.

3. LECTURES, PRIVATE READING AND ATTENDANCE AT THE COURTS. This method of preparing for the Examinations in law is a sufficiently good one for those who are aiming at a call merely as a necessary or desirable qualification for certain posts in the army and medical profession, or for the social distinction it confers.

SCHOLARSHIPS, PRIZES AND CERTIFICATES. There are many scholarships and prizes available for competition amongst law students. Some are open to all, without distinction of Inn; others are confined to students of a particular Inn.

1. GIVEN BY THE COUNCIL AND OPEN TO ALL STUDENTS:
   (1) Studentship of £105 a year for three years to the best candidate in Part 4. Age limit, twenty-five. Open for competition twice a year—in May and December.
   (2) Prize of £50 each to the best candidates in Parts 2 and 3 respectively. Age limit, twenty-five.
   (3) "Barstow Scholarship." About £70 a year for two years. The examination is a special one, and particulars should be obtained from the office of the Council. No age limit.
   (4) Certificates of Honour are granted to all who reach a certain high percentage of marks in Part 4. The value of these certificates will be seen in the following section.
2. CLOSE SCHOLARSHIPS AND PRIZES.
   (1) Every Inn gives a prize of £50 to each of its students who gains a Certificate of Honour (see preceding paragraph).
   (2) Gray's Inn gives scholarships of £45 and £40, each for two years, for excellence in Political and Constitutional History, the details of which vary; one of £60 a year for three years after call for a special examination, the subjects of which differ from year to year; and a prize of £25 for an essay on some subject announced about nine months before the essay is to be sent in.
   (3) Lincoln's Inn has occasionally a valuable scholarship to offer under the Tancred Trust. It is worth nearly £160 a year for about five years. Students to be eligible must be between nineteen and twenty-three. No vacancy is expected till 1907. Details can be obtained from Messrs. Frere, Foster & Co., Lincoln's Inn Fields.

CALL TO THE BAR. The call to the Bar is the seal to a man's certificate of qualification to practise as a barrister. The usual age for call is from twenty-three to twenty-six; and it is of little use in ordinary cases to try to qualify earlier, since few barristers begin actual practice before the age of thirty. The call fees amount to nearly £100, of which £50 is for a government stamp.

IRISH BARRISTERS AND SCOTCH ADVOCATES. In Ireland there is but one Inn—King's Inn, Dublin; but the general course and cost of qualifying are pretty much the same as in London. An Irish barrister of three years' standing can become a member of an English Inn by keeping only three terms; and his call fees are less than for an English barrister by £50—the cost of the government stamp, which he has already paid.

The legal system of Scotland is quite different from that of England: barristers are there represented by *Advocates*, and solicitors by *Writers to the Signet*. Those who desire to be advocates first, as a rule, graduate in laws either at Glasgow or Edinburgh, and then enter the Faculty of Advocates. If they have not graduated at some recognised university, they must pass an examination in general subjects before they can be admitted to the Faculty as "intrants." After a year the private examination in law can be taken, and successful candidates must then go through the form of the Public Examination, consisting of the reading and defence in public of a thesis. The total fees amount to nearly £340, the greater part of which is devoted to the magnificent library of the faculty.

KING'S COUNSEL are the leaders of the Bar appointed to their honorary office by letters patent. They wear a silk gown instead of the alpaca one worn by "utter" (outer) barristers; hence a barrister who becomes a K.C. is said to have "taken silk." Taking silk is not always an advantage, since a K.C. is not allowed to undertake a good deal of business that fell to his share as a member of the Junior Bar; but it is a necessary step in the career of those who aim at the highest posts. King's Counsel do not take pupils, nor do they accept conveyancing or pleading; but in court they are the leaders.

PROSPECTS. Turn to p. 444, and you will find under "Administrators of the Law" what handsome incomes

are available for distinguished members of the bar. The Lord Chancellor gets £10,000 a year, the Attorney-General £7,000 and fees—sometimes over £6,000; the Solicitor-General £6,000 and fees; the Lord Chief Justice gets £8,000, the Lords of Appeal each £6,000, the other Lord Justices each £5,000, whilst County Court Judges must be content with the modest stipend of £1,500 a year. These sums, however, are surpassed by the incomes earned in private practice by some of our most eminent barristers; whilst a moderate amount of success is rewarded by incomes that run into four figures.

Many men, however, are called to the bar without any intention to practise. Doctors, with this additional qualification, are more likely to get coronerships, worth anything up to £2,000 a year; the most valuable town-clerkships, often worth more than £1,000 a year, are held by barristers; journalists, who can style themselves "barristers-at-law," find their literary abilities more likely to find scope, and membership of the bar adds weight to the claims of the would-be member of parliament, and to the decisions of the country J.P.

For those who do not mind emigrating, there are good public appointments in the Colonies, and good opportunities for lucrative practice at the local bars. The official salaries of judges in the various colonies can all be seen in Whitaker, under the different sections of Greater Britain.

2. SOLICITORS.

The cost of training for qualification as a solicitor is, in most cases, as great and sometimes greater than that for qualification as a barrister; but the chances of failing afterwards to make a living are by no means as great. There is room here for men of good abilities, but who, as barristers, would certainly fail. The chief necessary mental qualities are a good memory, and a capacity for steady work and for taking pains. Capital is, of course, indispensable at first to pay for the necessary training. If any remains to the solicitor when his business begins to be fairly remunerative, he will have excellent opportunities of placing it advantageously, one of the principal duties of his profession being the negotiation of mortgages and the sale of property of all descriptions.

The body that controls the admission, training and examination of students who wish to be solicitors, as well as the general discipline of the whole profession, is the *Law Society*, Chancery Lane, London, to whose Secretary applications for current regulations should be addressed.

EARLY TRAINING. Given the necessary natural qualities, the well-educated solicitor has the best chances of success, since, having the entry into a wider social circle than others, he has better opportunities for becoming known to people likely to need and able to pay for his services. He who can afford it should certainly go to a university, or should, at any rate, secure a university degree in arts or laws. He must at school learn Latin, but not necessarily Greek; and he should try to pass some such public examination as the Matriculation of the London University, the First Class of the College of Preceptors, or the Oxford or Cambridge Senior Locals. A boy may quite well start his special legal studies at sixteen or seventeen; but if he does, he will have, in most cases, to spend five years over them; whereas the university graduate need only spend three.

PRELIMINARY EXAMINATION. The Law Society holds its Preliminary Examination four times a year, and at various centres; in their own Hall in Chancery Lane; and in Birmingham, Bristol, Leeds, Liverpool, Manchester, Newcastle-on-Tyne. Occasionally they are held in other towns.

> The subjects are Latin, English dictation and composition, arithmetic, geography of Europe, history of England and two of the following: (1) Mathematics, including algebra to simple equations and the first four books of Euclid, (2) more advanced Latin, (3) Greek, (4) French, (5) German, (6) Spanish, (7) Italian.

Those who have passed certain examinations, such as those already named under "Early Training," are exempted from the necessity to take the Preliminary; but until this Examination has been passed, or some certificate has been definitely accepted by the Law Society in lieu thereof, no time spent in training can count towards enrolment.

PROFESSIONAL TRAINING. Having passed the preliminary examination or its equivalent, the candidate must be articled to a solicitor or firm of solicitors. The usual term of such service is five years, but for graduates of any British University, or for barristers of less than five years' standing, it is only three years. The stamp duty on the articles is £80. The premium charged by a solicitor for a pupil varies with his standing from £100 to £400, or occasionally more; and he pays him no stipend. The pupil will have to do a good deal of work that may appear to him to be drudgery; but it is drudgery that must be got through. A good deal of a solicitor's business is connected with conveyancing; and in the documents connected therewith, as in fact in all legal documents, exact legal phraseology is all-important. Since the Conveyancing Act of 1881 such documents are no longer as long as when a solicitor's fee for drawing one up depended on its length. But in legal matters there are stereotyped methods of procedure which must be learnt gradually by the pupil in the only way they can be learnt—by actual practice.

During his period under articles the pupil can, in London, attend the courses of Lectures held by the Law Society, or those held in the various colleges of the London University; and there are law classes held in many large provincial towns. Every articled clerk, with certain exceptions, is required to pass the *Intermediate Examination*; and he may present himself at any time after completing twelve months' service. The subjects are such elementary works on the Laws of England as the Examination Committee of the Law Society may from time to time select. The fee for the first entry is £6 and for each renewal after failure £3.

If a candidate fails to pass the Intermediate within a year of completing one-half of his term of service, he will probably be unable to take his Final near the end of such term; that is, the date of his qualification to practise will be postponed. For the Final Examination the entrance fee is £10, and for each fresh trial after failure half that sum. Both the Intermediate and Final are held in London only, in the Hall of the Law Society, Chancery Lane. Those who do exceptionally well in the Final are allowed, two days after its completion, to take an Honours Examination at an extra fee of £1.

SCHOLARSHIPS. In 1906 the Law Society awarded ten scholarships, each of the annual value of £50, and tenable for three years. Some of these were awarded to young men intending to enter into articles of clerkship and others to clerks already articled. The Society does not bind itself to offer such scholarships every year; but the current regulations relating to them may be obtained from the Secretary.

Other scholarships and prizes are offered in connection with the Final Examination:—

(1) TRAVERS-SMITH SCHOLARSHIP. £50 a year for three years. Age limit, twenty-six. Open to all candidates for the Final.

(2) SCOTT SCHOLARSHIP. About £57, tenable for one year, given on the result of the Honours Examination.

(3) PRIZES AND MEDALS of various values, from £4 to £25, are given on the result of the Honours Examination.

ADMISSION TO THE ROLL. No candidate can be enrolled as a solicitor who has not passed the Final Examination, who is under twenty-one years of age, or who has not completed the prescribed term of service. He who has satisfied all these conditions obtains an Admission Certificate, which has to be impressed with the revenue stamp of £25. A payment of £5 has to be made to the Law Society, and the Certificate must be sent to the Master of the Rolls for his signature. When the document has been duly signed, the applicant's name is entered on the Roll of Solicitors.

SOLICITORS' CLERKS must be carefully distinguished from *articled pupils*. Occasionally they are allowed to

earn their articles by their services, and may thus, on passing their examinations, be put on the Roll. Many of them are extremely able men, and may earn, as clerks, from £70 to £500 a year.

PROSPECTS. Solicitors cannot expect to make the handsome incomes earned by prominent barristers. Still those in good practice often earn from £1,000 to £2,000 a year; and one here and there may get considerably more. Fixed salaries paid to solicitors as managing clerks to big firms of solicitors may reach £700 or even £800 a year; and many separate sums of from £50 to £100 a year may be made by a solicitor as Clerk to various boards of management. Solicitors, too, are eligible for appointment as town clerks, clerks of the peace, magistrates' clerks, vestry clerks, and so on. In the Civil Service, vacancies frequently occur for Clerks in the Estate Duty Office of the Inland Revenue. Candidates must be qualified solicitors, and between the age of twenty-one and twenty-seven. The salary ranges from £150 to £500. One of the best official appointments open to a solicitor is that of Taxing Master, for which the usual salary is £1,500.

MEDICINE.

1. PHYSICIANS AND SURGEONS.

We are very far removed in more than time from the state of things that obtained when Molière could never mention the *médecin* without contempt, representing him as a mere bombastic quack; and, allowing for the poet's creative faculty which led him to make classes out of individuals, we know that his contempt was too often deserved. But *nous avons changé tout cela*, and to-day the doctor is held in general esteem as a man of science, whose treatment is based on scientific, and not *a priori* principles. We know that a mere clumsy fool like Flaubert's *Charles Bovary* could never pass the tests of knowledge and skill prescribed by the General Medical Council for all candidates for leave to practise medicine in England; and we know that the knowledge shown is not mere cram that will be as quickly lost as gained, but knowledge that has been acquired during a long course of study, from experts in medical science, and from actual work in hospitals. Everything that affects the health, not only of individuals but of communities, and even nations, is, or has been, the subject of the doctor's investigations; and he could find, perhaps, no more fitting motto for himself than Terence's well-known words—*humani nihil a me alienum puto.*

THE GENERAL QUALIFICATIONS for a doctor—outside those special ones gained by professional training—are numerous. He should be a well-bred man, or at least one of those men of natural refinement who, though born in humble circumstances, easily catch the tone of a higher stratum of society than their own. Culture and refinement are certainly prime elements of success in the medical profession. Nor should anyone of less than fully average ability attempt to enter the profession: the training and the tests are severe, and the competition, even amongst clever qualified men, is very keen. Good physique is an essential qualification, not only on account of the strain involved in training, but of that of general practice. The doctor's time is never his own, except during his four or five weeks' holiday in the summer: Sunday brings him no rest from the "daily round," his nights are frequently broken and his meals are movable feasts. He must be a man of character—capable of firmness and swift decision in emergencies; but, for all that, he must be a man of tact, for he has to depend for his living on the good opinion of people of the most varied dispositions.

COST OF A MEDICAL TRAINING. He who would be a doctor must have access to a well-filled purse. His special training cannot begin before he is sixteen, and cannot last less than five years; and several years may elapse between the time when he is qualified to practise, and the time when he can earn enough to keep himself decently. Without going at present into particulars, we may say that the total cost of a five years' medical training varies from about £600 to £1,000, the higher limit being taken when the student qualifies at one of the older Universities. The cost may, however, be considerably reduced when the student can live at home, and when he is fortunate enough to win one of the entrance scholarships attached to nearly every Medical School, and one or more of those obtainable after entrance. We give further particulars of scholarships below; our object here is to give parents some general idea of the expenses to be faced if they think of allowing their sons to train for the Medical profession.

QUALIFICATIONS FOR REGISTRATION. Every intending medical student should register his name as such at one of the offices of the General Medical Council: London, 299 Oxford Street, W.; Edinburgh, 54 George Square; Dublin, 35 Dawson Street. Before, however, he can do this he must have passed some Preliminary Examination recognised by the Council, and he must be at least sixteen years old. The list of examinations, success in which is held to qualify for registration, is too long for insertion here; but we may mention that it includes the Oxford and Cambridge Junior Local and their higher Examinations, the Preliminary Medical and the First Class Certificate Examinations of the College of Preceptors, the Matriculation Examinations of the Universities of London, Birmingham, Wales, Ireland (Royal), and the equivalent Examination of other Universities in the United Kingdom. A complete list can be seen in the Educational number of the *British Medical Journal* or *Lancet*, each of which appears early in September, and can be obtained post free for 6½d. from the office of the Journal. But, whichever examination is chosen, it must include certain subjects, which are at present:

> English, English History, Geography, Latin, (including translation from unprescribed Latin books, grammar, and translation into Latin of continuous prose), Mathematics (including Algebra to Quadratics and the subject matter of Euclid I., II., III.,) and either Greek or a modern language. If a modern language is chosen, the examination in it must be similar to that in Latin; if Greek, the continuous prose may be omitted.

We thus have a guide to the kind of early education to be given to our embryo doctors.

Our advice to most English boys would be to get the Oxford or Cambridge Junior Local Certificate first, and then work hard for the Senior Certificate or for the London Matriculation. Provided certain subjects have been successfully taken for the Senior Certificate, the holder is now held to have passed the London Matriculation. If the Junior Certificate states that the necessary subjects were successfully taken, it will serve for registration; and for the latter examination two sciences may be taken up—say Chemistry and Physics—which will be of great value when the student actually begins his professional course. The London Matriculation over, the registered medical student will be able to start work at once for his London Medical Degrees, which are those in view at all the great London Colleges and Hospital Schools. If a boy is bound for Oxford, Cambridge, or some other University, there to begin or complete his medical training, he *need* not, of course, take the London Matriculation certificate, but he will probably find it a useful possession.

MEDICAL DIPLOMAS AND DEGREES. In the medical profession there are four classes of practitioners: family doctors, consulting physicians, consulting surgeons, and specialists on the eye, throat, etc., who attend only to one part of the body. Before any one can practise as a doctor, he must be placed on the *Medical Register* of the General Medical Council, and none can be placed thereon who has not certain specified certificates of proficiency. These are granted by the various English, Scottish and Irish Universities, by the Conjoint Board of the Royal Colleges of Physicians and Surgeons, by the Society of Apothecaries of London, and by the Apothecaries' Hall of Ireland. The most usual method of qualifying for admission to the Medical Register is by means of the examinations

held by the Royal College of Physicians and Surgeons. The doctor thus qualified may write the letters M.R.C.S., L.R.C.P. after his name; but he cannot, any more than the L.S.A. or the L.A.H., be properly styled Dr. So and So. It is becoming increasingly usual for doctors to qualify by means of University Courses and Examinations, so that they may be entitled to use the extremely useful letters M.D.; and of all the examinations by means of which this distinction may be won, those of the London University are now held in highest repute. As, however, it is considered that the attainment of the Diploma of the "Conjoint Board" is a matter of greater certainty than that of a degree, most students first make certain of the former, and then try for the latter. Even those who begin their medical course at Oxford or Cambridge usually finish it in London, on account of the unrivalled opportunities for varied experience offered by the London Hospitals. This is the chief reason for our advice to intending medical students to try hard to pass the London Matriculation before leaving their ordinary school.

CHOICE OF A MEDICAL SCHOOL. All the great Hospitals of London, Edinburgh, and Dublin have Medical Schools attached, and on one of these the choice usually falls; but the schools attached to the universities of Bristol, Liverpool, Manchester, Sheffield, Leeds, Birmingham, and Glasgow offer a training which is certainly amply sufficient for all purposes. The choice will, in many instances, depend on the cost of the qualifying course, and the opportunities offered of reducing it by means of Scholarships; and we consequently discuss these questions in our next two sections.

FEES FOR MEDICAL TRAINING AND EXAMINATION. It must be clearly understood that the fees for instruction charged by the Medical Schools are quite separate from those for examination, the latter depending on the diploma or degree for which the student is working. It is generally possible to pay a "Composition Fee," on entrance, for lectures and hospital practice throughout the five years' medical course, instead of paying the fees by instalments.

> The composition fee varies from £70 to £150, the lower fees being demanded at some of the younger universities in the Provinces, and the higher at the London Medical Schools. The cost of living also varies a good deal, being probably much higher at London or Oxford than, for instance, at Glasgow or Dublin. The Examination fees for the diplomas of the "Conjoint Board" amount to £42, and will be more if re-examination is needed in weak subjects.

In calculating the probable expense of his training, a man must not forget that books and apparatus may cost him from £40 to £50, and that, if he cannot live at home, board and lodging will cost him from £60 to £100 a year more; so it should be remembered that the expense may be sensibly reduced by gaining one of the numerous scholarships offered. The complete course, as we have said, takes five years; but it lasts longer for those who do not get through their various examinations at the first attempt. Indeed, only a small percentage qualify in the minimum time. Neither students nor parents need be astonished if six or seven years are required for the purpose. And of course, those who are ambitious of taking a medical degree at some university, in addition to the diploma of the Colleges of Surgeons and Physicians, will require additional time and money for finishing their degree work and paying the examination fees.

SCHOLARSHIPS. The number of scholarships and money prizes offered for competition to candidates for admission to the various Medical Schools and Colleges, as well as to those qualifying in them, is very great, and we can only mention a few of them here. A complete list, in any case, can only be obtained from the School or College in question; but a fairly complete list of the more valuable is given in the *Public Schools Year Book*, published at 2s. 6d. by Swan Sonnenschein & Co., and the conditions attached to them are given too. A fuller list, with conditions, is given in the Educational Number of the *British Medical Journal* or *Lancet* already referred to. Pupils of Epsom College, which is largely, but by no means exclusively, attended by the sons of medical men, have perhaps the best chance of winning Entrance Scholarships to the London Hospitals. No less than nine are annually offered to leaving boys, which exempt them from payment of the Composition Fee. There are Entrance Scholarships to the College of the value of £30 each; so that a boy who had gained one would be boarded and educated for £48 per annum, or for £38, if the son of a medical man, and would have, on leaving school, if diligent and successful there, an excellent chance of a Medical Scholarship. Nearly every Public School, indeed, has a number of Leaving Scholarships, tenable at Universities where medical studies may be pursued. A great many are described in the *Public Schools Year Book;* but complete lists and conditions can only be obtained from the individual schools.

We here give, as samples of the value of Entrance Scholarships open to competition, thos offered in 1908 by well-known medical schools in the metropolis:—

Charing Cross Hospital, 73, 30, 20 guineas.
St. George's Hospital, four at 50 guineas.
Guy's Hospital, £150, £100, £60, £50.
King's College, three at £100, £60, £40, £20.
London Hospital, £120, £60, £35, £30, £20.
St. Mary's Hospital, £145, £78¾, two at £63, two at £52½.
Middlesex Hospital, £100, £50, £25.
St. Thomas's Hospital, £150, £60, £50.
University College, two at 80 guineas.

The various universities also offer to medical students a number of scholarships equivalent to those offered by the London Hospital Schools. Besides the entrance scholarships above mentioned, are others for competition among actual students, for an account of which we must refer our readers to the publications already mentioned, or to the calendars and prospectuses of the various schools and colleges at which they are offered.

MEDICAL CURRICULUM. The period that must elapse from the time of registration to the time of the final qualifying examination for a diploma is five years, and for a London degree 5½ years. This time may all be passed in Medical Schools and Hospitals, and generally is. Many students, however, prefer to take the required course in chemistry, physics and biology at other schools or colleges recognised as efficient by the General Medical Council. But, whichever course he adopts, the first aim of every student should be to pass as soon as possible the examination in physics, biology, and chemistry.

Candidates for the M.B., B.S. degrees of the London University must have matriculated and pass the following examinations in all of which practical work tells most.

(1) First M.B. The subjects of the examination are Inorganic Chemistry, General Biology, and Physics.

(2) Second M.B. Part I. Subjects, Organic and Applied Chemistry.

(3) Second M.B. Part II. Subjects, Anatomy, Physiology, and Pharmacology. Candidates must have passed the first M.B. at least 18 months previously, and have also passed Part I.

(4) Final M.B., B.S. This examination cannot be taken within three years of the date of passing Part II. The subjects may be divided into two groups, one relating to Medicine, etc., and the other to Surgery and Midwifery. The two groups of subjects may be taken at the same examination or at different times. But a candidate must pass in both groups in order to receive a diploma from the University entitling him to practice.

Candidates for the diploma of the Conjoint Board have to pass three examinations, commonly known as the First College, Second College, and Final:

> FIRST COLLEGE is in four parts—(1) Chemistry, (2) Physics (3) Elementary Biology, (4) Practical Pharmacy. SECOND COLLEGE deals with Anatomy and Physiology. FINAL COLLEGE consists of three parts—(1) Medicine, (2) Surgery, (3) Midwifery, and may be taken together or separately.

The candidate for the Final must have passed the Second Examination at least two years previously, and have spent five years in professional study subsequent to passing the required Preliminary Examination. Three years for the Final are by no means too many, and neither student nor

parent need be surprised if four years are found to be necessary. It is found that the time taken for the entire course averages between six and seven years.

Students who pass the Final Examination in Medicine held by Universities receive the degrees of Bachelor of Medicine (M.B.), and Bachelor of Surgery (B.S.) or their equivalent; whilst those who successfully take that held by the Conjoint Board may style themselves L.R.C.P., M.R.C.S., that is, Licentiate of the Royal College of Physicians, and Member of the Royal College of Surgeons. Whichever university is chosen as the examining body for a medical degree, the subjects of examination *must* be the same up to the completion of the degree which qualifies a man or woman for admission to the Medical Register as a "Registered Practitioner."

BETWEEN QUALIFICATION AND REGULAR PRACTICE. After qualification comes the need of experience. This is gained by the best men in practice at their own hospital, as "House Surgeons" or "House Physicians," their appointment depending on the results of a competitive examination or on their record during their residence as students. Others find it by taking a post as medical officer on board passenger vessels, or on private yachts. Others hold temporary posts as *locum tenens*, or attach themselves to some busy doctor as assistant; whilst others find employment as House Physician or Surgeon in a provincial hospital or asylum. When sufficient experience has been gained, the time has come for buying a practice or partnership, or for setting up on one's own account in some growing neighbourhood.

PUBLIC APPOINTMENTS. Those who desire to hold one of the numerous appointments open to medical men under Government or local control, should take the diploma in Public Health (D.P.H.) granted, after examination, by most of the universities, and by the Conjoint Board. Medical officers of health of large districts are well paid, the salaries ranging from £350 to over £1.000. In small districts the medical officers of health often combine their public duties with private practice. For men with experience and the ordinary qualifications, there are posts in the workhouse infirmaries, prisons, and convict settlements, carrying salaries ranging from £200 to £550, and for men of more than ordinary ability, there are appointments as resident medical officers in the various hospitals and asylums throughout the country. Medical appointments for certain colonies are filled from time to time by the Colonial Office.

Commissions as surgeons may be obtained in the Navy, the Army, and the Indian Service. Candidates must hold a diploma entitling them to practise medicine, and must also pass a special entrance examination according to the Service he wishes to join. And after the successful candidate has received his commission he will be required to attend certain courses of instruction, and to pass an examination at the end of each course. As an indication of the value of such appointments, we may mention the pay of surgeons in the navy: *Surgeons* receive from £255 to £310; *Staff Surgeons* from £365 to £438; and *Fleet Surgeons* from £493 to £657 per annum. On retirement, there is either a pension or a gratuity. There have been substantial improvements recently in the Army Medical Service; but the Indian Medical Service is not so remunerative as formerly.

MEDICAL TRAINING OF WOMEN. Women who wish to qualify for medical practice are subject, in the same way as men, to the regulations of the General Medical Council. Most British Universities, except those of Oxford and Cambridge, allow women to take their degrees; and the London Society of Apothecaries. as well as the Conjoint Board of the Royal College of Physicians and Surgeons, admit them to their examinations for diplomas, including Surgery and Dentistry. Women only, are trained at the London (Royal Free Hospital) School of Medicine, the Medical College for Women at Edinburgh, and the Queen Margaret College, Glasgow. There are many medical appointments open to women in England in connection with the Post Office, factories, girls' schools, etc., and many make good incomes in private practice. In India there are more chances of success for women than for men, owing to the fact that only women are allowed to enter the women's quarters of the rich natives. A good many women doctors go to India as medical missionaries. Valuable scholarships confined to women candidates, are offered at the London Royal Free Hospital, at Owen's College (Manchester), and at the Queen Margaret College (Glasgow).

2. DENTISTS.

It is rare in these days to be able to say of a lucrative profession that the competition for service in it is not keen. Such, however, is the case with dentistry. There is much more work for dentists to do, since many more people now really look after their teeth than was formerly the case, and there are fewer to do the required work, owing to the fact that no one may now legally style himself a dentist who has not been through a four years' course of training for his profession. Since the regulations for the training and registration of dentists were undertaken by the General Medical Council, the time of preparation has grown longer and more expensive; and candidates with the necessary capital have not come forward in numbers sufficiently large. Yet the former social disabilities under which dentists laboured are fast disappearing. The properly trained dentist belongs to a branch of the medical profession, and insists on being treated accordingly; and his claims are becoming more generally admitted.

REGISTRATION. Dental students must now register themselves as such, in the same way as medical students, and at the same offices; and, before they can register, they must have passed one of the same Preliminary Examinations (see above, under *Qualifications for Registration* in the case of Medical Students).

PROFESSIONAL TRAINING. After registration a dental student must spend at least four years in the acquirement of professional knowledge. He must receive instruction, in the same way as medical students, in chemistry and physics, at an institution recognised as efficient (see above, under *Medical Curriculum*). His *two* years' study of mechanical dentistry may be passed at a dental hospital, at the dental department of a general hospital, or as an apprentice to a registered dentist. The two years of mechanical dentistry may be taken wholly or partly before his registration as a dental student. He must take courses, extending over two years, in dental surgery, at a recognised dental hospital and school, or in the dental department of a general hospital; he must have performed dissections at a recognised medical school for at least twelve months; and he must have attended, during two winter sessions, at a recognised hospital or hospitals, the practice or surgery and clinical lectures on surgery. He cannot present himself for the final examination for his diploma till he is 21. Several of the above courses can be taken concurrently; but it is usual for students to spend five or even six years in preparation for their last examination, instead of the regulation four. At the National Dental Hospital and College, the cost of the two years' course in mechanical dentistry is £100, and the four years' courses in dental and general surgery cost about £110. Books and instruments may cost £35, and the examination fees of the English Royal College of Surgeons amount to £21, including the Preliminary Science Examination in Chemistry and Physics.

DIPLOMAS AND DEGREES. Diplomas are granted and special dental instruction provided by the following bodies among others:

(1) IN LONDON: Dental Hospital, Leicester Square; National Dental Hospital and College, Great Portland Street; Dental School of Guy's Hospital. (2) IN THE PROVINCES: Devon and Exeter Dental Hospital; and at schools connected with the Universities of Manchester, Birmingham, Liverpool, Leeds, Sheffield, and Bristol. (3) IN SCOTLAND: Edinburgh Dental Hospital and School; St. Mungo's College, Glasgow; Anderson's College, Glasgow. (4) IN IRELAND: Dental Hospital of Dublin; Trinity College, Dublin.

Degrees B.D.S., and M.D.S., or B.Ch.D. and M.Ch.D. are obtainable at the Universities of Birmingham, Leeds Liverpool, Manchester, Durham, and Dublin.

SCHOLARSHIPS. Dental students who enter for their courses at a general hospital can try for some of the scholarships already mentioned. Some are open to competition amongst dental students only: one of £30 at Charing Cross Hospital; one of £20 at Westminster Hospital; one of £35 at Owen's College, Manchester; one of £40 and one of £20 at the National Dental Hospital, Great Portland Street, W.

PROSPECTS. The prospects of a really clever dentist are extremely good, although, as with doctors, a certain number of lean years have to be lived through, whilst the dentist is acquiring experience and inspiring confidence. He will probably act at first as an assistant before buying a practice or making one. There is one piece of advice he should lay to heart—not to be in too great a hurry to grow rich; patients change their dentists with less hesitation than their doctors.

3. VETERINARY SURGEONS.

Until 1881 practically anyone could call himself a Veterinary Surgeon; but an Act passed in that year made it illegal to do so unless the practitioner had been properly trained for the work he undertook. The result has been a decrease in the number of veterinary surgeons, with a corresponding rise in the status and prospects of well-trained men. The "vet's." work is chiefly connected with the diseases of the larger domestic animals—horses, cows, sheep, etc.; but it is by no means confined to these, and we know of one who has made a considerable income by the successful treatment of *gastritis* is cats. The Army and Indian Civil Veterinary Departments offer not only fair salaries but good pensions too. There are also good openings in the Colonies. But the prospects of the profession are by no means too bright at present on account of the substitution of motor for horse power. And as this substitution is certain to continue for some time at an accelerated rate, parents will do well to discourage their boys from entering the profession during the next few years.

THE R.C.V.S. There is only one body in the British Islands licensed to grant diplomas in veterinary surgery—the Royal College of Veterinary Surgeons, 10, Red Lion Square, London. He who has passed the four professional examinations, known as the A, B, C and D examinations, may be registered as M.R.C.V.S., and is allowed to practise. The higher diploma, F.R.C.V.S., can only be obtained by examination and after five years' experience as a veterinary surgeon. Candidates for the A Examination for the M.R.C.V.S. diploma must have spent a session (practically a year) in a Veterinary College, and must previously have gained one of the certificates recognised by the General Medical Council as exempting medical students from the Preliminary Arts Examination. Those who have none of these certificates, must take the Veterinary Preliminary Examination conducted by the College of Preceptors, London, or that conducted by the Educational Institute of Scotland. No certificate is accepted which does not state that the candidate has passed in all the following subjects at the same examination:—English, Latin, Mathematics, and *one* other optional subject, viz., Greek *or* any modern language (other than English). Those who intend to take up veterinary surgery should by all means get the Preliminary over before they enter on their professional studies in a College, which last four years.

VETERINARY COLLEGES. There are not many colleges where complete courses can be taken for the M.R.C.V.S. diploma. In England there are two: the Royal Veterinary College, Great College Street, Camden Town, London, N.W.; and the New Veterinary College at Liverpool, which, till October, 1904, was located in Leith Walk, Edinburgh, but is now connected with the Liverpool University. In Scotland, also, there are two: the Royal (Dick) Veterinary College, Clyde Street, Edinburgh, and the Glasgow Veterinary College. In all of them students enter at or over 16 years of age.

DIPLOMA AND DEGREE. As an indication of the growing importance attached to Veterinary Surgery, it may be mentioned that the Liverpool University has instituted (1904) a new Diploma in Veterinary Hygiene (D.V.H.), the course for which can only be taken by those who hold the M.R.C.V.S. diploma. A still more striking sign of this upward tendency is the new degree of B.Sc. in Veterinary Science, instituted by the University of London. For this degree there are four Examinations, one at the end of each year at College, only the candidate must previously have matriculated. The fee for each examination is £5. Students of exceptional ability may be able to qualify concurrently for this degree and for the diploma of the Royal College of Veterinary Surgeons, who alone, we repeat, can give the indispensable licence to practise. As a rule, however, those who intend to take the double qualification will probably require to devote five sessions, instead of four, to their studies. This extra year will be well spent, in view of ultimate success in their profession, by those who succeed in obtaining the degree, as the possession of the degree will undoubtedly confer a higher professional status on those who hold it, and will give them a great advantage over those who possess the diploma only in competing for public veterinary appointments.

COST OF TRAINING This includes cost of living, college fees, books and instruments, and examination fees. The first, away from home, amounts to between £60 and £100 a year; books and instruments cost about £25; and examination and registration fees come to £21. The college fees vary, e.g., in London (Camden Town) they are £84; in Edinburgh (Dick), £58; in Glasgow, £63. In both the Scottish Colleges, however, students who can pass a considerably more difficult Preliminary Examination than that described above have all their fees paid for them by the Carnegie Trustees, but only those are eligible who are of Scottish birth or extraction, or who have, after the age of 14, spent two years in a school or institution under the inspection of the Scotch Education Department.

ARMY VETERINARY DEPARTMENT. Candidates must be between 21 and 27, and unmarried; they must be suitable in every way to hold commissions; and they must possess the M.R.C.V.S. diploma. Applications must be sent to the Under Secretary of State, War Office, London, S.W. If the applications are considered, candidates have an interview with the Director-General of the Veterinary Department, and, this over, are examined in professional subjects. Successful candidates go through a six months' course at Aldershot, with an examination at the end of it, and then, for six months, are Veterinary Officers on probation. If the probationary period is satisfactory, the officer is dubbed Veterinary-Lieutenant, and receives £250 a year. He is now on the ladder leading to promotion, increased pay, and a good pension on retirement.

INDIAN CIVIL VETERINARY DEPARTMENT. The Officers of the Indian Civil Veterinary Department perform or supervise all official veterinary work in India, other than that of the army, and are debarred from private practice in India. Their duties include: (*a*) Educational work in veterinary colleges, (*b*) horse and mule breeding, (*c*) cattle disease and cattle breeding. Candidates, who must not be over 26, and must have the M.R.C.V.S. diploma, should apply to the Revenue Secretary, India Office, London, S.W. If, on examination into their qualifications they are accepted on probation, they have a free first-class passage to India, with the prospect of good pay and a good pension on retiring.

TEACHING.

If we reflect that the whole nation passes through the hands of teachers, we shall recognise the enormous national importance of having as schoolmasters and mistresses those who are capable of making the most of their opportunities. At no time has this question been so prominent

as now; and our Board of Education is at last paying some attention to the advice of the late Mr. Matthew Arnold, given some fifty years ago: "Organise your Secondary Education." At present this organisation is incomplete, and only directly affects such of our Secondary Schools as come within the jurisdiction of the Board of Education. The Teaching Profession is becoming a far more real profession than formerly; and one for which in future candidates must deliberately train. We should demand that those to whom we entrust the education of our children shall be trained for their difficult work, just as doctors, lawyers and architects must be trained for theirs. At present the conditions of service in the profession are not such as to attract a sufficient number of well-qualified men. To women, however, teaching offers as good a prospect as they would, as a rule, find in any other pursuit; and there is consequently an adequate supply. Even elementary school teaching attracts a far better class of young women than was the case a few years ago. One effect of the "stringing-up" of the requirements for the qualification of secondary teachers was, for some time, a diminution of the supply; and this has had a very noticeable effect on the salaries offered. A few years ago it was no uncommon thing for an assistant master in a grammar school, or its equivalent, to start at £80 a year; now if properly qualified, he can command from £120 to £150. Speaking generally, we may say that the whole profession has improved, not only financially, but in public esteem, and now offers a fair career for clever men and women—especially women.

1. SECONDARY SCHOOL TEACHING.

QUALIFICATIONS OF THE TEACHER. *Nascitur non fit*, "born not made," may be as true of the *great* teacher as of the poet, but certainly not of teachers in general. As a matter of fact, any healthy young man or woman of good moral character, sufficient education, and with plenty of "go"—who "means business," in fact—can with patience and hard work become a successful if not a brilliant teacher. Those who are shy, diffident, or irritable should, however, choose some other profession. The greatest difficulty that meets the beginner in teaching is discipline; but any one who can hold his own with his fellows need have no fear of surmounting it. Above all, it must be borne in mind that the effect of the personality of a teacher is the greatest factor of the total effect of his work. It pervades the air of his classroom: he cannot hide it; and the mental and moral gain or loss to his pupils due to his assocation with them depends upon his own character. If he is in real earnest about his work, his pupils as a whole will be in earnest about theirs. He may bluster and punish as much as he likes if he does not really work with and for his pupils, they will make but a feeble response to his efforts.

EDUCATION REQUIRED FOR SECONDARY TEACHING. It was formerly possible for those who had been trained as elementary school teachers to work for two or three years in Elementary Schools, and then, fortified with a London or Dublin degree, to get a post as assistant in a Secondary School. Many present head masters of such schools were thus trained for their work and have fully justified their promotion. But this opening into higher educational work is becoming more and more difficult of access, and may, in the near future, become practically impossible. Those who mean to engage in secondary teaching should now have nothing to do with teaching in Elementary Schools. Boys and girls who get their early education in Elementary Schools will have a good chance of getting posts in the schools we are considering, if they win scholarships that will give them three or four years' education in a Secondary School, and enable them to proceed to a University degree. But those who aim high in the teaching profession must have spent some of their early years in a school of high standing. The headmaster of one of our Public Schools once remarked to the writer: "It is not sufficient for me to know that a candidate for a post in my school has the requisite knowledge; I want to know how and where he acquired it." A degree of some British University or its equivalent is now essential for all; but the best in general estimation are those granted by the Universities of Oxford and Cambridge after three or four years' residence. Now that London is a Teaching University, its ordinary degrees are more valued; but our best schools are in the hands of Oxford and Cambridge men, and they give Oxford and Cambridge men the preference. Only Public School men who have won distinction at one of these two Universities have any chance of getting a post in a Public School or in one of the larger Preparatory Schools. As a rule they must be good athletes, too, especially for the latter. Still there are good posts available for men and women with pass degrees if they go through the course of training recognised as suitable and sufficient by the Board of Education.

PROFESSIONAL TRAINING FOR SECONDARY TEACHERS. The attempt to form a register of teachers divided into columns A and B (the former for teachers of elementary schools, and the latter for teachers of secondary schools) has proved a failure. And this is now fully recognised by the Board of Education, who will probably secure the results aimed at by registration in another way. The Board have announced three important changes in regard to secondary schools and teachers in England and Wales:—

(1) They intend to establish a list, to be issued periodically, of secondary schools recognised after full inspection as efficient in respect of their staff, course of instruction, premises and equipment. This list will include both schools receiving grants under the regulations of the Board, and schools, whether public or private, which for one reason or another are not in receipt of State aid.

(2) Their regulations for secondary schools also provide that after July 31st 1907, a certain proportion of all new appointments to the teaching staff of a school included in the above-named list of efficient secondary schools, whether State aided or not, may be required to have gone through a course of training recognised for the purpose. In applying this provision, the Board will take into consideration the teaching staff of the school as a whole. Any person, moreover, whose name has previously been entered on column B of the Teachers' Register (now in abeyance) may, subject to the Board's sanction, be counted in applying any such requirement to the school.

(3) The Board intend to issue regulations, instituting a system of grants in aid of courses of training specifically designed for the requirements of secondary school teaching. [This has been carried out.]

It will, therefore, be wise on the part of any one who intends to become a teacher in a secondary school, after taking a degree or its equivalent, to go through a course of training in accordance with the regulations of the Board.

Diplomas or certificates in the Theory and Practice of Teaching in Secondary Schools are now granted by the following Universities:—

Oxford, Cambridge, London, Durham, Manchester, Birmingham, Liverpool, Leeds, Wales, Edinburgh, St. Andrews, Aberdeen, Glasgow, Dublin, and by the College of Preceptors and the National Frœbel Union.

Courses of training for the teachers of secondary schools are provided at many universities and institutions, including the following:—

Oxford, Cambridge (Day Training College, Secondary Department), Cambridge Training College for Women; at the Universities of Durham, Birmingham, Manchester, Liverpool, Sheffield, Leeds, and Bristol; at the University Colleges of Bangor, Cardiff, and Aberystwith in Wales; at the following institutions in London: Bedford College (Women), Maria Grey College (Women), Mary Datchelor College (Women), Catholic Training College (Cavendish Square), London Day Training College (Secondary Department), Clapham High School (Women), Frœbel Educational Institute; at the Ladies' College (Cheltenham), Hartley University College (Southampton), St. Mary's Hall, (Stonyhurst, Blackburn, Roman Catholic), and at St. George's Training College, Edinburgh, for Women.

As an example of the usual regulations of a University relating to the course of training and to the Diploma in Education we give those of the University of Sheffield:—

(1) Candidates for the Diploma must be graduates of a British University. (2) The course of study shall extend over one academic year. (3) It shall consist of (*a*) Lectures on the history, theory, and practice of education, and (*b*) practical work in schools recognised by the University. (4) The candidate shall be attached to recognised schools, and during the first two terms, shall attend not less than two mornings per week. (5) During his attendance he shall make himself acquainted with the organisation of the school, and with the methods of teaching the various subjects. (6) He shall further be required to give a course of lessons—not exceeding six per week—under the supervision of the Head Master or the Professor of Education. (7) He shall attend the lectures on Education during the first two terms, but the third term he shall spend entirely in one of the recognised schools, and devote himself wholly to the work of the school under the direction of the Head Teacher. (8) The examination shall consist of a practical test, of written papers, and of an examination of the student's own records.

In addition to the posts for regular Form Teachers in secondary schools, there are many openings for such Teachers of music, art, physical training, manual instruction, cookery, needlework, etc., as have gone through the needful training and proved themselves competent.

There is always a demand for teachers who can teach French conversationally, and those who wish to undertake general teaching are strongly advised to become as proficient as possible in it. The following notice, which was published in the English newspapers in August, 1904, is well worth the attention of those able to avail themselves of the offer it contains:—

The Board of Education have received from the French Government a notification of their intention to attach as temporary assistants to certain Lycées a number of young English Secondary schoolmasters, or intending schoolmasters who have undergone an approved course of training, and hold some recognised diploma for Secondary teachers. These assistants will not take any share in the regular work of the school, but will conduct small conversation groups under the direction of the Proviseur. Two hours' work a day will be expected of them. The rest of their time will be at the disposal of the assistants, who will thus be able to pursue their own studies. The assistants will receive no remuneration, but will be boarded and lodged at the Institutions to which they are attached. Candidates for such posts should forward their application to the Director of Special Enquiries and Reports, St. Stephen's House, Cannon Row, S.W., enclosing testimonials as to character, capacity, and teaching experience, and a medical certificate of health. It will also be necessary for each candidate to have a personal interview with the Director at his office.

Holiday courses in France for English teachers are arranged every August, and particulars of them can be obtained of the Secretary of the Assistant Masters' Association, 27 Great James Street, S.W. Similar holiday courses are also to be had in Germany and Spain.

German is not so universally taught as French. In the thirty-seven London Secondary Schools whose language teaching was, early in 1904, inspected by the London University on behalf of the London County Council, French was, without exception, compulsory; whilst German was compulsory only in seven, and optional in eighteen. For men and women who are really proficient in French and German there are good openings as modern language teachers. It is found that such teachers secure better results in our schools than foreigners, and, curiously enough, impart a more accurate pronunciation. Spanish is taught in only four of the thirty-seven London Schools we have mentioned, and very little in the country generally.

Music, art and science are usually left to specialists; but a knowledge of geometrical drawing—plane and solid—is generally required of men teachers. In nearly every school, masters, and often mistresses too, are required to take part in the school sports; and superior athletic qualifications will often turn the scale against mere academic distinction. Except in the Public Schools and the best Preparatory Schools, Greek is seldom wanted; but Latin still forms an essential part of the curriculum of most Secondary Schools.

APPLICATION FOR POSTS. Most of the best posts in higher schools are advertised in the *Times*, the *Athenæum*, the *Journal of Education*, and often in other newspapers; but teachers in want of posts should have their names down at some Agency. One of the best is the Joint Agency, 23 Southampton Street, Bloomsbury, W.C., and there are others equally good connected with the Universities of Oxford and Cambridge. Private Agencies charge those for whom they arrange appointments from two and a half to five per cent. on the first year's salary. In applying for a post, pains should be taken to make the application clear and business-like. When there are many candidates for one post, their applications are, at first, necessarily read through somewhat hurriedly; and a carelessly written or worded one may be at once thrown into the "rejected" basket.

TRAINING FOR SCIENCE AND ART TEACHING. 1. SCIENCE TEACHERS. Those who wish for an appointment as Science Teacher must take a degree in science of some British or well-known foreign—preferably German—University. In fact, work in a good German laboratory, such as that of the Berlin or the Heidelberg University, is very valuable even to those who have graduated in Science in the United Kingdom. Those who aim high should take the Natural Science Tripos at Cambridge, or the D.Sc. Degree of London; but all who have obtained the B.Sc. of London, with Honours in Chemistry or Physics, will be practically certain of good posts, provided, of course, they prove themselves capable teachers. The value of any degree, however, will depend very greatly on the nature of the training which led to it. A London B.Sc. obtained by private study or after work in an obscure laboratory is of small value compared with the same degree obtained after work in one of the Colleges attached to the University—University College, King's College, East London Technical College, etc., or in the famous Royal College of Science, South Kensington. The last named is under the direction of the Board of Education, and the courses are specially arranged for those who wish to become science teachers. There are also many valuable scholarships available, giving free instruction and from £50 to £60 a year, tenable at either the Royal College of Science, London, or at the corresponding College at Dublin. Particulars of these courses and scholarships can be obtained from the Clerk, Royal College of Science, South Kensington, S.W.; and valuable practical advice could probably be obtained from the Science teachers in any one of the Polytechnics to be found in all our larger towns.

2. ART TEACHERS. For Art Teachers, the best all-round certificate is the ART MASTER'S CERTIFICATE of the Board of Education; and if they can add to their qualifications the fact that they have been employed as designers to some artistic trade—lace-making, iron-work, art-furniture, wall-paper, etc.,—so much the better. The lower certificate—the ART CLASS TEACHER'S—would be sufficient only for small schools, but would be a good extra qualification for general form work. Training for these certificates may be obtained or commenced at any of our numerous Municipal Polytechnics; but candidates for them should make up their minds to enter either by means of scholarships, or by paying the fees, the Royal College of Art, South Kensington. A prospectus of the College can be obtained by post free 4d. Valuable Training Scholarships are offered, giving free tuition and a maintenance grant of from 12s. 6d. to 43s. 6d. a week; and there are also a number of Free Studentships. The fees charged to the general public range from 5s. to £5 a term, according to the course taken. The Art Master's Certificate is almost a necessity to those who wish to teach in any of the Municipal Art Schools or Classes, or in the best Secondary Schools which are under the direction of the Board of Education; but those who have received their art instruction in any of the famous Art Schools of the country would have many posts open to them. The most famous

Art schools are in London—the Royal Academy Schools, the Slade School of University College, etc.; and full information about them can be found in Mackenzie's *Art Schools of London*, published at 2s. 6d. by Swan Sonnenschein & Co.

PROSPECTS. Fully qualified men teachers now get from £120 to £150 to start with, and women from £70 to £100. Form Masters in the lower grade of Secondary Schools—those whose pupils leave at sixteen—may expect to get a maximum of from £180 to £200, and Form Mistresses from £120 to £150. In the higher grade of Secondary Schools, which retain their pupils for another year or more, the salaries of Form Masters often rise to £300. In the Public Schools the income of a master who has the privilege of a boarding-house may rise to from £700 to £1,000. Science and Mathematical Masters get from £150 to £400, Modern Language Masters from £100 to £300. In residential posts the salaries are usually £50 lower than those given above. Head Masters of the lower grade of Secondary Schools receive from £300 to £700, and of the higher from £700 to £1,200. The salaries of Head Mistresses of the larger Girls' Schools range from £180 to £800. In exceptional cases Second Mistresses may get as much as £200. The salaries in private schools for boys vary very considerably: in the best they are as good as in those under public control; but in others they are often miserably poor. There are many good private schools for girls; and the salaries paid in them to assistants who have graduated are equal to, or even better than those paid in schools under boards of managers. Men and women who have taken high university honours and have made a thorough study of education may be able to enter the ranks of Junior Inspectors under the Board of Education, after they have given evidence of skill in teaching. The salary starts at £200 and rises to £400. If they are promoted to Inspectorships their salary rises to £800.

2. ELEMENTARY SCHOOL TEACHING.

There has been, within the last few years, nothing less than a revolution in the system of training Pupil Teachers, that is, young persons preparing for the profession of elementary school teaching. The old system under which boys and girls were employed all day in teaching, and got their own education as best they could in the early morning or in the evening, has happily been swept away. The law now protects them from the deadening influence of over much work and too little play; and protects also the scholars of our elementary schools from the teaching by boys and girls in such subjects as require skilled and experienced handling. Since the passing of the Education Act, 1902–3, a series of changes has been introduced which should result in supplying our elementary schools with teachers properly trained for their work and equipped with a wider knowledge of the general field of education than many of them have hitherto possessed. Till now they have had little or no knowledge of education other than elementary, and the system of payment by "results," too often restricted education to mere instruction. In future a large proportion of our elementary school teachers will have, themselves, spent at least three years as pupils in Secondary Schools. The new system of training, again, cannot fail to raise the elementary school teacher in the estimation of the public. Hitherto such teachers have from the time of their apprenticeship as pupil teachers been thrown too exclusively into the society of other teachers. In future it will not generally be known till they are sixteen years of age that they are going to be teachers; they will be ordinary scholars in Secondary Schools, and will form friendships and acquaintances from a far wider circle. In many cases they will be attached to their Secondary School till the age of eighteen, and may possibly for three years more study for their profession as members of a university. But there is one fact that must be borne in mind by those who submit themselves to the new system of training—a fact to which we have already called attention in speaking of secondary teaching: they must recognise that their life's work will be connected with elementary school teaching, and that passage into secondary teaching will be very difficult. This, however, will not be such a hardship as it would formerly have been, since elementary school teaching will be in every way a higher profession. For women, elementary school teaching offers good prospects, and girl candidates are consequently more numerous. It is gratifying, too, to know that they are being drawn from a better social class than formerly. There is one great advantage attached to this branch of education: the training is very cheap, as will appear on reading through the sections which follow.

NATURAL QUALIFICATIONS OF CANDIDATES Boys and girls begin their training so early that it is barely possible for them to be sure that they are suited to the work; but fortunately the training they will undergo under the new regulations will fit them for many pursuits other than teaching if they find it distasteful or unsuitable to them. There is, however, very little fear but that bright, healthy and intelligent boys and girls will make successful teachers. Those, we repeat, who are shy, diffident, and irritable should not take up teaching at all; neither should those with any marked physical defect—especially of eyesight, hearing or speech.

EDUCATION TILL THE AGE OF SIXTEEN. Henceforth, except in rural districts, no boy or girl may be a pupil teacher till the age of sixteen; and all, as a rule, must serve two years. In rural districts they may, with the consent of the Board of Education, be engaged for three years from the age of fifteen. To enable suitable boys and girls, who have a desire to enter the teaching profession, to become pupil-teachers, provision has been made for their education and partial maintenance by most of the Education Committees of our large towns. The scholarships they offer give free education for two years, either in special classes or, more often, in Secondary Schools, and a maintenance grant of from £10 to £20.

At the age of sixteen they should possess a certificate of having passed one of the following examinations, to show that they have sufficient general education to justify the Board of Education in accepting them as pupil-teachers: Oxford or Cambridge Junior Local, Lower Certificate Examination of the Oxford and Cambridge Schools Examination Board, College of Preceptors (Second Class), Junior Certificate Examination of the Welsh Board.

HOW TO BECOME A TEACHER in an Elementary School. The first step after attaining the age of sixteen is to get an appointment as Bursar, or an engagement as Pupil-Teacher, or (when 17 years of age) recognition as a Student Teacher. The candidate in each of these cases must be suitable in respect of character, health, and freedom from personal defects, such as lameness or deafness.

1. BURSARS. A Bursar is a boy or girl attending full time at an efficient Secondary School, who intends to become a teacher in an Elementary School, and who receives from the School Authority, aided by the Board of Education, such financial help as will enable him to continue his education for a year, after reaching the age of 16 or 17. The Bursar must receive continuous and suitable instruction throughout the year of his Bursarship, and within two years of his appointment as Bursar must enter for the "Preliminary Examination for the Certificate" (see below). The Bursar must subsequently either enter a Training College or serve for a year as a Student Teacher in a Public Elementary School. Otherwise, he will not be recognised by the Board, even as an Uncertificated Teacher, though qualified by age and by the examination he has passed.

2. PUPIL TEACHERS are boys and girls, mostly over sixteen, who are receiving (*a*) Training in teaching in an elementary school, together with (*b*) Instruction approved by the Board. Candidates must be suitable in respect of character, health and freedom from personal defects, and

must have been vaccinated. The only date for admission is 1st August, and the names of candidates must be submitted to the Board not later than 1st July. Those, therefore, who wish to become Pupil-Teachers and who can satisfy the Local Authority, by the evidence of their Teachers, that their attainments are sufficient, should send in their names to the authorities of the elementary school in which they wish to serve some time in June. Those who hold teaching scholarships will have all necessary arrangements made for them; but it is hoped that many ordinary secondary scholars will, at the close of their school course, become pupil-teachers. Should this fall within their eighteenth year *and they give evidence of special attainments*, their engagements may last for one year instead of the usual two. It might in fact be worth while for those who can do so to thus postpone their engagement in order to take one of such examinations as the London Matriculation or the Oxford or Cambridge Senior Local.

The life of pupil-teachers need now be neither hard nor unpleasant. They usually spend half their time in schools, learning the art of teaching, and the other half at the *Pupil-Teacher Centre*, where they pursue their own studies under competent teachers. The Board of Education is doing its best to induce Education Committees to attach their pupil-teacher centres to secondary schools; and in some towns the pupil-teacher centre is so attached.

> The half time spent in teaching may be variously distributed over the term of engagement: in some cases one-half of each week is spent in the schools and the other half at the centre; in others, six months in school and six at the centre. The division of time is decided by the school authorities—not by the pupil-teacher. The salaries vary considerably with the locality: in the larger towns the usual amount is from £20 to £30, but in country districts much less.

Every Pupil-Teacher in a Centre must enter for an approved Leaving Examination, which may be either the Preliminary Examination for the Teachers' Certificate, or some other examination accepted by the Board as equivalent. They may not enter for any External Examination in secular subjects other than their Leaving Examination. They may not even attend any class in Technical Schools, School of Art, &c., under Government Inspection, except with the written consent of the Head Master or Mistress of their Centre. This regulation apparently leaves a Pupil-Teacher free to attend any University Extension Lectures within his reach. It is a great mistake to suppose that true education depends on the mere extent of one's knowledge: it depends, also largely on the style and quality of it; and this is influenced by contact with those who direct our studies. Young teachers should strive, therefore, to come under the influence of superior minds, such as are to be found amongst our Extension Lecturers.

3. STUDENT-TEACHERS. A Student-Teacher is one who is employed in a Public Elementary School, during not more than eight meetings in any one week, for the purpose of gaining practical experience in the Art of Teaching, together with such further general education as may be available. To obtain recognition as a Student-Teacher on the staff of the school the candidate must immediately before his application for such recognition have been a "Bursar," or have been in regular attendance for not less than three years at an efficient Secondary School. And if he has not been a Bursar, must be over 17 years of age and have passed the Preliminary Examination for the Certificate, or some other examination accepted by the Board of Education as a qualification for admission to a Training College.

PRELIMINARY EXAMINATION FOR THE CERTIFICATE. This replaces the old King's Scholarship Examination. It is divided into two parts, Part I. taken in December, and Part II. in April, following. Part I. consists of Reading, Repetition, Penmanship, Composition, Arithmetic, Drawing, Music, and (for women) Needlework. It is open to Bursars, to Pupil-Teachers who have completed their apprenticeship or entered on the last year, and to all other persons over 18 years of age. Part II. is open only to candidates who have satisfied the examiners in Part I. The names of candidates for the Preliminary Examination for the Certificate must be notified to the Board of Education before October 1st. All candidates who pass the examination will be recognised as Uncertificated Teachers, eligible for employment in Elementary Schools, or for admission to a Training College. There are many alternative examinations which may be taken in lieu of the "Preliminary Examination," and which will open the doors of a Training College, or entitle the examinee who has successfully passed one of them to recognition as an UNCERTIFICATED TEACHER. (See "Regulations for the Training of Teachers for Elementary Schools," post free, 8d. published by Wyman and Sons, Fetter Lane, E.C.), or still better, "The Red Code," post free, 1s. 3d., from the Schoolmaster Publishing Co. The Board give fair notice that "recognition as an Uncertificated Teacher may at any time be recalled or suspended." It should therefore be the aim of such a teacher to pass the CERTIFICATE EXAMINATION as soon as practicable.

TRAINING COLLEGES are of two kinds—*Residential* and *Day*. Of Residential Colleges in England and Wales 16 are for men and 34 for women. Of these colleges 31 were founded for students belonging to the Church of England, 7 for Roman Catholics, and 2 for Wesleyans. But now the authorities of a College may not, in respect to half the number of places vacant, reject the application of any candidate not belonging to the denomination of the College on the ground of his religious faith. At Upper Norwood, London, there is a Residential College for teachers of the blind, accommodating over thirty students of both sexes. There are thirty-six Day Training Colleges, of which *nine* are for men, *twelve* for women, and the rest admit students of both sexes. In 1905 was opened the Goldsmiths' College, at New Cross, London, "recognised" for 500 Day Students, men and women.

> At a RESIDENTIAL COLLEGE the usual admission fee is £25 for men, and £20 for women. In Roman Catholic Colleges the fees are considerably lower. Books cost about £5 or £6, and there are usually small charges made for sports, papers, magazines, etc.
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> At a DAY COLLEGE the usual tuition fee is £10 a year; and students must make their own arrangements for residence. Day Students receive a maintenance grant from Government, men £25, women £20 each year. In some cases *Hostels* are attached to the Day Colleges, in which students are boarded at very moderate fees.

The course in a Training College usually extends over two years, but to those of exceptional merit a third year's training may be granted. At those Day Colleges which are closely attached to a university, the course lasts three years, and is so arranged that, at the end of it, students may become graduates of the university. At the London Day Training College none but graduates and undergraduates are admitted, the former to study for the Teachers' Diploma, the latter to take a three years' course with a view to the Teachers' Certificate, and the degree of B.A., or B.Sc., of the London University. In many other Training Colleges the more promising students are permitted to take University courses of study, if they fulfil the conditions here stated:—

> "No candidate who passes his qualifying examinations for admission to a training college after August, 1910, will be allowed to be prepared for an examination forming a recognised stage towards a university degree as part of his course, unless he has either (*a*) passed the Preliminary Examination for the Certificate and obtained in that examination distinction in English, History and Geography, Elementary Mathematics, one language, which must be either Latin, Greek, French, or German, and either in a second language on Elementary Science; or (*b*) in lieu thereof passed some University examination accepted by the Board as sufficient, such examination to include English Language and Literature, English History, Geography, Mathematics, one language selected from Latin, Greek, French, and German, and either a second language or in approved science subject. A list of such alternative examinations is given in Appendix A (II.) of the 'Regulations for the Training of Teachers for Elementary Schools,' and may be seen in 'The Red Code,' previously mentioned."

CERTIFICATED TEACHERS. At the end of the period of training every student must pass an examination approved by the Board, in order to be recognised as a Certificated Teacher. For candidates for a certificate who are not students the Board hold an annual examination called the "Certificate Examination." A candidate must be over 20 years on 1st January preceding the examination and must, as a rule, (1) have passed an examination qualifying for recognition as an Uncertificated Teacher, and (2) have been employed as such, for a year at least, in some Elementary School under Government Inspection. A graduate in Arts or Science of any university in the British Empire may be recognised as a Certificated Teacher provided he or she holds a certificate of proficiency in the Theory and Practice of Teaching granted by one of the educational bodies named in Schedule I. of the "Code of Regulations for Public Elementary Schools."

Certificated Teachers who have been employed for eighteen months in a Public Elementary School, and have been favourably reported on by an Inspector, receive from the Board of Education their *Parchment Certificate*, on which are recorded particulars of their course of training, including the names of any subjects in which they distinguished themselves as students. Those who took a three years' course get their Parchment after twelve, instead of eighteen months' service.

PROSPECTS OF ELEMENTARY SCHOOL TEACHERS. Salaries vary considerably with the locality. One of the highest scales of salary in the country is as follows:—

	£	£		£	£
Head Masters .	150 to	350	Head Mistresses.	120 to	265
Trained Assistant Masters . . .	95 „	200	Trained Assistant Mistresses . .	85 „	125
Untrained but Certificated .	85 „	200	Untrained but Certificated .	75 „	125

Head Assistants get from £10 to £15 more than ordinary Assistants. The Head Teacher's salary depends on length of service and size of school.

In large towns the salaries approximate more or less to the salaries given above, but in smaller ones they are often at present considerably less. For untrained teachers the salary is generally £10 less than for trained teachers under similar circumstances.

ENGINEERING.

The term *engineer* is applied to men occupied in widely different kinds of work. The man who makes a water-tap is an engineer, and so is he who constructs such stupendous works as the Nile Dam or the Forth Bridge. The term was at first a military one, and is still used as such to describe a member of that branch of the army whose business is connected with fortifications, earthworks, &c. But, when men began to devote themselves more and more to the construction of engines and works for the service, and not the destruction, of mankind, a new term was wanted; and as these were *civilians*, not soldiers, they were called *civil engineers*. Smeaton was probably the first to use this title to describe himself. In process of time civil engineers were differentiated into various classes, each devoting itself to a special branch of work; so that to-day we have mechanical, marine, railway, electrical, mining, gas, sanitary and civil engineers in the more restricted meaning now applied to the name; and this by no means completes the list. In most cases the title adopted explains the nature of the occupation; but that of *civil engineers* has still a very wide signification. He may be defined as "the man who practises the art of directing the great powers of nature into definite channels for the use and convenience of man."

It is obviously necessary for the Engineer to learn all he can of the nature of the forces he directs, and to be thoroughly acquainted with the mechanical means in use for directing them. His training should, therefore, be of a most comprehensive nature. A sound knowledge of mathematics, physics, chemistry, hydraulics, and mechanical engineering are primary necessities. He must, further, have a practical knowledge of geology, surveying, and architecture, and must be acquainted with the nature and strength of the materials which he may be called upon to use. These qualifications are all necessary to a man who is to be ready to prospect for or make railways and canals, dams, docks, bridges, lighthouses, windmills or any of the thousand and one things that may come in his way. But, whatever the branch he ultimately takes up, the engineer who means to be more than a "hand" must have a wide and accurate knowledge of physical and chemical science, and this he cannot get without an extended knowledge of mathematics; and he must be a skilled draughtsman. If he adds a knowledge of one or two modern languages, the better his chances of securing lucrative work in other countries than his own.

GENERAL EDUCATION REQUIRED. Well, your son has expressed a desire to be an engineer: what are you to do? That depends very much upon his age and capabilities, and the means at your disposal. If he is under twelve, and you can afford it, you might possibly send him to Osborne to be trained in due course as a Naval Engineer. If he is about fourteen, of constructive tendency, and fond of his mathematical and scientific subjects, do nothing definite, beyond humouring his bent and pointing out to him the importance of working hard at *all* his school subjects, and of keeping himself physically fit. Engineers have to work hard with head and hands, and a sickly boy would have a poor chance.

Although there are many advantages in belonging to the Naval service—a pension, for instance, the chances of getting distinction and wealth are far greater in other engineering pursuits. If you determine that his work shall lie on land, there is no necessity for your boy to specialise before he is between 16 and 17 years of age. He will want all the knowledge he can get, not only of such subjects as bear directly on his chosen profession, but of those which will help to make him a man of broad culture, fit to associate on equal terms with men of good standing. *Mens sana in corpore sano* is best acquired by having a variety of interesting pursuits, with many things to think of.

French and German may prove of inestimable value, and so, too, may Spanish; but a working knowledge of Spanish can be acquired in a few months by any one who has had a good grounding in Latin and French. Drawing, especially geometrical, is of the utmost importance, and so is the use of graphical methods in mathematics. If there is a carpentry class in connection with your boy's school, as there ought to be, by all means let him join it. Meanwhile you yourselves might with advantage learn something of the engineering profession, its prospects and achievements, whilst your son should be encouraged to read the lives of famous engineers, the difficulties they surmounted, and the wonders they accomplished. For yourselves we should recommend as a very readable book, Haldane's "Engineering, Popularly and Socially Considered," published by Spon; and for the boy such well known books, by Dr. Smiles, as "George Stephenson," "Boulton," "Watt," and especially his "Memoirs of James Nasmyth," inventor of the steam-hammer, "Lives of the Engineers," &c.

> If you cannot afford the cost of a long preliminary course, your boy could become a Dockyard Apprentice, at any time between the ages of 13½ and 16; but his wages would probably never exceed £250 unless he is distinctly clever, in which case he may win a commission as an Engineer Cadet. If you think of this course, send to the Secretary to the Admiralty for the Regulations for the entry of Dockyard Apprentices.

AT SCHOOL AND COLLEGE. When your boy is approaching 16, it is time for you to make up your mind as to one of several courses for his technical training. If he is at a school with an engineering side, you will naturally arrange an interview with the Head Master. There are many such schools now—Cheltenham, Repton,

Clifton, Dulwich, Felsted, Malvern and many others (see Public Schools Year Book, 2s. 6d., Swan Sonnenschein & Co.) The advice will probably be to let your son finish his school training on the engineering side, and then, if you can afford it, to send him to Cambridge, where he can take the Mechanical Tripos before entering, as a pupil, the works of some great engineering firm or before competing for a government appointment, for which a knowledge of engineering is necessary. Failing Cambridge your son will do well to gain admission to one of the following universities in which there are Faculties of Engineering: London, Durham (Armstrong College, Newcastle), Manchester, Birmingham, Liverpool, Leeds, Sheffield; Wales; Edinburgh, St. Andrews, Glasgow; Dublin. At the universities of Sheffield and Liverpool three degrees are granted in Engineering, namely, Bachelor of Engineering (B. Eng.), Master of Engineering (M. Eng.), and Doctor of Engineering (D. Eng.). At most of the other universities a degree in Science is granted with Engineering as the principal subject of examination. Those who desire to take up mining engineering would find the Royal School of Mines, South Kensington, very suitable for their purpose.

In most of the institutions indicated above, the course of instruction in engineering lasts three years; but their fees differ widely.

> In University College, London, the fees (after Matriculation) amount to £115 for the three years' course; in the City and Guilds Central Technical College (London), to £109. In the East London Technical College, Mile End, on the other hand, the fees are only £30, notwithstanding the excellence and general "go" of the instruction.

The fees just mentioned are about what may be expected in other institutions of their respective ranks. In most of them the fees are considerably reduced for scholarship winners. Generally speaking, the first year's course is the same for all engineering students. In the second year, they begin to specialise.

There are several branches of engineering, in addition to Military Engineering, any one of which is sufficient to occupy the attention of a student for the next two or three years. He may take courses in one of the following branches:—

> (1) *Civil Engineering*, embracing the theory and practice of constructing railways, harbours, waterworks, sewers, bridges, and such like; (2) *Mechanical Engineering*, which deals with the engine in all its forms, whether to propel ships, draw trains, or drive machinery; (3) *Electrical Engineering*, including all appliances of electricity for locomotive purposes, for lighting, or for storing and transmitting the electric current; (4) *Mining Engineering*.

ON LEAVING COLLEGE. The profession may be overstocked with men indifferently trained, but not with such as we are now considering. There is "always room at the top." But you must not think that your son, although trained and furnished with a degree, can immediately command good pay. If he gets 20s. a week, and has to pay no premium, he is fortunate, provided he gets into works where he can get good varied practice. It would be useless to offer advice as to the kind of works into which trained students should seek admission. The best hints are those picked up in the College from the Professors and others. Marine engineering, perhaps, offers the best opportunities for gaining wide experience; in railway works, the opportunities in this respect are not so good. To prevent loss of time, as well as to be more certain of good ultimate employment in some definite branch, it may be advisable to pay a premium to an engineer in good practice to take your son as a pupil. Many reduce the premium for trained men. In London premiums range from £100 to £500 or more; in the provinces they are usually less. But if your son is content with a small stipend, he will probably have little difficulty in getting work which will give him experience of actual workshop practice.

A young fellow must expect, while passing as a learner "through the shops," some rough experiences. He must not mind appearing as black as a tinker. Much tact will be necessary on his part to avoid friction with the regular hands, who naturally resent anything approaching to an air of superiority on the part of the new-comer, fresh from college. It may be worth mentioning that it is usual for the new-comer to pay his "footing." A small sum handed to the shop foreman for this purpose is money well spent as a means of good fellowship. After getting a first-hand acquaintance with the smutty work of the shops, the young engineer should apply to be taken into the drawing-office of his own or some other firm. This part of the business offers particular attractions to many, but for ultimate success as an engineer it is necessary, after a year or two, to resist its charms and seek work that will give him practical experience of the right kind.

His chance of success in his future career will be enhanced by becoming connected with the INSTITUTION OF CIVIL ENGINEERS, Great George Street, Westminster. To become an associate (A.M. Inst. C.E.) the candidate must be over 25, and must possess an Engineering Degree, or pass the very difficult examination held by the Institution. A member (M. Inst. C.E.) must be over 30. There are separate institutions for nearly every branch of engineering (see Whitaker under "Societies and Institutions"); but the Inst. C.E. includes men belonging to all. The subscriptions are generally small, and the advantages attached to membership are obvious. Men get to know one another and be known.

APPRENTICESHIP. This is a way of entering the profession, which is not only much less expensive but which offers one special advantage, inasmuch as under favourable circumstances, it gives a practical insight into the work from the first, thus enabling the learner to get a good grasp of the theory when it is subsequently explained to him, as it may be at some Technical Institute. If this method is adopted a boy on leaving school at the age of 16 or 17 becomes an apprentice to an engineering firm. In most cases a premium is required. A very usual figure is 100 guineas a year for three or more years, part of which is returned as wages at the rate of 3s. or 4s. at first, rising to something less than a £1 at the end of the term. The Brush Electrical Engineering Company (Loughborough, Leicestershire) charges 100 guineas a year for three years, and gives wages of from 3s. to 18s. a week. Most of the great Railway Companies take apprentices in their shops for a five years' course. The Great Eastern Scheme for apprentices in the Mechanical Department may be taken as a sample. A premium of £50 is charged, and wages given, ranging from 5s. a week for the first year to 15s. for the 5th, and to 20s. in the 7th, if the apprentice stays on. In the Civil Engineering Department of the L.N.W. the premium is 100 guineas for the usual term of three years; but only College-trained men are likely to be received. In works run by Companies, the influence of a friend who is a large shareholder will often considerably reduce the premium usually asked.

Some firms take apprentices without premium; but care should be taken that the boy's prospects are not prejudiced by the fact that the class of work undertaken is of too restricted a nature. If he is kept too long turning bolts, making screws and doing mere repairing work, his position has been dearly bought. Apprentices, wherever they go, must be prepared for plenty of hard work and dirt. They will usually have to start in the shops at 6 a.m., and, if they desire to rise in their profession, they must spend many of their evenings at Technical Classes, or in private reading. Marine engineering firms, as a rule, charge no premium. One of the best to be connected with is that of Messrs. Yarrow and Co., (lately removed from Poplar to Scotstoun, near Glasgow).

> Applicants for admission as apprentices must be over 15 years of age and in thoroughly good physical health. The term of apprenticeship is 5 years. The pay ranges from 5s. per week in the first year to 14s. in the fifth year. Apprentices are given every facility to attend evening classes. After having been one year at least in the shops, apprentices will have the option of spending two winter sessions at the University or Technical College, during which period they receive no pay. If unable to incur the expense of attending such classes, owing to the non-receipt

of wages, the Firm will continue paying wages to a limited number, provided they have served two years in the shops and have shown exceptional promise.

The system of taking pupils because of their father's purses rather than for the sake of their brains is fast becoming obsolete. Such great firms as Yarrow & Co., the British Westinghouse Company, the British Thomson Houston Company, Messrs. Siemens, Messrs. Clayton and Shuttleworth, and the Daimler Motor Company are now refusing to take paying pupils, whom it was nobody's business to train, and are selecting apprentices with brains. Even the conservative railway companies are beginning to see the folly of the old practice of taking "premium pupils" with no other test or qualification but that of the money-bags.

MOTOR ENGINEERING. This has now become so important that it may be useful to offer a few hints on their training to those who think of engaging in it.

1. WHILE AT SCHOOL you should make a special study of Mathematics and Higher Arithmetic, including the Metric System, which is so commonly used by motor makers in France and Germany. A knowledge of Chemistry will be found most useful—special tests having to be applied in judging of the particular qualities of iron and steel—and a knowledge of Electricity is indispensable. A knowledge of Steam, which for heavy transit has advantages over petrol, is desirable, and skill in drawing of course is essential. Ability to speak French or German might prove of great value.

2. AFTER LEAVING SCHOOL you may go at once into a Motor Works as an apprentice, or still better, in the first place, to a technical college, there to study for two years. In the latter case you might leave school somewhat earlier, say about 15 years of age, so as to start your apprenticeship about the age of 17. Whilst an apprentice you should not fail to have some time in the Drawing Office, and also a while in each of the principal shops, particularly the Testing shops. You should also cultivate your taste in form and colour so as to produce artistic and pleasing designs applicable to the carriage building part of the industry.

N.B.—It is often possible to become a draughtsman in an engineer's office without going through the full apprenticeship; and really good draughtsmen are not ill paid.

EMPLOYMENT WHEN FULLY QUALIFIED. Those who have served their apprenticeship in marine engineering works may become engineers in the Mercantile Marine, if they get the necessary Board of Trade Certificates. The qualifications for the various grades may be seen in the "Regulations Relating to the Examination of Engineers in the Mercantile Marine," which may be obtained for 6d. through any bookseller. The wages range from about 30s. to £20 a month, according to the class of vessel. Mercantile Marine Engineers should qualify for admission into the Royal Naval Reserve, the regulations for which may be obtained from the Secretary, Naval Reserve Office, Admiralty, or can be seen in the Quarterly Navy List.

There are many good posts in large towns for Borough Engineers with salaries ranging from £300 to £1,000; and at University College, London, a special course in Municipal Engineering may, for an extra fee of six guineas, be taken in conjunction with that in the Civil and Mechanical branch.

Various government appointments are available for trained engineers. The best are those connected with the Public Works Department of India, and the Telegraph Service. Formerly all candidates for these Indian appointments were chosen from students of the Royal Engineering College, Cooper's Hill, Staines; but this has now been closed and the appointments are offered for competition amongst the practical engineers who have received their training in other Technical Colleges. In the Public Works Department, salaries range from 350 rupees a month to 2,500, and, in the Telegraph Service, from 300 to 1,000—*perhaps* more; and pensions are given which may amount to £475 a year at 55. (A rupee is 1s. 4d.) For posts in the Home Civil Service a nomination is usually necessary. We have already mentioned some of these under "Civil Service"; and, for a fuller account, we must refer our readers to the Civil Service Year Book.

PROSPECTS. We are unable to speak definitely of the financial prospects of engineers—they are without limit in both directions. For young men of good average intelligence probably the most satisfactory positions are those where length of service receives due and regular recognition, as in the Civil and Municipal Services. Unless thus placed, engineers are often hard pressed for employment, because the best positions are usually filled by relatives of the manufacturers, and the secondary places by practical workmen who have risen from the ranks. However, for the man of brain and energy there are few finer professions. Such a man, when fully qualified for his duties, will probably get little more than £100 a year at first, but the experience he is constantly acquiring is so much capital, which should within the next few years yield a handsome rate of interest; and, by the time he is 40, an able man well trained, with a varied experience, may expect to be earning £1,000 a year. It is a mechanical and scientific age in which we are living; and, as nature reveals more and more of her secrets to the man of science, the mechanician has increasing knowledge of those natural forces which it is his business to utilise. Consider, for instance, the possible development of wireless telegraphy, unknown but a few years ago; the increasing application of electric force to traction all over the world; the possibility of transmission to long distances of the enormous energy of running and falling water, and of the rising and falling tides; in all probability, a great development of air-ships in the near future; and, finally, the possibility of again profitably utilising the neglected energy of the wind, and you will see that there is plenty for the engineer to think of in his spare time.

CHEMISTS.

The term "Chemist" applies to the expert in two very different branches of the science of Chemistry, namely, Pharmacy and Applied Chemistry.

1. PHARMACY.

SCHOOL EDUCATION. A boy who desires to become a Chemist and Druggist must have a fairly good secondary education, including as much instruction in Latin, a modern language, Algebra, and Euclid as is required for a pass in one of the University Junior Local Examinations or in the Second Class Examination of the College of Preceptors; and he should, while at school, make a good start in Chemistry and Botany. He should leave school between sixteen and seventeen, after passing one of the above examinations or an equivalent. A list of such equivalent examinations can be obtained of the Secretary, Pharmaceutical Society, 17 Bloomsbury Square, W.C., or may, with much other important matter, be seen in the Educational number of the *Chemist and Druggist*, published at 4d. at 42, Cannon Street, E.C. Whichever examination is taken, the Certificate must state that the holder has passed in all the subjects above mentioned, except Chemistry and Botany, and also in English Grammar and Composition. Chemistry and Botany, however, form so large a part of the young Chemist's special studies after leaving school, that he will find it to his ultimate advantage to include them in his examination if he can. Arithmetic is a very important subject; and every Chemist must be thoroughly acquainted with the Metric System.

PROFESSIONAL TRAINING. To be qualified to practise as a Chemist and Druggist, a man (or woman) must have passed the Minor Examination of the Pharmaceutical Society which cannot be taken before the age of twenty-one. For at least three years before the examination he must have been employed as a registered Apprentice or Student; and to be so registered he must send to the Pharmaceutical Society one of the Certificates we have mentioned, together with a registration fee of two guineas. Every student should be apprenticed to a qualified Chemist

and Druggist for three or four years, and the apprenticeship should terminate about the age of twenty. The premium for a four years' indoor apprenticeship hardly ever exceeds £100; and during the fourth year about a quarter of this is generally returned as wages. Outdoor apprentices are often taken without premiums, but are sometimes charged from £20 to £25. As a rule, the outdoor system is not recommended.

SCHOOL OF PHARMACY. Having finished his apprenticeship at the age of twenty, the young man's (or woman's) most important consideration is the passing, in a year's time, of the all-important *Minor Examination*. If he can afford to do so, he should by all means spend this intervening time in a School of Pharmacy. He will find a list of such schools in the *Chemist and Druggist* referred to above; but one of the best is the Pharmaceutical Society's own School in Bloomsbury Square, London. Applications for information about this school should be sent to the Dean. The total fees for tuition and practical work amount to £31.

SCHOLARSHIPS. Two scholarships, called the "Jacob Bell" Scholarships, are offered annually to registered students of the Pharmaceutical Society, and are tenable only at the School of the Society. Each is of the value of £25, together with free lectures, and laboratory instruction, and books to the value of £2 10s.; and each is tenable for one year only. The Scholar may, however, at the end of his year of tenure, apply for free admission to the next ensuing Advanced Course in the Society's School. He could in this way get through his Minor Examination at the end of his scholarship year, and through the Major Examination at the end of the next.

The "Manchester Pharmaceutical Association" Scholarship is also offered annually, is tenable for one year at the Society's, or some other approved School, and is of the value of about £26. Candidates must have been apprenticed in Lancashire, Cheshire, or part of Derbyshire. Further particulars of these scholarships may be obtained from the Registrar of the Pharmaceutical Society, 17 Bloomsbury Square.

EMPLOYMENT AND STUDY COMBINED. Although it would pay in the end for every candidate for the Minor Examination to spend the year preceding it entirely in professional studies, it is often impossible, for financial reasons, to do so. In that case he should seek a post as assistant to a Chemist and Druggist. If he is a "whole-time" assistant, he will probably get from £40 to £50 with residence, or from £80 to £90 without; if he gives only three or four hours a day, he will only receive free board and lodging in return for his services. Although for the purposes of the Minor Examination it matters not how the necessary knowledge has been obtained, it is better to get it from good teachers than from books; and the student should join any evening classes that would help him, and for which he has the necessary time.

QUALIFYING EXAMINATION. The Pharmaceutical Society hold two examinations, Minor and Major, for testing the qualifications of candidates who have passed through the course of training already described:—

(1) MINOR EXAMINATION. The fee is ten guineas, and the subjects of Examination are Botany, Chemistry, Physics, Materia Medica, Pharmacy and Dispensing and Prescriptions. The candidate who has passed it is qualified to practise as a Chemist and Druggist, and has the legal right to dispense and sell poisons.

(2) MAJOR EXAMINATION. The fee is three guineas, and the subjects the first four of those given for the Minor but of a more advanced order. Those who have passed it are styled *Pharmaceutical Chemists*, and have better chances than mere "Chemists and Druggists" of securing the better posts in Pharmacy. In England and Wales, too, Pharmaceutical Chemists are exempt from service on all juries and inquests.

PROSPECTS. Those who have distinguished themselves in their examinations are eligible for posts as demonstrators in the Society's or some other School of Pharmacy—the lecturers are usually distinguished men of science; or they may become dispensers in some of the larger hospitals at salaries ranging from £250 to £350 a year. The majority, however, of young qualified men will look out for assistantships to Chemists and Druggists; and those who succeed in getting into big houses will be fairly well paid. The average salary for a qualified assistant would be about £60 or £70 a year with residence, or from £100 to £130 without. Comparatively few men finish their Minor Examination before the age of twenty-three. Those with sufficient capital to start or purchase a business would hardly profit by any advice we could give, and we shall accordingly offer none.

2. APPLIED CHEMISTRY.

The application of chemistry to industrial processes gives employment to many chemists who have undergone a thorough training for their work. They are employed in gas works, breweries, chemical works, and other manufacturing concerns, whilst as analytical chemists they are chiefly employed in the examination of the qualities of food stuffs, drugs, etc. A boy who is fond of chemistry and general science, and whose parents can afford his special post-scholastic training, has a wide and profitable field of work open to him. He may of course elect to take up pure Science in the hope of getting a demonstratorship as a stepping-stone to a professorship. If so, he should do his utmost to get his training at one of the older Universities; although so far as mere scientific instruction is concerned he might get instruction equally good in one of the many provincial Universities and University Colleges; and the cost would be at least £50 a year less. We are, however, here chiefly concerned with those who elect to take up applied Chemistry; and it is for such that the following information is intended.

SCHOOL EDUCATION. The first necessity is a wide general education, including Latin, German, or French. To the analytical chemist German is more important than French. Science—particularly Chemistry and Physics—should be studied; but facts are of far less importance than the power of demonstrating them. The boy who can perform ordinary experiments neatly, and who has been trained to observe the ordinary and extraordinary phenomena connected with them is likely to make a more successful chemist than he who has a mere knowledge, however wide, of chemical facts and formulæ. Mathematics is a very important subject, and graphical methods of solving algebraical problems should be thoroughly understood. The pupil should acquire the power of expressing himself in clear, terse English. English composition commonly receives at school far less attention than its importance deserves.

The school period should be prolonged to the age of seventeen, or at least sixteen, and the pupil should by this time have passed the Oxford or Cambridge Local Junior or an equivalent or higher examination, and his certificate should state that he passed at one and the same time in (1) English, (2) Latin, (3) Arithmetic, (4) Algebra to Simple Equations, (5) the first three books of Euclid, (6) French or German (See below under *Institute of Chemistry*).

POST-SCHOLASTIC TRAINING. There are three ways in which a young man may train himself for work in applied chemistry. (1) He may spend about three years in a University or University College, and then seek a post as assistant chemist. (2) He may spend half his time in the works—dyeing, brewing, gas, paper-making, etc., and half in classes. (3) He may spend all day in the works and get his general training in private study and evening classes.

He who can afford it should by all means take the FIRST (*University*) COURSE and follow it up with a year—or even two years—in Germany. He will thus qualify himself for a far greater range of employments—technical or professorial; and such a training will fit him far better than others to be a leader of men and, possibly, to combine the duties of manager and chemist. If he cannot afford one of the older Universities, one of the newer ones or one of the University Colleges will serve his purpose well, and the cost, away from home, would not be more than £100 a year. A year in Germany need not cost more than £100, including travelling expenses.

THE SECOND (*Half-time*) COURSE is, it would seem, growing in favour. In Edinburgh, for instance, pupils in

the City Gas Department, may spend half their time in the works and half at the Heriot Watt College. The system, however, is not yet sufficiently developed for us to give more than the advice to adopt it if possible.

THE THIRD COURSE is the one usually followed by those who cannot afford the first. Arrangements are made with the head Chemist or the Manager of some particular works to enter the chemical department as a pupil. The usual period of apprenticeship is three years, and the premium £150. A portion of this is, however, generally returned as wages—£20, £30, and £40 in the respective years. A really clever and hardworking man *may* do as well in the end after such a training as many who have spent far more on their general education; but he is more or less tied to one branch of applied chemistry, and cannot have the same grasp of scientific principles as the more highly educated man. He tends to become a "rule of thumb" man. If, however, he means business he can and should widen his general knowledge by private study and attendance at evening classes. In the works he must make up his mind to keep his eyes more active than his tongue.

He whose aim is to become a Public Analyst should apprentice himself to one for a period of three years. The usual premium is £100, and no wages are given. There is a Society of Public Analysts (8 Duke Street, Aldgate), but entrance is by election, not examination.

THE INSTITUTE OF CHEMISTRY (Offices: 30 Bloomsbury Square, W.C.). Although many well-known Consulting and Analytical Chemists do not belong to the Institute of Chemistry, it is advisable, in these days of keen competition, to qualify for entrance. The letters A.I.C., or, better, F.I.C., after a man's name are a guarantee that his application for a post is worthy of close attention. The Book of Regulations for the Admission of Students, Associates, and Fellows can be obtained for a shilling on application to the Registrar, Institute of Chemistry, 30 Bloomsbury Square, W.C. There are three grades of members: Students, Associates, and Fellows.

First Grade candidates for the STUDENTSHIP must be over seventeen years of age, and must have passed a Preliminary Examination in subjects of general education approved by the Institute (see above under *School Education*; but to the subjects under (6), add "or a modern language approved by the Council.") He must also show that, at the time of making application for registration, he is working at an Institution recognised by the Council, or in the Laboratory of a Fellow of the Institute, with the object of qualifying for the profession of Analytical and Consulting Chemistry.

Second Grade. It is not obligatory on a candidate for the ASSOCIATESHIP to have been registered as a student, but such registration will be found advantageous. In addition to the Preliminary Examination mentioned above, he will have to pass two others—the Intermediate and the Final.

To be admitted to the *Intermediate Examination*, the candidate must prove that he has regularly attended systematic day courses, in an Institution recognised by the Council, for at least three academic years. As an alternative to this three years' training, a candidate may take one of two years, and work systematically for two other years in the laboratory of a Fellow of the Institute.

No questions as to time or manner of training are asked of a candidate with a Science Degree of a University recognised by the Council; but he must have taken both Organic and Inorganic Chemistry in his Final, and Mathematics either in that or in his Intermediate. Those who hold a Science Degree with distinction in both branches of Chemistry are, as a rule, excused the Intermediate altogether.

The *Final Examination* for the Associateship lasts four days; and the candidate is expected to possess, in addition to a general knowledge of all branches of Chemistry, a *thorough* knowledge of one branch selected by himself from the following:—(*a*) Mineral Chemistry, (*b*) Metallurgical Chemistry, (*c*) Physical Chemistry, (*d*) Organic Chemistry, (*e*) Analysis of Food and Drugs, and of Water, (*f*) Biological Chemistry. A candidate who wishes to qualify himself for appointment as Public Analyst, should take Branch (*e*); as, provided he has done so, the Certificate of Associateship of the Institute is accepted by the Local Government Boards of England, Scotland, and Ireland, as sufficient documentary evidence of his qualifications for the post.

Third Grade. For admission to the FELLOWSHIP (F.I.C.), an Associate (A.I.C.) is required to have been registered for three years, and to have been continuously engaged during that time in the study and practical work of Applied Chemistry in a manner satisfactory to the Council.

PROSPECTS. Having qualified himself in any of the ways described above, the young Chemist should seek a post as Assistant. The salary will probably not be more than £120 to begin with. When appointed Analytical Chemist to some manufacturing firm, he may expect to get £300; but if he is a good man and lucky, he may ultimately get as much as £1,000. Managers of works are not usually Chemists; but there is some prospect that the two posts may in the future be combined in the case of a man who, with a sufficient knowledge of Chemistry, combines the power of managing men.

ARCHITECTS.

An Architect is an artist, whose materials are not pigments but wood, brick, stone, and iron. He must thoroughly understand the nature of these materials and how to dispose them so as to give, not only stability to, and the necessary accommodation in, the work he constructs, but the beauty of form suitable thereto. To know how to construct a building which will merely stand he must understand the principles of theoretical and applied mechanics; and he should be able to get stability with the least expenditure of material. To know how to link together the various parts of his structure in the most convenient way, the Architect needs the trained imagination which can conceive in outline the whole and its parts before he commits his ideas even to paper. And to be able to give to a building the beauty of form best suited to it, his mind must be stored with vivid pictures of the most beautiful buildings of various types, and he must understand how their effect has been produced. No boy, then, should be allowed to take up Architecture who has not a decided taste for drawing, and who do not show signs of ingenuity, and, who has evidently not sufficient patience to enable him, when the time comes, to master the technical details of building construction.

SCHOOL EDUCATION. The boy who wishes to be an Architect should receive a thoroughly good general education. While at school he should be encouraged in every way to practise drawing—but never from flat copies. Perspective and all kinds of geometrical and scale drawing are also most valuable. Mathematics, pure and applied, are now more than ever necessary in dealing with iron construction—unfortunately on the increase. Modern languages are desirable, if not necessary, for travel, so valuable in giving new ideas, and for making available the many excellent foreign architectural works. Every opportunity should be taken to interest the boy in old buildings: bicycling expeditions to visit old churches, castles and mansions might be arranged; and visits to foreign countries would be made doubly interesting by a little previous study of the types of Architecture to be found in the district visited. If the boy means, as he should, to enter the Royal Institute of British Architects (R.I.B.A.), he will find it to his advantage to have passed, whilst at school, one of the following examinations:—

(1) The London (or some other British University) Matriculation; (2) any University Senior Local (or Junior Honours); (3) College of Preceptors, First Class. He will also save time if he can get any of the following, provided they are of the First Class: the Board of Education Elementary Certificates for (1) Geometrical Drawing *and* Perspective; (2) Theoretical Mechanics of Solids *and* Fluids, and (3) the Advanced Certificate for Outline Drawing of Ornament from the Cast.

PROFESSIONAL TRAINING. The usual way of getting the necessary technical training is to be articled to an Architect for three or, in exceptional cases, four years. The premium varies with the standing of the Architect, from £100 upwards; but a very usual figure is £200 In the Architect's office the pupil will acquire a knowledge of business ways, and of the character and detail of architectural work. Beyond architectural drawing there is a good deal of general work to be done—keeping and checking accounts, writing reports, keeping the diary, inspections, and so on. Everything, of course, depends on how the pupil utilises the opportunities thus offered. But the work and experience of the office are not sufficient. Much outside study and work is absolutely essential, such as reading standard books on Architecture, examining and drawing buildings, old and new, and preparing for the examinations of the R.I.B.A. There are many Architects of good standing who do not belong to the Institute; but it is far better for young men who have to make their own way to enter it. The age at which office life begins varies. It is not unusual for men, even after leaving the University, to spend a year abroad, and take a course on Architecture in Germany or Switzerland. That at Zurich would seem to be one of the best. But the usual age for entering the office is eighteen or nineteen.

THE ROYAL INSTITUTE OF BRITISH ARCHITECTS. (R.I.B.A. Office: 9 Conduit Street, W.) There are three examinations to be passed by those who wish to qualify for the Associateship of the Institute: (1) the Preliminary, qualifying for registration as *Probationer;* (2) the Intermediate, qualifying for registration as *Student;* (3) the Final, qualifying for registration as *Associate.* Particulars of the examinations to be passed may be obtained from the office of the Institute. Those who have passed one of the General Examinations mentioned above under "School Education" are excused such parts of the PRELIMINARY EXAMINATION as are covered by their certificates. Indeed, it is possible, in this way, to get entire exemption from every thing but payment of the fee of two guineas for registration as a *Probationer.* During the two years following this registration, the probationer has to prepare certain drawings, and if these "testimonies of study" be approved, he is admitted to the INTERMEDIATE EXAMINATION, and on passing it is registered as a *Student* of the Institute. The FINAL EXAMINATION is to test the *Student's* further progress, and the preparation for this examination and of the "testimonies of study" admitting to it, occupies not less than three years. On passing the Final he becomes qualified for candidature as *Associate* of the Institute, and receives a notification to that effect.

PROSPECTS. The chances of success will, in most cases, depend on the individual and the use he has made of his opportunities both inside and outside the office. A competent man, who has completed his training, can always get employment as an Assistant; and his remuneration will vary, with his ability and experience, from £100 to £500. If a sufficient number of clients can be had and the young Architect feels he can do justice to them, the sooner he gets into practice for himself the better. The Architect's payment is, generally speaking, five per cent. on the outlay on the building (see Professional Fees, p. 1023).

SURVEYORS AND AUCTIONEERS.

1. GENERAL SURVEYORS.

(INCLUDING QUANTITY SURVEYORS, LAND AGENTS, AND VALUERS.)

A Surveyor, in the widest sense of the term, is one who is skilled in the art of measuring and delineating the surface of the earth, of managing and developing estates, of determining the value of all descriptions of landed and house property, and of measuring and estimating the work involved in any building operation. Few men, however, qualify in all branches of Surveying. Some specialise in Land Agency, which includes a fair knowledge of Agriculture, whilst others specialise in Valuation, or in Quantity Surveying. As the work of the Quantity Surveyor is to most people quite unknown, it may be well to say that it consists in "taking out," that is, measuring and computing from the Architect's drawings and specifications, the exact quantities and contents of a building, so that the Builder may be able to furnish a definite price for his share of the work.

SCHOOL EDUCATION. It is to be regretted that the *Preliminary Examination* (see below) which all boys must pass to be registered as Students of the Surveyor's Institute, is not sufficiently wide to form a good guide as to the course of study which a boy destined for the Surveying profession should pursue while at school. Fortunately, the Institute indicate the standard of education, which should certainly be the aim of all who hope for a successful career, when they exempt from their Preliminary Examination those who have passed one of the following:—

(1) The Matriculation Examination of any University in the United Kingdom; (2) Oxford or Cambridge Senior Local or Junior Honours; (3) Higher Examination of the Oxford and Cambridge Schools Examination Board; (4) Central Welsh Board Examination in Honours.

Each of these examinations admits of a choice of subjects. It is important that the future Surveyor should be strong in Geometrical Drawing and Mathematics (including Mensuration and Trigonometry), and these subjects, therefore, should receive special attention during the school course.

PROFESSIONAL TRAINING. On leaving school, those who intend to learn the business of a Surveyor must make up their minds as to the Branch of Surveying in which they mean to specialise. It is not absolutely necessary to be articled in order to become a Surveyor, but it is highly desirable. The choice of the Firm in which to seek entrance as an articled student will, of course, depend on the branch of the profession in view. The usual age for entering on articles is seventeen or eighteen, and the period of training is usually three years; the premium required varies in amount with the standing of the Firm, but a portion of it is often returned as wages. Some men prepare for their future work and for the examinations of the Institute by attendance at one of the Agricultural Colleges, or of such University Colleges as provide special facilities for the study of Agriculture. This course is more expensive than the other, but may offer special advantages to those who intend to practise in the country.

THE SURVEYORS' INSTITUTION (Office: 12 Great George Street, Westminster), was instituted in 1868 to secure the advancement and facilitate the acquisition of that knowledge which constitutes the profession of a Surveyor. No one is admitted as a student until he is 16 years of age at least. There are three examinations held by the Institution: (1) Preliminary. (2) Intermediate. (3) Final. Particulars of these Examinations may be obtained by application to the Secretary of the Institution. The Second and Third Examinations are arranged in three divisions corresponding to the three main branches of the profession: Land Agency, Valuation, Quantity Surveying. The Final Examination deals with advanced stages of the subjects set for the Intermediate. At present a student who has passed the Inter. Exam. and is in practice as a Surveyor is eligible for election as a Professional Associate, with the right by Charter of writing P.A.S.I. after his name. But after 1913 he must have passed the Final to be eligible for election. As a consequence of this change, candidates for the Inter. Exam. will be allowed, after 1909, to sit at the age of 19, and for the Final at the age of 21. No one is admitted to the class of Fellows until he has held for five years a responsible position in the profession. A Fellow has the right by Charter to affix F.S.I. to his name.

PROSPECTS. The prospects of a Surveyor belonging to any one of these branches who succeeds in establishing a good connection, are enviable indeed; but it may take many years to do it. Many who are the agents of large estates reckon their incomes by thousands. A Quantity Surveyor, also, who can count on the support of a fair number of Architects in good practice, is in an enviable position. The charges he is entitled to make, usually ranging from two per cent. on the value of the work for which quantities

are taken out, are highly remunerative. A young man, however, who has just obtained his Associateship must not expect to get, as assistant to a Surveyor, much more than £100 a year. Eventually much will depend on his own energy and alertness. For those who prefer more certain, if more modest incomes, there are posts in the Civil Service as Clerks of Works in the Office of Works (£150 to £300), as Assistant Surveyors (£200 to £450), or Surveyors (£550 to £1,000.)

2. BOROUGH SURVEYORS.

The post of Borough Surveyor is one well worth working for, but it is one that requires special training and no small amount of knowledge and skill connected with engineering and sanitary inspection. The title of Borough Surveyor is, accordingly giving place to that of MUNICIPAL ENGINEER AND SURVEYOR. In all cases, whether in London or elsewhere, his duties include the making, maintaining, lighting and cleansing of roads, the designing and supervision of bridges, electric light stations, baths and workhouses, working-class dwellings, public libraries, hospitals, fire-stations, chimney shafts, etc. And in provincial districts he is responsible for the treatment and disposal of sewage, and for the supervision of buildings in accordance with the sanitary and building by-laws. Accordingly, the youth who has the post of Borough Surveyor in view must be trained to pass examinations in Sanitary knowledge and Civil Engineering.

TRAINING. Whilst at school he should give special attention to Mathematics, Applied Mechanics, and Geometrical Drawing, and before leaving school should pass the London Matriculation or an equivalent examination. On leaving school the boy should be articled for three years to a corporate Member of the Institution of Civil Engineers, as he cannot himself become a member unless he has been articled to a member. The premium will range from £100 to £300, according to the town and Engineer. During his articles the boy should take up Building Construction, and pass the various stages of the Board of Education Examinations in that subject, including the Honours Stage. He should also study Sanitary Engineering and take, as soon as he is twenty-one, the examinations for the Certificate of the Sanitary Inspectors' Examination Board (1 Adelaide Buildings, London Bridge, E.C.), or of the Sanitary Institute, 90 Buckingham Palace Road, S.W. He may never need this qualification, but he should have the knowledge to which it testifies. The next examination to pass is that of the Incorporated Association of Municipal and County Engineers (11 Victoria Street, S.W.), whose Certificate is extremely useful in obtaining an appointment as Assistant. At twenty-five should be taken the examination for the Associated Membership of the Institution of Civil Engineers (Great George Street, S.W.), which is extremely difficult, and covers many subjects outside the scope of Municipal Engineers and Surveyors, but with this qualification his chances of success are greatly enhanced.

PROSPECTS. The salaries of Assistants to Borough Surveyors vary greatly. In Urban District Councils, they range from £80 to £150; in small towns, from £100 to £200; in large towns, from £200 to £500; in London, from £150 to £500. The man who means to get on must make up his mind to hard work for years. He must keep his object steadily before him, and try to make himself indispensable to his chief. The Provinces offer the best training ground; and small towns are best, as the work is not departmentalised as in London and other large towns. The salaries of Borough Surveyors are as follows:—In Urban District Councils, from £150 to £250; in small towns, from £200 to £350; in large towns, from £400 to £1,250; in London Boroughs, from £350 to £1,000.

3. AUCTIONEERS.

Auctioneers, who are also Valuers and Estate Agents, have much in common with General Surveyors, but the successful men in these two professions are distinctly different in type. If your boy is to make his way in the world as an Auctioneer, he should have a good share of mother-wit, with no tendency to reserve or shyness. He must have sufficient book-knowledge to conduct his business as an educated man, but his success will depend still more on his knowledge of human nature, on his tact in dealing with men, and his practical acquaintance with all the details of his professional work.

TRAINING. On leaving school, at the age of 16 or 17, the boy may enter an auctioneer's office as clerk, with a salary at first of about £25 a year, but he must be an exceptional boy, if in this position he is able to lay the foundation of a successful career. The only satisfactory course is to become an articled clerk in a good Auctioneer's Firm, the premium to be paid ranging from £100 to £500. His apprenticeship will last three years, and during this time he should become conversant with the class of business carried on by his Firm, and at the same time qualify himself for passing the first two examinations of the Auctioneer's Institute of the United Kingdom.

EXAMINATIONS. For full information write to the Secretary of the Institute, 34 Russell Square, W.C. The Preliminary cannot be taken after the age of 21. Exemption from the Preliminary is granted to those who have passed the Matriculation Examination of any British University, or some similar test. At the age of 19 a student who has passed the preliminary, or its equivalent, is eligible to take the Intermediate Examination, provided he is an articled clerk of not less than three years' standing, or has been employed as clerk in an auctioneer's office for at least five years. Success at this examination qualifies for the Associateship of the Institution (A.A.I.). The Final for a Fellowship (F.A.I.) is open to Associates, who have attained the age of 23, and have entered on the business of an Auctioneer.

ACTUARIES.

An Actuary is "An official in an insurance office, whose duty it is to compile statistical tables of mortality, and estimate therefrom the necessary rates of premium, etc.; or, one whose profession it is to solve for insurance companies or the public all monetary questions that involve a consideration of the separate or combined effect of interest and probability, in connection with the duration of human life" (*Oxford English Dictionary*). Actuaries, therefore, find their chief employment in life insurance offices. They are also experts in statistical matters and monetary values based on statistical tables. A really clever actuary who has had a good all-round education, and possesses grit and firmness combined with suavity and tact, has enviable financial prospects. When such a man has earned the title of Fellow of the Institute of Actuaries—which can only be done by passing a very difficult examination—he has only to work, watch and wait: a good appointment is bound to offer itself.

QUALIFICATIONS. Only boys who have distinctly good mathematical ability have any chance of becoming actuaries. But this is not sufficient; they must be doggedly persevering; for their preliminary training is a long and somewhat tedious one. Finally, they must have a good presence; and the better their social position the better their chances of being allowed to take the first definite step in their wished-for career.

EDUCATION AT SCHOOL. A good all-round secondary education is the first necessity, and special attention must be paid to mathematics. Familiarity with logarithms should be acquired as early as possible, as also an intimate acquaintance with graphical methods of calculation. Foreign languages may prove of great use to an actuary who can *speak* them, since he may secure employment in the foreign branch of some office, which is more lucrative than in the home offices. The student should do his best to obtain some such certificate as the Oxford or Cambridge

Local, with distinction, if possible, in mathematics; the Junior Certificate might serve the purpose, but the Senior would be far better.

WORK IN AN INSURANCE OFFICE. On leaving school, at the age of sixteen or seventeen, the first thing to do is to obtain employment in a life insurance office, if possible in the Actuarial Department. To do this it is generally necessary to obtain a nomination from a director or from one of the chief officials. This secured, there will be some form of examination to be gone through and an interview with the manager, who will try to make sure that the applicant is well educated, and is smart and of good address. Youths who are judged satisfactory are sometimes apprenticed for four or five years. There is no premium, and small wages are paid—probably £15 a year at first, rising to £30 in four years. Junior clerks in insurance offices are often paid better than apprentices; but there is no undertaking on the part of the officials to teach the former the ins and outs of insurance business as there is in the case of the latter. A few actuaries, who are not attached to any particular office, take pupils and charge them a premium. As soon as work in the office is well started, application should be made for permission to join the Probationer's Class of the Institute of Actuaries. The letter should be addressed to their Secretary, Staple Inn Hall, Holborn, W.C.

EXAMINATIONS OF THE INSTITUTE OF ACTUARIES. Members of the Institute are divided into three classes: Students, Associates and Fellows; and entrance into each class is by examination. All the examinations are held in April, and public notice is given of the exact date. Candidates must apply, at least a fortnight before this date, for permission to sit, and must send with their application the examination fee of a guinea. There are four examinations, held by the Institute, known as Parts I., II., III., IV. respectively. Before admission to the first of these examinations, evidence must be produced of having received a good general education, such as a certificate of having passed the Matriculation examination of the London University or an Examination of a similar nature at any University in the British Empire, or the Oxford or Cambridge Senior Local Examination. Having passed the examination, known as Part I., the probationer becomes a Student, and is now a Member of the Institute. Students can, for a fee of two guineas, join the classes maintained by the Institute for the preparation of candidates for the next examination—Part II., success in which will admit them to the class of Associates. To become a Fellow, an Associate must also Pass Parts III. and IV. We give below the syllabus of Part I. to indicate the extent of the Mathematical knowledge and ability required at the very threshold of the arduous task that lies before the man who aspires to success as an Actuary. He may measure his chances of a successful career by the degree of proficiency and mathematical power of which he gives evidence at this examination.

> PART I.—(1) Arithmetic and Algebra; the theory and use of Logarithms; the elements of the Theory of Probalities. (2) The elements of the Calculus of Finite Differences, including Interpolation and Summation; Elementary Differential and Integral Calculus, excluding questions necessitating the use of Trigonometry. (3) Compound Interest and Annuities-Certain, including the Construction and use of relative Tables.

PROSPECTS. It must be remembered that the man who has qualified himself for actuarial work has next to get an appointment as actuary. Till he receives an appointment as such he is in all probability an assistant in the Actuarial Department of some Insurance office. As such, his salary may rise from about £70 to £250 or £500. When the wished-for post is secured, he may expect to get from £500 to £1,500 a year, although there are possibilities of getting a considerably higher salary. The best posts are those connected with Fire and Marine Insurance. The ultimate object, however, of most actuaries is the managership of some Office, for the duties of which their attainments and course of training peculiarly qualify them. The salaries of most such managers exceed £1,000 a year.

ACCOUNTANTS.

An Accountant is one skilled in the art of keeping and examining accounts. If a going concern is to be turned into a Limited Liability Company, Accountants are called in to thoroughly examine the books of the vendors and certify the profits and the probable percentage of interest that may be expected from the capital invested in the proposed Company. It is usual to appoint Chartered Accountants as auditors of a Company, and as such it is their duty to examine the books of the Company and to certify the profits and the amount available for dividend. In these days, when every successful tradesman or manufacturer, who has "made his pile" and desires to retire from the "storm and stress" of active commercial life, wants to sell his business to the investing public, for a consideration, the Accountant's profession is a fairly safe and lucrative one. Unfortunately many business men and many companies show losses instead of profits, and are perforce "wound up"; but "it is an ill wind that blows nobody good"; and such disasters bring "grist to the mill" of the Accountant. He is now called in to search for the cause of failure, and to say how much may be saved from the wreck and paid over to the creditors or shareholders; and bankruptcy cases are often amongst his most lucrative ones. Accounting is a profession demanding careful training, and one not to be undertaken except by such as have a good head for figures and a great capacity for taking pains. But Accountants must not only be able to understand figures, they must be able to understand men, and particularly business men, and must acquire such a knowledge of their practices as will enable them to read between the lines of accounts submitted to them. Should they certify as correct balance-sheets which are subsequently found to have been false, they will have to prove in a court of law that their error was not due to a want of reasonable care and diligence. It goes without saying that an Accountant must be a man of strict probity and great moral courage. He may need both should he happen to be employed by unscrupulous company promoters.

EARLY TRAINING. The best early training is one that will fit a boy before the age of sixteen for the Preliminary Examination of the Institute of Chartered Accountants (whose offices are in Moorgate Place, London, E.C.), or for one of the numerous public examinations, success in which would admit him to the further examinations for membership of the Institute without passing through the Preliminary. Among the examinations success in which gives exemption from the Preliminary are the following: Responsions at Oxford, the Previous at Cambridge, Matriculation of any English University, First-Class Certificate of the College of Preceptors. If exemption cannot be claimed the candidate will have to pass the Preliminary of the Institute (Fee two guineas), which is held in June and December.

SPECIAL TRAINING FOR A CHARTERED ACCOUNTANT. The boy who wishes to become a Chartered Accountant, if he is over sixteen and has passed or been exempted from the Preliminary, must now be articled for five years to a Member of the Institute who is in practice in England or Wales. If he is a graduate, however, the term of service under articles is only three years. He will have to pay a premium, the amount of which will vary with the standing of the firm, and may be anything from 100 to 300 guineas. During articles the future Accountant is engaged in learning the practical details of his profession as well as Commercial Law. The first year will be principally spent in dealing with columns of figures, in casting and checking accounts. This may be regarded as mere drudgery, but it is an essential part of the training and should be faced accordingly. When half the term has expired, he is permitted to take the Intermediate Examination (fee two guineas), the subjects of which are: Book-keeping and Accounts, Auditing, and the Rights and Duties of Liquidators, Trustees and Receivers; and this examination he

take while under articles, though permitted to try again, if necessary, even after the expiry of his articles. On completing his term of service he can take the Final Examination (fee two guineas), the subjects of which include those of the Intermediate with the addition of the principles of the Laws relating to Bankruptcy, Joint Stock Companies, Arbitrators and Awards, and Mercantile Law. For success at the severe Final Examination close and continuous study is necessary for at least a twelvemonth before the day of trial. It will be well for the pupil to take advantage of any class, within his reach, in which he can take a course in Mercantile Law under a competent teacher. There are a good many special books to be read which will probably cost from £10 to £15. There is, however, a Students' Library connected with the Institute of Chartered Accountants, where most of these books can be had.

Those who have passed the Final Examination and have paid their fee of ten guineas and been formally admitted become Associates of the Institute, and may use after their names the letters A.C.A.; and after five years' continuous practice they may become Fellows (F.C.A.).

THE SOCIETY OF ACCOUNTANTS AND AUDITORS. This society also holds examinations for those who wish to become Accountants. It is less exclusive than the Institute of Chartered Accountants, and service under articles is not at present a condition precedent to admission to the Society, or to any of its examinations. It is, therefore, of great value to Clerks and others who are qualified in every other respect. For information apply to the Secretary, 50 Gresham Street, Bank, E.C.

PRIVATE ACCOUNTANTS. Although most Accountants of good standing belong to one or other of the above societies, a good many do not. A young man who could not afford the training demanded by the Institute might take the examination in Book-keeping held by the Society of Accountants and Auditors, the Society of Arts or the London Chamber of Commerce, and then, after serving some time with an Accountant, apply for membership of the Society of Accountants and Auditors.

PROSPECTS. These are decidedly promising to a well-trained man with good common sense and the power of steady application, especially if he has good business connections. Having secured his A.C.A., the young Accountant will do well before setting up on his own account to gain experience as clerk in one or more firms doing different classes of business. And when the time has come for setting up his own brass plate, he will probably find it best to buy a partnership, if possible, in an established business. The sum required will amount to two or three years' purchase. Of course the greatest caution will be required in negotiating a partnership. But if he has no capital at his back, he will find employment without much difficulty as clerk in some good firm. The young man who had passed the Final Examination of the Institute of Chartered Accountants would probably command £120 a year. His future income would depend very much on himself; there is no prospect for him of fixed annual increments, as there is for Civil Servants. If, however, he proves himself keen and trustworthy, he has far better prospects than most of these and might fairly expect to earn from £500 to £800 a year, Accountants being often engaged as Secretaries to Banks, Companies and Building Societies.

CHIEF COMMERCIAL OPENINGS.

1. BANKING.

Of all commercial employments, that in a bank is looked upon as one of the most dignified. It is one, too, that offers fair scope to the ambitious, talented young man: the salary is good and progressive; sick pay is generous; holidays are regular, and liberal pension schemes are usually arranged on the basis of mutual contributions from the employees and the Bank. Except at the end of each quarter, and especially at the end of the year, when balances are struck, the hours are regular and not excessive. From all this it will be at once seen that the competition for Bank clerkships is very keen. Mere general ability, however, is not sufficient to secure them; influence is, in most cases, essential, as will appear hereafter.

GENERAL QUALIFICATIONS. The lad who desires employment in a Bank must have had a good general education, must be of good address and of good social position. He must have punctual habits, and a discreet tongue; and his record for trustworthiness must be unimpeachable.

SCHOOL EDUCATION. An all-round secondary education is of course essential; and the better the standing of the school attended, the better the boy's chances of securing a post in a leading London Bank. The subjects to which chief attention should be paid are Mathematics—especially Arithmetic—English Composition, Book-keeping, at least one foreign language—preferably French, and, most important of all, Handwriting. Provided, however, that these are well kept up, such other subjects as are held to form a necessary part of the mental equipment of an educated man must not be neglected. It would be useful, before the age of sixteen, to secure some such certificate as the Oxford or Cambridge Local Junior; and, if time permit, it should be followed up by the Senior Certificate. Other extremely useful ones, especially for London Banks, are the Junior and Senior Commercial Certificates granted by the London Chamber of Commerce. All information about these latter can be obtained from the Secretary, London Chamber of Commerce, Oxford Court, Cannon Street, E.C. In all cases, Book-keeping should form one of the subjects of examination.

NOMINATION AND EXAMINATION. Not later than the age of sixteen, except for the Bank of England, a nomination should be obtained from the Secretary of the Bank selected, and the support of a Director, chief official, or large customer of the Bank, should be secured. In the case of the Bank of England, candidates must be between the ages of eighteen and twenty-five; a nomination must be obtained from a Director; and only he who is personally known to a Director is likely to receive one. Those who are accepted as candidates for any Bank have to undergo an examination in the subjects mentioned above; and, if the results are satisfactory, their names are entered on the books as eligible for posts when vacancies occur. It is quite possible that such a vacancy may not arise for a year or more; and it is, therefore, not unusual for boys to have their names down at more than one Bank.

FIRST WORK AT THE BANK. The young Bank clerk will find his first work of an extremely easy nature—posting up pass-books, collecting various kinds of documents from other Banks, etc.; but he should at once set about qualifying himself for promotion when the opportunity arises. His best claim for promotion will rest on the character of his previous work; but his claims will be considerably strengthened if he can show certificates which testify to his knowledge of the theory and practice of banking and of general economic science. The way to obtain such certificates is explained below.

It would be out of place for us to give details of the various steps by which the young clerk gradually rises to the better paid positions at the Counter, in the Accountant's Department, in the Manager's Office, and finally to the post of Manager. Once in the Bank, he will, if he is in earnest, soon learn these in a more satisfactory way than reading about them. Those, however, who desire to understand more fully the work in which they mean to engage, should purchase, or borrow from a Library, one of the following; Gilbart's Principles and Practice of Banking (10s.), Macleod's Theory and Practice of Banking (26s.), Moxon's English Practical Banking (4s. 6d.), Macleod's Elements of Banking (3s. 6d.).

THE INSTITUTE OF BANKERS is an "Association of gentlemen connected with the various branches of Banking, whose objects are to facilitate the consideration and discussion of matters of interest to the profession, and, where advisable, to take measures to further the decisions arrived at; and to give opportunities for the acquisition

of a knowledge of the theory of Banking." During the winter months the Institute arranges a series of monthly lectures on some Banking subject in London and in a selected provincial town; and, for the benefit of country members, these lectures are published in the monthly Journal of the Institute. But one of the chief parts of the work of the Institute is the examination of candidates for its Certificate. The examinations are open to members only, and are held annually in London and such provincial centres as are convenient to candidates. Forms of application for election and all particulars can be obtained of the Secretary, 34 Clement's Lane, E.C.

EXAMINATIONS OF THE INSTITUTE. These are divided into two parts, extending over two years. The first part is of a preliminary nature; and the second—to be taken after the lapse of not less than one year from the first—is of a more advanced nature. The Certificate of the Institute is granted only to those who have passed the Final, and entitles the holder to be elected an Associate. The value of these Examinations is becoming yearly more appreciated, as is shown, not only by the increasing number of candidates, but by the fact that most of the leading Banks now give prizes to those of their officials who pass them. Boys, therefore, who aim at Bank appointments, would do well to look through the subjects of the Preliminary Examination, and, in their spare time, make a start in the study of the simpler of those which are new to them. We should recommend them to read some elementary book on Political Economy, such as Marshall's *Economics of Industry* (3s. 6d.).

As the syllabus of the examinations can be obtained by application to the Secretary of the Institute, we need only say here that the subjects of the Preliminary Examination cover a wide area and include (1) Commercial Arithmetic, (2) Book-keeping, (3) Economics, (4) Practical Banking, (5) Commercial Law, (6) French *or* German, neither of which is compulsory. The subjects of the Final Examination are the same as for the Preliminary with English Composition and Banking Correspondence instead of Commercial Arithmetic.

PROSPECTS. In London Banks clerks usually start at £40 or £50 a year, and their salaries rise by fixed annual increments to £250 or £300. Those, however, who have earned the confidence of their chiefs and have gained admission into the Institute of Bankers, have opportunities of far better appointments as Accountants, Clearing House Clerks, etc. Managers of provincial branches of London Banks have salaries ranging from £250 to £800; whilst a General Manager may receive from £2,000 to £3,000 a year with a prospect of a liberal pension after from ten to fifteen years' work. In most banks, clerks are not allowed to marry till they are in receipt of a salary of £130, or, in some cases, £150. In Country Banks, salaries are lower than in London.

2. INSURANCE OFFICES.

Insurance office clerkships have this great advantage over those in other commercial houses: they are more certain. Once in an Insurance Office, it is a man's own fault if he does not remain there. The ordinary salaries, too, are fair; whilst an energetic man has a good chance of getting £600 or £700 a year, even if he does not attain to a managership with a far larger salary. The work, as a rule is not exacting; although the official hours—usually from 10 to 4—are often exceeded.

SCHOOL EDUCATION. The best school training is one that will fit a boy before he is sixteen to pass one of the University Junior Local Examinations, or an equivalent examination, such as the Second Class College of Preceptors. In one London office with which we are acquainted, all members of the Junior Staff who have not passed some such Examination, are required to get the Junior Certificate of the London Chamber of Commerce. The subjects to which a boy should pay most attention are Writing, Arithmetic, English Composition, and Modern Languages. Many Insurance Offices do a good deal of foreign business; and those men who, on account of their knowledge of languages, are sent to a foreign Branch Office, are more highly paid than those of corresponding rank who remain at the Head Office. Though French and German are as a rule in greatest demand, a knowledge of Spanish may prove most useful, and is comparatively rare in those who seek Insurance appointments.

THE FIRST APPOINTMENT. To obtain an appointment in an office, a boy should get an introduction to a Director of the Office chosen, who can always give him a nomination. If this is not possible, he should try to obtain the interest of one of the Officers—the Manager, if possible, who will probably be able to obtain the necessary Nomination. If the Board of Directors decide to accept the nominee, his name is placed on the list of eligible clerks; but he may have to wait for a vacancy. In some Offices, clerks are selected by competitive examination; and in some, apprentices are taken for a period of four or more years (see above under *Actuaries*).

THE PERSONNEL OF AN INSURANCE OFFICE. The number of kinds of Insurance Office is considerable: Life, Fire, Marine, Burglary, Employers' Liability, Accident, Boiler, Mortgage, Plate Glass, and many others. As each Office is a self-contained, self-governing body, the personnel and the general organisation of one are not necessarily the same as those of any other. Here is the personnel of one large London Life Insurance Office which may serve as a general type:

(1) THE STAFF: Junior Staff, Second Class Staff, First Class Staff.
(2) THE OFFICER: Assistant Secretary, Assistant Manager, Manager.
(3) THE ACTUARIAL STAFF: Assistants, Chief Assistant, Actuary.
(4) THE ACCOUNTANT'S DEPARTMENT: Assistants, Assistant Accountant, Chief Accountant.

In other Offices there would be, in addition, various kinds of Surveyors and Inspectors. The rules for promotion, again, do not admit of any general description, except that success depends mainly on the man. If he is punctual and diligent at the Office and works hard in his own time to fit himself for higher posts, he will probably get them.

PROSPECTS. In such an Office as the one we have described above, a young man will, on first appointment, probably get from £30 to £45 a year, and may expect to get a rise of £5 to £10 a year. The maximum to a member of the Staff may be £300, but it is more usually £250. The Officers are more highly paid. An Assistant Secretary may hope to get from £500 to £1,000 a year, whilst a Manager may receive anything from £1,000 to £4,000, and the Assistant Manager from £700 to £2,000. Those who combine the duties of Manager and Actuary are even more highly paid (see above, under *Actuaries*.)

3. THE STOCK EXCHANGE.

Stock Brokers and Jobbers are those who negotiate the purchase and sale of stocks and shares—the former for their clients, with a commission on all business transacted, and the latter for themselves. Success depends on shrewdness, a power of rapid calculation and decision, a due combination of caution and boldness with good fortune. The business has, in fact, many of the elements and much of the excitement of gambling. A series of fortunate deals—or even one—may bring wealth, just as unfortunate ones may bring financial ruin and the "hammer." Membership of the Stock Exchange is consequently eagerly sought by those who have the capital and think they have the mental qualities essential for success.

SCHOOL EDUCATION. For Stock Exchange work, examination certificates are of little value; although a good general education is naturally very important. French and German should receive much attention. Much of the Stock Exchange business is with the Continent; and a young man with a good working knowledge of both these languages would, as clerk, command a higher salary than without it.

CLERKS. It must be clearly understood that the *Office Clerks* have practically no chance of becoming members

of the "House," as the Stock Exchange is called. An office clerk may become a manager in the "office," but he rarely becomes a broker, whatever his ability and industry. The *House Clerk*, whether authorised or unauthorised, is of a different order. He is a man who has capital or a large connection, and merely becomes a House Clerk because the rules of the Stock Exchange make it easier for him than any other to become a member. An *Authorised Clerk* is allowed to deal in his principal's name; but an *Unauthorised Clerk* is not allowed to deal at all; his business consists in going round the House, getting the changes in quotations, checking bargains, etc.

Business on the Stock Exchange begins at 11 o'clock, and the House is closed at 3. A good deal of American business is, however, done "in the street" after the close of the House, as, owing to the difference in time (nearly five hours), New York's opening prices are not received here till about 3 o'clock. Clerks, however, must not expect to be "let off" quite so lightly as their Principals, and may often have to work pretty late—on the three "Settling Days," possibly till midnight. The House is closed on Bank Holidays, and also on May 1st and November 1st, and Clerks have the amount of summer holiday usual in commercial houses.

MEMBERSHIP OF THE STOCK EXCHANGE. The rules for the admission of members were radically changed in December, 1904. With the possible exception of perhaps twenty clerks a year, every candidate for membership must purchase a Nomination from some old Member, who is willing to retire in his favour, or from the executors of a deceased Member. Such Nominations have ranged in price from £500 to £900. Thus Membership is a kind of insurance that has not previously existed, and the rule is therefore very popular in the House. Next, every new Member must become the holder of Stock Exchange Shares, which cost about £230 each. If he has not been a House Clerk, he must purchase three such shares; if he has, he need only purchase one. Further, the Entrance Fee for all is 500 guineas, and the annual Subscription 40 guineas. Finally, an applicant who has not been a House Clerk for four years must find three sureties of £500 each, who will undertake to pay his debts to that amount should he fail to meet his engagements during the first four years of his membership. If he has been House Clerk for four years he will need only two such sureties of £300 each.

4. MERCANTILE PURSUITS.

It would not be possible, in our limited space, to give an account of the multitudinous careers open to boys who wish to engage in Commerce, but who do not know definitely in what branch; nor would it be possible to tell them what are their prospects therein. What we can say, however, is that the well-educated boy, endowed with energy, determination, and integrity, is morally bound to succeed. In this section we shall offer a few words of general advice to such boys, and shall then take one special branch of Commerce for somewhat fuller treatment.

SCHOOL TRAINING FOR MERCANTILE EMPLOYMENT. Boys at school often do not know definitely what is to be their future work; but they may be quite sure that, whatever it is, their success in it will depend on, or at any rate, be accelerated by, a good all-round education. Merchants say that, whilst the boy of limited, mechanical education, is more useful to them at first, it is the boy of broader culture who ultimately succeeds in rising to the better posts in their houses. Boys must not then neglect those subjects of their school curriculum which seem to them useless for commercial pursuits. Such subjects may be of the greatest value in giving to their minds that breadth and depth which is bound to tell on their future success in life. On the other hand, there are subjects which seem to be important for such pursuits, and over which boys often waste valuable time. Shorthand, for instance, may prove a dangerous accomplishment. By its means it is easy to get a first place; but "Once a Shorthand clerk, always a Shorthand clerk," may prove to be literally true. Type-writing again is of little general use to a boy. Most typists are women, whose wages are smaller than men's. The importance even of book-keeping as a subject of exhaustive school study is much exaggerated. Each firm has its own system which can be gradually learned as required. On the other hand, clear, rapid Writing, accurate Spelling and Arithmetic, and good English Composition too often receive far less attention in our Secondary Schools than they deserve. Much time should be given to Modern Languages; French, German, and (in a less degree) Spanish are likely to prove the most useful. Whichever are taken must be studied, to a very large extent, conversationally. Towards the end of school life it is well to learn the more usual forms of commercial letters in the languages that have been studied; but it is easy to waste valuable time in the vain attempt to become proficient in general foreign correspondence. Boys do not, as a rule, know in which branch of commerce they will engage; when they do, it will be easy for them to learn the technical terms used in that branch, provided they are well acquainted with the ordinary language. The remarks just made apply equally to English Commercial Correspondence, for which the best general school preparation is the writing of the usual exercises in Composition, followed by a little practice in the writing of business letters a few weeks before the close of school life.

CERTIFICATES OF STUDY. It would be well for all young people intended for mercantile life, to have one good Certificate of general proficiency. Any one of the University Matriculation Certificates would do, or any one of the University Local or School Certificates. If one of the Examinations of the College of Preceptors is taken, it should be either the First or Second Class. Perhaps, however, the most useful, especially in London, is the Full Junior (or Senior) Commercial Certificate of the London Chamber of Commerce, as a large number of firms give the preference to lads who hold it. The examinations for these last-named Junior Certificates, formerly much too technical, have improved within the last few years; and boys of fifteen or sixteen can now prepare for them at school without risk of educational injury.

PROSPECTS. On this question we can say but little. The prospects in the mercantile world are indefinitely great and indefinitely small, and depend mostly on the individual. Keep your body fit, your head clear, and your hands clean, and take as the guiding principle of your life: "Whatsoever thy hand findeth to do, do it with thy might," and you will be taking the right course to secure, if not wealth, certainly enjoyment in work. There is one branch of commercial work to which we would call the attention of boys who have the gift of acquiring languages, and that is travelling abroad to represent English firms. Such boys should, if their parents are not sufficiently well-off to send them abroad, look out for the chance of winning "Travelling Scholarships." Many schools have them in their gift, and the London Chamber of Commerce offers some every year to such of its Junior Candidates as do their Modern Language Papers specially well.

THE TEA TRADE.

We will take the tea trade as typical of a large number of mercantile pursuits. Here, as in most other pursuits, the lower grades are overcrowded; but there is plenty of room at the top for those with sufficient *nous* and determination to get there. The three classes of PRINCIPALS who have to do with the importation and distribution of tea are the Merchant, the Broker, and the Dealer; and the young man who means to get his living out of tea, will enter the office of one of these. There is money to be made in any one branch; but the Merchant's office naturally offers the best prospects. The Merchant imports tea, mainly through agents in Calcutta and Colombo. The Dealer, whose business it is to distribute to the Retailers, has no direct dealings with the Merchant: he does all his business with him through

the Broker, who receives from the Merchant 1 per cent. on the value of all sales he effects, and ½ per cent. from the Dealer. Even when, at auction sales, the Dealer himself bids, he does so in most cases, not in his own name, but in that of his Broker. The centre of the English tea trade is Mincing Lane, where are the great commercial Sale Rooms, which, on Sale days, give one some notion of what Pandemonium must be like.

No special preparation is necessary, except such as will secure smartness, accuracy, self-reliance, and good address; but the man with the best all-round education has the best chance, provided he possesses the other necessary qualities. If there could be a school course in "Human Nature and its Management," it would be a good subject to take up, as a knowledge of it is all-important for success. As, however, this is not practicable, the knowledge must be picked up in the world of men.

The Merchant's Office. The best age to enter is from sixteen to seventeen. There will be little or no pay to begin with—perhaps 5s. a week, and no dignified or highly responsible work. The beginner must be prepared to put his hand to anything—washing cups, tending kettles, tying up catalogues and letters, etc., etc.; but whatever he does must be well and cheerfully done. It is strangely enough found by experience that those who do these "menial" offices best and most cheerfully, are the product not of the Elementary but of the Public School. No one will give the learner lessons in his business: he must keep his eyes and ears open, and pick up his knowledge gradually for himself. After a time he will take part in weighing up teas for the Tasters, and later develop skill in tasting and valuing himself; he will attend auction sales, and take prices and be employed in converting them from other currencies—especially rupees, with the mysteries of which he must be thoroughly acquainted. Short of becoming a Manager or Principal, the young man's aim is to be the "curate" or necessary man to the London Manager; he may become the Merchant's Valuer; or, if he proves himself specially capable, he may be sent to the office in Calcutta or Colombo as Taster and Valuer. Then, too, he may have the offer of a post in the Merchant's tea-gardens in India or Ceylon.

The Broker's Office. What we have said about early employment in the Merchant's Office applies to the Broker's. But here energy and address are even more necessary than there. The Broker is the intermediary between the Merchant and the Dealer; and his success depends on acquiring and keeping the confidence of both. He must be skilful in the estimation of the character not only of tea but of his clients. After serving some time in the Office, a young man may become the Broker's Agent or "Runner," (as he is somewhat irreverently called by Dealers), and will receive as remuneration one-third of the profits he brings to his employer.

The Dealer's Office. The early stages are the same as in the Merchant's Office, and require the same determination to do all the work that comes in the way, no matter what it is. There are two goals to make for—either the post of Buyer or that of Seller. Comparatively few Buyers are wanted, but a good Salesman can always command a decent income; and it is to him that apply with special force the remarks we made above on "Knowledge and Management of Human Nature." It is said that a real Salesman is born, not made. This, however, is hardly an axiom; and a lad with tact and determination can work commercial miracles on a small scale. But you must do three things: First, learn your article; next, know human nature; and, finally, blend your knowledge and push it. A Salesman—or Traveller—usually receives as remuneration one-third of the profits he makes.

SOME EMPLOYMENTS FOR WOMEN.

In previous sections of this work we have given particulars of several occupations definitely open to women, such as **Medicine, Teaching,** and the **Civil Service.** We propose now to discuss some other occupations in which women may profitably engage. During the last few years the field of women's work has enormously increased, and to give anything like a complete account of it would be to write a large volume. Those interested in the general question should read the Report of the *International Congress of Women* (held in London, 1899), published in five small volumes by Fisher Unwin. Those whose interest is confined to England, will probably get all they want from the *Englishwoman's Year Book* (A. & C. Black, 2s. 6d. net). Women are generally ignorant as to the relation between supply and demand in respect to woman's work. Educated women who want to work, but do not quite know in what direction to start, should seek the guidance of the *Central Bureau for the Employment of Women* (9 Southampton Street, Holborn, W.C.). There are some occupations in which exceptionally gifted women are engaged, but which it would be foolish for us to recommend our general readers to take up. Of **Dentistry** we have already spoken (see under *Medicine*)—a lucrative profession, yet not sufficiently taken up by English Women, but largely and successfully followed by their American *cousines.* Women's work in Science is steadily growing; and many earn good incomes by lecturing on scientific subjects—especially *Hygiene.* Ladies with a University Degree or its equivalent, who have special knowledge of such subjects as are dealt with in University Extension Lectures, may get remunerative and congenial work as Lecturers in connection with one of the University Extension Societies. But they must be specially qualified as lecturers; and it is not easy for women to obtain sufficient practice to prove their ability to undertake the work.

There are good openings for women as **Manageresses of Laundries**; but the work is hard and the hours long. Many earn £100, and some as much as £250. At least three months' training should be undertaken in a laundry, costing about 10 guineas, and a knowledge of book-keeping should be acquired. A list of suitable laundries may always be seen in the current number of *Women's Employment* (post free 1½d. from the Office, 9 Southampton Street, Holborn), or in the *Englishwoman's Year Book.* In consequence of the difficulty of obtaining good domestic servants, it is becoming increasingly usual for educated women to take posts as lady-helps, **Children's nurses,** and cooks. The best known training institution for children's nurses is the Norland Institute, 10 Pembridge Square, W., the Principal of which would supply all necessary information; but particulars of others will be always found in the current number of *Women's Employment.* Nurses trained at such institutions receive from £20 to £70 a year "all found."

In the following pages of this section we shall deal somewhat more fully with certain occupations very generally followed by educated women.

Indexing is well paid; but being piece-work, you must expect many intervals of non-employment. The work involves much drudgery, and yet requires a good all-round education with a deeper knowledge of a few special subjects. The necessary training is rather difficult to get, and costs from 20 to 30 guineas. The professional charges for indexing vary according to the nature of the work. The Government rate of pay for Blue-books is 2s. per printed page, and this is a fair standard to judge by. Indexes to books of a general character range from one guinea per 100 pages. (For further information see the "Technique of Indexing," published by the Secretarial Bureau, 52A Conduit Street, W.) *Translating* is very poorly paid—not more than 9s. per 1000 words—and it is difficult to get work. The office of a *Librarian* seems suitable for women, but as a rule women occupy only subordinate posts with an average salary of £60. The necessary training for the office of Librarian may now be obtained at the School of Economics, Clare Market, W.C. At present the pay is poor; no woman can hope to get much more than £100 a year as the head of a Public Library.

BOOK-KEEPING. It is very common now for tradesmen and business firms generally to employ women to keep their books; and a girl of seventeen or eighteen, who has certificates of ability to do the work can, without much difficulty, earn from 12s. to 15s. a week at starting. She must be quick at figures, must write well, and should have

the Certificate for Book-keeping granted either by the *Society of Arts* (John Street, Adelphi), or by the *London Chamber of Commerce* (Oxford Court, Cannon Street, E.C.). If possible, it should be the Advanced or Senior Certificate.

HORTICULTURE seems to be increasingly taken up by women as a means of livelihood. The essentials for success are physical strength, determination and adequate training. The necessary training can be obtained at many institutions:

> The Horticultural College, Swanley, Kent; the Royal Botanical Society of London Practical Gardening School for Ladies; the Studley Horticultural College for Women, Studley Castle, Warwickshire; University College, Reading. There are also schools of gardening for women at Corstorphine, Edinburgh; Glasnevin, Dublin; Glynde, Lewes.

At most of these institutions the course in horticulture extends over two years, and the fees for tuition, board and lodging amount to £70 or £80 a year. Courses are also to be had in most of them in bee-keeping, poultry-farming, and dairy-work.

DRESSMAKING offers constant and well-paid employment to women of taste and education who are willing to give the necessary time for a thorough training; and those who have sufficient taste and capital to start a business of their own have every chance of success. The apprenticeship usually lasts two years; and the cost, with board and residence, in good houses, varies from £60 to £100 for the full course. Great caution is necessary in the choice of house. When her apprenticeship is completed, a girl may expect to earn from 10s. to 16s. a week; but a really first-class hand may ultimately earn from £150 to £200 a year. There are posts for skilled dressmakers as teachers of their craft in large girls' schools, with salaries of about £50 with residence, and as visiting teachers in various institutions with liberal pay. But for success they must have all the qualities of a good teacher and disciplinarian.

SICK-NURSING is a field of work peculiarly suited to educated women who have sufficient health to stand the strain, and offers to them very fair remuneration during their term of service, which does not usually extend much beyond the age of fifty. A three years' training must be undertaken in a hospital, which cannot, as a rule, be commenced before twenty-three or after thirty. In children's hospitals, probationers are taken at twenty. Probationers receive from £8 to £15 and uniform; but Sisters receive from £25 to £50, with partial board, and Matrons from £40 to £200 with board, lodging and laundry. After the completion of their training, most nurses take to private nursing, and usually join some Nurses' Institution or Nurses' Co-operation. A good many join the Queen Alexandra's Imperial Military Nursing Service, in which the pay ranges from £37 10s. to £300 a year, with a pension on voluntary retirement at fifty, or compulsory retirement at fifty-five. The Naval Service is not quite so good, and the appointments are comparatively few.

MIDWIFERY. This is an occupation not at present overstocked and one which should appeal to "many a woman anxious to take up a work of public usefulness." Midwives are required to register under the Midwives Act, 1902, and full information to those who desire to take up this work can be obtained from the *Midwives' Institute*, 12 Buckingham Street, Strand, or the *Central Midwives' Board*, Caxton House, Westminster. A three months' course of training would cost from £15 to £25, but it is often advisable to extend the course to five or even six months.

BOOK-BINDING in its artistic form is mostly done by women, and the demand for their work is constantly increasing. A twelve-months' training could be obtained for £70. If the worker has originality and power of design she has a fair chance of constant and remunerative employment in her own home. The necessary training can be obtained at the establishment of Miss Woolrich, 5 Bloomsbury Square, W.C.; Miss M. Marshall, 19 Southampton Street, W.C.; Miss E. J. Gedge, 6 Denmark Street, W.C.

SANITARY INSPECTORS. Women are employed as Sanitary Inspectors in most Metropolitan Boroughs, and their numbers, we believe, are steadily increasing in the Provinces. As the pay is good (ranging in London from £80 to £160, and in the Provinces from £60 to £120) the competition is becoming keener every year.

> The Inspector's duties include the inspection of factories and workshops, laundries, tenement houses and lodgings, kitchens of hotels and restaurants. Also the inspection of sanitary and sleeping accommodation for shop-assistants, public lavatories for women, and houses where infection has occurred. In respect to all these places she has to make written reports to the Local Sanitary Authority, and to enforce in all of them the regulations relating to cleanliness, ventilation, overcrowding, and air-space, having recourse, when necessary, to legal proceedings.

It is now usual to require some evidence of proficiency. This may be offered in the form of a certificate from the Royal Sanitary Institute; or, still better, from the Sanitary Inspector's Examination Board. Information respecting the examinations may be obtained from their respective Secretaries, the former at Parkes Museum, Margaret Street, W.; the latter at 1 Adelaide Buildings, London Bridge, E.C.

HEALTH VISITORS. Many Local Authorities have in recent years appointed women as "Health Visitors" to carry out sanitary inspection and visiting in their district. Their special duty is to visit the houses in the poorer districts, and there to give advice on the feeding and care of children, and to assist in improving sanitary conditions. Moreover, as the inspection of school children with respect to their physical condition, becomes general, there will be many new openings for Health Visitors or "School Nurses," as they are called in a memorandum issued by the Board of Education. The Council of the Royal Sanitary Institute have, accordingly, decided to establish an examination for Health Visitors and School Nurses.

> The syllabus includes general structure of the body, personal hygiene, air, water, food, clothing, the dwelling, elements of home nursing, care of infants and young children, prevention of communicable disease, first aid, treatment of injuries, ailments and accidents. Fee for Examination, £2 2s.
>
> Those who wish to qualify as Health Visitors would do well to write for information to the Secretary of the National Health Society, 53 Berners Street, W., and to the Secretary of the Royal Sanitary Institute, 90 Buckingham Palace Road, S.W.

GOVERNMENT FACTORY INSPECTORS. Factory inspection offers a very desirable opening for women, who are able to get a nomination from the Home Secretary, and to pass the required examination, the salary commencing at £200. Age limit 25 to 40; Fee for examination £2.

> All must pass in English Composition and Arithmetic, and in four optional subjects, which include English Literature, English History, and General Modern History; French or German or Italian; Economics, Chemistry, Physics, Physiology and Bacteriology. If the Secretary of State thinks fit, a candidate who has passed for an Honours degree in any University of the United Kingdom may be exempted, wholly or in part, from examination in the above subjects.

There are also appointments for women as Assistants to Inspectors. The examination is comparatively easy, the subjects being English Composition and Arithmetic, and the Law relating to Workshops. Limit of age 21 to 40; examination fee 10s.

SECRETARYSHIPS AND CLERKSHIPS. Lady secretaries and clerks are now very commonly employed by many business houses and limited companies, but much more frequently by educational and philanthropic institutions. A very usual salary for a lady secretary is from £80 to £150 a year, and it may, in exceptional cases, rise to as much as £250. The clerk may expect to start at 15s. a week, and rise to £100 or more a year. Type-writing, shorthand and some knowledge of book-keeping are mostly essential; but good secretaryships are obtainable only by such as have received a good general education, and are of good social standing. The power to speak in public is sometimes a necessary qualification. The training in the technical branches of the work can be obtained for a pound or two in the Technical Institutes to be found in all our large towns, or for from £10 to £15 in private institutions; and

practice in public speaking can be obtained in ladies' debating societies. Familiarity with the conduct of committee meetings should be obtained by apprenticeship to a secretary, which may cost about £20, or by engagement as an assistant secretary; or a course may be taken at the Women's Institute, 92 Victoria Street, S.W.

JOURNALISM. There is an increasing demand for competent women on the staff of the various newspapers. Now every journal has articles on subjects of special feminine interest, such as weddings in high life, the coming fashions in dress, the sayings and doings of the upper ten thousand, and the like. The successful woman journalist must have a certain acquaintance with the manners and usages of good society, if not with people of good social standing, quickness of observation, a facile graphic pen, and considerable tact and aplomb in interviewing celebrities. Some successful journalists have begun as clerks in a newspaper office, others by writing articles on subjects of general interest, and others have been trained for the work. [There is a School of Journalism at 8 and 9 Johnson's Court, Fleet Street, E.C.]

TRACING DRAWINGS. Many young women have recently been taken on at the Elswick works of Armstrong, Whitworth & Co. At the Annual Meeting, 1906, one of the Directors said, in regard to the classes for lady tracers, he could not help remarking that, so long as women would remember that they were ladies, there was no possible harm in their going into the workshops. There were many things their delicate fingers could do, much better than the coarser fingers of men. In their drawing offices the tracers were of the greatest value to them. Their neatness was phenomenal and they got through their work splendidly. Tracing in the drawing offices offered a nice opening to many young ladies. They were now taking them into their shops at Elswick. Some of them were under his charge. And he tried to make it a point that they should always appear neatly and nicely dressed, for he was persuaded that so long as young ladies paid attention to their appearance they would always command respect from the other sex.

PHOTOGRAPHY offers a fairly good opening to an intelligent woman, with artistic taste, and sufficient capital to get the necessary training. The Polytechnic, Regent Street, London, offers a professional training for 50 guineas, but the student must provide her own studio in which to practise. Probably the best plan is to enter into an agreement, if possible, with a first-rate photographer in a provincial town in order to acquire the necessary training. There is, of course, a large demand for women to touch up photographs and to act as attendants in connection with a studio, but the supply is still greater than the demand. The pay for these minor appointments ranges from 15s. to 40s. a week.

PHYSICAL TRAINING offers a wide and remunerative field of labour to educated women of good physique. The training should extend over at least two years, and costs for that time from £50 to £100, exclusive of the cost of living. The best ages for training are from seventeen to twenty-five. Salaries vary: the average for a residential post in a school is from £40 to £50; but a really clever teacher has little difficulty in making from £150 to £200 a year; whilst those with sufficient capital to set up a gymnasium, can earn from £250 to £350 a year. For a list of training institutions consult the *Englishwoman's Year Book.*

DISPENSING AND PHARMACY. Women are often employed as dispensers in hospitals and by medical men; and there is a growing tendency to employ them as assistants in chemists' shops. Properly qualified women earn from £60 to £100. Only those who hold the Certificate of the Pharmaceutical Society are eligible for the better posts; and the cost of training must be put down at about £200 in all. Candidates for registration as students or apprentices of the Society must have passed some such examination as the Oxford or Cambridge Senior or the London Matriculation, and must have taken Latin, French (or German), Arithmetic, Algebra, and Euclid. The period of apprenticeship in a hospital or to a properly qualified chemist or doctor lasts three years, and the premium varies from £15 to £40 a year. At the end of this time comes the Minor Examination of the Society, success in which qualifies the candidate to act as chemist or druggist. The Secretary to the Pharmaceutical Society (17 Bloomsbury Square, W.C.) would furnish the names of lady chemists who take pupils, as well as a list of examining bodies whose certificates are accepted for registration.

N.B.—Further particulars of most of the above openings for women, in addition to others not here described, can be found in the works already mentioned and in *Open Doors for Women Workers*, post free 1s., from the office of *Women's Employment.* Journalism as an opening for women is discussed in *Press Work for Women*, 1s. net, Upcott Gill.

A SOCIAL GUIDE.

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A SOCIAL GUIDE.

HINTS ON ETIQUETTE.

The word "etiquette" simply means "ticket," and is the "label" attached by an unwritten convention to the best observances in the social life of well-bred people. The principles upon which it rests are clear and few in number. They may be enumerated as follows:—

(1) Chivalry and delicate respect towards woman.

(2) Repugnance towards allowing or taking a liberty.

(3) Opposition to unwelcome obtrusion on the one hand, and to ungenial reception of friendly advances by equals in the social grade, on the other.

(4) Hatred of fussiness and promotion of easy and natural demeanour.

(5) Demand for reciprocity in favours and civilities conferred.

(6) Recognition of the difference between civility and servility, between kindness and condescension.

(7) (And this runs through the whole code of English etiquette) recognition of the fact that, at all events in this country, society is graduated.

From principles which never change, let us turn to the rules which guide most of the practical contacts of social life, but vary with the fleeting changes of fashion.

I. INTRODUCTIONS.

Be slow in giving "letters of introduction." By giving them you tax both the courtesy and hospitality of your friend. If the person to whom the introduction is addressed is in a superior station, it is only right to ask his permission before sending the letter. It sometimes happens that from early intimacy you yourself are willing to overlook many social short-comings in an old acquaintance, but that does not justify you in handing on to another one who has no right to expect indulgence from the friend of a friend. The letter of introduction should not be closed and should be left with a card without asking to see the hostess, who ought, if she is well disposed, to issue an invitation to dinner or an "At Home."

But apart from written introductions, the rule is good for general observance always to consult the wishes of both parties before the introduction is made. The following rules should be strictly observed:—

(1) The lower in rank is always introduced ("presented" is a more courteous word) to the higher.

(2) A gentleman is always "presented" to a lady, never the reverse, and this without regard to difference of rank. (Of course at a ball, it would be futile to introduce a gentleman to a lady unless he was able and willing to be her partner in a dance.)

(3) As regards introductions between gentlemen, it is difficult to lay down any rule beyond this that no one should undertake them unless he is sure that the introduction will be agreeable to both parties.

(4) An unmarried lady is always "presented" to a married lady unless the unmarried is superior in rank. The ladies so introduced simply bow and make some passing remark. There is no need to shake hands. A lady's hand-shake is an act of grace, not of obligation, to a gentleman; he therefore waits after introduction for her offered hand.

(5) The hostess shakes hands with all guests whether present by her own invitation, or brought by a personal friend.

(6) At a dinner-party it is customary for the hostess to present the gentleman to the lady whom he is to "take down."

(7) After dinner the hostess uses her own discretion as to what ladies she will introduce to each other in the drawing-room.

(8) Gentlemen continuing at the table over "the walnuts and the wine" talk to each other without introduction.

(9) In afternoon calls, the hostess uses her own judgment as to what introductions should be made, and such introductions do not necessarily involve more than a bowing acquaintance afterwards. (Recent authorities say that the hostess should introduce all her guests to each other).

(10) In ball-rooms the real responsibility for introductions rests much more with chaperons than with stewards. The latter can only interpret according to their judgment the advisability of introductions. If an introduction is sought by a gentleman he is bound either to dance or at all events to show the usual civilities of the tea-room or supper-room to the lady to whom he sought to be introduced.

II. LEAVING CARDS.

1. Ladies govern all rules respecting the leaving of cards, which is an index to their choice of acquaintances, or their avowal that civility has been shown and is expected in return. A lady's card should be always plain in type, thin, unglazed, and not more than 3½ inches in depth. The address should be down in the left hand corner and the name in the centre. Ladies junior by marriage in a family, print their husband's Christian name, but when they become the senior or sole survivors of the family, they change "Mrs. John Smith" into "Mrs. Smith." Young ladies print their names under their mother's name, if she is alive; if not under their father's upon a card shaped like a lady's card. The rules for leaving cards are these:—

(1) A wife leaves cards of her husband along with her own, and a daughter her father's, but a husband can never leave his wife's cards nor a father his daughter's.

(2) In large cities arrivers intimate their arrival by leaving cards upon friends who otherwise might not know of it.

(3) Ladies leave visiting cards *personally* when walking, not by servants or through the post office. But "At Home" cards, stating dates of reception, are now sent through the post.

(4) A married lady calling alone and not finding the mistress at home leaves three cards,—her own and two of her husband's. Her own is for the mistress, and her husband's for both master and mistress.

(5) "Is Mrs. —— at home?" is asked at the door. If she is, the lady caller does not require to use her own card, but at the end of the visit she silently leaves her husband's two cards on the hall table, if he is not calling with her. If he accompanies her and both the master and mistress are at home no cards are left at all. If one be "not at home." a card is left by the husband upon the absentee. At a first visit it would be convenient, in ordinary cases, for a card to be left with the address.

(6) Turning down the right hand corner of a card implies that the daughters of the house visited are included in the call.

(7) In leaving cards upon a friend who is the guest of one with whom you are quite unacquainted, there is no need to leave a card upon the hostess.

(8) Except when the persons called upon are living in hotels it is "bad form" for a visitor to write their names upon the card left.

2. A person not "to the manner born" is sometimes uncertain whether a call should be made or only a card be left. As a rule calls must be answered by calls and cards by cards within a period of not more than ten days. A

superior may return a call for a card, which is to be taken as a compliment, but if she repay a call with a card, the hint is obvious that she does not want to "improve" the acquaintance. The following rules, it is hoped, will be found useful:—

(1) After the following entertainments cards should be left by all invited (whether present or not), within a week of the entertainment: balls, receptions, private theatricals, amateur concerts, and dinners. Only after dinner-parties need you ask if the hostess is "at home." In the other cases leaving cards is sufficient.

(2) Residents in country districts call upon new-comers, not as in India where the new-comer calls upon the residents. The rule of "call for call," and "card for card" applies here as in (1), and its breach has the same significance.

(3) Cards to "inquire" after friends who are ill are left in person, (more recently after child-birth, by servants), and bear simply the words "To inquire after Mrs. Blank." In the stage of convalescence there comes in return an ordinary visiting card, with the words written above the name "With thanks for kind enquiries," which indicates that the hostess can now see company.

(4) "P. P. C." (*Pour prendre congé*—in order to take leave) cards should be left in person or by servants (not by post) within ten days of departure if the absence is to last two or three months. (This rule has been lately relaxed as regards postal delivery).

(5) A lady making a purely business call upon a lady or gentleman gives her card to the servant to be taken to his master or mistress, *but only on these occasions.*

3. Gentlemen have certain rules of their own to observe in regard to making calls and leaving cards. A gentleman's card should be thin, unglazed, the inscription in plain English copper-plate with no flourishes after the manner of the Continent and America. Titles of persons of rank and of ecclesiastical dignitaries are never preceded by the definite article nor by adjectives such as "Most Noble," "Right Honourable," "Right Reverend," "Venerable;" nor do men with degrees or scientific or legal distinctions attach them to their names on their visiting cards. Thus correct use gives simply "Duke of Newcastle," "Bishop of London," "Archdeacon of Cleveland;" "Mr. Arthur Balfour," "Reverend Dr. Cooper." An "Honourable" drops the word on his card and is plain "Mr. Gordon." An officer in the navy adds R.N., or R.I.M. (Royal Indian Marine), after his name but no King's Counsel, Member of Parliament or Doctors of whatever faculty add K.C., M.P., LL.D., D.D. to their card-name. Baronets and Knights until recently were simply "Sir Charles Forbes," "Sir William Mac Gregor," without Bart. or Kt., but since the Lord Chamberlain's instruction that Baronets attending Court should have their rank of Baronet on their cards, it is usual for them to indicate their rank on their printed visiting-cards. Officers in the army have the name of their club down in the left-hand corner and the name of their regiment down in the right-hand corner.

(1) In calling upon married people a gentleman leaves two cards, one for the mistress and the other for the master.

(2) A gentleman should not turn down the corner of his card (see Rule 6 in rules for Ladies Card-leaving.) His call is upon the host and hostess, and not upon the young ladies of the house.

(3) Calls are not made nor cards left by a gentleman upon new acquaintances, however pleasant they may have been to him at a dinner or ball in another person's house, without a clear intimation from the lady that a call at her house would be agreeable to her.

(4) The same rules apply to gentlemen as to ladies with regard to leaving cards after entertainments. See Rule (1) near top of page.

(5) Bachelors call upon bachelors after receiving hospitality, unless they are upon such intimate footing as to dispense with ceremony.

N.B.—Wedding Cards and Memorial Cards are no longer fashionable.

III. PAYING CALLS.

Certain calls are obligatory, e.g., A formal call by you and a return-call by the person called upon is an indispensable preliminary to your inviting him or her to your house. Calls are of different categories, principally these: calls of congratulation, calls of condolence, and calls of courtesy.

1. A call of *congratulation* is made upon a bride shortly after entering her new home. This is something more than a ceremonial civility and implies that you are prepared to continue her in, or admit her into, the circle of your friends. You have, of course, already called upon her parents when the engagement was announced and after the marriage has taken place. Then again, on the birth of a child you call to "enquire after mother and child," leaving cards with your sympathetic enquiries.

2. *Condolence* is first expressed by a letter of sympathy bearing a narrow black rim in case of a death. You do not need to make your personal call until a card has come from the mourners "returning thanks for kind sympathy."

3. We now come to calls of *courtesy* or general calls. These are paid between the hours of 3 and 6 p.m., to allow the luncheon to be well over and preparation for dinner to be easily arranged. A few hints may here be serviceable:

(1) Visitors should never prolong their call beyond a quarter of an hour or twenty minutes if they wish to avoid the charge of having inflicted "a visitation."

(2) The hostess rises to receive her visitors and advances a few paces, but the other ladies present remain seated. (Gentlemen rise at each new arrival.) The hostess places each new-comer as near as possible to her own chair, and introduces them to those in their immediate neighbourhood to promote conversation. When they rise as about to leave she rings the bell, and the host, if he be present, hands the departing lady down stairs to her carriage, and bids her "good bye," (not "good morning.") at her carriage door.

(3) Formerly a gentleman, when paying a formal call, took his hat and stick into the drawing-room, but now it is more usual to leave them in the hall. When gentlemen wear gloves, they can take them off or keep them on as they please.

(4) As regards refreshments nothing more at ordinary "At Homes" is required than tea, (which the hostess pours out herself), plain bread and butter, cakes, scones, and thinly cut sandwiches of paté de foie gras, &c., &c. On "big days" refreshments will be served in the dining-room, when claret cup, coffee, &c., may be given.

IV. VISITING.

1. In paying visits to a country house your task is now easier than of yore in deciding the length of your visit. Your hostess generally specifies the time for which the invitation is intended, and this is no proof of scant hospitality. Necessarily the number of bedrooms is limited, and if a succession of visitors is expected your room will be required for the next visitor. Make your arrangements, therefore, rigidly with this in view. Consult Bradshaw beforehand, as to the time of your train for departure and do not appear to be hanging on in hopes of an extended invitation. Young ladies, especially, are prone to jump at some such civil phrase as "Don't you think you could spare us a few days longer?" which often is a *façon de parler* and nothing more. Of course there may be cases when there is no pressure for accommodation, and where, perhaps, the solitude of your hostess would make an intimate lady-friend's extension of visit a real kindness. But this must be clear beyond dispute before you agree to go beyond the letter of your invitation. There is always a risk of outstaying your welcome. Sad indeed would it be if it happened to you as to the visitor of whom the old Scotch lady said to the cook in his hearing: "Jane, bile an extra egg for Mr. Brown's breakfast the morn, for he is gaun to traivel." Such a violent hint as this did he require before packing up to be off!

2. During your stay you will generally find the morning hours free. Breakfast and luncheon are "moveable feasts," and sometimes prolonged ones. It is, however, always well to ascertain casually from the hostess before saying "good night," whether she has any plans in which she wishes you to share next day. There may be a drive to a neighbouring ruin, or a pic-nic, &c., in which some or all the guests are wished to take part, and it would be unmannerly in you to absent yourself for some private pleasure. If there be no "plans" for the morning-hours, you can breakfast and take luncheon at any time during which the meals are running (9–10; 1.30–2.30) helping yourself from the sideboard and sitting down in any vacant

place. If you are a fisherman or sketcher, you can always get sandwiches from the kitchen to obviate the necessity of returning for luncheon.

3. On no account, however, must you fail to appear in the drawing-room in proper attire at the hour prescribed preparatory to going down to dinner. Some people are culpably lax in this elementary courtesy with the result of infuriating the cook, unnerving the hostess and angering all their hungry fellow-guests.

4. Try to make your host and hostess feel that you are enjoying yourself. "Nil admirari" is a wretched tone of mind to exhibit. Without violating truth in the slightest degree, you can always fix upon something in the house, grounds or neighbourhood which has given you pleasure. And to hear this moderately expressed gives pleasure to your entertainers.

5. Spare the servants unnecessary trouble by not ringing your bell upon every slight occasion, and reward them suitably upon your departure. But here comes a painful question: "What shall I give in the way of "tips" or gratuities ("vails" was the old word) to the servants in my host's house, and to which of them?" Well, we are not all millionaires nor the guests of Dukes. It would be a real convenience if there could be, as in Holland, a well recognised tariff by which this melancholy business could be regulated for ordinary mortals. Of course, something depends upon the quality of your host and the length of your visit, but to judge by the countenance of servants, a short visit does not imply a material reduction in the gratuity expected. A week or a "week-end" is pretty much the same. Only general rules can be laid down.

(1) From young girls little is expected.

(2) From sportsmen gold is *de rigeur*; any default will be visited next season by the gamekeeper's relegation of you to an impossible place in the *battue*.

(3) Fees to butlers range from five shillings to a sovereign. The servant who "valets" you always expects a special "tip." Half-a-crown is the usual gratuity given to a coachman, and even a young lady "remembers" the Jehu who drives her to and from the station. She is generally exempt however from giving tips to other men-servants.

(4) If no men servants are kept in the house, the parlour maid first and the housemaid second expect a gratuity. This may be five shillings in the first instance and half-a-crown in the second.

N.B.—Many men escape the difficulty of partition by giving a pound or two to the head servant and asking him to distribute it among the claimants. He is sure not to forget himself in dividing the spoil.

V. WEDDINGS.

There is great improvement within our own recollection as to the conduct of weddings, and this improvement is not limited to "society" weddings. The general raising of church tone since 1833 has affected the ceremonial of matrimony as of everything else.

1. The earliest to arrive is the bridegroom, anxious, we suppose, to prove that he is no "laggard in love." With him comes the "best man," and they stand together below the chancel steps, or in some churches kneel at a "prie Dieu," until shortly before the bride's arrival. The bridesmaids assemble in the church porch, or inside the church near the west door, in two rows facing each other, waiting for the bride's arrival and ready to "fall in" behind her. If the wedding is a choral one, the choir and clergy march in silence to the west end, and are ready at a signal agreed upon with the organist to strike up the processional hymn. The guests have meanwhile been shown to their seats by "gentlemen-ushers" who ascertain from each of them whether they are friends of the bride or bridegroom, and assign their place accordingly, so that they are sure to find themselves among acquaintances.

2. The bride enters the church leaning on the right arm of her father or guardian, and follows the choir to the chancel step, the bridesmaids, two and two, following her. The bridegroom takes his place at her right side with the "best man" standing behind him. He neither embraces nor shakes hands with the bride but simply bows to her. The father stands at the bride's left hand. Her mother sits in the front seat with the nearest relatives.

3. And now the service begins. At the question "Who giveth this woman, &c.," the father bows to the clergyman, and stepping in front of the couple, joins their right hands together, and then goes back to his place. Now is the time for the gloves of the bride to be handed with her bouquet to the care of the chief bridesmaid, who holds them to the end of the service. The bridegroom should unglove as soon as the service begins. It always creates an awkward pause if the bridegroom has to hunt in his pockets for the ring. He should have it ready when required by the priest to place it upon the book. After the first blessing, the bride and bridegroom alone follow the priest to the altar, the others remaining at their stations, not chatting together, but reverently joining in the service.

4. When all is finished, the bride, leaning on her husband's left arm, and the principal relations and friends, go to the vestry to sign the book and give congratulations. The fee to the clergyman should never be given uncovered by an envelope. The correct mode is silently to place it on the vestry table with an inscription on the envelope "Rev. Dr. Smith, with thanks and compliments." Its amount varies, but in fashionable weddings is always largely in excess of "legal fees." On slowly going down the church, the bride takes her husband's left arm, each recognising their friends with a smile or nod, the bridesmaids follow two and two, and then the bride's mother. The "best man" waits till the last to see everybody into their carriages. The Bishop of London has lately condemned the custom of throwing rice or confetti in the church porch or within the railings at the west end. Sensible people will approve the bishop's action and govern themselves accordingly.

VI. RECEPTION AFTER THE WEDDING.

The old-fashioned wedding-breakfast with its Dickens' reminiscences is now a thing of the past. The abolition of the compulsory ante-noon celebration of holy matrimony introduced a new era in marriage festivities.

1. Invitations are issued upon an "At Home" card or silver-edged note paper, about 15 days before the ceremony, in the following formula: "Mr. and Mrs. Jones request the pleasure of Mr. and Mrs. Smith's Company at the marriage of their daughter Ethel with Mr. Henry Brown, at 2 p.m., on June 10th, at St. Barnabas', Pimlico, and afterwards at No. 3 Eaton Square. R.S.V.P." Acceptants send a present to the bride accompanied by a visiting card upon which is written, "With Good Wishes," or some such kind words. These presents are all displayed with card attached in one room with plenty of circulating space.

2. The refreshments consist of tea and coffee, sandwiches of all kinds, rolled bread and butter, cakes, aspic jellies, chicken and game. Champagne is always provided, and is handed round by the waiters. The buffet is placed at the top of the room denuded of furniture, or along one side with servants behind to pour out. The wedding-cake stands in the centre of the buffet surrounded by white flowers upon a white satin or *crepe* table-spread embroidered with silver.

3. The guests are received with a handshake by the hostess, who stands close to the drawing-room door. They say their words of congratulation and then seek out the bride and bridegroom by the fire-place, utter kind words and go to inspect the presents. All then adjourn to the tea-room in the following order: Bride and bridegroom, bride's father with bridegroom's mother, bridegroom's father with bride's mother, best man with chief bridesmaid, the remainder of the bridal party. Then follow "all and sundry" without prescribed order of precedency.

4. With glass of champagne in hand, the officiating clergyman, or some old friend of the family, briefly proposes the health of the happy couple, the bridegroom replies and the bride cuts the cake, a small portion of which is handed by the butler to each guest, and no one must decline receiving it. The bride then retires to change her dress and leaves the house for her marriage tour amid showers of rice.

VII. INVITATION TO DINNER.

1. The mode of reply to an invitation to dinner is governed by the mode of invitation. To a formal invitation the reply will take this form: "Mr. and Mrs. Burton accept with pleasure the kind invitation of Mr. and Mrs. Andrews to dinner on——of——at 8 p.m." (The day and hour are repeated in the acceptance to prevent mistake). Whatever the style of invitation the answer should be prompt, and the subsequent discovery of inability to be present (never except for the gravest reasons, e.g., family affliction, illness, or a royal "command") should be intimated at once. If one of an invited couple is obliged to withdraw, it should be left to the hostess to say whether she desires the presence of the other. As the hostess never asks anyone but a friend to fill up a blank ("the young man from Whiteley's" excepted), it is best for the stop-gap good-naturedly to accept, but the hostess ought verbally to acknowledge the compliance as a favour.

2. The time of arrival should not be more than 5, or at the most 10 minutes, after the hour named. Husband and wife do not now enter the drawing-room arm-in-arm, but the lady goes a little in front, and both make their way at once to shake hands with the hostess and then with the host, without looking right or left to salute other friends. This imperative duty having been performed, the lady visitor takes a seat, but the gentleman remains standing and converses with any one he knows. The only introductions made are those between the lady and gentleman who will go down to dinner together. The gentleman bows to his partner, but does not shake hands, and makes small talk until the announcement of dinner. When the move to the dining-room is made, the gentlemen offer the ladies the right arm (because the lady will sit on their right side at table), the order of precedency being indicated by a nod from the hostess.

3. The following remarks refer to the usual observances at table:—(1) The guests unfold their serviettes and place them across the knee, not like foreigners who fix them inside their collar. The little nosegay inside the serviette makes a buttonhole. (2) The menu card is glanced at, not deeply studied, for conversation, however light, must flow on uninterruptedly. The gentleman's first duty is to talk to the lady he "took down," but if during dinner she is briefly conversing with the gentleman on her right, he may talk without introduction to the lady on his left. (3) Should the carving be done in the old English fashion at the table, an opportunity is presented for one of the gentlemen who flank the hostess to offer his services. This should never be done by an inefficient carver, nor should a carver ever stand up to perform his task, however difficult. Bad carving tortures the heart of the smiling hostess and leaves the dish unsightly. (4) Three or four wine glasses stand at the right hand of each guest with a square of bread (intended to be broken, not cut) on the left. The small tumbler or the wide-cupped glass is for champagne, the ruby-coloured glass is for hock, the smallest for sherry and the green one for claret. Sherry is offered with soup, champagne with the first entrée, and then throughout the dinner. Hock or chablis is offered with fish, but there is no need to partake of all or any of these. Some people limit themselves to claret or whiskey and soda, and others to plain water. Syphons of Apollinaris, soda water, lemonade, &c., stand on the side-board, and liqueurs (Chartreuse, brandy, Kümmel, benedictine, &c.) are offered after ice-pudding.

4. The following hints are offered to the very few who may need them:—

(1) Knives and forks are arranged in a fixed order. The table spoon is for soup, which must be eaten (need we say noiselessly?) from the side near the point. The fish knife and fork are placed outside the others ready for eating the fish which follows the soup.

(2) In helping yourself to dishes handed round, act quickly, and have regard to the wants of others, neither taking a miscroscopic portion nor a huge one. Never take two helpings of soup or fish even if asked, nor a large quantity of sauce. If you want a second supply of the joint, leave your knife and fork upon plate when sending it to the carver.

(3) Aim at noiselessness both as regards eating, drinking, breathing, and every other possible source of disagreeable sound. Do not speak or drink with food in your mouth. Keep the moustache free from traces of soup, and use only the serviette in wiping the mouth.

(4) Eat curry with spoon and fork; sweet breads and vegetable entrées with fork alone, holding it in the right hand; oysters served on the shell with a fish knife and fork; fish rissoles and fish hors-d'œuvres with fish fork only; salads with knife and fork.

(5) Never use knife or spoon if a fork will do. With ice pudding or ices use a small spoon.

VIII. FUNERALS AND MOURNING.

1. After a death write to all relations and intimate friends on a black-edged sheet of good note-paper a simple notice of the event. At the same time a communication should be sent to certain daily newspapers and to such weekly journals (e.g., "The Guardian" or "The Army and Navy Gazette") as circulate among friends of the deceased. In the case of a returned colonial the words are often added: "Australian, Canadian, or New Zealand papers please copy."

2. Invitations to the funeral follow in a day or two: "The family of the late . . . . request the honour of your presence at his funeral on——at 3 p.m.," &c. (signed by the male head of the house).

3. The dress of the chief mourners is, for ladies, woollen materials trimmed with crape; and, for gentlemen, black suits and ties, black gloves, and a plain black hat-band.

4. Friends send their cards after the funeral "with kind enquiries," and in due time a printed card in return comes "with thanks for kind enquiries."

5. Widows do not now universally wear "the widow's cap" which used to be obligatory for a twelvemonth, but for this period they wear their "weeds" generally as follows: crape dress, large black silk cloak, crape bonnet and veil, plain muslin collar and broad cuffs.

6. "Deep mourning" is considered to be woollen fabrics and crape, the crape covering the dress completely for the first year. Even diamonds may now be worn with deep mourning. "Second mourning" is dull black silk or cashmere, with or without crape. "Half mourning" is black and white. "Complimentary mourning" black without crape.

7. Time of wearing mourning is as follows:—

(1) For a *wife*, the widower should wear mourning for two years.

(2) For a *husband*, the widow should wear deep mourning for the first year, the crape being gradually reduced during the next nine months, and plain black for the remaining three.

(3) For a *parent*, twelve months, plain black being worn all the time.

(4) For a *child*, the same as for a parent.

(5) For a *brother*, or *sister*, six months—half mourning during the last month.

(6) For a *grand-parent* nine months.

(7) For an *uncle*, *aunt*, *nephew*, or *niece*, three months.

(8) For a first *cousin*, six weeks.

N.B. A wife "mourns" for her husband's relations as for her own, the same rule applying to the husband.

Mourning rings and memorial cards are out of fashion.

HINTS ON ENTERTAINING.

I. JUVENILE PARTIES.

1. The best time for these is winter, when the roaring fire inside and the Christmas evergreens still decking the apartments, with the mistletoe in its time-honoured central position, seem to usher the young band into a new world after tramping through the snow or having their blood sent pulsing through their veins by the sharp air outside. The hostess knows that not one *blasé* guest will be found to-night; no mock thanks for all her trouble and pains; but genuine enjoyment on the part of both seniors and juniors. The invitations on "At Home" cards should be

written by the children of the house, and the "play-name" ("Billy" and "Molly"), without surname, is sufficient among intimates. "Master," "Miss" are used for new or distant acquaintances. The receivers are the children themselves, the mother standing in the background.

2. When all are assembled and have taken off their "things," the impatient guests, led by the eldest boy of the house and the little girl whom he chooses for his partner, form a procession to the tea-room, where the table should be radiant with bright colours, preferably pink for the shades, candles and sweetmeats. Homely things (notwithstanding the doctor's warnings) must for this occasion be eschewed, and all that can tempt the eye as well as the appetite be exhibited in profusion. Care must be taken that there is enough for everybody, for children love "a good feed." The children's tea-table is presided over by the eldest daughter of the house, or the governess or some lady who acts as lieutenant for the mistress. The "up-growns" are simultaneously at tea in another room served by servants from behind the buffet, the gentlemen waiting on the ladies. The hostess meanwhile is "here, there, and everywhere," but her prime duty is to the children.

3. Games should be under the charge of a sprightly young lady, who knows a number of games, shows how they ought to be played, and peremptorily insists on the order in which they shall be played. A whimsical youth who interferes with her directions must be ignored. No time should be wasted between one game and another. "Musical Chairs," "Brother I'm Bobbed" (especially with boys), "General Post," "Blind Man's Buff," "Puss in the Corner," are always favourites. For a simple dance-game nothing beats "The Muffin Man." Movement is the grand secret of entertaining children. The "Christmas Tree" is a somewhat costly business if the children are above the ordinary class. Most children love dancing, especially a polka, an easy waltz, and "Sir Roger de Coverley." In Scotland there are few, however young, who cannot acquit themselves creditably in the "Highland Schottische" or a reel.

4. Before leaving, lemonade or claret cup, sandwiches and cakes are served.

II. GARDEN PARTIES.

1. Invitations are sent on a large square "At Home" card in the name of the hostess about three weeks before the appointed day. After the name of the guest, add "and party," and in one corner write "tennis," "archery," &c. The hours (3.30-7) should also be specified. No thought of difference of age need restrict your freedom of invitation; for old, middle-aged, and even children enjoy the bright afternoon on the lawn in August or September, which are the favourite months for garden parties. "Weather permitting" is not often written on the card, and the guests are expected to come notwithstanding a few showers, and unless there is a "regular down-pour" of rain. Of course the reception-rooms inside the house will in the latter case take the place of the lawn for the gathering.

2. The lawn should be closely mown and present the trim appearance which is never seen out of our own country. A few tents with bright coverings, or flag decorations are put up here and there on the grass, labelled with the purpose to which they are devoted: "Fortune telling," "palmistry," "refreshments," &c. If there is a band, a "stand" will be required, placed in the centre of the lawn; if pierrots, a stage with dressing-room attached. Garden chairs, settees, deck-chairs and the like are placed up and down in abundance, and rugs for the feet of those who are sensitive to damp. Shawls should always be easily available. A "Punch and Judy" show is sure to be popular with children.

3. The hostess stands on the upper part of the lawn or at any point where she can readily be seen, so that the guests may at once come and shake hands, and introduce the friends they have brought as "party" before they mingle with the crowd and seek out their acquaintances. The hostess does not at a garden-party introduce people, but leaves them to find their own friends.

4. As regards refreshments, tea and coffee are served on arrival either in the marquee or in the house, and are afterwards replaced by ices, champagne-cup, claret-cup, strawberries and cream, grapes, peaches, melons, &c. Effervescing drinks are sure to be in demand in hot weather. The hostess does not look after your bodily wants, but expects you to go to the buffet and ask from the servants whatever you require. Gentlemen wait upon ladies whom they know.

5. If a military band is to play, the host will take care to ask permission of the colonel before negotiating with the band-master, the charge for the performance, the method and cost of conveyance, the refreshments expected, &c. The host will also arrange for the conveyance of reporters if their presence is desired, and see that they are well regaled. "Gentlemen of the press" have much in their power, and can easily glorify your "function" or damn it with faint praise.

7. Costume will depend upon the nature of the amusements; but ladies should wear bright colours, and hats and frocks, in harmony with the season; gentlemen wear morning dress, but the silk hat is not *de rigueur*, now that straw hats are so tastefully and "dressily" made. Perhaps in town and the home district it is well to adhere to the silk hat. It is not necessary to say adieu if the hostess is not at hand, nor to call after the party, but some people leave a card as they pass out, both as a record of their presence and a courteous acknowledgment of the pleasure they have received.

III. DINNER PARTIES.

HINTS TO THE HOSTESS.

1. A dinner given to guests should be more marked by elegance than profusion. "Non ampliter sed munditer convivium; plus salis quam sumptus" (Corn. Nep.) = "An entertainment should be refined and finished rather than a prodigious spread; there should be more of exquisite taste than vulgar display of expense." Beauty and comfort should enter into all the appointments of a high-class dinner; table decorations, lustrous, i.e., well-cleaned silver, brilliant crystal, fancy venetian glasses, spotless napery, variegated lamp-shades, well-regulated temperature according to the season, and every detail which pleases the eye and gives the sense of comfort as soon as the dining-room is entered. A country farmer thinks of what he will eat and drink, a lady and gentleman look upon a dinner as an æsthetic feast. The progress of civilisation is by nothing more marked than by the suppressing or subduing of mere animal gratification to a love of the fine arts, and of these, refined dinner-giving is surely one.

2. First comes the question of table decorations. A white cloth of the finest linen damask is spread with great exactitude on the table. Down each side and along each end of a carved oak table may be placed long and short slips, which are drawn off at the conclusion of dinner, and before dessert. A very handsome table decoration placed in the centre is an Indian or Japanese silver cloth. Some ladies affect a centre plateau of plate glass, placed with small water-fowl on its surface supporting bouquets of flowers, and round the edges are bright-coloured flowers or green ferns placed in long glass troughs. Less pretentious, though not so effective, is an oval board, covered with crimson plush, on which are grouped clusters of small glass or china vases with flowers. The abolition of the old *epergne* and its replacement by low floral decorations, permit of all the guests seeing each other and of the host and hostess surveying the whole proceedings. The flowers are not clubbed together in large groups but are scattered up and down the table in harmony with a preconcerted plan of decoration. They should always be of the choicest kind, and ferns and moss should be used to assist the general effect. To give the idea of naturalness, long branches of roses, roots and all, are sometimes laid along the table: the roses wired to the stem, the roots carefully cleaned and then partly veiled in asparagus fern. If a set design

is preferred, long sprays of orchids and ferns radiating from the centre of the table, flowers placed in straw gondolas, or as if growing on cork trees whose green wire boughs are covered with ferns, are used with beautiful effect. We have seen a whole table look very beautiful by being encompassed right round by a trellised arrangement of sweet-peas rising from water troughs placed at a convenient distance from the diners, the brass *chancellerie* not being too high.

3. What then is the general appearance of the table when the guests enter? No wine is seen on it, no solid food. Knives, forks and spoons and the silver nut-crackers are there and a few carafles of clear spring water. The coloured candles in silver candlesticks, or jets of electric light in tiny globes, or lamps veiled with ruddy shades, pour their soft radiance over the scene. "Grapes in their own green leaves, strawberries and cherries piled high on their respective dishes, apricots and plums ensconced each in a separate leaf, so that they may not be robbed of their delicate bloom by too close contact with their fellows—pines and melons taking their stand as the chief personages. Mingled with all these fruits, sprays of fern and ice-plant give a cool and refreshing appearance to the dish. Crystallized fruits sparkle and glitter; the more sober walnut and filbert, disdaining decoration of any kind, as unbecoming to their respective characters, complete the list of after-dinner delicacies," (Lady Colin Campbell "Etiquette of Good Society").

4. Next, of what should a fairly representative guest-dinner consist? We are not encouraging extravagance nor parsimony if we say that after the appetizers (Hors d'œuvres) such as olives, anchovies, caviare, sardines, &c. (which after all are not essential), soup, fish, two entrées (hot and cold), a joint and fowl as pièces de résistance, game, ice-puddings, sweets, savouries, cheese in its multiform preparations, and dessert, make a dinner quite good enough for any but gourmands or gourmets. Of course we are thinking of entertainers with moderate means.

5. A few plain words on various matters connected with the giving of a dinner party, for which the hostess is more or less responsible, may here be given:

(1) Invitations are sent on "At Home" shaped cards about three weeks beforehand, in some such terms as these: "Mr. and Mrs. A. request the pleasure of Mr. and Mrs. B's company at dinner on — of — at 8 p.m." Of course on unceremonial occasions the notice is not so long, nor the style of invitation so formal.

(2) In many houses little cards lie on the hall table downstairs to inform the gentlemen who are their partners; but in others the arrangement is told in the drawing-room, and the necessary introductions made.

(3) In moving to the dining room, the host leads the way with the principal lady, and the hostess closes the procession with the principal gentleman, the order of precedency being indicated by a nod from the hostess.

(4) The host, with the principal lady on his right, remains standing until the guests have all found their places under his guidance, the hostess occupying the head of the table with the principal gentleman on her left.

(5) At the conclusion of dinner, the servants prepare the table for dessert. A dessert plate bearing a d'oyley, finger glass, and silver knife and fork is placed before each guest. (Great beauty is often seen in hand-painted d'oyleys.) The wine is put on the table in front of the host, and handed once round by the butler with the question, "port, sherry, or claret?" After handing the various kinds of dessert to each of the guests, the servants leave the room.

(6) In a short time the hostess "catches the eye" of the leading lady-guest, rises, and the ladies rise with her to make their way to the drawing-room.

(7) The host now passes to the chair at the head of the table. After a glass or two of wine the gentlemen drink coffee and liqueur, smoke a cigar or cigarette, and rejoin the ladies, who have already had coffee. Tea follows; music is sometimes introduced, and carriages are announced at 10.30 or 11.

IV. MYSTERIES OF A MENU CARD.

Have you ever watched the countenance of the untravelled Englishman who is brought face to face at *table d'hôte* or *dîner à la carte*, with a menu card written in French or German, and whose decision as to what he will select is somewhat impatiently awaited by the sarcastic garçon who can "be silent in six languages?" We know the puzzled look, the painful hesitation, and the final throb with which the only words the Englishman recognises on the card are gasped out: "rosbif," "biftek," "omelet." He will live upon these dishes for weeks rather than display his ignorance of the terminology or trust himself to the unknown contents of the enigmatic card. We shall endeavour to assist him in deciphering its mysteries.

1. Let him recognise at once the very small force that lies in the ever-recurring prepositions "au," "à la," and "en."

To begin with "au." Well, "au four" = something baked in an oven; "au gras" = meat dressed with rich gravy or sauce; "au gratin" = dishes prepared with sauce and bread crumbs; "au maigre" = Lenten dishes made without meat; "au naturel" = simple, plain ("pommes de terres au naturel," are potatoes cooked as any farmer's wife would do them); "au jus" = meat dishes with natural juice or gravy; "au beurre noir" = anything done in brown butter; "au lait" = in milk. The upshot is that all this mysterious language has no concern with you the consumer, but simply describes a culinary process.

Next, as to "à la." This is a contraction of "à la mode de," and is an inflated invention of French cooks to please some grandee after whom they name their soups or sauces, or else a kind of geographical dedication. Thus, "à la Russe" = in Russian style; "à l'Allemande" = in German style; "à la fermière" = in farm-house style; "à la Flamande" = in Flemish style; "à la gitana" = in gipsy fashion; but "à la Maintenon" and a thousand other similar dedicatory "*à la's*" mean no more than the complimentary dedication of a volume of poetry by Dryden and the old poets.

Lastly, as regards "en." This generally refers to the article in which a dish is served or dished up as, e.g., "en serviette"—served up in a napkin. You see then that all these terms need not prevent you from making a deliberate choice of what you actually want for your dinner. Look for the substantive and ignore the qualifying clauses.

We shall now give you a specimen of a very elaborate French Menu, and translate it so that you may see how by a little knowledge of the French names of fishes, birds and fruits, you can thread your way through what at first sight seems a labyrinthine maze.

Suppose we take the menu of the dinner given by the Corporation of London to the Emperor Napoleon III., April 19, 1855.

POTAGES.	SOUPS.
Potage de tortue clair.	Clear turtle soup.
Bisque d' écrevisses.	Shell-fish soup (cray-fish).
Potage de nids d' oiseaux chinois.	Chinese birds' nests soup.
Consommé de volaille.	Clear poultry soup.
ENTRÉES CHAUDES.	**HOT ENTRÉES.**
Cailles aux fines herbes.	Quails and sweet herbs.
Côtelettes d' agneau aux haricots verts.	Lamb cutlets with green beans.
Ruffs en caisse.	Small birds ("Ruffs") set in a paper fringe.
Petites bouchées à la Reine.	Small puff-paste patties (dedicated to the Queen).
ENTRÉES FROIDES.	**COLD ENTRÉES.**
Filets de truites à la Ravigote.	Fillets of Trout with a piquant sauce, ("Ravigote.")
Foies gras de Strasbourg.	Fat goose liver from Strasburg.
Gâteau de ptarmigan aux truffes.	A round flat cake of grouse with truffles.
Chaudfroid de bécassines.	Snipes dressed while hot and to be eaten cold.
Mayonnaise de turbot aux laitues.	Mayonnaise of turbot with lettuce.
Blanquettes des volailles à la gelée.	A stew made of fowl with jelly.

GROSSES PIÈCES.	LARGE DISHES.
Paönneaux à L' Impératrice.	Peacocks (dedicated to the Empress).
Hure de sanglier à la Bohémienne.	Wild boar's head in Bohemian style.
Gros saumon à la Royale.	Large whole salmon (dedicated to Royalty).
Dinde en galantine à la Parisienne.	Galantine of turkey in Paris style.
Cochon de lait à la Napolitaine.	Sucking pig in Naples style.
Jambon de Salisbury au vin de Madère.	A Salisbury ham done in Madeira wine.
Baron of beef.	(A relic of old times weighing from 40 to 100 lbs.)
ENTREMETS.	BETWEEN DISHES.
Buisson de truffes de Périgord.	A bunch of truffles from Périgueux.
Buisson d' œufs des pluviers.	A cluster of plovers' eggs.
Petits pois au naturel.	Plain green peas.
Asperges en branches.	Asparagus.
Patisserie.	Pastry.
Crême à la vanille.	Vanilla-flavoured cream.
Suèdoise d' abricots.	Swedish apricots.
Compôte d' ananas.	Stewed pineapple.
Brioche à la Saxonese.	Butter cakes in Saxon style.
Baba à la Polonaise.	A Polish substitute for tipsy cake.

We have chosen this luxurious specimen from scores of menus that lie to our hand, not because there is much prospect of many of us being "commanded" to dine with an Emperor, but because we believe that if you master this you will not have much difficulty in understanding much simpler bills of fare. If you want a gastronomical dictionary you must go to Senn or Francatelli; we are merely your humble interpreter. Young housewives will find in any good cookery book suggestions for constructing a menu card with the appropriate technical terms written in French. As the Frenchman deifies sauces, and satirizes England as "a land with a hundred religions and one sauce," we may mention that the four great classical sauces used by *chefs* are: Espagnole, Velouté, Allemande, and Béchamel (named from its inventor, in the time of Louis XIV).

HINTS ON PUBLIC SPEAKING.

1. "Knowledge," says Lord Beaconsfield in *Endymion*, "is the foundation of eloquence." And this is a dictum of golden value. Before an orator can pour out streams of useful eloquence, no matter how richly he may be endowed "with the fatal fluency of speech," he must have mastered the subject on which he speaks. Let us first of all assume that you are familiar with your topic in all its available bearings, many of which perhaps you may not find it possible or desirable to introduce into the limited speech you are about to deliver. It is well, however, always to have a reserve fund, especially if you may have to reply in the course of debate to criticism more or less formidable. This will give you a sense of strength, and sometimes of joy, as you watch your opponent floundering in misapprehensions, misstatements, and general want of accurate preparation and firmness of grip of what you have wholly made your own. The late Lord Randolph Churchill would sit up two or three nights in succession in order that he might master a Blue Book which contained the matter upon which he was about to assail Mr. Gladstone's foreign policy. Let us then reiterate our first counsel to you—*Grudge no trouble in preparing your material.* Of course we are thinking now of serious oratory. We will deal with its lighter exercises by and by.

2. Considerable skill is required in the selection of suitable, serviceable, and telling matter. Never overcharge your speech with minor details and long rows of figures, running in money down to half-pence, and in weights and measures to three places of decimals. All this is well enough if you are proposing the adoption of the report of a Bank or Railway Company or any public body who prints in draft a financial statement, a copy of which your hearers hold in their hands while you are commenting upon it. But in ordinary cases deal with round numbers and broad facts, as all the great Chancellors of Exchequer from Peel and Gladstone downwards have done in submitting their Budgets to Parliament. Many a speech is "a weariness to the flesh," notwithstanding its substantial excellence. There is still force in the Biblical phrase "a word *in season.*"

3. After long and varied personal experience of addressing public assemblies, we have no hesitation in saying that the most effective element in compelling attention and enlisting sympathy, is the employment of simple and direct appeal to the audience. Elaborateness and turgidity alienate; simplicity and directness conciliate and persuade. The tyro in public speaking can do nothing better than study John Bright's speeches and Mr. Spurgeon's sermons. Whatever may be his political or religious predilections he will find in the works of these two "masters of assemblies" all the elements of successful and artistic appeal to a popular audience. We feel bound to urge again the prime virtue of *Simplicity.*

4. As regards *arrangement.* Necessarily there must be a few prefatory remarks by way of exordium, but the student of public speeches must have noticed that these can generally be picked up by following in a modest and grateful spirit the kind words uttered by the chairman of the meeting in introducing the speaker. It never does any harm, but rather the opposite, to express a diffident sense of fear lest the introduction in such flattering terms should end in disappointment. This personal note should, however be very brief and not overdone,—a lesson to be learnt from our most distinguished modern speakers from Mr. Chamberlain downwards. They all seem anxious to get "to business" as soon as possible. Plunge then at once *in medias res.* But remember that the human mind requires a beginning, a middle and an end in all its reasoning processes. Therefore state the elementary proposition which you intend to elucidate as soon as possible, and do this with confidence, as if you could not conceive that there could be any hesitation as to its acceptance in the mind of any reasonable human being. This was Bright's distinguishing characteristic. He never paltered with possible objections, or left on the mind of his hearers the feeling that he was not fully convinced in his own mind. It must be left to others to raise objections, you yourself must be "square-shouldered." After enunciating your main proposition slowly and sometimes with varied reiteration, you must proceed to support it with the best arguments you can command. But it is always well to give them a cumulative force. Put the weakest argument first, but do not treat it as weak. Do it full justice and then pass on to that which is stronger, drawing into it anything of worth from its predecessor. And so on to the end, building up a growing palatial structure until you arrive at the roof and the turrets. We dwell upon this with emphasis, because we have often watched the effect on the mind of an audience when the grand cumulative assault with its battering rams shatters the citadel of the enemy. Perorations are now out of date. At the same time, as you will notice in the rhetorical conclusions of our present great Parliamentary leaders, a few glowing sentences, if crowned with a line or two of telling poetry, make an effective *denouement* to an argumentative speech. Even a couplet from a well-known poet fires the feelings of your hearers better than half-a-dozen stanzas from some metaphysical or difficult author such as Browning, and a pat anecdote, if really good, never fails to win the applause of your audience.

5. As regards *diction.* The days of involved sentences and periodic structure are over. The last successful imitator of Burke was Mr. Gladstone. Perhaps the best representative of modern high-class oratory is Mr. John Morley. Every sentence tells, because it is not only simple in structure, but severely simple in diction. The words are the words not of Dr. Johnson, but of Dean Swift and Matthew Arnold. Julius Cæsar counselled young speakers

to avoid an "*insolens verbum*" (an out-of-the-way word), "as a mariner avoids a rock." Make then your language as simple as the words of the Authorized Version of the Bible, or of Wordsworth, Newman or Froude. You are permitted to be homely but never vulgar. "Slang" is not simplicity but the corruption of language. In a scientific or commercial address technical accuracy is the great aim of language, but in political and general speeches, you should travel by "the king's highway," using the well-established usage of our magnificent English tongue. Allusions to obscure authors savour of pedantry and are of no practical use in a popular address; but a reference to some of the well-known characters in Don Quixote, Scott, Dickens or Thackeray can often be turned to good account.

6. A few words on "externals," such as *Attitude* and *Gesture*, may not be amiss. The speaker should avoid any eccentricities in pose or gesture such as the caricaturist might reproduce, of course with exaggeration. An Englishman never knows how to dispose of his hands. Accordingly, one speaker plunges them into his trousers' pockets; another, Pickwick like, places one under his coat-tails while he saws the air with the other; a third folds them like Napoleon across his breast; a fourth like Lord Holland (whom Sydney Smith corrected) raises his arm from the elbow-joint, when he wishes to be emphatic, and moves it perpendicularly up and down like an automaton, or a chopping-machine; while a fifth, like the late Mr. Lecky, raises each arm in turn like a semaphore. We will venture to give you a few plain cautions and directions upon very elementary matters as regards posture, gesture and voice management:—

(1) Stand well to the front of the platform within easy reach of the desk upon which your notes are placed. (These notes, by the way, should not be too numerous, and should be either type-written or hand-written in bold character.)

(2) Do not turn in your toes but place one foot a little in front of the other and stand erect.

(3) While you are supposed always to address the chairman—a fact which you acknowledge by the frequent introduction of "Sir" in your remarks—never turn your back or side to your audience even if you have a large number of "backers" on the platform. Aim your words straight into the audience and remember that your voice must travel to the extreme end of the room.

(4) Do not push forward your head or lower your voice at the end of a sentence, and do not "duck" or "curtsey" as your warmth increases.

(5) Let your gesture be sparing, but when it comes germanely to your subject, extend the whole arm from the shoulder with the hand outstretched, not from the elbow with the fingers clenched or bent. In appeals, stretch both hands, palms upwards, to the audience. As the peroration approaches and you wish to convey the notion of certain victory to your contentions raise your right arm higher, and at the end, as if cheering the final triumph of the truths you have been fighting for, you may accompany your last few sentences with a swift rotary motion of your hand above your head. (Never was there a master of gesture to compare with Mr. Gladstone, who had an endless variety of attitudes and gestures for sarcasm, banter, exhortation, denunciation, pathos, defiance and victorious self-confidence.)

(6) The great secret in the management of the voice is to measure the capacity of the hall. You will remember how Canon Liddon, with anything but a strong voice, filled St. Paul's by his choosing the right register and the "carrying note" suited for the particular building. It is well to visit the hall beforehand with some two or three friends who will sit in various places and tell you how they hear. Of course you will make allowance for the difference between a crowded hall and an empty building.

7. We may add a few remarks on LIGHTER SPEECHES—speaking to toasts, proposing a bride's health, etc.

Here very little that we can suggest can be of general use, for everything depends upon the readiness, good taste and intelligence of the speaker. We may, however, give a few cautions as to what should be avoided:

(1) In proposing a toast, remember that the object is to please and do honour to the subject of it. Accordingly you will single out from his life and character such things as can honestly be placed to his credit, and with a little garnishing can be stated in the presence of his acquaintances without exciting the feeling that you are fulsome in your praise or extravagant in your estimate. No man has a right to undertake this task unless he is in sympathy with it. He must remember that he is not asked to give a critical review or even a biography of his subject, and therefore he may conscientiously pass over many faults and bring into relief virtues which the speaker knows he possesses.

(2) Avoid referring under the guise of praise to any past incident in his life of which he might not like to be reminded. We have heard of an orator proposing the health of a Mayor of an English city—a "self-made man" with the words, "By dint of his own efforts and abilities he has raised himself from the very dregs of society."

(3) The highest test of graceful oratory is the proposal of a bride's health at the wedding breakfast, or now more commonly the "reception." This is one of the few occasions upon which we would advise the speaker to write his speech and commit it to memory. The sentiments should be highly respectful, the language somewhat roseate, the hopes genial and affectionate, and the good wishes warm and tender. Brevity, good taste and kindness are the ingredients of a good bridal speech.

(4) In moving votes of thanks at a meeting, many speakers make the mistake of being too long. They really give an independent contribution to the subject and then tack on the vote of thanks in a sentence, forgetful that the audience has already most likely had enough, and that such a summary and perfunctory tribute to the chairman or speakers can hardly be considered complimentary by them. It is quite permissible to give a brief résumé of the main drift of what has been maintained, of course in a sympathetic spirit, but "the briefer the better."

DUTIES OF A CHAIRMAN.

A. PUBLIC MEETINGS: The Chairman of a Public Meeting may have statutory rights, or he may be elected to the office by the voices of those present, or he may enjoy a merely ornamental post accorded to him by the invitation of the organisers of the meeting who are influenced in offering him the chair by considerations of his social rank or his special knowledge of the subject to be treated at the meeting.

We may have a *statutory chairman*, e.g., the head of a Town Council, School Board or any Corporate body where the functions and privileges of the chair are defined by statute as well as the length of its tenancy, and the capacity of the meeting to transact business in the absence of the chairman. Here a chairman has great latitude of power, but is also controlled by the traditions of his office, the reasonable expectations of the public, and the sense of responsibility which a wise and capable man will never attempt to evade. Your first duty then as chairman is to acquaint yourself thoroughly with the business which lies before your board at any particular meeting. Nothing is more irritating to a body of business men than to sit under the presidency of a chairman who opens the proceedings in obvious ignorance of "the card," and who therefore is compelled to turn to the clerk for instruction in matters of which he should be the authoritative exponent. In opening the business, *avoid speech-making*. Take the items as they occur on the card, and say no more than is absolutely necessary for making the point to be discussed clear and definite. Be careful not to appear as if you were anxious to force your own view upon the meeting, and if possible do not make the first motion. A suspicion of partizanship is ruinous to your moral influence in the chair. As a rule a friend can easily be got to undertake a motion embodying your views, and you can sit silent until the moving and seconding have been done, and an amendment has to be called for. Of course you will allow no speech ever to intervene between any mover and his seconder, no matter at what stage of the proceedings. Allow no amendment which does not contradict some essential portion of the original proposition. For example, if the original motion were "To-morrow we

will dine at Greenwich upon whitebait," it is no amendment to say, and "after whitebait, mince-pies shall follow." This is a rider, not an amendment. But if "the day after to-morrow" be substituted for "to-morrow," or "Richmond" be substituted for "Greenwich," the amendment in either case is competent as such, because it contradicts (or "amends") the original motion in an essential particular. You will, therefore, never allow a rider to be put *against* the original motion. The rider must wait until the original motion is disposed of, and if the latter survives the rider may be tacked on to it and put to the meeting as an addendum.

You may sometimes have a difficulty in settling the order in which amendments should be put, and you will often find clamorous appeals for the amendments to be put in the order in which they were proposed. You are entitled to resist this, and to choose, in the absence of any standing rule to the contrary, what you consider the logical order best qualified to bring out the true sense of the meeting. You are not, however, at liberty to put them in such an order as to give an advantage to any particular faction. "Fair and square" is your only safe and right motto in doing your duty as chairman, and a few words may at times be useful to explain why you have chosen a particular order. The following rules indicate the right way of dealing with amendments:—

(1) No amendment must be proposed which would be tantamount to a direct negative of the entire motion.

(2) An amendment must be seconded in the same way as a motion, otherwise it must drop.

(3) When an amendment has been moved and seconded, it should be stated from the chair before the debate is allowed to proceed.

(4) There can be only one amendment to a motion before the meeting at one time.

(5) If this amendment is put and carried, it then becomes the substantive motion, to which another amendment can be moved before it is put and carried as a substantive motion.

(6) If the amendment is put and lost, the original motion is then open to the moving of another amendment, which, if carried, becomes the substantive motion.

(7) No person can move two amendments to the same motion, but a person can move an amendment to a motion, and if that be carried move another to the now substantive motion.

(8) No person should be permitted to move an amendment while an amendment is already under discussion. He should be caused to wait.

(9) Speakers should be rigidly kept to the subject of the motion or amendment under discussion, but a speaker may state, as a reason for opposing an amendment, that he prefers a method of dealing with the matter which he would embody in a subsequent amendment if the present one is defeated and got out of the way. He might be allowed to outline the amendment he has in mind, as part of his argument, against the existing one.

When you have sufficiently elicited the opinions of the meeting, you will put the amendment that has survived or, in the event of all amendments having failed, the original motion to the vote, first giving its mover the opportunity of reply. When he has made his reply, put the question at once, insisting on silence and that each member keeps his seat. Sometimes a motion called "the previous question" is proposed. It is so named because it is always put before the main question. It refers to the inopportuneness of discussion and is not necessarily hostile. We prefer a motion "to pass to the next business" which is plain in significance and unattended with technical complications. Such a motion—whether called "previous question" or not—takes precedence of all other amendments, and if carried the meeting must pass at once to the consideration of the next business.

As a statutory chairman you are supreme in all matters of order. You will be wise, however, to have a short code of "rules of order" drawn up by a competent man for your own guidance and the satisfaction of your board. These must have the sanction of the board before they become obligatory, but once adopted, they hold force until they have been amended after due notice given, and they do not die with the body that originally passed them. A newly elected board inherits them and is bound by them until they have been competently rescinded or amended. If your board has no code of its own you can only appeal for sanction to your judgments to the practice of the House of Commons, or of Town Councils in large cities, or (in Scotland) to the procedure of the General Assembly. "The Chairman's Hand Book" is a useful parliamentary guide book, but you are safer for ordinary work with a municipal code of "Rules of Order," a sketch of which you will find below. A statutory chairman should be first sure of his ground in settling a question of order, and then should be inflexible in adhering to his decision. If the meeting becomes mutinous he should leave the chair, after calmly giving warning of his intention so to do. He should never allow his decisions upon order to be put to the vote. Nothing passed after his leaving the room can have any validity. There is considerable doubt in many chairmen's minds as to the circumstances under which "dissents" may be accepted and entered. The rule is clear. No one is entitled to enter a dissent unless (1) he was present at the meeting which passed the resolution he objects to; (2) unless an amendment against the resolution was moved, seconded and a division thereon unavailingly taken, and (3) that the dissentient took part in such division.

SPECIMEN CODE OF STANDING ORDERS:—

(1) Ordinary meetings shall be held on the first and third Wednesday of every month.

(2) The Statutory Chairman, or in his absence, the Vice-Chairman, shall have power to summon special meetings for urgent business, either *proprio motu* or at the written requisition of five members; the special business to be placed on the card. No minutes of ordinary meetings will be read at the special meeting.

(3) Programme of business for ordinary meetings shall be circulated three days before the meeting.

(4) First business at all ordinary meetings shall be approval of past ordinary minutes, the only permissible discussion thereon being as to accuracy of record. Objections on this score must be moved, seconded, and voted upon.

(5) The Chairman shall preserve order and rule all "points of order" in accordance with this code; decide priority of speeches according to the order in which a member "catches his eye"; ask for the terms of a motion or amendment before a speech is delivered thereupon, if he thinks fit.

(6) In the case of disorder arising, the Chairman shall have power to adjourn the meeting to a time he shall fix, and his leaving the Chair terminates the business.

(7) In the case of equality of votes, the Chairman shall have a second or "casting vote."

(8) Notice must be given at an ordinary meeting of any motions to be proposed, other than those which arise directly from the subject under discussion.

(9) When a report is submitted by a Committee, the Convener, or Chairman of that Committee, shall have the right to move its adoption.

(10) Alterations or rescindments of *res gestæ* must be by notice of seven days, and motion proposed, seconded, and carried thereupon.

(11) Motions and amendments (always to be put in writing) shall not be withdrawn or essentially altered after they have been seconded, without leave of the meeting.

(12) "The previous question" or the motion "to pass to the next business" shall always have priority of all other amendments, and if this is carried, the meeting shall at once proceed to the consideration of the next business.

(13) The mover only of an original resolution shall have the right of reply, in which, however, he must introduce no new matter. Other members can only be heard (by permission of the meeting) to clear up misunderstandings with regard to an essential portion of what they have said.

(14) If a member rises to "a point of order," he must specify the rule in the code which he thinks is being violated, and the member who was in possession of the house shall sit down while the point of order is being discussed and settled. The Chairman only can rule, and while his rule is being given, the objector must sit down. The speaker shall then continue his speech, subject to the ruling given.

(15) Discussion shall cease if the motion that "the question be now put" is carried by a two-thirds majority, the mover of the original motion having been first heard in reply.

(16) At an adjourned debate, the mover of the adjournment shall be first heard.

(17) Questions, of which notice has been given, may be put (but without discussion upon either question or answer) to Conveners presenting a report, subject to the approval of the Chairman.

(18) Sub-committees must report to the Committees-in-chief before submitting their reports to the general body.

(19) These Standing Orders can only be suspended by a two-thirds majority.

B. COMMITTEE MEETINGS. The only differences we need here note between the procedure already described and procedure in committee are (1) that a seconder to a motion or an amendment is not absolutely necessary in committee, and (2) that whereas in a board or any public meeting no man can speak more than once upon the same motion, there is no limit to the number of times he may speak in committee. The method in committee is conversational, and the object to transact business as quietly and quickly as possible.

C. MEETINGS IN GENERAL. A few additional hints to Chairmen of meetings in general may be found useful:—

(1) Require all motions and amendments to be handed up to the chair in writing.

(2) Apply the rules of statutory meetings with patience, courtesy, and firmness.

(3) While keeping the general drift of discussion to the proposition in hand, be not for ever "tugging at the bridle." Allow a little liberty until it becomes evident that the speaker's prolixity or irrelevance is resented by the meeting.

(4) Save your own remarks, with the exception of a few opening expository sentences, until the close of the meeting, and then give a brief résumé of the lecture or speeches in a sort of judicial spirit without unnecessary strictures.

(5) The only occasions when you are allowed to give a lengthy and exhaustive speech as chairman, are such as the unveiling of a statue, or the annual meeting of a Railway Company or a Bank. Here you are expected to be the spokesman of your clients, and nobody else is likely to be disappointed if you say all that is relevant to the cause which has brought them together. The same considerations will guide you as to the character of your diction—florid, dryly scientific, or luminously expository.

DUTIES OF A SECRETARY.

It does not come within our province to give counsel to a professional Secretary. We venture to offer a few hints only to those who may not be fully conversant with the duties which such an office entails.

I. HINTS TO A PRIVATE SECRETARY.

A Private Secretary holds a confidential position with regard to his principal which can easily be defined. During the tenancy of his office and for long after—in fact the time of the cessation of his responsibility can hardly be prescribed—he is in a measure the *alter ego* of his chief. He reads all letters except those of a domestic and strictly personal character; and, if in the employment of a politician or high ecclesiastic, must naturally become acquainted with many things hidden from the public. In fact, he sees things in their initial and inchoate state, and may easily ruin many projects of his principal unless he observes the strictest secrecy and fidelity in what he may be tempted to disclose. We have known inducements placed before a subordinate official in the Foreign Office by a city merchant to reveal what would have affected the transactions of the Stock Exchange.

A very few general rules may be suggested for the guidance of a Private Secretary.

(1) Acquire a good style of hand-writing which may suggest as soon as seen that the letter you have written proceeds from a *gentleman*. Many styles of handwriting are either slovenly, commercial, or generally under-bred.

(2) Acquire a ready knowledge of short-hand and type-writing.

(3) Be very careful to use good English, free from provincialisms, Americanisms and "slang" in your memoranda for your chief, and replies to his correspondents.

(4) Throw in a good sprinkling of courteous phrases, however bald may be the substance of your secretarial communications. Many an aspirant for Parliament has lost votes through the dryness of his replies, or those of his secretary, to his correspondents in the constituency he is wooing.

(5) In the absence of your chief, when you are called on to receive deputations in his name, be courteous but reticent. Take careful notes of the topics brought before you, but avoid any semblance of committing your principal to any definite decision.

(6) Employ your leisure time in reading up widely any subject in which your principal is engaged. Your special knowledge is sure to be valued by a busy man, who is often debarred from acquiring it himself.

(7) Take care to have all the documents bearing upon a subject in hand well arranged, so that you can produce them readily when called for.

(8) To no one, however intimate, breathe one word of what is known to you through your position as "Private Secretary."

II. HINTS TO AN HONORARY SECRETARY.

An Honorary Secretary does a great deal of work for no pay, and if capable, conscientious and enthusiastic, is one of the most useful members of society. You are generally elected to the office on the ground of special fitness, owing either (1) to your known interest in the particular work of the Association, or (2) your social influence which can enlist subscribers and desirable members, or (3) your contagious enthusiasm and persuasive advocacy, a qualification which has much to do with the prosperity of a public cause. The combination of these three recommendations makes an ideal secretary, whether honorary or paid. We will now offer a few practical suggestions.

1. Get a minute book, well-bound, paged, and with an indented alphabet-index at the beginning or end. Your book had better be of quarto size and the title printed on the front cover. As the book is supposed to endure for some time, and may become a permanent document or archive, it is well that the paper should be good and the binding full leather or morocco.

2. One of your first duties will be the drafting and issuing of APPEALS. Now considerable skill is required in drawing a good appeal. Let us, e.g., suppose that you are the "hon. sec." of a Queen Victoria's Jubilee Nursing Association for the nursing of the sick in their own homes. In your appeal you will naturally touch upon the following points:—

(1) The claim the Association has upon the generous support of the public from its being the creation and personal memorial of the revered Sovereign who was in so many ways "the Mother of her people."

(2) From its beneficence towards the sick poor, who under its help, can from their beds in their own homes exercise some amount of direction and supervision of household affairs, which would be quite impossible were they to go to the hospital.

(3) The educative value of a trained nurse entering a house, where even the most rudimentary notions of sanitation, ventilation, the vigorous use of soap and water, and temporary separation of the invalid are utterly unknown.

(4) You will then give from the Head Sister's log-book, several striking and pathetic illustrations of the good done by the Association during the last year.

(5) You will conclude with an earnest appeal, not too importunate in its terms, for continued or increased support; i.e., you will assume that your advocacy is its own recommendation to an intelligent and philanthropic public.

3. Let us next consider your duties (A) at a Committee meeting; (B) at a Public Meeting with the necessary preliminary arrangements for each.

A. COMMITTEE MEETINGS.

1. You will put upon the card of business (which should always be printed in outline with date and place of meeting filled in in MS.) the various items which will come up for consideration, adding always at the end "other competent business, if any."

2. You will at the meeting intimate apologies for absence; vacancies that have occurred in the Committee since last meeting by death, resignation, removal from the neighbourhood, or disqualification by accepting from the Association a post of emolument, &c., &c.; and then at the call of the chairman proceed to the reading of the Minutes of the last meeting.

3. MINUTES. These have been written by yourself and are subject to the revision, acceptance, or rejection of the Committee.

Endeavour therefore to give an exact historical record, without comment of yours, of what was transacted at the last meeting of Committee, with notice of defeated motions, names of those present, and who in the chair, with place, date and hour. No arguments or speeches can be recorded. Your minute will read, e.g. "On the motion of the Chairman, (or of Mr. X.), it was agreed that the following accounts should be paid." "That during the summer months the meetings of Committee should be monthly instead of fortnightly." "That contracts should, by public advertisement, be invited for the repainting of the Home," &c., &c. The Chairman will then put the question: "Are these minutes approved?" by which he means (and no other question can be allowed) "Is this a true and full record of what took place?" If the Committee says "Agreed," you hand the Chairman your book for signature or initialling. It does not signify whether the occupant of the chair be or be not the same as presided at the last meeting, for he gives his signature by authority of the present meeting.

B. PUBLIC MEETINGS.

1. Generally a small sub-committee, of which you are sure to be a member, is appointed to consider who shall be invited to preside at the annual meeting of the Association, and to draft resolutions to be submitted to it. If the nobleman or gentleman selected be a "busy man," it will fall to you to wait upon him and express the committee's desire that he will fix the time most convenient to himself for holding the meeting so many weeks or days hence. You will take with you the draft report of the year's work which has been drawn up by you and has already been approved by the sub-committee, and explain to him the salient points upon which he is wished to expatiate.

2. At an Annual Meeting it is customary to submit resolutions more or less formal; e.g., Resolution I. "This meeting, having heard the report, hails with satisfaction the steady growth of the influence and financial prosperity of the Association, and commends its claims to the generous consideration and support of the public." Resolution II. "That this meeting pledges itself to spare no effort to widen the work and impress upon friends the urgent needs of a Society to whose excellent results such abundant testimony is forthcoming." Resolution III. "That the following ladies and gentlemen be elected as the General Committee for the ensuing year; that the following be the acting Committee; the Auditors be Messrs. Smith, C. A. and Jones, C. A.; the Hon. Sec., Miss Clara Douglas, and the Hon. Treasurer, Mr. Wm. Allworthy." Resolution IV. "That the thanks of this meeting be awarded to Lord Cheviot for his excellent conduct in the chair." Your sub-committee will help you to fix upon suitable men to propose and second each of these resolutions, to whom you will send (with a copy of the report) a few days before the meeting a slip of the resolution to which you wish them to speak.

3. You will always inform the local press of the place, day and hour of meeting, so that you may be sure to have the proceedings well reported. If the reporters come to you for information, be sure to shew them every courtesy and give them all the assistance they require.

4. Votes of condolence, congratulation, &c., in the Society's name, will naturally be communicated by you to the family of a person deceased or the recipient of a public honour, and must be expressed in suitable terms. It is well to show such letters to the chairman after you have drafted them.

DUTIES OF AN HONORARY TREASURER.

The duties falling to be performed by the Hon. Treasurer of a Charitable Institution, while not exacting in the strict sense of the term, are at least sufficiently loaded with care and anxiety to require of him constant vigilance and resource. Although the formal keeping of the books in perfect order may be considered a comparatively easy task, it is still not an unimportant part of his work, and if he appreciates the value of lucidity in the handling of his figures and accounts, he will aim at a high degree of excellence in his book-keeping.

The method of sectionalising the Cash Book and setting forth under one head every detail pertaining to it has approved experience to recommend it, and it is obvious that as the analysis and distribution of items of expenditure proceeds day by day, as each entry is made, an exact statement of the nature and amount of the expenditure will be necessarily disclosed at once at the end of the year, without having to review and analyse the foregoing entries. After the final summations have been made the eye can see at a glance what the various items of expenditure have been incurred during the year, and whether the charges under the particular heads have been normal or the reverse. One of the advantages of this system is that it furnishes a standing comparative statement of the expenditure, and so enables a ready check to be applied to charges which are running out of proportion to the income.

But an Hon. Treasurer's cares are not simply confined to the spending of the income of the Institution: they only, as a matter of fact, begin in real earnest when he seeks to find the necessary funds to keep it going in a state of healthy vitality and efficiency. The secret of the success or failure of an Honorary Treasurer is to be found here. If he is going to succeed he must possess at least two indispensable qualities. He must have consummate tact on the one hand, and persistent perseverance and enterprise on the other. A third requisite, although not perhaps absolutely necessary, is yet exceedingly useful, and that is social influence. It is the duty of an Hon. Treasurer not only to regulate and control, as far as it is in his power to do so, the regular annual contributions, but to exert his wit and influence in angling for the "periodic lumps" that are frequently available for charitable purposes. It is in discharging this arduous duty that his tact and resource are taxed to the utmost limit. But success is rarely attained without perseverance.

As he gives his own services freely and without monetary reward, so he also infuses into those engaged in the work the true spirit in which the institution should be managed. High ideals and high aims should pervade every effort exerted on its behalf, and the Hon. Treasurer upon whom a great part of the burden of its management falls, is expected to lend an example of disinterestedness and public spirit which will command the approval and support of the generous public. The Hon. Treasurer also will find it to the advantage of the charity to attend all its meetings with commendable regularity, to explain the financial position, to encourage the other officials and to take common counsel as to the best method of promoting the interests of the institution.

As there may be some little uncertainty as to the respective functions of the Hon. Secretary and the Hon. Treasurer we may add—

(1) The Hon. Secretary makes general appeals to the public, the Hon. Treasurer private appeals to particular persons.

(2) The Hon. Treasurer alone handles money, "receipts" it, and banks it.

(3) He alone operates upon the fund, signing cheques generally with the Chairman of the Committee and perhaps one or two members of the Committee empowered by the executive to discharge this office.

(4) At the annual meeting, the Hon. Treasurer reads the financial statement and comments upon its contents. As he is generally chosen for his business capacity, his words are listened to with more attention than is accorded to perhaps any other speaker.

We need hardly say that there is one special duty the Hon. Treasurer owes to himself, and that is so to manage the business he has undertaken as to preclude the possibility of the ill-natured suggestion that his accounts are so muddled as to be unreliable. We therefore venture to give these two pieces of practical advice:—

(1) Never mix up collected money with your own, but always bank it in the name of the Institution you are serving.

(2) At the end of each year produce a Balance Sheet, after getting a business man (preferably a Chartered Accountant) to audit and certify your accounts.

HUSBAND AND WIFE.

He undertakes no light task who ventures to give counsel in a relationship so ancient and so intimate as that of husband and wife. Many might think that the task was not only presumptuous but also superfluous, for who can hope to improve upon the counsel given in Holy Scripture, and summarized in the Marriage Service of the Book of Common Prayer and other manuals? There is, however, a field which lies outside this technically religious territory that experience and genial common-sense, free from cynicism, may help to cultivate. Let us begin with a dictum which none will dispute: "Celibacy, however gloomy and painful it may sometimes be, is better than a bad marriage."

SELECTION OF A PARTNER FOR LIFE. 1. "In the selection of a wife, *tenderness* and *purity* are prime requisites, and no gifts of speculative intellect or practical ability can compensate their absence." ("Practical Morals," J. K. Ingram). The wife should be in fact:

> "A creature not too bright or good
> For human nature's daily food;
> For transient sorrows, simple wiles,
> Praise, blame, love, kisses, tears and smiles."

So sings Wordsworth in his exquisite "Portrait." And Byron, albeit not himself a model husband, is scarcely less successful in his "Bride of Abydos," in depicting the qualities expected in a good wife:

> "To soothe thy sickness, watch thy health,
> Partake but never waste thy wealth,
> Or stand with smiles unmurmuring by,
> And lighten half thy poverty."

2. But what about the choice of a husband? We cannot think of anything better as an answer to this question than the remarks of Mrs. Fitzpatrick in Fielding's "Tom Jones": "It requires a most penetrating eye to discover a fool through the disguises of gaiety and good breeding. . . . Among my acquaintances, the silliest fellows are the worst husbands; and I will venture to assert as a fact, that a man of sense rarely behaves very ill to a wife who deserves very well." *Sound sense*, then, is the indispensable quality which a young lady should require in the man who is to be her life-long companion. We place this first in the category, because even the highest moral rectitude and brilliant mental gifts, without the balancing power and prudential guidance of sound sense, will not secure her against the shipwreck of domestic happiness. Few sensitive people can watch, without disgust and loss of love, daily exhibitions of brainless, ludicrous, and stupid conduct on the part of those whom they have sworn "to love, honour and obey."

3. There is one counsel that is applicable to both man and woman who are contemplating matrimony, and that is: Have regard to the approximate *equality* in birth and station, age and education, in the choice of a partner. Many centuries have rolled by since the great tragedian Æschylus put into the mouth of his chorus in *Prometheus Vinctus*, words which are just as true to-day as they were then: "He was indeed a wise man who first conceived in thought and then gave speech to his counsel, that to marry *suitably to oneself* is by far the wisest plan; and that one who is of low degree should neither seek after a partner lapped in luxury nor boasting of high-sounding pedigree." Gross inequality in any of the points named is sure to be visited with penalties more or less severe, but, in some form or other, sure to fall. Moderate disparity is of course less hazardous in consequences, e.g., an opulent merchant may find a hearty welcome in the family of straitened patricians, and a highly educated, untitled lady, well acquainted with the ways and manners of the "great world," may make an excellent wife for a nobleman, but nothing can compensate for a wide gap in years or education.

4. When we spoke just now of "approximate equality," we had in view only the particulars enumerated. Nothing can be farther from our meaning than to insist upon identity of tastes, predilections, favourite amusements, and the like. "Each sex has what the other has not; each completes the other, and is completed by the other; they are in nothing alike, and the happiness and perfection of both depends on each asking and receiving from the other what the other only can give." (Ruskin: "Sesame and Lilies.") It produces, for example, no jar in married life for the wife of a scientist to be devoted to art, or for one consort to be passionately fond of sport while the other is equally enamoured of music or the drama. In fact, life is enriched by this non-antagonistic variety. Echoes are not needed for connubial bliss. Antithesis is often its charm.

5. Viewing marriage as a contract that involves the life-long obligation to cherish each other "in sickness and in health," it is of the highest practical importance to pay due regard to the question of health.

CONDITIONS OF MARRIED HAPPINESS. 1. No view of marriage is satisfactory that does not regard it as a tender and respectful friendship, "embellished," as a brilliant Frenchman adds, "by an incomparable mutual possession." We feel inclined to emphasise this view as of the greatest practical importance in perpetuating married happiness. The want of tenderness, either by the adoption of an over-bearing manner, which never reaches cruelty even in intention, or by what is still more characteristic of northern nations, the silence or sparse expression of love, even when it is felt, has a wearing effect upon its objects. A sentiment so tender as married love ought to be manifested. Much can be said against "gushing" and untimely demonstrations of marital affection, but undemonstrative conduct is not without its dangers. We have a terrible warning in the case of a famous teacher of his age, who learned too late, when his beloved one was taken away, how deeply he had failed in sufficiently expressing by word and act the feeling with which he regarded her.

2. Not less to be combated is the tendency for all the courtesies of the sweet-heart period to diminish, and sometimes to disappear, from married life. There should not be allowed to enter into the homestead any—even good natured—disrespectfulness in language or manner towards any of its members. More depends upon the observance of this caution than many people realise. The only lady whom many a man habitually treats uncivilly, is his own wife; and the only gentleman for whom many a lady will take no pains to be pleasant and attractive, is her own husband.

3. Want of unity of aim is another prolific source of domestic failure. This has many sides, and enters into economics, child-training, the cultivation of good neighbourly relationships, the maintenance of a satisfactory footing with the relatives of both sides of the house, the relativity of work to relaxation, the quality and allotment of joint pleasures, and the formation of new friendships. Pitfalls in abundance attend every one of these illustrations

of the want of oneness in aim. Unless there is mutual confidence as regards personal and household expenditure; unless each parent supports the other in the exaction of discipline among their offspring during the period of childhood, and a few years beyond it; unless each is complaisant towards neighbours and family connexions; unless they "see eye to eye" upon the ratio to be maintained between the serious and recreative portions of existence, and can co-operate in united tours, visits, expeditions and the like, and unless new alliances are the subject of mutual assent, troubles will grow in unlimited profusion. "Union is strength" is an old adage; but in married life it is more: it is peace and comfort.

4. Hitherto we have spoken only of union in the practical concerns of wedded life, but no thoughtful person will undervalue the conviction "that any real and permanent union of human beings must rest on a sufficient harmony between them in respect to the three portions of our spiritual nature—feeling, intelligence, and what is properly called character; and this harmony should be more complete in proportion as the union is to be intimate and profound," (Ingram). Profession of the same religious faith becomes, therefore, an important item in family concord.

To sum up in a nutshell all that we have said: The secret of domestic happiness lies in the exercise of mutual forbearance, gentleness and courteous demeanour, the desire to please and be pleased, the willingness to express pleasure when felt, the opportune demonstration of affection, and the determination to be one in aim and action in all that pertains to a common and co-operative life.

THE TRAINING OF CHILDREN.

Nothing has impressed us more in general literature than the prayer of Schiller's father on the birth of his illustrious son. Therein we learn what a devout man feels as to the responsibility that comes to him from the trusteeship of a newly-given soul. How to train it, lead it to the highest ideal, guard it from evil, and walk before it in the right path, all enter into the supplications of the father of the darling poet of Germany.

EARLY CHILDHOOD. We have to consider the conditions under which a child will live during his first septennial phase, and the influences which will act upon his evolution. Some of these are social, others personal. The first are entirely independent of the child's own will, for no one is consulted as to the nation or family in which he shall be born. Environment (climate, &c.) are not for him to decide. The result is that submission and dependence upon others is the first ethical law of life.

1. The parental duty, during these very early years of organic instability and morbid affections, is to attend to nutrition, thereby laying the foundation for the child of a sound constitution. The mother, who is the only guardian at this period, must act under competent advice. The instruments of sensation and locomotion will next require attention. The child should be trained to see, to hear, and to touch, so as really to appreciate objects correctly; also to hold himself erect, to walk, to run, to leap, to swim, and do other movements which will afterwards become habitual. The heart (i.e., in metaphor, the organ of unselfishness and love for others) must very early be trained, to family affection. Pleasures must be shared with others, and labours and privations borne in common. Personal instincts must be carefully regulated, and the atmosphere of modesty made to pervade the whole child-life. This side of training will fall mostly upon the mother. The moral action of the father on his children consists mainly in the spectacle of his daily life—his industry, punctuality, kindness, and avoidance of self-indulgent habits.

2. The most important rules with respect to parental directions are that they should not be inconsistent with each other, not too numerous, and that when they have once been announced, obedience should be insisted on. Praise should be cheerfully given in proportion to merit, but not in such a way as to invite vanity. Never "show off" a child before strangers, nor quote his precocious remarks in his hearing. "Nagging," and dwelling unduly on the child's deficiencies, and more particularly the frequent presentation of the children of other families as models for his imitation, produce discouragement and irritation.

3. Punishments should be infrequent, selected with judgment, and inflexibly carried out. It is a doctrine of the jurists that the certainty of punishment is more effective as a deterrent than its severity. In inflicting it avoid alike the reality and the appearance of passion. To be really useful the punishment must be seen by the child to be just; if it is met in a spirit of protest and revolt, more harm than good is the result. Allowance must be made for personal idiosyncrasies, which in many cases may be turned to advantage. Even in the same family the children are often physically, morally and mentally very unlike each other, as if the strain of heredity were derived from different sources in the genealogical tree. The careful trainer will vary methods accordingly.

4. Up to seven, the education should be informal and of the *Kinder-garten* kind. Curiosity should be guided and stimulated to the observation of inorganic objects, and of animals and plants. No decided effort should be made to teach him to read at this time, though, as sometimes happens, he may spontaneously, or in the way of play, pick up an art. Foreign places, English cathedrals and castles, and the inhabitants of a zoological garden will be learnt from picture books and engravings, and comments invited as to what strikes, pleases or interests. In sacred things, read or spoken, attention to reverence of tone and mien on the part of the teacher is of the utmost value.

LATER CHILDHOOD. From seven to fourteen the evolution is continuous, and in some cases rapid and remarkable. Wise parents will take great pains in the selection of a tutor or governess, if the education is to be conducted at home. Nor will they neglect serious preliminary conference with their deputy after the appointment has been made. Much requires to be settled if satisfactory work is to be done. The special characteristics of each pupil, the methods and measures of discipline, the range of the syllabus, the length of school-hours, and the kinds of recreation to be pursued, all require to be thought out and precisely agreed upon between the acting parents and the instructor. Vague understandings end in misunderstandings.

1. While upon the subject of home-tuition, we may make a few observations of a practical kind as to the mutual relationship of parent and tutor. While the parent can never abandon to others the supreme control of his children, he must remember that until his delegate has given proof of neglect or incapacity he is entitled to the support of the head of the house. Sufficient allowance is not always made for the *youth* of tutor or governess; nor for the fact that it is unreasonable to expect from them the same kind and degree of interest as binds parent to child. Again, stubborn or trifling children will yield a much readier obedience to parents than they will to home-teachers, whose disciplinary difficulties are accordingly increased. Parents should be most careful never to take the child's part against the teacher in the child's presence; never to make a slighting remark as to the teaching and management of the class before the pupils; and always to support the teacher in the execution of punishments, unless they are absolutely cruel or grotesque. Rebuke or criticism of the teacher should be administered in private, and not for every trifling defect; and non-interference should be the normal attitude of the parent to the teacher, unless there is urgent cause to step in. We will only add that it is false economy to get cheap tuition. Spend a few more pounds and secure a gentleman if you want a tutor for your sons, and a lady as governess for your daughters.

Character, manners, style and accent are all involved here, and in the generality of cases, mental culture.

2. But it is time we returned to our "later child," who enters upon his second septennium. He is now on the verge of, if not actually trusted with, the washing and dressing of himself, and attending to the rudimentary laws of health. Perfect cleanliness and control of the table-appetite must be insisted upon, as well as punctuality at meals. He must eat and drink like a gentleman, handling his knife, fork, spoon and serviette with decorous ease and skill. He must be taught his duties to his equals as well as to his superiors, and encouraged in the formation of suitable friendships. Frankness and candour especially towards his mother cannot be too much encouraged. The social or altruistic sentiment should be assiduously cultivated.

3. Athletic games, as time goes on, will increase physical strength and address, exercise courage, and promote a genial spirit of comradeship; while pedestrian excursions with children of like age will enlarge his knowledge of his own neighbourhood in many directions.

4. The time has not yet come for encouraging a fully elaborated system of education. The Memory and the Imagination are the best fields in which the sower can now operate. A fair amount daily of the learning of paradigms will save much drudgery at a later period, and with this will of course be included arithmetical tables, weights and measures, and the like, with relative exercises. We place great faith in the cultivation of the Imagination. Fairy tales, ballad poetry, "cameos" of history, adventure stories, good books of travel, and such books as the "Arabian Nights," deal with the Wonderland in which the minds of the young love to live. By such tentative flights they are prepared for the enjoyment, at a subsequent stage, of the works of Shakspeare and Scott, Dante, Goethe, Spenser and Victor Hugo. Colloquial French and German; Music and Drawing; and easy Latin passages, with interesting subject matter, belong also to this period of education. We are, of course, considering only the case of the "average boy," not prodigies.

5. We have come to the end of what is generally considered the happiest period of life. Blessed are those parents whose children, as they advance in years, "look back on those stages as having been passed in an abode which, though perhaps humble and perhaps a scene of self-denial, was yet brightened by mutual affection, elevated by high ideals, and enlivened by cheerful preparation for future usefulness." *

* Ingram's "Practical Morals"—a book to which this paper owes many excellent suggestions. The student will find much interesting matter on the education of childhood in Quick's "Educational Reformers," where the views of Milton, Locke, Pestalozzi, etc., are all given and criticised.

THE ART OF CONVERSATION.

The great object of conversation is not to gain information or to display it, but to give mutual pleasure. Keeping this end clearly in view we may lay down a few principles and rules which minister to its attainment.

I. GENERAL CONVERSATION.

1. By its very nature, conversation implies reciprocity. It is not monologue. Even a Macaulay may become a bore by monopolizing the talk of the table. "Bobus" Smith's witty remark is worth recording, that after Macaulay's return from India, he was so far improved that "he occasionally favoured his friends with eloquent flashes of silence."

2. This reciprocal quality does not imply that conversation can be measured off into equal portions for each of the parties. "There are some silent people," says Lord Beaconsfield, "who are more interesting than the best talkers. And when they speak they will always say the right thing." We remember once dining with Jowett at the high table at Balliol. He spoke only about three times during the dinner, with long intervals of silence, but to this day we can quote every word he said.

3. But undue spaces of silence are apt to give those who are contributing to the conversation the feeling that the taciturnity is owing either to want of sympathy or interest, or to a sense of superior wisdom. A host has the right to expect that his guests will each do his fair share to make matters go well. If he is an expert host, he will endeavour to show all his guests at their best, and by a little skilful angling will generally succeed in eliciting some remark which will relieve even the most backward from the appearance of stupidity or listlessness.

4. Conversation should never be reduced to a catechism. "Inquirers who are always inquiring learn nothing." We have known very amiable people delude themselves with the idea that to ask a multitude of questions will be interpreted as interest on their part in the affairs of their friends. Ere long, however, the catechetical ordeal becomes an affliction, especially when it is seen that the "anxious enquirer," like jesting Pilate, "does not wait for an answer." "Sir," said Dr. Johnson to Boswell, "questioners like you would make a man hang himself."

5. Neither should conversation be disputatious There is a great charm in the free interchange of opinion, however variant it may be in its composition. But this demands that the parties in the conversation are tolerant men who can bear to hear another opinion without warmth or loss of temper. Nothing is more disagreeable in a club or at a dinner-table than to find that the free expression of opinion has blazed into a wrangle.

6. It is always best to avoid religious and political subjects in general society. This would not be necessary if men were content to lay their own convictions by the side of opinions much opposed to them; but you must know your company well before you can feel sure that such tolerant wisdom awaits you on the part of an opponent, after you have fully and fearlessly expressed your views on the momentous subjects we have named. The very magnitude of these questions in which there is necessarily much speculation, and in one class much mystery, instead of impressing the mind with diffidence and awe, often inspires the disputants with angry passion and declamatory dogmatism. It is not every one who has learned like Endymion "to be prompt without being stubborn, to refute without argument, and to clothe grave matters in a motley garb."

7. Contradiction requires great management if it is not to be rude, brow-beating and insolent. "Putting people right" is often an odious liberty. He is a wise man who can occasionally allow errors of statement to pass without remark. It generally happens that you can work in your correction indirectly, later in the conversation, when your statement, dislocated from the connection of its origin, no longer sounds offensive. Irascible old gentlemen are entitled to some consideration even from the youngest and most self-confident striplings in the room.

8. The art of telling stories is not given to every man. First of all, the stories should be worth telling, i.e., they should be fresh, short, pointed, and likely to be generally interesting. It is too great a tax upon the patience of even a good-natured audience to martyr them with fusty, pointless and rambling anecdotes. Reminiscences, that delight so long as they are their own memories of elderly dons in the college common-room, are never in great demand, as "my Uncle Toby" discovered. Puns, again, ought generally to be eschewed unless they rise (which will not often be the case) to the level of Dean Mansel's or Tom Hood's. On the other hand, *bons mots* are always welcome. A story should be told *straight on* without windings and involutions, and should stop at *the point* without a word of appendix. A good climax is essential to a good story.

9. "Talking shop" is often too severely condemned. There is, of course, a form of it highly reprehensible, because it is merely the stale echo of the business hours, and should

not be heard when men come together for social intercourse. But as Mr. (now Lord) Goschen in his admirable Rectorial address ("Intellectual Interest") delivered to the students of Aberdeen University, pointed out, there are cases in which "shop" is in itself interesting, and the one subject upon which some of the guests can talk in the most interesting way. Who would feel that the experiences of a War Correspondent like Archibald Forbes, or the reminiscences of a great statesman would savour of the "shop"? And yet it was impossible to get a word out of Forbes in general company upon all that he had seen and done in the "sturm und drang" which he has so thrillingly described by his pen. It was professional "shop," and therefore "taboo." One can well understand why students fine a man who in hall spoils the joy of dinner with whiffs of his morning's studies, but it is not so obvious why all allusion to the varied work upon which college dons are severally engaged, apart from merely class curricula, should be absolutely excluded from the conversation of the common-rooms of Oxford and the combination-rooms of Cambridge.

10. Quotations in these degenerate days should be limited to English and French languages; but even the best poets weary if introduced too often and at too great a length. Literary allusions are often very charming.

11. Very often the best conversations are those of a mixed company of well-educated men and women. "Mrs. Neuchâtel's feelings were her facts, and her ingenious observations of art and nature were her news." Thus has a great master described in a nutshell the charm of a brilliantly gifted woman's contribution to social intercourse. Men cannot with courtesy lose their tempers when discussing with women subjects which generate heat in the combats of the stronger sex. Although the French *salon* has not been domiciled among us with its crowds "of dazzling people whose sayings and doings form the taste, and supply the conversation and leaven the existence of admiring or wondering millions," still in many a home, far below the rank of aristocracy, ladies and gentlemen meet whose talk is of literature, music, art or the drama. The free interchange of thought upon such topics is part of the education of our maturer years.

12. The quality of voice plays a great part in successful conversation. A loud, self-assertive tone betrays vulgarity and "love of pre-eminence." On the other hand, whispering and undertones are unsuited to the general flow of talk. Speak so that any one can hear you who wishes; let others finish their sentence before you break in, and do not try to help any one with suggested phrases to accelerate their speed, or to anticipate their conclusion. As a rule people prefer their own words, even if they come slowly, to being "helped over the stile" by an uninvited hand.

13. Never be contemptuous in reply, A timid but intelligent conversationist will always gratefully remember the kind and unobtrusive sympathy you extended to him when he was in difficulties as to the best way of putting his views creditably before his hearers. Dr. Johnson's handling of Goldsmith would not be tolerated in our day.

II. LADIES' SOCIAL CONVERSATION.

HINTS TO A HOSTESS.

Nothing in the shape of brilliant conversation can ever atone for the want in a hostess of a sunny manner, a frank and hearty reception, spotless cleanliness of person, and unimpeachable neatness of attire. We do not sympathise with Herrick's delight in

> "A sweet disorder in the dress,
> A happy kind of carelessness;
> * * * * *
> A careless shoe-string in whose tie
> I see a wild civility."

The magic of conversational power in ladies, whether at the tea-table, at (or after) dinner, or in "At Homes" is best demonstrated when the hostess has succeeded in making each of the guests talk at their ease, and show the best of what is in them. It is obvious that the cardinal virtue of this charming potency is Tact. Sitting in a retired corner, there may chance to be some shy and silent visitor, who if the spell were broken and the casket unlocked, could enter gladsomely into the genial interchange of conversation. How shall this be accomplished by the presiding genius of the company?

1. The hostess should have a great variety of topics, like the angler with a great assortment of flies, wherewith to beguile the coyness of some, and gently temper the overardour of others. Among these will naturally be found news of general interest, whether national, provincial, local, or parochial, and incidents in the family life of the people assembled under her common roof. In handling such diversified matters, the touch will be light, and the stay upon each brief, and quickly succeeded by flight to another flower. What has been gained from the morning papers is generally common property, and can only be handled without danger of staleness by way of comment. During the South African war who ever sat among silent or mere news-repeating fellow guests? When the feelings of every one were moved by bereavement, indignation, criticism or patriotic triumph, no tongue was dumb; every grandmother was a military critic, and every maiden of sixteen had her favourite general or her pet aversion. And even in country villages there is always something to discuss of general interest, be it the coming ball, yesterday's hunt, the parish tea-party, the curate's engagement, the squire's new motor-car, or the opening of the cottage hospital. "Pas de trop" (let nothing be overdone) is a good motto in handling such evanescent themes. Or, if you prefer English, "Touch and run" will do equally well.

2. It ought not to be forgotten that the vast improvement during the last quarter of a century or more, in the Higher Education of Women has widely increased the circle of intellectual topics of conversation. It is not likely that our "golden-haired graduates" will obtrude upon general society their academical attainments, and it is only just to them to avow that in our own experience the great majority of them have lost none of their womanly charm in their pursuit of knowledge. It is, however, only natural that, with trained intellects and advanced knowledge, they should desire something better in salons than "small talk" of the infinitely little which often passes muster for conversation. Without being bookish, there may surely be introduced by the hostess or others such topics as a new drama, a new novel, a new volume of poems, or the current exhibitions of pictures. A leading actress once remarked to us that she preferred a Parisian audience to an English one, because the French really loved a critical study of a play; they analysed it, followed with psychological sympathy or aversion the author's mind through all its windings, and from their historical knowledge were able to fix his place and that of the actors among dramatic authors and artistes. The same will be said by an English musical composer of the respective merits of German and British audiences.

3. Perhaps a caution is necessary here against overdogmatism in such high matters as the Fine Arts include. Nothing is more irritating than the assured way in which girls in their teens who have begun to handle the brush or the chisel will deliver their preferences for "impressionism," "realism," "genre," &c., and their contempt for all who are not of their school of criticism. Great artists are generally generous in their appreciation of the work of their fellow-labourers. They know the difficulties to be overcome and the triumphs that have been won in a work in which the amateur or the tyro sees nothing to praise.

4. The hostess will often feel great discomfort from a few exasperating trifles,—one proceeding from a mistaken sense of courtesy, the other from a vulgar desire of display. The former consists in some under-bred guest's insisting on mentioning a lady's name every time she addresses her. Thus, "Yes, Mrs. Brown," "No, Mrs. Brown," "No thank you, Mrs. Brown," "I agree with you, Mrs.

Brown," "Fine picture, Mrs. Brown;" until poor Mrs. Brown hates her own name; or, if addressing a titled person, bespattering him or her with constant repetition of the title: "Thank you, my lord, your lordship is very kind. Hope her ladyship and her grace, her ladyship's aunt, are both well." The intention is courteous, but the effect extremely vulgar. One mention of the title is enough, and the iteration of plain Mrs. Brown's name (except, perhaps, once in a way for the sake of softening a contradiction) absolutely forbidden.

5. The second annoyance is the determination of some guest to display her extensive acquaintance with grand people before the envious eyes of her fellow-guests. Thus, "My dear and intimate friend, the Countess of Antrim, told me the other day that she was emphatically charged by our mutual friend, the Duchess of Salzburg, to tell me that the Princess of Modena particularly asked after me at a ball given by the Emperor of Austria on his Imperial Majesty's birthday." Our only counsel to the hostess is never to ask such people again to her entertainments. Married guests who speak of or to each other as "Papa," and "Mamma," or "Father" and "Mother," or the wife who addresses her husband by his surname, or as "Mr. P.," are not likely to be present at such "At Homes" as we have supposed you to preside over.

6. Two things in feminine conversation never fail to charm; the soft, well-modulated voice and the responsive air of interest in what is said by others. In *tête-à-tête* it is annoying and certainly uncomplimentary to find that while you are talking the other party to the conversation gives you one ear and keeps the other open for what is being said by somebody sitting near. A great prelate, who was "a darling of society," delighted every lady with whom he conversed by giving her the impression that at that moment there was no other woman in the world for him.

7. Even conversation sometimes palls, so it is good to vary your "At Home" by music, recitations and conjuring-tricks. As regards music and recitations we do not think that Christian charity requires you to ask any one to sing, play, or recite out of mere compliment to the performer. John Hullah used to say that he considered it "one of the most merciful dispensations of Providence that no man can judge the quality of his own voice." To ask your friends to listen to the flat, or timbreless voice of some amateur who is generally very forward in volunteering service, is not kind. Neither is it hospitable to doom your friends to silence while your daughter, who may be a very "sweet girl" otherwise, thrums away at the piano or screeches on the violin to the positive distress of an accomplished musician. "Music," says a bitter cynic, "is a wanton interruption of conversation." Recitations are too often artificially delivered, a weak copy of some well-known reciter, or are badly selected for the audience, who do not care for too much sentimentalism, rant or insipid comedy. Like Lord Rosebery, demand, above all things, "efficiency" in your "entertainers," although they cost you nothing for their services.

8. In conclusion, we will become a little didactic though not homiletic:

(1) Draw the conversation as much as you can away from ill-natured tattle and injurious gossip.

(2) Never exaggerate evil reports for the sake of creating an effect.

(3) Do not encourage scandal, even if you cannot altogether suppress it.

(4) Try to leave upon your guests the impression that they have enjoyed under your roof a really pleasant evening, in which rational discourse has been enlivened by amusement, pleasantries have abounded unmixed with innuendoes or envenomed jibes, and that the badinage of lively people has raised the spirits and left no acid or subacid feeling in the palates of the most sensitive.

THE ART OF LETTER WRITING.

Many of us recall the difficulty we had in childhood of composing a letter. How to begin? How to end? What to say? were all questions that embarrassed. We are not sure that even now, when autumnal tints diversify our hair, that the task has freed itself of all difficulties. Not to mention the really cardinal crux of letter-writing, such minor matters as how to address the various ranks of peers, both on the envelope and at the start of the letter: the proper form of subscription; the style to be adopted to tradesmen and servants; the grades of intimacy to be observed in writing to friends, are all questions demanding consideration, although none of them touches the central difficulty, viz., of what should a letter consist. *Form* may be easily prescribed, but it is *substance* that makes a letter worth receiving. Let us begin with externals:

(1) Never write upon shabby note paper, and never use diaphanous envelopes.

(2) If you are entitled to "bear arms," never blazon them on your note paper. The length to which you can go is to reproduce your *crest* on the sheet, or on the flap of the envelope. Universities and other corporations may quarter their arms on their note paper, but not private individuals.

(3) The letter paper which is considered to show the most taste is of medium thickness, is finely ribbed, slightly glazed, and delicately tinted, with envelopes to match.

(4) For ourselves, we like a thick cream laid paper, with the address printed on the top right hand in clear black English type, not German text. Obviously the first requisite in an address is legibility. White addresses in high relief are less showy but are not so easily read. Red and blue addresses savour of affectation. The envelopes should be square shaped.

(5) Post cards are a somewhat unceremonious method of communication, and should, as a rule, be reserved for business notes.

(6) "Letter cards" are our pet aversion. They are difficult to open, and save no trouble anywise, as compared with enveloped letters.

Let us now proceed to consider the essential qualities of good letter-writing. The institution of the daily post has certainly transformed the style of old-fashioned correspondence. Time was when Horace Walpole, the Misses Berry, and scores of other English, Scottish and Irish correspondents interchanged in the form of letters sentiments, news and criticisms, which have now become worthy of the name of literature. Why should all this be a thing of the past? Many of us have children in India and other parts of the great British Empire. Why should not our letters to them bear the same characteristics of interesting, familiar, gossipy, critical, and news-giving communication, as distinguished the domestic letters of those we have named?

1. *A letter is not a circular.* Its charm lies in its personal note. It must reveal the author, and the author as related to the recipient. The want of this personal note is the defect in Pope's letters: its presence is the delectation we all enjoy in the letters of Macaulay to his sister, and of Dickens to his sons.

2. *A letter must not be didactic.* The secret of good letter-writing is in its free flow of talking upon paper. What you want to convey is exactly that which you would say if your recipient were present with you. Hence the mother is generally the better correspondent with her children than the father. The latter hates detail, while the former believes (and she proves to be right in the issue) that everything going on in the life of the family is sure to interest an absent member.

3. A letter should always be such as can lead to no disagreeable after-consequences. It is never an easy matter to say how far personal remarks impinge upon the libellous. You are, therefore, wise to refrain from anything which may rise up against you in judgment. "Publication" is one of the mysteries of English Law, and your repetition in a letter of what you have every reason to believe to be true may land you in a very unpleasant plight.

4. A letter should be easy without being slovenly in composition. Every verb should have its nominative. Such a style as "Arrived here this morning—hotel comfortable—scenery lovely—very tired—going to bed—found Jane waiting," &c. is to be abhorred. No one

except Alfred Jingle, would speak in this fashion, and, as we have already said, letter-writing is a substitute for speech. Its style will, therefore, be neither bombastic, involved, grandiose nor pert; but grammatical, structurally correct, and the diction that of educated conversation.

5. Punctuality in reply is an essential element in the courtesies of correspondence. It is related of an English Bishop that he suggested two additions to the questions already standing in the ordinal: (1) "Will you suffer fools gladly?" and (2) "Will you answer letters by return of post?" A precise conformity to the latter rule would save an abundance of trouble both in social and business matters. As a rule, the busier a man is the more punctual he is in answering letters. Men like Mr. Gladstone and the late Bishop Wilberforce were unfailing in this respect. The latter averred that if he once let a post go by without the necessary budget of letters "in reply," he could never overtake the lost opportunity. Hostesses are naturally offended if their invitations are left unanswered for days.

We add a few minor hints by way of postscript:

(1.) A little latitude may be allowed in deciding whether in returning business documents, any accompanying missive is necessary. It is never an arduous task to write on a clean half-sheet of note paper, "With Mr. So-and-So's compliments," or if a letter has been received along with the bundle of papers, to write a little more fully in acknowledging receipt. Even to an offensive letter it is well to give a formal receipt.

(2.) The form of address to superiors will be found in the table appended. One only caution may be added, viz., that if you are in doubt, always err on the side of deference and respect. The snub which punishes over-familiarity has made many a man wince for many a day after its administration.

(3.) If you ever venture upon writing in the third person, be careful to use it uniformly, and do not make a hash like Dean Alford's famous character, who lost his hat, and reclaimed it in a mixture of all the three personal pronouns (*v.* "Queen's English.")

FORM OF ADDRESSES ON ENVELOPES.

1. Every one, however high in rank, addresses the Sovereign and members of the Royal Family as follows:—"His Majesty the King"; "His Royal Highness the Prince of Wales," "His Royal Highness the Duke of Connaught," &c.

2. Below the rank of royalty, distinction is to be observed between the style of addresses used by equals and superiors. Thus, intimates will address the Duke of Devonshire simply by that title: subordinates will write "To His Grace, the Duke of Devonshire"; equals, will write "The Marquis of Huntly," subordinates "To the Most Honourable the Marquis of Huntly"; equals, "the Earl of Aberdeen"; subordinates, "To the Right Honourable the Earl of Aberdeen," and so on with Viscounts, Lords, Ladies, &c.

3. Members of the Privy Council are addressed as "Right Honourable," without the addition of "Esq.": thus "the Right Honourable James Bryce, M.P." Ambassadors and their wives bear the title of "To His (Her) Excellency," as do also the Lord-Lieutenant of Ireland, the Governor-General of India, &c. Archbishops are addressed on the envelope "His Grace the Archbishop of York"; Bishops, "The Right Reverend (if London, add "Right Honourable") the Lord Bishop of Llandaff"; Deans "The Very Reverend the Dean of Argyll"; Archdeacons, "the Venerable the Archdeacon of Cleveland"; clergy, "the Reverend George Smith, D.D." (or LL.D., or D.C.L.) but never with M.A. or B.A. affixed.

FORM IN BEGINNING AND ENDING A LETTER.

1. The Queen is addressed "Madam," the King, "Sir" (in the 18th century, "Sire"). Above "Madam" or "Sir," write "Her (His) Majesty the Queen (King)" The signature is always "profoundly" respectful and devoted, but varies a little in style. A poet inscribing his works to the Sovereign would sign "I have the honour to submit myself, with profound respect, your Majesty's most devoted subject and servant," but this is heavily formal, and the copy of a past age. The leader in the House of Commons in his nightly budget of Parliamentary news begins, "Mr. —— offers his duty to your Majesty," and goes on to speak of himself always in the third person, while addressing the Sovereign in the second. Princes and Princesses expect the subscription "Your Royal Highness' dutiful and obedient servant," even from intimates.

2. An ordinary person writing to a duke begins, "My Lord Duke," to a Duchess, "Madam," to a Bishop, "My Lord Bishop." Care should be taken to distinguish Dowagers by putting their Christian name both on the envelope and in the superscription *before* the title, thus; "The Right Honourable Jane Countess of Wigan"; sons and daughters of all peers above the rank of barons include their Christian name in their courtesy titles, thus "Lord Randolph Churchill," never Lord Churchill, "Lady Marjory Gordon" (never Lady Gordon). If the latter were to marry a commoner, she would still retain her title with the Christian name, and simply change her surname, thus "Lady Marjory Sinclair." In beginning a letter, the correspondent, according to the measure of intimacy, would begin, "Dear Lady Marjory," or "Madam," with the title written at the left foot of the page. A lieutenant in the army is addressed as "Esquire," in the navy by his title.

3. We may add that ordinary persons addressing their equals should be guided by the degree of familiarity in their relations to each other, as indicated in the following ascending scale of friendship: Sir, dear sir, my dear sir, dear Mr. Smith, my dear Mr. Smith, dear Smith, my dear Smith, dear Tom, &c.

The third person is going out of use except in purely business communications and letters to servants, e.g., "To Mary Jones—Mrs. Lumsden will return by the six train on Friday night, and bring two friends with her." "Mrs. Fortescue will be obliged by Mr. Watson sending her a really young chicken."

4. Subscriptions are very much a matter of taste. Mr. Gladstone always used the form: "Your faithful W. E. Gladstone." It used to be a rule that your subscription must copy your address; so that if you began "My dear Smith," you must end, "I am, my dear Smith, ever yours." We fancy that few now feel bound by this trifling ceremony. "Yours obediently," "yours faithfully," "yours truly," "yours sincerely," "yours very sincerely," "ever yours," and "yours affectionately," are a sort of rough gamut of the varying degrees of friendship and intimacy.

THE ART OF READING ALOUD.

Reading aloud should not be identified with what is popularly called "Elocution." Your experience may possibly be our own, that some of the most distasteful clerical readers you have ever heard were men who had wasted their substance in paying for lessons from a professional "elocutionist." Of some of them we may say with Hamlet, "that neither having the accent of Christians, nor the gait of Christian, pagan nor man, they have so strutted and bellowed that I have thought some of nature's journeymen had made men, and not made them well, they imitated humanity so abominably." We know no better account of the qualities of good reading as distinguished from stage-declamation, than what is to be found in one of Julia Mannering's letters to Matilda Marchmont in "Guy Mannering." "In the evening, papa often reads, and I assure you that he is the best reader of poetry you ever heard—not like the actor, who made a kind of jumble between reading and acting; staring and bending his brow, and twisting his face, and gesticulating, as if he were on the stage and dressed out in all his costume. My father's manner is quite different—it is the reading of a gentleman, who produces effect by feeling, taste, and inflection of voice, not by action or mummery." It is quite possible that Sir Walter Scott here describes his own practice of

entertaining his guests on winter evenings with reading the works of some favourite author in verse or prose; just as John Bright enchained in the tea-room of the House of Commons a sympathetic group of M. P.'s while he read the poets of his love.

Good reading is an accomplishment quite as worthy of cultivation, and as capable of imparting pleasure to others, as vocal or instrumental music. It is also a high intellectual exercise. For as with the painter, so also with the reader, there must first be a subjective appreciation of the force and beauty contained in the object, and then the power to project externally what has been intellectually apprehended. Voice and Delivery are the two pillars upon which stands "The Art of Reading Aloud."

I. VOICE. This must be considered both as to its natural character and acquired habits. The former relates to tone and articulation; the latter to pronunciation and accent.

1. TONE. By nature the tone of some voices is good, of others bad. Your ear is the judge. If the tone be clear, sweet and sonorous, you declare the voice to be good in tone; if on the contrary the voice be dull, faint, husky, croaking or harsh, you condemn the tone as bad. Let us come a little closer still, for epithets without illustrations are of little practical value. You have had the misfortune to hear a speaker whose voice is absolutely without *resonance;* the defect is not weakness, but a dull, muffled, non-portability which suggests speaking through a blanket. Neither gas-globes nor an open piano will utter a responsive chord. If the hall in which he speaks is large, the reporters are the sole recipients of his confidences. That man's voice is incontrovertibly *dull;* or if, in addition to being muffled, it is poor and thin, you call it *faint.* We are bold to affirm from experience that these defects can be remedied by reading aloud in the open air. You need not, like Demosthenes, practise declamation by the sea-side with your mouth filled with pebbles, but you can have no objection to repair to "dingle, bushy dell, wild wood, or bosky bower," and there read aloud by yourself, and so gain *timbre* for a voice naturally dull or faint.

Another remedy is to practise recitation in monotone upon G or A, in counting from 1 to 100, or reading an ordinary passage from a book on one note.

We are not equally confident in prescribing for the cure of a husky, croaking or harsh voice, especially in the case of an adult. Much, however, can be done with children. It is often from servants that children learn the shrill, high-pitched, harsh vocalization which it requires years to correct. It is of the utmost consequence that the voice they hear most frequently should be sweet and pure. We do not forget that very often a harsh speaking voice may be very sweet in singing, and *vice versa.*

2. ARTICULATION. As regards the second natural character of voice, Articulation, the prime excellence is distinctness. This is secured, not by volume of sound, but by means of deliberate utterance, the use of a far carrying note, the firm control of the jaw and teeth, and the clear enunciation of every final consonant. Opposed to clearness of articulation, we have in varying degrees of abomination, nasal, guttural, stuttering, lisping, and thick articulation. As regards the nasal, the American people, male and female, are the most conspicuous offenders; as to the guttural, even Princes of the Blood are not beyond reproach; and the "Tyne-sider" with his *burr* is almost as bad as the naturalized German-Jew. When we come to stuttering, we trench upon the function of the specialist. We have, however, experience to guide us in saying that gentleness and encouragement are the only means of creating in the young stammerer that self-control and deliberation, the want of which is the cause of stuttering. Stammerers can always sing without difficulty, and at school can recite their paradigms with perfect ease if monotone is permitted. *Lisping* is often an affectation. If a man says "Tholomon's Thong" for the title of the Book of Canticles, he is either an affected simpleton, or one who requires practice in the use of the sibilant letters. *Lumpiness* or thickness of speech is best illustrated in Mrs. Gamp with her "Ankwers packidge" for "Antwerp packet," "brick-badge" for "brick-bat," and "suppoge" for "suppose." Once more we prescribe monotone in a spacious room as the most efficient cure for all these defects. We now come to the acquired habits of the voice—Pronunciation and Accent.

3. CORRECT PRONUNCIATION. Its opposites are: vulgar, provincial and pedantic pronunciation. In this country we have no Academy to fix beyond dispute the pronunciation of any particular word, but the general usage of well-educated people gives a working guide in every case of doubt. As regards provincial pronunciation, the cure is surely, and perhaps regrettably, being wrought out by the great leveller of all distinctions, the Railway. To the philologist it used to be a great pleasure to trace, by vocal peculiarities, what particular band of Norsemen had colonized some particular district in England. This delectation vanishes before our present methods of travel with their accompanying unification of speech. *Accentuation* is still disturbed by locality. Take the following words, and see how the stress is differently laid in England and Scotland: "Arithmetic," "Committee," "Interesting," "Organization," "Aristocracy," "Indisputable" and "Success." Like the French the Scots accent the "met" in the first word, "com" in the second, and "suc" in the last; while many of them, and not a few Englishmen, put the stress on "est" in "interesting," on "gan" in "organization," and on "pu" in "indisputable." *Pedantic* pronunciation is the vice of schoolmasters and junior curates. They are deluded with the idea that the words must be pronounced as they are spelt, and that every letter must be heard.

4. ACCENT. The twin-brother of Pronunciation is Accent. Described by its excellencies, accent must be pure and may be fine. It is bad if mean, affected, or strongly provincial. Pure accent has no shibboleth. One ought not to be able, on hearing a man speak, to say "he is from Lancashire, Devonshire, Wales or Ireland." As a rule the vowels betray the geographical secret. The German "u" of the Yorkshireman in "butter"; the conversion of "ou" into "ew" by second-rate Londoners in such words as "town council"; the Scotch short "o" for the long one in "holy," "road," &c., and the Irish "oi" for "i" in "like," are all tell-tales of a man's *patria.* With these may be classed the close sound of "o" in "glory," and of "ou" in "thought"; and the prolific mistakes that surround the letter "a". But consonants also have their troubles. Some men insist upon aspirating them, e.g., "true" is pronounced "thrue," "ministers" "ministhers"; others ring them out unduly, "war-r" for "war," and (specially in Cheshire) the final "g" is doubled so that "ringing" and "singing" become "ring-ging" and "sing-ging." We protest also against the vulgarism now prevailing in high society of dropping the final "g" in all present participles: "runnin," "givin," &c. It seems to us no less a defect than the misplacement of the aspirate. Accent is *mean* if precise vowel-sounds are slurred over with undignified haste; and is *affected* when efforts to drop the native and attain a better accent overshoot their mark. "Wainy weathah" (rainy weather), "expwess twain" (express train), "bwandy and sodah" (brandy and soda) are cases in point.

II. DELIVERY. This is affected by certain mechanical properties and intellectual qualities.

1. ACCURACY. It is surely a reasonable demand that what is written and nothing else should be reproduced by the reader; but perfect fidelity is rarer than you might magine.

2. PAUSES. Printers' stops are often merely mechanical. Some writers (e.g., Sterne and Shelley), were notoriously negligent in punctuation, while others, such as Carlyle and Dickens, had their own peculiar views as to marks of pause. The best way in reading is to follow the grammatical structure of the sentence, and to refuse to be fettered by the printers' indications.

3. Emphasis and Cadence. Of both of these it may be safely said that it is better to be too sparing than too liberal. How distressing is the pounding of adjectives, pronouns and prepositions, except for the purpose of antithesis! Equally bad as over-emphasis is over-cadence, the too frequent raising and dropping of the voice, especially at commas. Even "sing-song" is preferable to this, especially in reading poetry. (S. T. Coleridge).

4. Fluency is the remaining mechanical property of Delivery, and implies that the delivery is neither faltering nor hurried, and that the voice is under command. Nothing is more trying to the nerves of the hearer than a gasping delivery, or one which is too *staccato*, or too syllabic; nothing more pleasing than the rolling *obligato*, when the words follow each other like the waves of the sea in regular and graceful undulations. Self-restraint is necessary to keep the utterance from being too rapid, and animation, to keep it from dragging. Moreover, the volume of voice should always be under strict discipline. The voice is at its proper intensity when the most distant person in the room hears with comfort, and the vocal organs of the reader are not strained.

5. Intelligence. Of Intellectual Qualities essential to good delivery, the first is intelligence, whereby the entire drift of the author is understood, and his meaning brought out by the reader. Argumentative composition should always be glanced over silently before being read aloud. Would that all clergymen would follow this counsel before reading in church St Paul's Epistles—a dialectic literature which taxes the intelligence of the reader to the utmost. In all such elaborate ratiocinative writing the reader must discriminate between the *main line* of the reasoning and the *sidings*. The former should be read in a high key with deliberate utterance and due pauses. But when the reasoner runs off the rails into some parenthetical statement or subsidiary issue, the key must fall and the pace hurry, so that the hearer can tell at what particular point the main argument has been resumed. When the last "therefore" introduces the grand conclusion, the voice must give *empressement* by a slow and didactic delivery of the words in which everything before is summed up.

6. Harmony is another "Intellectual Quality," and denotes a sense of rhythm in prose or verse. A good prose writer tries to avoid abrupt and jerky composition; and although he does not measure out his words into feet, or make his pauses and accents fall with the regularity of blank verse, he marches along to the step of an informal rhythm. The first paragraph of "Rasselas," the collects in the Prayer Book, Sir Thomas Browne's "Religio Medici" and De Quincey's "Essays" will all supply excellent examples of rhythmical prose.

7. Feeling and Expression are the last but not least of the Intellectual Qualities essential to good delivery. Without Feeling reading is little more than a mechanical exercise; without Expression there is no perceptible change of part or character. Feeling makes the voice responsive to the pathos and sense of the author; Expression is the power of dramatic imitation. It is modified as occasion may require, and suits its tone and manner to the subject—grave, playful, familiar, impassioned or solemn. *Poetry, dramatic literature and colloquies* are the best fields for the cultivation of Feeling and Expression. A good reader, while never losing command of his voice, and steadily preventing it from running into emotionalism, follows with truthful and expressive modulation the varying strains of his author. The thrill of heroic sentiment, the throb of restrained passion, the tremulous accents of pleading and compassion, the defiant tone of insult given or returned, the sneer of sarcasm, the lofty exhortation to duty, the fiery appeal to the golden deeds of the past, the withering denunciation of meanness or treachery, are all communicated to the hearer by play of voice, and yet nothing is pompous, sensational or suggestive of the stage. All this conception and execution are included in "the Art of Reading Aloud."

KEY TO SYMBOLISM,

ECCLESIASTICAL AND RELIGIOUS.

1. Symbolic Light. When the "halo of light and glory," which in art distinguishes Divine or holy persons, envelopes the body, it is called an *Aureola*; when it is limited to the head only, it is termed a *Nimbus*; the union of the Aureola and the Nimbus is called a *Glory*. The nimbus of the Eternal Father is usually a circular disc, having three bars or rays upon its field, reaching from centre to circumference. Ο Ω Ν by the Greeks and REX by the Latins, is often inscribed upon the nimbus, the former denoting the "Self-Existing One" and the latter "the King." If the hand be depicted it also is surrounded by a nimbus. In late Italian and Greek art the nimbus takes the form either of an equilateral triangle or of two triangles placed reverse behind each other. In each case the Trinity is symbolised. The nimbus of God the Son is also a three-rayed circular disc. The earliest form is rayless, but is accompanied by the Lamb, and A and Ω (alpha and omega) as a monogram. It is not now believed by experts that the three rays seen in Christ's nimbus have any connection with the cross, but refer to His membership of the Undivided Trinity. The symbol of the Holy Spirit is also generally invested with a circular tri-radiated nimbus, but sometimes with a plain triangular one. No angel ever wears the tri-radiated nimbus, nor does the Mother of Christ. The nimbi of the Apostles are in all cases circular, generally plain, or with a simple border, but, according to age and country, sometimes richly ornamented, and bear the name of the Saint. Saints, martyrs, confessors and virgins venerated in the Middle Ages bear the nimbus; and even living persons, but in the last case the nimbus is square in shape, and placed upright behind the head.

2. The Hand (issuing from a mass of clouds), as a Symbol of the Eternal Father, and indicating His power, was prevalent in the first eight centuries. Then began the practice of painting portraits of God the Father as an aged man, "the Ancient of Days," of august and venerable appearance, with a beard and long hair. The hand is sometimes open, sometimes closed, but benediction and the giving of grace are generally symbolised.

3. The Good Shepherd (St. John x. 14, 15, 16) appears in the catacombs as a popular representation of God the Son. Sometimes He simply stands amidst His flock, at others He carries a Pan's pipe in His right hand, while with His left He holds the feet of the sheep, one member of the flock standing on His shoulders.

4. Orpheus playing upon his lyre with such sweetness and power as to captivate all nature, animate and inanimate, is also found in the catacombs, as a symbol of Christ.

5. The Lamb, however, has been the constantly popular image of the Saviour. In the catacombs it appears standing, sometimes without nimbus, with a cross or the Greek monogram (X crossed by P) over its head; at other times it appears, with inscribed nimbus, standing upon a small hill, from which four streams (the four gospels) are flowing. As the "Agnus Dei" in art, the Lamb bears a cross and a cross-adorned banner.

6. The Lion also is used for Christ, who is styled in the Apocalypse "The Lion of the Tribe of Judah."

7. The Pelican, with its crimson stain on the tip of its beak, was supposed to feed its young with blood flowing from its own breast, and so became an emblem of the Redeemer.

8. The Fish has a curious history as a symbol of Christ. The Greek word "Ichthus," a fish, supplies the initials in Greek for "Jesus Christ (the) Son of God (the) Saviour." The pointed oval form, ommonly used for the aurecle, was probably derived from the shape of the fish, and is called *Vesica Piscis*.

9. The Grape Vine as a symbol for Christ is evidently connected with St. John xv. 1.

10. The Dove as the symbol of the Holy Ghost owes

its origin to St. Matthew iii. 16. It is represented in art pure white in colour, with red feet and beak, head downwards, with gold tri-radiated nimbus below its head, and three rays issuing from its mouth. Seven doves are sometimes depicted together in reference to Isa. xi. 1, 2; Rev. v. 6, 11, 12.

11. TRIANGLES in many arrangements stand for the Ever Blessed Trinity.

THE CROSS.

The Cross is the universal symbol of man's redemption, and appears in many varieties of form.

(1) The Old Testament Cross shaped like the capital letter T (called the Tau Cross).

(2) The Patriarchal Cross, with three transverse beams for the Pope, and two for Cardinals and Archbishops, the lowest beam being the longest.

(3) Of Crosses with four limbs, the Greek type includes those which have equal limbs and can be circumscribed with a circle; the Latin, unequal limbs.

(4) The Cross of Suffering is a Latin Cross with pointed members.

(5) The St. Andrew's Cross (Cross Saltire), is shaped like the letter X.

(6) The Maltese Cross has eight points.

(7) The Cross Patée must not be confounded as is often done with the Maltese; its radiating lines may be straight or curved.

MONOGRAMS OF THE NAMES OF OUR LORD.

1. ☧ = ChR, the first two Greek letters in Christos.

2. ☧ = the above, plus Alpha and Omega.

3. ☧ = Ch.I. (Christ Jesus).

4. ☧ A monogram consisting of Cross, Chr. I. with the loop of the rho added to one of the arms.

5. ℞ The N stands for "noster" = *our* (Lord Jesus Christ).

6. The above forms of the monogram are often enclosed in circles.

7. ĨC stands for the first and last Greek letters in the name of Jesus (C was the ancient S); similarly XC̃ = the initial and terminal letters of Christos.

8. IH̃C (in Latin letters IHS) = Je—s (Jesus); XP̃C = Chr—s = Christos (Christ).

EMBLEMS OF THE PASSION, RESURRECTION, AND ASCENSION.

1. *Emblem of Suffering.* The Cup with a plain Cross issuing from it. (St. Matthew xxvi. 39, 42).

2. *Emblems of the Betrayal:* Sword, Club, Lantern, Torch, Ear, Rope, Thirty Pieces of Silver, and the Head of Judas.

3. *Emblems of the Condemnation and Sufferings in the Common Hall:* Basin and Ewer (used by Pilate), Rope, Pillar, Scourge, Purple Robe, Crown of Thorns, Reed, and Cock.

4. *Emblems of the Crucifixion:* Cross, Three Nails, Hammer, Pincers, Ladder, Sponge and Reed, Spear, Inscription (I. N. R. I.), Seamless Robe and Three Dice. Also the Pelican, feeding its young with drops of its own blood; the Brazen Serpent, the Sacrifice of Isaac, and the Paschal Lamb.

5. *Emblems of the Resurrection:* The Lion, Phœnix and Peacock (as renewing its plumage every year).

6. *Emblems of the Ascension:* The Eagle; Translation of Enoch and Elijah.

EMBLEMS OF THE SACRAMENTS.

1. HOLY BAPTISM: A Fish; three Fishes interlaced in a fret; the crossing of the Red Sea and Jordan.

2. HOLY EUCHARIST: A Cup with three small loaves, marked with crosses; Chalice and Wafer; a small Altar with Chalice and Bread.

EMBLEMS OF THE EVANGELISTS AND APOSTLES.

1. EVANGELISTS: Four Scrolls; four open Books; four Rivers; (the four open Books, each with an aureole, are often placed between the arms of a Greek cross); a winged man (St. Matthew); a winged Lion (St. Mark); a winged Ox (St. Luke); an Eagle (St. John).

2. APOSTLES. Twelve sheep; twelve men (with or without sheep) carrying scrolls; *St. Peter*, cross keys; *St. Paul*, a sword pointing upwards; *St. Andrew*, the cross which bears his name; *St. James the Great*, a pilgrim's staff, script and scallop-shell; *St. John* (as an Apostle), a serpent issuing from a cup; *St. Thomas*, a builder's rule or square; *St. James the Less*, a fuller's club; *St. Philip*, a Latin cross fixed into a long reed; *St. Bartholomew*, a scimitar; *St. Matthew*, a tax-collector's purse or bouget; *St. Simon*, a large saw; *St. Jude*, a halberd; *St. Matthias*, an axe (or spear).

Most of these emblems refer to the weapon by which the particular Apostle was martyred.

EMBLEMS OF SAINTS.

St. Agnes, V. and M., a lamb; a sword and palm-branch.
St. Alban, a sword, and a cross on a long staff, or else a palm branch.
St. Alphege, a battle axe.
St. Ambrose, a triple scourge; a bee-hive.
St. Augustine, a heart pierced with arrows.
St. Benedict, several emblems drawn from attempts to poison him (cup and serpent, a loaf and serpent, &c. &c.).
St. Blasius, an iron comb.
St. Boniface, a book pierced by a sword, (he was martyred in Friesland while trying to evangelize the inhabitants).
St. Britius, blazing coals carried in his hands or chasuble.
St. Catherine, a wheel.
St. Cecilia, an organ, organ-pipes, or harp.
St. Clement, an anchor.
St. Crispin, a shoemaker's awl and knife.
St. Cyprian, a sword.
St. Dunstan, a harp and a pair of furnace tongs.
St. Edmund, *K.* and *M.*, a bunch of arrows or short darts.
St. Edward, *K.* and *M.*, cup and dagger.
St. Fabian, sword and palm branch.
St. Faith, a grid-iron.
St. George, a dragon, a shield bearing a red cross, and a spear.
St. Giles, a hind seeking protection in his lap.
St. Gregory, book and dove.
St. Hilary, three books (he wrote three works against the Arians).
St. Hugh, a swan.
St. Jerome, a model of a church in his hands.
St. Lambert, a javelin.
St. Laurence, a grid-iron.
St. Lucy, a sword, a pair of eyes carried on a dish, and a burning lamp.
St. Margaret, a dragon spouting her out of its mouth.
St. Mary Magdalene, a box of ointment.
St. Nicholas, three purses, or three golden balls.
St. Nicomede, a club spiked with iron.
St. Prisca, a sword, and a lion at her feet.
St. Remigius, a dove with an oil cruse in its beak.
St. Richard, chalice at his feet, where the consecrated cup lay when he accidentally let it fall without spilling a drop.
St. Stephen, a stone or volley of stones.
St. Vincent, a grid-iron.

Here again symbol and mode of death go together for the most part.

EMBLEMATICAL USE OF COLOURS IN THE EARLY AND MIDDLE AGES.

WHITE (or Silver) is used for Christmas, Circumcision, Epiphany, Easter, Feasts of B. and of V. M. Saints who were not martyrs.

RED: For Exaltation and Invention of the Cross, Pentecost and Feasts of Martyrs.

BLUE: Symbolises Heaven, Knowledge, Contemplation.

YELLOW: Symbolizes the Goodness of God, faith, fruitfulness.

GREEN: Used on common Sundays; signifies youth and fertility.

VIOLET: Used for Advent, Lent and all penitential days except Good Friday (when Black is the colour). Violet signifies passion, suffering, humility, &c.

SYMBOLISM OF STONES.

The *Diamond* signifies light, innocence, life and joy.
The *Ruby*—divine power and love, dignity and royalty.
The *Carbuncle*—blood and suffering.
The *Sardius*—martyrdom.
The *Sapphire*—all heavenly virtues.
The *Topaz*—Divine goodness and human faithfulness.
The *Emerald*—hopes of immortality.
The *Amethyst*—earthly sufferings and truth unto death.
The *Pearl*—purity, innocence and humility.

MISCELLANEOUS SYMBOLS AND EMBLEMS.

An *Anchor* signifies hope, serene patience and tranquillity.
An *Ape*—sin, malice, cunning and lust.
An *Apple*—the fall of man.
Arrows—suffering, pain, martyrdom.
An *Asperge*—purity of life and holiness (an instrument used for sprinkling holy water).
A *Banner*—triumph over persecution and death; is often charged with the cross.
A *Book*—the gospel or (as in the case of St. Stephen), the Old Testament.
A *Circle*—eternity.
A *Crown*—triumph over all hindrances.
A *Dove*—when bearing the nimbus, the Holy Ghost; without it, love, innocence, &c.
A *Dragon*—the devil.
The *Dragon's Mouth*—the jaws of hell.
The *Escallop's Shell*—pilgrimage.
The *Heart*—when flaming, fervent zeal for Christ; when pierced with arrows, contrition and devotion in trial.
The *Lamp*—wisdom.
The *Lily*—virginity and purity.
The *Olive Branch*—reconciliation and peace.
The *Palm Branch*—final victory.
The *Pomegranate*—immortality.
The *Scourge* (Flagellum)—penance and self-mortification.
The *Square*—earthly existence.
The *Swan*—solitude and retirement.
The *Sword*—violent death or martyrdom.

A VISIT TO AN ART GALLERY.

It sounds but a truism to say that both pleasure and education are to be found in visiting the collection of sculpture, oil-paintings, water-colours, drawings and representations in black-and-white which form an Art Gallery. And yet in contrast to the delight with which the French, German, Dutch and Spanish crowds regularly frequent their own galleries, are to be noted the listlessness, aimless remarks, poverty of criticism and general want of intelligent interest characteristic of the average British visitor to the galleries of his own country. Is it possible to aid him in discovering a new and abiding pleasure? We can do no more than offer a few rudimentary suggestions with the most charitable intentions.

1. The path to enjoyment runs through the valley of humility. Applied to the subject in hand, this venerable truth means that you must take *on trust* at first the judgment of competent tradition and expert verdict as to what is truly good in the domain of the Fine Arts. No amateur can relay the foundations of æsthetic criticism. Go then, again and again, to the National Gallery, or any other great classical collection at home or abroad, and there "read, mark, learn and inwardly digest" the works of the immortal painters who represent the great National Schools (Italian, Dutch, English, Flemish and Spanish &c.). It is marvellous in how short a time the eye can learn to arbitrate between the claims of the superior and inferior in drawing, painting and sculpture, if only *established* excellence is admitted as the criterion of judgment.

2. Even if we succeed in winning but few disciples, we shall maintain that the first steps in artistic appreciation should begin with a study not of colour, but of form, i.e., of black-and-white in its various manifestations: etchings, pen-and-ink sketches, line-engravings, silver-point, pencil drawings and the like. All these varieties are often hung in the lower corridors of galleries, as if they were of small importance; or placed, as in the Dutch museums, in large portfolios on swing-desks; but nothing of this inferior placement should prejudice the intelligent student against giving them a thorough attention. Proportion, freedom of pose and motion both in men, women, wild and domestic animals, birds, fishes, &c., can all be seen in the free-hand and free-arm drawings of the great masters. As our suggestions are only addressed to the uninitiated, we may venture to caution them in this connection against the misuse of such terms as "etching," &c. We have frequently heard this word confounded with pen-and-ink sketches. Now "etching," which means *biting*, is "the operation by which a slight depression is made at pleasure on the surface of a body by means of a liquid solvent called etching-fluid." Clearly then, what you draw with your pen cannot, without the "biting" process, be called an "etching." In conning etchings, you will soon notice with pleasure the various treatment by great artists of shadows, skies, clouds, &c. Thus, e.g., you will see that while Rossini gives with great power the black sunless effect of the passage through an old Roman arch, he entirely neglects to represent clouds, but contents himself with straight horizontal lines in their place. Piranesi, on the other hand, is sparing in very black shadows, and lets plenty of sun-light fall upon his buildings, while his skies are filled with a greater variety of clouds than we are wont to associate with the climate of Italy.

3. When you are ambitious to go upstairs into the gallery, we would advise you to give beforehand a few evenings to the study of some manual which gives a summary of the characteristics of the Great Schools of painting, and their distinctive names. You are familiar, e.g., with the term, "Pre-Raphaelites"; but what does it mean? As applied to a school of modern artists it denotes those "who profess to follow the mode of study and expression adopted by the early painters, who flourished before the time of Raphael, and whose principal theory of action is a rigid adherence to natural forms and effects, in contradistinction to the style or rendering of any particular school of Art." Or, to take another example, that of "Genre-Painting." Many are the misapprehensions of this much used term. It is often limited to comic or work-a-day subjects; but it really includes all the incidents of every-day life, whether grave or gay. Hogarth is our best English representative. In Holland "genre" subjects abound in every gallery; a boat coming into harbour with a dead man on board, whose wife or sweetheart is waiting on the shore to welcome him, unconscious of his fate; a band of merry-makers dancing in front of a village inn; groups of village gossips discussing eagerly their rustic interests in the blacksmith's forge; or a little procession of mourners carrying to the grave-yard by the sea "all that remains" of a beloved relative,—all these are rigidly included under the term "genre" pictures. Of course, if you are going deeply into the subject of art, which we hardly assume, you will lay your foundations in a study of Greek art, which we cannot here touch upon even with the lightest hand.

4. Instead of labouring with your catalogue, and examining every single picture by its description, when you enter a particular gallery for the first time, go where your fancy leads you, and "skim" the collection. Perhaps a landscape is the first to appeal to you, with its quiet familiar scene of wood, water, village-spire, sedgy pool, woodsmen returning from their labours through the trees whose stems are reddened by the setting sun. Or perhaps you like a picture with a "story,"—lovers stealthily con-

versing on the little wooden bridge after the evening star has risen. Or you enjoy the spectacle of the fat herds of cattle grazing in rich pastures, or lying under the trees to shelter themselves from the noontide sun; or a gaudily painted garden with flowers of the old-fashioned sort, amid which stands the maiden in white under a scarlet sun-shade; or it may be a bee sipping eagerly from flower to flower, or a vigilant mother-bird guarding her callow offspring. Follow your fancy as your only guide.

5. But all the time you have mentally been taking stock of what other attractive objects the collection contains, with a view to subsequent visits, by which you hope to deepen the little specialized knowledge which possibly you may have acquired in one department of painting, and in any case to gratify your predilection for particular kinds of subjects. Go back to these as often as opportunity permits. Study each from the several points of view, say of colour—harmonious or otherwise—drawing and composition. If you are standing before a landscape, note how the effect of atmosphere or sunlight is rendered, the balancing of parts, the subtle gradations of tint in middle distance (trees, hills, pasture-land, &c.). Or if you are engaged in the study of a subject-picture, notice the drawing and grouping, the objective excellence and the subjective impression upon yourself, i.e., the effect impressed upon you, quite apart from the artistic merits in themselves, or from the details of the story. but the grand total of all these as realised in your own mind.

6. We may now say a few words about portraits. What is a really good portrait? There seems to be considerable difference of opinion between experts as to the way in which the human face and figure should be handled. Some critics find fault if drapery does not receive minute attention; others if more than one "eye's take-in," i.e., the measurement of a single glance without change of focus, is represented fully and clearly in the portrait. The third button of the waistcoat is by these taken as the boundary point between what is to be clearly painted and what is to be only suggested. Every wrinkle, every eye-lash, every graded hue in cheek and eye, is powerfully pourtrayed, but below the third button you must gradually sink into shadowy suggestion of abdomen, legs and feet! And yet some of the greatest portrait-painters have displayed with equal clearness the whole man from top to toe. Other portrait painters "idealize" their subject, attenuating corpulence, diminishing age, and reducing rubicundity, until the nearest friends hardly recognise the personality portrayed. Surely they have forgotten Cromwell's injunction about painting the wart! Now it seems to us that the first requirement in portraiture is to exhibit character. Behind the surface there lies a human being, whose look, stoop, gaze, pose, hand and fingers are all tell-tale of the man himself. Do not then look first of all at the velvet robe, the lace collar, the diamond ring, the buckled shoes, but at the general demonstration of what the man must have been as a rational moral being. You may then proceed to notice the merits of colour and drawing.

7. In pictures of still-life (fruit, flowers, groups of furniture or other inanimate objects, which generally form only adjuncts to a picture) you will notice composition, drawing, beauty of colour; and in floral pieces, likeness to nature without attempt at imitation. Just as Wordsworth never *catalogues* in verse the features of Nature, which he so beautifully describes, but nevertheless gives them an abode in the reader's mind, so the painter of still life does not take flower by flower and leaf by leaf in composing a group, but beguiles you by the general impression he conveys.

8. Lastly, learn to admire rather than to find fault. Read all that is relevant to your special subject written by really competent authorities. Be ready to abandon preconceived opinions if you feel that the masters have indicated "a more excellent way." If so disposed, make a few simple efforts on your own account to imitate what you admire, and you will soon learn how much easier it is to criticize than to do.

A VISIT TO AN ANTIQUARIAN MUSEUM.

The history of the world has been written in "divers manners." The great scribes of history—Herodotus, Thucydides, Livy, Gibbon, Macaulay, Carlyle, tell their wondrous tale, often without human sympathy and seldom without prejudice. "History," says Gibbon, "is indeed little more than the register of the crimes, follies and misfortunes of mankind." In place of this cynical verdict by one of the greatest historians, we prefer the kindlier judgment of Don Quixote: "History is a kind of sacred writing, because truth is essential to it, and where truth is, there is God Himself." Happily the history of the world has not been left entirely to literary historians to record. Geology is the great historiographer of its physical frame, and Archæology of its social advancement; and Don Quixote's commendation applies to both. In the present paper we deal with the latter, and are anxious to fire with our own enthusiasm those visitors to an Antiquarian Museum who hitherto have wandered listlessly through its dreary collection of old stones, barbaric implements of bronze and iron, and a miscellaneous assortment of meaningless objects, conveying to them no message of human interest, any more than would a Dutch auction.

Notice first, in such an Antiquarian Museum as that (say) of Edinburgh, from what a wide area of the world's surface the stone collection alone has been gathered. Besides what Scotland has herself contributed from Shetland to Wigtonshire, from the Hebrides to Berwickshire, you find these stone relics coming from England, Ireland, France, Belgium, Denmark, Scandinavia, Japan, various parts of Asia and Africa, New Zealand, Australia, Oceanic Islands, Greenland and Eskimo, Canada, United States of America, Mexico, South America, and the West Indian Islands.

Notice also in what sundry places many of the objects have been discovered: in sands by the sea-shore, in cinerary urns, in peat-mosses, chambered cairns, pit-bottoms, stone circles, cists, barrows, graves of every description, the bottoms of lakes, and the beds of rivers, &c., &c.

Now the value of this width of area and variety of *situs* lies in the broad basis thus supplied for the erection of a platform of generalizations. Behold how slowly, but surely, civilization advances from the primitive savage relation to even the simplest arts and expedients, up to what we see when the curtain rises at the dawn of authentic history, as witnessed by literary historians! But beware of making an essentially false chronological deduction. Do not imagine that the use or final disuse of a particular weapon or other article in one region of the world implies that such use or disuse was universal and contemporaneous everywhere. The stone quern for grinding corn, e.g., is still used in Skye, although its use has for centuries been dropped in all other parts of the civilized world.

PERIODS. We now pass on to state the accepted divisions of pre-historic Archæology. There are three of such divisions: the Stone Age, the Bronze Age, and the Iron Age.

1. The Stone Age, of which it is impossible to fix the dates of beginning or end, includes (1) the Palæolithic or Drift Period, (2) the Neolithic or Surface-stone Period ("Palæolithic"=old stone; "Neolithic"=new stone). The characteristic implements of the *Drift Period* are of chipped flint, belonging to an epoch in which men occupied Central Europe contemporaneously with the mammoth, the cave-bear, and other long-extinct mammals. The *Surface-stone Period* is characterized by weapons of polished flint and stone.

2. The Bronze Age recognized copper as a malleable metal, and then as a material capable of being melted and moulded into form by the application of heat. Crude ores then began to be smelted so as to extract the metal, and metals were mixed in diverse proportions so as to prepare an alloy of requisite ductility or hardness, according to the special aims of the artificer.

3. The Iron Age supplanted Bronze by Iron for the

manufacture of arms, sword-blades, spear-heads, axes, daggers, knives, &c.

This outline of "Periods" will guide you in following with intelligent interest the classification of objects in the Museum, some of which we may now indicate with more or less detail. We will begin with—

RELICS OF THE STONE AGE. (1) *The Stone Knife.* One can hardly realize how cutting operations could be performed by such an instrument, and yet as late as the time of Moses, a very delicate operation was performed with a stone knife upon his son by his Midianitish wife (Ex. iv. 25). In what abundant variety the museum exhibits these knives: leaf-shaped, thoroughly chipped on each face; semi-oval knives, ground smooth from each face to a sharp cutting edge on three sides, and probably used in the skinning of animals; oblong knives with rounded angles, polished over both faces, and with the sides worked to a sharp edge all round; square shaped knives with rounded angles, ground on each face to a sharp cutting edge on three sides; "flakes" plano-convex in section, curved longitudinally, finely worked over the convex side, and along the edges; "fabricators," i.e., elongated implements used as punches in the secondary working of other flint implements; triangular knives, each pointed at one end. Some knives are made of thin micaceous sand-stone.

(2) *Scrapers, cores, flakes, &c. of Flint.* The scraper is formed from a flake with a flat under surface, by trimming one end to a rounded edge like that of a round-nosed chisel.

(3) Roughly chipped stone implements *not made of Flint.* These abound in Orkney and Shetland, are large in size, and are very rudely chipped out of sand-stones, clay-stones, steatite, granite, &c. The common forms are club shaped or handled, and very formidable weapons they seem.

(4) *Flint Arrow and Spear Heads.* Flint arrow-heads are of three varieties of form—leaf-shaped, lozenge shaped, or triangular, with barbs and basal stem for attachment to the shaft. The largest arrow-head is almost of the same size as the smallest spear-head.

(5) *Stone Axe-Heads* in two forms, (1) with both ends nearly alike in width; (2) tapering from the width of the cutting edge to a bluntly pointed conical butt. The material is various: greenstone, felstone, granite, gneiss, chlorite-schist, porphyry, serpentine, sandstone, micaceous schist, jasper, grey flint, diorite, &c., &c.

(6) *Perforated Stone Axes, Hammers, &c.* In whatever form, they present one feature in common, the perforation for the handle drilled from both sides, probably with a piece of soft wood aided by sand and water.

(7) *Pounders or Hammer Stones and Anvil Stones.* Chiefly oblong or rounded water-worn pebbles or boulders of such a size as may be conveniently grasped in the hand.

(8) We must "lump" the other interesting memorials of the Stone Age: whetstones, polishers, stone-cups (often of great beauty), wrist guards, discs, socket and pivot stones, sink stones, smoothing and ironing stones; grain rubbers, knocking stones, querns, whorls, &c., &c.

The stone age represents the early condition of mankind in general, and has remained in savage districts up to modern times. The use of bronze indicates a marvellous advance in the progress of civilisation. The bronze age had its most important place among the nations of Europe and Asia. Let us now inspect some

RELICS OF THE BRONZE AGE. (1) *Moulds.* These were generally made of stone, sometimes of loam or clay. In making some articles, moulding was completed by hammering.

(2) *Bronze Flat Axes*, which are flat, flanged, or socketed.

(3) *Bronze Spear Heads.* The blade varies from a short to a very elongated leaf-shape. The socket always extends along the middle of the blade as a midrib, cored almost to the point. Two rivet holes for fastening to the shaft, or a pair of loops are often displayed.

(4) *Bronze Dagger Blades.* These have sides more or less curved, and a tapering midrib, and are attached to the handle by two or more rivets in the base of the blade.

(5) *Bronze Shields.* Some of these are beautiful specimens of hammered work. They are circular in shape, with a central boss, and a series of concentric rings with rows of smaller bosses or studs between them extending to the circumference. (Trumpets, bracelets, sickles, anvils, rings, gouges, and especially beautiful and capacious caldrons are objects of this age worthy of your attention.)

Iron, notwithstanding its abundance, came into use many centuries after bronze, on account of its admixture in a natural state with sulphur and other ingredients, from which it can only be set free by a process of smelting which long remained hidden. But when the art of smelting iron ores had at length been mastered, iron became the material for the manufacture of arms, sword-blades, spear-heads, axes, daggers, knives, &c. The Iron Age leads us on to the period of authentic history, and therefore relieves us of detailed specialization of the iron examples contained in an Antiquarian Museum.

There are, however, a few more objects of importance which solicit your attention as you wander round this seemingly lifeless gallery, and these we may roughly summarize as monuments connected with Death and Life; in other words, with Sepulture and the requirements of Social Life.

RELICS CONNECTED WITH DEATH: (1) *Cinerary Urns of Clay.* These are early witnesses to the practice of cremating the dead. The burnt bones were carefully gathered up from the funeral pile, and were then placed in a large clay urn, with plain conical under part and ornamented upper part. The urn was then deposited in an upright position, within a cist of stones, or buried in the ground, and the mouth was covered over with a thin flat stone. These vessels belong to the Bronze Age of the British Isles. You will notice many varieties of these urns, and not the least beautiful, the small cup-shaped urns, and those of the drinking-cup type, some of which belong to the Stone Age; others, though of stone, are ringed with bronze. (2) *Altars inscribed to the Dead:* always of historical and sometimes of pathetic interest. (3) *Sculptured Monuments, Crosses, &c.* These are of the highest interest, but require time to master their elaborate pictorial designs, which we can only present in the most summary fashion.

In a sermon preached at the consecration of the Bishop of Brechin, January 6th, 1904, the Bishop of Bristol made the following interesting allusion to these Sculptured Crosses and Memorial Stones:

> "At Restennet . . . Palladius and Ninian taught the naked Pict that a Christian must be clothed as well as in his right mind. The Pictish king and chieftains would naturally ask, what was to become of that wondrous art which they possessed of delineating on their bodies the figures of animals and complicated ornaments of other character. . . . The Christian priest would make reply that all this decoration should be transferred to memorial stones, the complicated patterns worked into a great cross on the face of the slab of stone, and the perfect outlines of real and imaginary creatures sculptured on the other side."

Never has the Cross been so elaborately treated as by these Picts of by-gone ages. You may, e.g., find a stone incised with a plain cross; or with an equal-armed cross surrounded by a circle; or a cross nine feet high, bearing on the obverse figures of the Virgin and Child, David and the lion, &c., with ornamented Celtic panels; and on the reverse, four lions and four bosses of interlaced serpents surrounding a central boss of similar work in high relief.

RELICS CONNECTED WITH LIFE. (1) *Personal Ornaments.* Including bronze mirrors with ornamented handles and gorgets, bronze belts, studs, armlets, silver brooches, pennanular brooches, pins, chains of double rings of silver, bow-shaped fibulæ, lunettes, twisted rings, spirally twisted torcs, bracelets, beads, buttons.

(2) *Life in its utilitarian and military aspects:* Here you are in a homely land, as you wander among saucepans, cooking-pots of brass and iron, ewers, flagons, measures of brass, kitchen and table utensils, lamps, candle-sticks, tinder-boxes, locks, keys, door-knockers, gratings, spurs, bridles, horse trappings and shoes, distaffs, spindles, spinning-wheels, looms, and various kinds of rude tools. Among the more attractive objects are those connected with the military profession:—swords, daggers, dirks, long-shafted weapons, banners, and flags, bows and cross-bows, armour and (of a later period) powder-horns and old guns. You will doubtless be much interested in the prehistoric canoes and masses of bog-oak, as well as in the coinage of early historic days.

(3) *Life in its Religious Aspects:* In addition to the

marvellous crosses already described, the following relics of early Christian times may be glanced at: bells of iron and bronze, pastoral staves, crucifixes, reliquaries, sacred sculptures, carvings in stone, wood carvings, and MSS. of sacred books. Very curious are the old quadrangular bells, sometimes of bronze, sometimes of iron, found in Scotland and Ireland *passim*. The famous "Bell of St. Fillan," with its double-headed dragonesque handle, was held in such reverence that the people resorted to it for the cure of insanity and other diseases! You will find tiny bronze bells (3 by 3½ in.) with figures in relief and representations of such scenes as the Temptation and the Crucifixion. Seldom will you see in your search for the beautiful, anything more exquisite than the Quigrich or Crosier of St. Fillan of Glendochart. "Books of Hours," missals, early MSS. of the Gospels, have an interest sometimes derived from their great age, sometimes from their rich ornamentation.

We will conclude with expressing the hope that a Lectureship may be founded in connection with every Antiquarian Museum in this country, so that the people may enjoy, from the living voice at convenient times, expositions of the instructive and interesting contents of such institutions.

A VISIT TO A CATHEDRAL.

There is much truth in the striking dictum of Thomas Carlyle, that "he who would understand the history of England, must first understand the history of England's Church." Perhaps no better schoolmaster could be found for the teaching of the latter than the ancient and majestic cathedrals of our land. Hoary with experience of all the vicissitudes of our national life, both political and religious; beauteous in themselves as works of consummate art; eloquent in their appeal to the religious instincts of every thoughtful man—they stand at once the glory and sublime teachers of our race.

But is it not somewhat remarkable that the warmest and truest testimonies to their unique beauty should have come from foreigners? We do not ungratefully forget Winkle's "British Cathedrals,"—who could? with his charming illustrations of what our Cathedrals were like before the rage for "restoration" set in; nor what Pugin, Rickman, Bloxham, Ruskin and Parker have done for the scientific and æsthetic appreciation of both Cathedral and Parish Church; but who has equalled in delicacy and fidelity of description Mlle. de Varreux, whose contributions in 1884 (excellently translated by "G. S. M.") were the gems of the short-lived but very able *Scottish Church Review*? Next we may name two American writers, the successors of Washington Irving, of almost classical renown: Nathaniel Hawthorne, author of the *Scarlet Letter* and of many other delightful books, and Bishop Cleveland Coxe, whose *Sacred Ballads* and *Impressions of England* are dear to the hearts of all Anglicans on both sides of the Atlantic. Each of these has glorified our Cathedrals by the devotion of his own genius to their honour. But, as with all kinds of education, so also here, the pupil must bring to the desk a certain mental outfit before he can profit by the prelections of even the most illustrious masters. What mental equipment, then, shall the Cathedral tourist take with him if he would reap the rich harvest of all that Cathedrals can teach him?

I. He must have the *sense of beauty*, without which he is even as the blind. No fair landscape, sunset or sea-view can give pleasure to the blind man, and the glories of Lincoln, Salisbury, and York will be equally powerless to charm the observer who is blind to beauty. We remember with what delight Lord Leighton once spoke to us of his "week-end" visits to the English Cathedrals. But then he took his eyes with him, and such eyes! You, the tourist, must have first of all a loving eye for symmetrical beauty and proportion, and a catholic appreciation of very various styles of beauty.

And, first, let us mark the imposing grandeur of the Norman Style. It is not enough, however, to be deeply impressed, e.g., at Durham or at the White Tower Chapel of London, with the massive Norman channelled pillar, which always makes us think of a Titan; and the rounded or horse-shoe arch, which seems an image of eternity; nor with its zigzag border, which seems connected with "the changes and chances of our mortal life"; but you must, like ourselves, love almost to tearfulness the heavenly charm of

The Early English, as seen in the "Angel Choir" at Lincoln, at Westminster Abbey, and the south transept of York Minster, with its clustered columns, its mouldings of alternate rounds and deeply cut hollows, producing a strong effect of light and shadow; its lancet-shaped trefoil or cinquefoil arches; its deeply recessed doorways, divided into two by a single shaft or small pier; its windows in combinations of two, three, five and seven, occasionally surmounted by an all-embracing arch with circles pierced between it and the tops of the windows; its groined ceilings bossed with foliage at the intersections; its flying buttresses and high-pitched roofs; its love of the rose as an ornament, almost as common as the tooth and the trefoil, and its deep under-cutting of foliage suspended from the mouldings only by the stalks and edges of the leaves. Surely the poetry of Architecture is here! But, as a Cathedral tourist, you must not be exclusive in your admiration, and you cannot gainsay the beauty of

The Decorated Style, which succeeded the Early English. Its charms have been well described by Mr. Whewell in his "Notes on German Churches" (third edition, p. 330). "It is characterized with us by its window-tracery, geometrical in the early instances, flowing in the later; but also, and perhaps better, by its triangular canopies, crocketed and finialed, its niched buttresses, with triangular heads, its peculiar mouldings, no longer a collection of equal rounds, with hollows, like the Early English, but an assemblage of various members, some broad and some narrow, beautifully grouped and proportioned. Among these mouldings one is often found consisting of a roll, with an edge which separates it into two parts, the roll on one side of the edge being part of a thinner cylinder, and withdrawn a little within the other. A capital with crumpled leaves, a peculiar base and pedestal, also belongs to this style." We hope we are not making too great demands upon the affections of the ordinary tourist, if we say a word in favour of the last great style of pre-Reformation English Architecture—

The Perpendicular; (a name first used by Mr. Rickman in reference to the perpendicular lines of the tracery which run unbroken upwards). We quite admit the one common defect in its later development is the lavish and confused introduction of ornament and the paucity of the mouldings; but still, in its earlier stages the general effect is bold and good. The depressed arch, the square arrangement of the mouldings over the heads of doorways, creating a spandrel on each side above the arch, which is usually ornamented with tracery, foliage or a shield; the constant use of transoms crossing the mullions at right angles, even repeatedly, in large windows, e.g., the west windows of Westminster and Gloucester; the crossing of vertical lines by bands of quatrefoils, &c., causing a right-line arrangement; all this, we admit, gives a Quaker-like stiffness to the style, but it has also the neatness and decorum of the Quaker costume, making us regret all the more the meretricious and Jezebel-like extravagance of its declining years. But perhaps our taste is too severe for you, and you may love panelling on every inch of walls and vaults, and may prefer Henry the Seventh's Chapel at Westminster to any other part of the Abbey. If so, we make you welcome to the fairy-like fan-tracery both there and at King's College Chapel, Cambridge. For us the charm of the Perpendicular Style lies rather in its ogee doorways; its ornamental roofs with the whole framing exposed to view; its pendants, between the timbers filled with tracery, and the beams arched, moulded and ornamented in various ways. Look, e.g., at the roof of West-

minster Hall erected in the reign of Richard II, and you will see the finest specimen of the Perpendicular roof the country can produce; others, however, are to be found in Christ Church Hall, Oxford, and the Church at Cirencester in Gloucestershire.

II. You must have a *chronological knowledge* of the great foundations, and the classification of styles.

The ENGLISH CLASSIFICATION may be briefly stated as follows:—

1066–1154, Norman; or Romanesque.
1154–1189, Transitional from Norman to Pointed.
1189–1272, Transitional from Early Pointed to Complete or Geometrical Pointed.
1307–1327, Geometrical Pointed } Middle
1327–1377, Flowing or Curvilinear Style } Pointed.
1377–1399, Transition from flowing to hard lines.
1399–1546, Third Pointed, variously called "Rectilinear" (Sharpe), or "Perpendicular" (Rickman).

III. You must also acquaint yourself with a *Knowledge of the Arts of Masonry*, in Foundations, Pillars, Pedestals, Capitals, Mouldings, Ceilings, Lanterns, Buttresses, Roofs, Cloisters, Crypts, Burial-places, Fonts, Altars, and Rood-screens. Then with Stained Glass, Heraldic Brasses and Blazonry in general; with Belfries and the casting of Bells, and old contractions of Latin inscriptions. "A large order," you will exclaim, but not nearly, to a man of moderate liberal education, as difficult as you might think. Trustworthy Handbooks, with their glossaries, abound, and some of them are of permanent value.

IV. But further, you must know the purposes to which the various portions of the Cathedral were originally destined, e.g., the Lich or Corpse Gate, the Galilee (Durham and Ely); the Nave and Aisles; the Fald Stool; the Lectern; the Sanctuary; the Aumbrey; the Tabernacle; the Lady and Side Chapels; the Crypt; the Clerestory and Triforium; the Muniment Room, Chapter House, Vestry, Choir School, Presbytery, and the like. A good glossary will enable you to steer a clear course through this array of unfamiliar terms. (Refer to "Glossary" in *Index*.)

We append a few chronological notes that may be of use in making you see the "time-connection," as regards the history of the English Cathedrals, both in foundation and extension.

430 A.D., the Romans left our shores, and in 450 the Saxons arrived.
565, *Candida Casa* ("White Cottage"), the oldest British Church was built at Whitehorn, in Wigtownshire N.B.
597, Augustine arrived in Kent, and six years later founded the Cathedral of Canterbury, afterwards often destroyed by fire.
604, St. Paul's and Rochester originally founded.
627, York Minster, and 643 Winchester founded.
665, Peterboro' founded.
983. Worcester completed.
988, Durham begun.

Before we pass to the year 1000, we may remark upon the paucity of Anglo-Saxon remains to be found outside a few places, such as Oxford, and some parishes in East Anglia. The reason is interesting. The prevailing belief that the Messiah would return in A.D. 1000, made the keepers of "tumble down" churches disinclined to repair or maintain them, and when, in 1066, the Normans came, they had to restore almost all the churches of the country.

The 11th CENTURY bestowed upon us Hereford, Gloucester, Selby, St. Alban's, the Tower Chapel, Lincoln, and the most of Norwich.

The 12th CENTURY saw Tewkesbury completed; Salisbury and Peterboro' rebuilt; and on May 4th, 1130, King Henry I. and David, King of Scotland, and all the English Bishops "assisted" (surely an unique event in ecclesiastical history of England) at the dedication of Canterbury Cathedral; in 1180, Christ Church Cathedral, Oxford, was consecrated; in 1185, the Temple Church, London, was built, and in 1195, Glasgow Cathedral.

And now we come to the 13th CENTURY, the most generous and prolific of all ecclesiastical mothers. In 1220 Salisbury Cathedral was founded, dedicated in 1260, and completed by the addition of its spire, about 1330. In 1221 King Henry III. laid the foundation stone of the Lady Chapel at Westminster; in 1224 Exeter Chapter House was built. A coincidence worth remembering is that in 1248 Cologne Cathedral and the Alhambra at Granada were begun; in 1278 King Edward I. and many of his nobles attended the reconsecration of Norwich Cathedral, and in 1294, Queen Eleanor's nine monumental crosses were erected. Before the close of the century, the nave of York, the choir of Exeter, St. Stephen's Chapel, Westminster, the Chapter House of Wells, and the cloisters of Norwich had been added to our list of great foundations.

The register of the 14th CENTURY is highly distinguished. Lady Chapels were founded at Lichfield, St. Alban's and Ely; Bristol Cathedral was built and Windsor Castle re-built, and the lovely lantern of Ely; the nave of Exeter; the west windows of York and Durham; the choir of York and the spire of Norwich; the cloisters of Gloucester; the nave and aisles of Winchester, and New College, Oxford, all belong to this century.

We have still a hundred and odd years to run before we arrive at Reformation times, and in that interval the east window of York; the College of Eton; Redcliffe Church, Bristol; Rosslyn Chapel in Scotland; the central tower of Gloucester; Magdalen College, Oxford; Great St. Mary's, Cambridge; St. George's, Windsor; Canterbury "Angel Steeple"; Bath Abbey; Henry the Seventh's Chapel, Westminster; the vaults of Windsor and of King's College Chapel, Cambridge; and Bangor Cathedral, were all either built, re-built or enlarged.

Two reflections spring from these historical notes: (1) the bounty of kings, bishops, and even priors, in building churches "exceeding magnifical" without the aid of bazaars or other popular appeals for money; (2) the connection between architecture and theology in the history of religious thought in this country, e.g., the growth of Lady-chapels keeps time with the growth of the cultus of the Blessed Virgin. We could give other illustrations, but this is hardly the place for them.

AN INTRODUCTION TO HERALDRY.

1. **WHAT IS HERALDRY?** Heraldry or Armory is a pictorial or delineated system whereby families declare the continuity of their line, and the ramification of its branches in due degrees of subordination, and the honours that its members may have from time to time received from the sovereign. It is an authenticated register passed on from generation to generation, and therein lies its essential difference from the array of badges and devices pertaining to a solitary individual. Old writers on Heraldry ignored this capital distinction, and found in the Bible, Homer, Æschylus, and Tacitus evidences of an heraldic system existing in the ancient world. More modern writers have endeavoured to root it in Totemism with but little more success; for here again it was optional for the son to continue or abandon the totem of his father (Fraser's *Totemism*, p. 56). Let us repeat that fixity and the capability of hereditary transmission are the two grand essentials of Heraldry or Armory properly so called.

2. **WHAT IS ITS ORIGIN?** "Heraldry," says Mr. Planché, in his book *The Pursuivant of Arms*, "appears as a science at the commencement of the 13th century; and although armorial bearings had then been in existence undoubtedly for some time previous, no precise date has yet been discovered for their first assumption. The object of this assumption ....was simply to distinguish the persons and properties of the assumers, to display their pretentions to certain honours or estates, attest their alliances, or acknowledge their feudal tenures." Dr. Woodward is of opinion that Germany is the birth-place of the science of Heraldry (Heraldry British and Foreign I. 32). There can be no doubt that the Third Crusade (1189–1192), when the hosts of England, France and Germany were combined, paved the way for the fixed use of armorial bearings; for it was now necessary, especially after the adoption of the improved helmet, which completely covered the face, with the exception of narrow eye-slits and breathing slits, that some distinctive insignia should mark the personality of the national and sectional leaders; while the descendants of heroes would be only too anxious

to preserve and adopt for family use the blazonings on banner or shield which recalled their ancestor's prowess. Tournaments (which had their origin in Germany, and afterwards crossed to England from France) also aided the development of armory, for the visored combatants could only be recognized by some bold representation on crest and shield, which was theirs and theirs alone. The evidence of both seals and tomb-stones supports Planché's theory of an early thirteenth century origin for the general introduction of scientific coat-armour.

3. HERALDIC TERMS. Before proceeding further, we beg our readers to understand that we assume that they know nothing, or very little, about one of the most complicated subjects which can be offered to their attention; and that we shall attempt in these notes no more than to smooth their path towards a more thorough study of Heraldry in one or other of the many excellent existing manuals which deal with it scientifically. Let us begin, then, with a few salutary cautions against misconceptions and misuse of heraldic terms.

(*a*) A young lady asks you, for example, "What is your *crest?*" You reply that it is a lion rampant, an elephant, or a ship in full sail. Her rejoinder shows that what she wanted to know was, "what is your *coat of arms?*" an expression due to the old practice of embroidering arms upon the surcoat or camise worn over the armour. Now a visit to St. George's Chapel, Windsor, would have shown her in a very picturesque form the difference between "coat" and "crest." In that glorious chapel you see suspended the crests, helmets, and shields of the Knights of the Garter. Above the helmet, and attached to it by a long wire, are to be seen every variety of objects, animate and inanimate, and these are called CRESTS. We need not here specify them any more precisely than to say that nothing seems to be excluded as crests; birds, beasts, negroes' heads, bows and arrows, etc., etc., But come down now to the SHIELD, and there you see in some cases a very simple, and in others a very elaborate display of figures coloured red, blue, black, green or purple, and furs variously marked upon metallic back-grounds of yellow or white (i.e., gold or silver). This shield-decoration is the "coat of arms," with the motto inscribed underneath. Now in speaking of this shield, you are always to think of it as hanging on *your own* breast, not as if you were looking at it on the breast of another, and therefore "right and left" (i.e., dexter and sinister) are reversed as compared with popular usage.

(*b*) Never use the expression "bar sinister," for notwithstanding the high precedent of Sir Walter Scott, and the current language of fiction and newspapers, there is in reality no such thing. The proper term is "bend sinister," which is formed of two diagonal lines drawn from the sinister chief to the dexter base, or from left to right. Its significance as a mark of illegitimacy is more than doubtful (v. Woodward, Vol. I. cap. v.).

(*c*) On the supposition that you wish to understand some of the terms which baffle you in the terminology of the "Noble Science," we give you some very simple illustrations of their use:

> Let us begin with the SHIELD. You may have the SHIELD coloured; or simply delineated with dots and lines, according to the scheme of Petra Sancta in the latter part of the 17th century, who supplied the whole of Europe with a system as universal as the language of music. In this system, which we shall presently illustrate by the reverse of half-a-crown, you have gold (Or) represented by dots; silver (Argent) is left plain; blue (Azure) is denoted by horizontal lines; red (Gules) by perpendicular lines; black (Sable) by the crossing of both; green (Vert) by diagonal lines from the dexter to the sinister; and purple (Purpure) by diagonal lines from the sinister to the dexter. Furs are of three kinds: ermine, black spots on a white field; ermines, white spots on a black field; erminois, black spots on a gold field.

It is obvious how useful such a system of marking is to the colourists of shields. Our next section is of great use to the beginner in the study of Heraldry, and should be read carefully if you wish to make any progress in understanding Armory as a science.

4. RULES OF BLAZONING. To blazon is either to paint or orally describe in proper terms all that belongs to a coat of arms. The following are the rules to be observed:—

(1) In blazoning always begin with the field, which you name simply as *or*, *argent* (for metals), or *gules*, etc. (for colours), noticing the lines with which it is divided, *per pale*, *per fess*, *per bend*, etc., saying also whether these lines are *indented*, *engrailed*, etc. Then proceed to describe the charge (i.e., the figures in the field of a coat of arms) nearest the centre, and then charges more remote: e.g., "Azure, a crescent between three stars argent." means that the field is blue, and that the crescent is at the centre of the shield, and that three stars, arranged two above and one below the crescent, are also charges in the field.

(2) In blazoning, a repetition of words must be avoided, a rule which may appear to you pedantic, but it is so ordained by "the Noble Science." Thus e.g., suppose the field is *azure* (blue) and the charge is a saltire *or* (gold) bearing six mullets azure, and six crescents gules, you are bound to say in blazon: "azure, on a saltire or six mullets of the first, and as many crescents gules." "Of the first" refers to the tincture first named, i.e., azure. Again, you cannot repeat the word "six," but must render it "as many."

(3) Metal can never be placed upon metal, nor colour upon colour. This is a fundamental rule, and forbids e.g., painting a red cross upon a blue field. The field must be either gold or silver before it can receive a coloured charge, and conversely must be red, blue, black, green, or purple, before it can be charged with a gold or silver cross, &c.

5. THE HERALDRY OF HALF-A-CROWN. We are precluded by the limits of space from going further into the technical details of Heraldry, but we feel that a concrete illustration of some of its terms might be usefully supplied by the blazon on the reverse of Half-a-Crown. Look at the back of this coin, and what do you see? An Imperial Crown surmounts a shield, divided into four quarters, which has passed through many changes during the various periods of English history. In the first quarter (dexter) you notice three lions ranged parallel to each other, an arrangement technically called "in pale." You see also perpendicular lines all over the field, which is an indication to the colourist that he must paint the field red (gules). You will notice also that the lions bear little resemblance to the lions of "the Zoo," but this is owing to the fact that it was long a matter of dispute whether they were leopards or lions, and that heralds claim an almost unlimited licence in the way of idealizing anything. *The three lions in pale stand for England.* Now look at the second quarter, which contains a red lion within a double frame upon a dotted field. The dots denote that the field is to be painted yellow or gold. The lion is standing upon its hind-legs, and is therefore called *rampant.* If it were looking at you it would be described as "*gardant;*" if it were looking backwards it would be called "*regardant.*" This double frame, called a Tressure, is a mark of the highest distinction in heraldry, and is described as "flory counter-flory," which simply means that the head and stalk of the fleur-de-lis are alternated. *The second quarter is dedicated to Scotland.* Now look at the third quarter, dedicated to Ireland, and you will see a harp upon a blue field (azure) marked by horizontal lines, but the blazon does not on the coin declare to you that the harp is of gold and its strings of silver. The fourth quarter is simply "England" (three lions) repeated. In the "coats" borne in Scotland by "Royal Tradesmen," the first quarter very properly bears the lion of Scotland, and is repeated in the fourth.

ORDERS OF KNIGHTHOOD.

The orders here described are limited to those conferred by our own Sovereign, without whose gracious permission no British subject is allowed to wear the insignia of any foreign order.

1. THE MOST NOBLE ORDER OF THE GARTER (K.G.). Instituted by Edward III. about the year 1348. The old story of the origin, still found in children's histories,

is now discredited. Mr. Beltz, in his "Memorials of the Order of the Garter," thinks "the Garter may have been adopted as an emblem of the tie, or union, of warlike qualities to be employed in the assertion of the founder's claim to the French crown; and the motto as a retort of shame and defiance upon him who should think ill of the enterprise." (*Honi soit qui mal y pense*—"Dishonoured be he who thinks ill of it"). The order consists of the Sovereign, the Prince of Wales, twenty-five knights-companions, together with such lineal descendants of George I. as may be elected. Foreign princes and extra-knights have been elected under special statutes, the latter, however, waiting for vacancies before they can be numbered with the twenty-five constituent knights.

The INSIGNIA consist of the Garter; the Collar and St. George; the Star; and the Ribbon and Badge, or lesser George. The GARTER is of dark blue velvet, edged and buckled with gold, and bears in letters of gold (sometimes diamonds) the well-known motto. It is worn below the left knee, but female Sovereigns wear it upon the left arm above the elbow. The COLLAR consists of twenty-six pieces, composed alternately of golden love-knots, and of buckled garters azure enamelled with the motto, and enclosing roses. From the central link depends the BADGE or GEORGE; a golden figure enamelled, or set with jewels, representing St. George, the patron-saint of the realm, transfixing with his lance an over-thrown dragon. (Woodward's "Heraldry" II. 344, 345). The STAR (worn on the left breast) was added by Charles I. in 1629, and consists of eight silver or diamond rays with the buckled garter and motto in the centre, enclosing on a field of white enamel the red cross of St. George. When the Collar and George are not used, the BADGE, or lesser George, is worn from the broad blue ribbon of the order *en écharpe* (i.e., slant-wise) at the right side, the ribbon passing over the left shoulder.

The HABIT of the Order consists of a crimson velvet Surcoat; a Mantle of deep blue velvet lined with white taffeta, fastened by cordons of blue and gold, on the left breast the star embroidered; a Hood of crimson velvet; and a Hat of black velvet, lined with white taffeta, plumed with white ostrich feathers with a tuft of heron's feathers in the centre, all fastened to the hat by a band of diamonds.

The OFFICERS of the Order are the Prelate (Bishop of Winchester); the Chancellor (Bishop of Oxford; formerly the Bishop of Salisbury when St. George's Chapel formed part of the latter diocese); the Registrar (usually the Dean of Windsor); Garter Principal King of Arms: and the Usher of the Black Rod (each with a special badge hung from the ribbon.) Ribbon of the Order—GARTER BLUE.

2. THE MOST ANCIENT AND MOST NOBLE ORDER OF THE THISTLE (K.T.). (Origin disputed by historical students—revived [according to Woodward "founded"] by James II., 1687, and, after a period of desuetude, re-established by Queen Anne, 31st December, 1703).

The Order now consists of the Sovereign, Princes of the Blood and sixteen knights, almost always peers. Its MOTTO is: "Nemo me impune lacessit" (No one provokes me with impunity: "Wha daur meddle wi' me?" an allusion to the prickly defensiveness of the thistle).

INSIGNIA: Star, Badge and Collar. The STAR, lozenge shaped, worn on the left breast, is a silver St. Andrew's Cross with rays between its arms; centre of gold, charged with a thistle enamelled proper, and surrounded by a motto-band of green enamel. The BADGE: a figure of St. Andrew in a purple surcoat and green mantle, standing behind and supporting his Cross, the whole irradiated with golden rays. This is worn pendent from the collar, or from a dark green ribbon over the left shoulder and tied under the arm. The COLLAR is of gold, and consists of sixteen enamelled thistles which alternate with saltires, each formed of four interlaced sprigs of rue. Officials: A Dean of the Chapels Royal in Scotland; Secretary; Lyon King of Arms; Gentleman Usher of the Black Rod. Ribbon of the Order—GREEN.

3. THE MOST ILLUSTRIOUS ORDER OF ST. PATRICK (K.P.). (Instituted by George III., February 5th, 1783.) consists of Sovereign, a Grand Master (Lord Lieutenant of Ireland), and 22 Knights (originally 15).

INSIGNIA: Star, Collar and Badge. The STAR, worn on the left side, is of eight silver rays, and consists of the red Cross of St. Patrick on a silver field charged with a trefoil, surrounded by a sky-blue enamelled circle with motto and date of foundation. The motto: "Quis separabit?" (who shall separate?) is now the watch-cry of the Irish Unionist party. The COLLAR consists of golden harps, joined by love-knots to circular plates of gold, which are enamelled with wreaths of shamrocks surrounding the "Union Rose," and are of alternate colours. A large golden harp, surmounted by the Imperial Crown, forms the central link, from which hangs the BADGE. This is of gold, surmounted with a green wreath of shamrock and the motto in gold. On each leaf of the shamrock is an Imperial Crown.

Officials: Chancellor (Chief Secretary for Ireland); Secretary; Genealogist; Usher of the Black Rod; Ulster King of Arms; Athlone Pursuivant. Ribbon of the Order—SKY-BLUE.

4. THE MOST HONOURABLE ORDER OF THE BATH. (Motto: "Tria juncta in uno" (three joined in one) referring to the union of the crowns of England, Scotland and Ireland). (Founded 1399; revived 1725; enlarged 1815 and 1847). The title "Bath" refers to the ancient symbolical act of bathing, which was one of the ceremonies at the admission to Knightly dignity. In 1725 George I. created a new Order of the Bath, to consist of the Sovereign, a Grand Master, thirty-six Knights and sundry officers. In 1815 the Order assumed a practical character, inasmuch as it was connected with the "termination of the long and arduous contest in which this empire has been engaged," and there was then adopted the present division into Grand-Crosses, Knights-Commanders and Companions. In 1847 a further extension was made, and the members were divided into the classes of Military and Civil, still existing. In 1859 the Order assumed its present state. Besides the Sovereign, Princes of the Blood, Foreign Princes and Foreign Honorary Members, the Order consists of fifty Grand Crosses (G.C.B.), nominated for military or naval services, and twenty-five for diplomatic or civil services; of 123 Knights-Commanders (K.C.B.) for military or naval services, and sixty for civil services, and of 690 Companions (C.B.) for military and naval services, and 200 for civil. The "Bath," therefore, is the grand popular order instituted for the recognition of actual merit.

INSIGNIA: Badge, Ribbon, Collar and Star. The BADGE for the Military classes of the Order is a gold Maltese Cross, enamelled white, each of its eight points ending in a little golden ball. The centre circle bears the rose, thistle and shamrock issuing from a golden sceptre in pale, between three Imperial Crowns, arranged one above and two in the flanks. This centre-piece is surrounded first by a motto-band of red enamel with the motto, "Tria &c.," in gold, and next by a laurel wreath of two laurel branches connected in base by a small blue scroll with the words "Ich dien" (I serve) in gold. Between the arms of the cross are four golden lions of England. Except on "Collar-days," the Badge is worn by G.C.B.'s pendent from a red ribbon across the right shoulder *en écharpe*; by K.C.B.'s from the neck, and by C.B.'s from the button-hole. The width of the RIBBON decreases with diminishing rank. The COLLAR is of gold (30 oz. Troy weight), and consists of nine Imperial Crowns and eight roses, thistle and shamrock (issuing from a sceptre), all naturally coloured and linked together with seventeen gold knots, enamelled white. The Badge is suspended from the Collar, which is only worn by G.C.B.'s. The STAR for military G.C.B.'s is formed of silver wavy rays, upon which is a Maltese Cross with a circular centre-piece containing three golden crowns and surrounded by laurel branches and motto. Civil G.C.B.'s omit the laurel leaves in the Star, and in their place have a red circle with motto in bold letters. Their Badge also is simpler than that of their military brethren. It has no *cross-patée*, but is oval-shaped and is charged with sceptre, three crowns, rose, thistle and shamrock. Civil G.C.B.'s and C.B.'s also wear the same Badge, only of a smaller and still smaller size, while all the military divisions, whether G.C.B., K.C.B. or C.B. wear the Badge (in sizes reduced according to the grade) which we first described (— the Maltese Cross, &c.).

5. THE MOST EXALTED ORDER OF THE STAR OF INDIA. Founded by Queen Victoria, February 23rd, 1861, and enlarged in 1866 and 1876, it has served a most useful purpose in recognising the loyalty and worth of illustrious native Indians, as well as the conspicuous services, both military and civil, of those of our own people who have occupied with distinction the highest posts of the great Dependency. The Order now consists of the Sovereign, the Grand Master (the Governor-General), thirty Knights,

Grand-Commanders (G.C.S.I.), i.e., eighteen native princes and twelve Europeans, seventy-two Knights-Commanders (K.C.S.I.), 144 Companions (C.S.I.), and an indeterminate number of extra and Hon. Knights-Grand Commanders.

INSIGNIA: Star, Collar, Badge and Mantle. The STAR consists of 52 wavy rays of gold, alternately longer and shorter, arranged in a circle. In the centre is a five-pointed star in diamonds, surrounded by a motto-band, enamelled light blue and tied at the ends, inscribed with the motto of the Order:—' Heaven's Light our Guide." The COLLAR is composed of five united red and white roses and six flowers of the Indian lotus, separated by ten links, each of two palm branches in saltire tied together by the ends. The central link is the Imperial Crown, and from it the Badge depends. The BADGE consists of an oval medallion of onyx, cameo-cut with a crowned bust of the Sovereign in profile, and the motto surrounding. Above is a mullet in diamonds with the ring at the top from which the Badge depends. The MANTLE is of light blue satin, lined with white silk (on the left the Star of the Order), and fastened at the neck with cordons and tassels of light blue silk and silver bullion. Ribbon of the Order—SKY-BLUE with a white stripe near either edge.

6. THE MOST DISTINGUISHED ORDER OF ST. MICHAEL AND ST. GEORGE. Founded in 1818 for natives of the Ionian Islands, Malta, and others holding high office in the Mediterranean. In 1868 it was extended so as to be an Order of Merit for the British Colonies in general. After subsequent enlargements its numbers now consist of (exclusive of Royal personages) 65 Grand Crosses, 200 Knights-Commanders and 342 Companions.

INSIGNIA: Badge, Collar, Ribbon, Star, Mantle. The BADGE is a gold cross of fourteen points (in seven rays) with a circular centre of blue enamel, with a blue motto band bearing the motto, "*Auspicium melioris Ævi*" (Omen of a better age). On the obverse, the Archangel Michael tramples the devil underfoot; on the reverse, St. George mounted transfixes the Dragon. The Cross is surrounded by an Imperial Crown. The COLLAR consists of six golden crowned lions of England; of eight Maltese Crosses enamelled white; and of eight golden cyphers, four of the letters SM and four SG; the central link back and fore shows two winged lions of St. Mark, facing each other, each with a gospel and a sheaf of seven arrows. The RIBBON is of three equal stripes, two of Saxon blue, the centre one of scarlet; it is worn *en écharpe* ((i.e., slant-wise) with the attached Badge, from the right shoulder to the left hip. The STAR of Grand Crosses consists of seven rays, between which are small rays of gold. On this ground is placed the Cross of St. George in red enamel, and this is surmounted by St. Michael enclosed in the blue motto-band. The MANTLE of the G.C.M.G.'s is of Saxon blue satin, lined with crimson silk, on the leftside the Star, and fastened by cordons of blue and scarlet silk with gold bullion. Officials: Grand Master; Prelate (a Colonial Bishop); Chancellor; Secretary; King of Arms; Registrar and Officer of Arms.

7. THE MOST EMINENT ORDER OF THE INDIAN EMPIRE. Founded 1st January, 1878, to commemorate the assumption by the Queen of the title "Empress of India," and to recognise distinguished Indian services to the Empire. It consists of Sovereign, Grand Master (the Viceroy), Knights Grand Commanders, Knights Commanders and Companions (G.C.I.E.; K.C.I.E. and C.I.E.).

INSIGNIA: Star, Collar, Badge, Mantle. The STAR is of five silver rays separated from each other by a smaller ray of gold, all issuing from the centre-piece, viz., the Sovereign's head in profile within a purple circle inscribed with the original motto of the Order: "Imperatricis Auspiciis" (under the auspices of the Empress), the circle surmounted by the gold Imperial Crown. The COLLAR is composed of elephants, lotus-flowers, peacocks displayed or "in their pride," and Indian roses all enamelled on gold in their natural colours, with the Imperial Crown in the centre. The BADGE is a golden rose, enamelled red with green barbs between the five petals. The golden centre has a likeness of the Sovereign with (now) the words "Edwardus Imperator" in a circular purple band. The MANTLE is of imperial purple satin, lined with and fastened by a cordon of white silk with purple silk and gold tassels attached; a star on the left side for the first-class of the Order. Ribbon: PURPLE. Officers: Registrar and Secretary.

8. ROYAL VICTORIAN ORDER. Founded by Queen Victoria, April 21st, 1896, and consists of the Sovereign and five classes: (1) Knights Grand Cross (G.C.V.O.), (2) Knights Commanders (K.C.V.O.); (3) Commanders (C.V.O.); (4) Members of the Fourth Class (M.V.O.); and (5) Members of the Fifth Class (M.V.O.). The officers of the Order are the Lord Chamberlain and the Keeper of His Majesty's Privy Purse. Its object is to confer honour upon such as have "rendered extraordinary, or important, or personal services" to the Sovereign.

INSIGNIA: Badge, Star. The BADGE of G.C.V.O.'s consists of a white enamelled Maltese Cross of eight points, with an oval crimson centre, bearing the Imperial and Royal cypher in gold. "VICTORIA," the motto of the Order, is inscribed in a blue enamelled circle in letters of gold, and is surmounted by an Imperial Crown. The Badge is worn over the right shoulder, suspended from a dark blue ribbon with a narrow edge on either side of three stripes, red, white and red. The STAR consists of a silver chipped star of eight points.

9. THE DISTINGUISHED SERVICE ORDER. Founded by Royal Warrant, September 6th, 1886, "for rewarding the distinguished services of officers in our Naval and Military Services who have been honourably mentioned in Despatches." Its membership is limited to those who at the time of nomination are actually commission-holders in one of the services, and have been specially named by the chiefs of the Naval or Military forces for "meritorious or distinguished service in the field, or before the enemy."

The BADGE consists of "a gold cross, enamelled white, edged gold, having on one side thereof in the centre, within a wreath of laurel enamelled green, the Imperial Crown in gold, upon a red enamelled ground; and on the reverse . . Our Imperial and Royal cypher—shall be suspended from the left breast by a red riband edged blue, of one inch in width."

10. ROYAL ORDER OF VICTORIA AND ALBERT. Ranges in directions, enlargements, &c., from 1860 to 1882, and is entirely an Order of Ladies, arranged in four classes. The Badge is an oval medallion bearing in profile the heads of Victoria and Albert. It is enclosed by a double border of brilliants, surmounted by an Imperial Crown, and is worn at or near the left shoulder.

11. THE IMPERIAL ORDER OF THE CROWN OF INDIA (1st January, 1878). Exclusively an Order of Ladies who by birth or marriage connection (e.g., wives of Viceroys, Governors General of Bombay, Madras, or of the Chief Secretary of State for India), have special claims upon the Crown. The Badge is the Imperial cypher, set in diamonds, pearls and turquoises, encircled in pearls, and surmounted by the Imperial Crown.

VARIOUS DECORATIONS.

Besides the Orders of Knighthood already described, are various Decorations not less valued, it may be, by their recipients, though conferring no special rank or precedence.

1. THE VICTORIA CROSS. V.C. Instituted January 29th, 1856. The motto explains the motive for the institution: "FOR VALOUR,"—i.e., for valorous deeds, on the part of Naval and Military officers, and of any member of either Service who has done a brilliant deed in face of the enemy. Admirals, generals, colonels, captains, sergeants, corporals and privates have their names enrolled side by side in this golden chronicle of fame, although the original intention was to distinguish only non-commissioned and petty officers. The honour in a few cases has been retrospective, including earlier heroes of the Crimean war.

The BADGE is a plain *cross-patée* in bronze with straight bounding lines, and is attached by the letter V to a bronze bar laureated. The centre-piece is a lion "standing looking at you," upon an Imperial Crown, with "For Valour" escrolled below. The bar bears on the reverse the name and rank of the recipient, and the cross the name and date of the distinguished action or campaign. The cross is suspended from the left breast by a garter-blue ribbon for the navy and a red one for the army.

Non-commissioned officers and men receive a pension of £10 per annum in virtue of the Cross, and an extra £5 per annum for each additional bar that marks an extra deed of valour.

2. VOLUNTEER OFFICERS' DECORATION (V.D.). 29th July, 1892. For Volunteer Officers of twenty years' service, either spent in the ranks or under commission.

The BADGE, called "The Volunteer Officers' Decoration," consists of "an oak wreath in silver, tied with gold, having in the centre the royal cypher and crown in gold," and "is suspended from the left breast by a green riband one inch and a half in width from a silver oak bar-brooch."

3. THE ALBERT MEDAL: First Class and Second Class, April 12th, 1867; extended April, 1877, to cases of gallantry in mines, on railways, and at fires, &c., in addition to the original heroic saving of lives from perishing at sea. The First Class receive a gold (the Second Class a bronze) decoration, bearing the words "FOR GALLANTRY IN SAVING LIFE AT SEA," or "ON LAND," as the case may be.

4. THE ROYAL RED CROSS. (April 23rd, 1883). To reward nurses of any nationality who have tended our sick and wounded soldiers or sailors with conspicuous devotion, and are recommended by the Secretary of State for this distinction.

The BADGE is a gold cross enamelled red, worn on or near the left shoulder, attached to a dark blue ribbon edged red, one inch in width. "Faith, Hope, Charity," and "1883" are charged upon the arms of the cross in the centre of which is Queen Victoria's profile.

5. THE GRAND PRIORY OF THE ORDER OF THE HOSPITAL OF ST. JOHN OF JERUSALEM IN ENGLAND. (Revived by Queen Victoria, 1888). For an elaborately learned account of this ancient Order we must refer the reader to Dr. Woodward's "Heraldry, British and Foreign," vol. ii, p. 361. It is enough to say here that the origin of the order dates from the Norman era, under the title "Knights of Malta," and that its object was the relief of pilgrims going to Jerusalem. The "St. John's Ambulance Association," and "The British Ophthalmic Hospital at Jerusalem" are practical offshoots of the ancient *motif* of the order.

Its BADGE (gold or silver, according to the grade), is a true Maltese Cross with alternately a lion and unicorn between the branches, and is worn suspended from the throat upon a black watered silk ribbon. H.M. the King is always shown when depicted in full dress with the Badge at his throat.

6. ORDER OF MERCY. Instituted by Queen Victoria in 1897 as a reward for distinguished personal services in the relief of suffering, poverty, or distress.

The BADGE is a gold cross enamelled red, surmounted by a crown and Prince of Wales' feathers, having in the centre a group of figures representing Charity.

7. ORDER OF MERIT (O.M.). Created by King Edward VII., June 26th, 1902. It consists of members illustrious for service in Navy, Army, Science, Art or Literature. Its number is limited to 24. Its portal is sure always to be strictly guarded, so that none but the very best in each great field can be admitted.

BADGE: a cross of red and blue enamel of eight points; blue enamel centre inscribed with 'For Merit" in gold letters within a laurel wreath. On the reverse, "R. et I." in gold. The whole is surmounted by the Imperial Crown enamelled in colour, and suspended by a ribbon, garter-blue and crimson.

8. IMPERIAL SERVICE ORDER (I.S.O.). Instituted by King Edward VII., June, 1902, to distinguish the civil servants of the Empire for long and meritorious services. Besides the Sovereign and Prince of Wales, it consists of 425 Companions, of whom 250 belong to the Home Civil Service and 175 to the Civil Service of the Colonies and Protectorates.

The BADGE is a gold and enamel medallion, worn on the left breast, bearing "R. et I" on one side, and on the reverse, "For Faithful Service," both executed in dark blue enamel on a plaque of gold within a wreath of laurel, and the whole surmounted by the Imperial Crown.

9. THE EDWARD MEDAL. Instituted, July 13th, 1908, to distinguished by some mark of royal favour, the many heroic acts performed by miners and quarrymen and others, who endanger their own lives in endeavouring to save the lives of others.

The Edward Medal is a circular medal of silver or bronze, with the King's effigy on the obverse, and on the reverse a design representing the rescue of a miner, with the inscription, "FOR COURAGE."

DEGREES OF NOBILITY.

The sovereign is the fountain of honour, and can confer the rank of nobility on whom he pleases. But there are certain persons who are born to the peerage, that is, have the right by inheritance of sitting as lords of parliament, or in Scotland and Ireland of being elected to that dignity. Of peers there are five degrees of honour, corresponding to the titles of duke, marquis, earl, viscount, baron. All persons below the rank of baron are classed as commoners. This distinction is a little confused by the custom of conferring certain courtesy titles on the eldest sons of those in high rank. Thus, the Marquis of Hartington was legally a commoner, and sat in the House of Commons, until the death of the Duke of Devonshire made him his successor to the dukedom.

THE ROYAL FAMILY has a dignity all its own. Royalty, down as far as the sovereign's nephews, must always take precedence of all others. Precedence amongst the princes and princesses themselves depends on their relationship to the reigning sovereign, and not on their relationship to any deceased sovereign. The coronets to which they are entitled are also determined by their relationship to the reigning monarch.

DUKE. The first duke that we meet with in England, properly so called, was Edward, surnamed the Black Prince, whom his father, Edward III., created Duke of Cornwall, 1337. By this creation the eldest son of the King of England is Duke of Cornwall from his birth, but only Prince of Wales when so created. A duke's coronet is a circle of gold, with eight strawberry or parsley-leaves of equal height above the rim. A duke's eldest son bears by courtesy his father's second title, and the younger sons are addressed as lord, with the addition of their Christian name, as Lord Randolph Churchill.

MARQUIS. The title of marquis corresponds with the Anglo-Saxon title of *marken-reve*, which signified the ruler of a "march" or frontier province. The first English marquis in the modern sense was Robert Vere, who was created by Richard II., in 1387, Marquis of Dublin. A marquis's coronet is a circle of gold set round with four strawberry leaves and as many pearls placed alternately on points of the same height as the leaves. For the courtesy title of his sons see above under *Duke*. [The pearls, so called, on the coronets are commonly made of silver].

EARL. This title comes from the Anglo-Saxons, and was borne by the governors of counties. The first Earl in England to be invested with the title, without reference to the office he held, was Hugh de Pusaz, bishop of Durham, who was created by Richard I. Earl of Northumberland. An earl's coronet is similar to that of a marquis, only the pearls are raised above the leaves instead of being on the same level. By courtesy an earl's eldest son is supposed to be born a viscount, and all his daughters are styled "lady," but his younger sons have no title of peerage.

VISCOUNT. When the earl was governor of a county, he required a deputy to act for him in his absence; the deputy was in Latin called *vicecomes*. But about 1440, in the reign of Henry VI., it became a title of honour in the somewhat different form of "viscount." His coronet, which is a circle of gold, is adorned with twelve silver balls. His eldest son has no title of peerage, nor are his daughters "ladies." But the eldest son and daughter of the first viscount in Great Britain and Ireland are said to be the first gentleman and gentlewoman without a title in the kingdom.

BARONS. Of this degree there are two sorts in England —a baron by writ and a baron by patent. The greater barons in ancient times were summoned to Parliament by writ personally. All such barons were hereditary peers. The first created by patent, or royal letter, was John Beauchamp, made Baron of Kidderminster by Richard II., 1388. A baron had no coronet till the reign of Charles II., when he was adorned with a circle of gold and six silver balls set close to the rim.

BISHOPS of the Established Church of England are of the rank of barons, but only a certain number are entitled

to seats in the House of Lords. They precede all under the degree of viscount. Precedence among the bishops themselves goes as a rule by seniority of consecration, but the bishops of London, Durham, and Winchester, always come first. The two archbishops stand much higher. The Archbishop of Canterbury is "the primate of *all* England," and to him it properly belongs to crown the King. He takes his place next to the royal family in the order of precedence. The Archbishop of York is "the primate of England," and to him belongs the privilege of crowning the Queen. He comes next to the Lord Chancellor. Bishops' wives, as is well-known, derive no title, either in law or by courtesy, from the rank of their husbands.

MODE OF ADDRESSING PERSONS OF RANK.

In conversing with persons of rank, avoid the constant repetition of their title. The following table refers to the forms to be observed in *formal* communications:

(*a*) = How to address the envelope.
(*b*) = How to begin the letter.
(*c*) = How to refer to a person's rank when conversing with him.

N.B.—For the right way to end letters, refer to the "Art of Letter Writing" (p. 792).

ROYALTY.

The King: (*a*) To His Majesty the King; (*b*) Sir, under His Majesty the King; (*c*) Your Majesty.

The Queen: (*a*) To Her Majesty the Queen; (*b*) Madam, under Her Majesty the Queen; (*c*) Your Majesty.

The Prince and *Princess of Wales:* (*a*) To His (Her) Royal Highness the Prince (Princess) of Wales; (*b*) Sir (Madam); (*c*) Your Royal Highness. Similarly in regard to other members of the Royal Family.

NOBILITY AND GENTRY.

Duke and *Duchess:* (*a*) To His (Her) Grace the Duke (Duchess) of ————; (*b*) My Lord Duke (Madam); (*c*) Your Grace.

Duke's *eldest son* has a courtesy title and is addressed as if it was his by creation. Duke's *younger sons:* (*a*) To the Right Honble. Lord James——; (*b*) and (*c*) Sir. Duke's *daughters:* (*a*) To the Right Honble. Lady Jane G—— (*b*) Madam; (*c*) Your Ladyship.

Marquis and *Marchioness:* (*a*) To the Most Honble. the Marquis (Marchioness) of ————; (*b*) My Lord Marquis (Madam); (*c*) Your Lordship (Ladyship). Marquis's children same as for those of a Duke.

Earl and *Countess:* (*a*) To the Right Honble. the Earl (Countess) of ————; (*b*) My Lord (Lady); (*c*) Your Lordship (Ladyship).

Earl's *eldest son* takes courtesy title and is addressed accordingly. Earl's *younger sons:* (*a*) To the Honble. Charles R————; (*b*) and (*c*) Sir. Earl's *daughters* same as for those of a Duke.

Viscount and *Viscountess* similar to Earl and Countess. *All* their sons and daughters are styled Honourable. (*a*) To the Honble. John (Mary) S——; (*b*) and (*c*) Sir (Madam).

Baron and *Baroness* and their children similar to Viscount and Viscountess and their children.

Baronet: (*a*) To Sir Edward D—— Baronet or Bt. (not Bart.); (*b*) Sir; (*c*) Sir Edward. His wife: (*a*) To Lady D——; (*b*) Madam; (*c*) Your Ladyship.

Knight: (*a*) To Sir John F——; (*b*) Sir; (*c*) Sir John. His wife, same as Baronet's wife.

Omit Kt. after the name on the envelope and avoid in speaking the use of the surname.

THE CLERGY.

Archbishop: (*a*) To His Grace the Lord Archbishop of—; (*b*) My Lord Archbishop, or Your Grace; (*c*) Your Grace.

Bishop: (*a*) To the Right Reverend; (*b*) My Lord Bishop; (*c*) Your Lordship.

N.B.—As a matter of courtesy the same form is usually adopted in addressing bishops, whether they are English Suffragan, or Colonial or Scotch, or Irish bishops.

Dean: (*a*) To the Very Reverend The Dean of ————; (*b*) Very Rev. Sir; (*c*) Mr. Dean.

Archdeacon: (*a*) To the Venerable the Archdeacon of—; (*b*) Venerable Sir; (*c*) Mr. Archdeacon.

Clergymen: (*a*) To the Rev. C. D————; (*b*) Rev. Sir; (*c*) Sir.

If the Christian name is not known, leave blank: Rev. ———— D. ———— not Rev. Mr. D———— If a clergyman possesses the right to be styled Honourable or Right Honourable, this should precede his address as a cleric; e.g. The Right Honble. and Right Reverend ————

A *Canon* or *Prebendary* is addressed like ordinary clergymen except that Canon or Prebendary takes the place of the Christian name or initial.

The wives of bishops and other clergymen derive no title from the official rank of their husbands.

THE JUDGES, MAYORS, ETC.

The Lord Chancellor: (*a*) To the Right Honble. the Lord High Chancellor; or to the Right Honble. Earl Russell, Lord High Chancellor; (*b*) My Lord; (*c*) Your Lordship.

This style is also adopted in addressing the Lord Chief Justice, the Master of the Rolls and the Lords of Appeal.

Vice-Chancellor: (*a*) To the Honble. ———— Vice-Chancellor; (*b*) and (*c*) Sir.

Puisne Judges: (*a*) To the Honble. Mr. Justice ————; (*b*) and (*c*) Sir, but "My Lord" when on the Bench.

Judges are usually Knights; but the above mode of address is more complimentary than that used in the case of Knights. Their wives are addressed as the wives of Knights.

Judges of the County Court: (*a*) To His Honour Judge—; (*b*) and (*c*) Sir, but "Your Honour" when on the Bench.

Justices of the Peace: (*a*) W. Smith, Esq., J.P.; (*b*) and (*c*) Sir, but "Your Worship" when on the Bench.

Lord Mayor: (*a*) The Right Honble. the Lord Mayor of ——; (*b*) My Lord; (*c*) Your Lordship. His wife: (*a*) The Right Honble. the Lady Mayoress of ——; (*b*) Madam; (*c*) Your Ladyship.

In Scotland Lord Provost takes the place of Lord Mayor. His wife does not share in his title.

[The chief magistrates of London, Dublin, York, Liverpool, Manchester, Birmingham, Bristol, Leeds, Sheffield, Newcastle, Cardiff, Norwich, Belfast, Cork, Sydney and Melbourne are Lord Mayors; and those of Edinburgh, Glasgow, Aberdeen, Perth and Dundee are Lord Provosts.]

Mayors: (*a*) The Mayor of ————, or in a memorial or other formal address, To his Worship the Mayor of ————; (*b*) and (*c*) Sir, but "Your Worship" when in Court.

Aldermen: (*a*) To Alderman Sir James ————, or To Mr. Alderman Jones; (*b*) and (*c*) Sir.

OFFICERS OF THE ARMY AND NAVY.

(*a*) The professional rank must always precede any other title; e.g. Admiral Sir William Eyton; Captain James Martin, R.N.; Lieut. Nairn, R.N. A lieutenant in the army is addressed simply as Esquire, but above that grade the rank is expressed; e.g. General Sir Edward King, Colonel The Honble. Arthur Bayne; Major Thompson; (*b*) If the officer is untitled begin the letter by writing "Sir" under the name and office. [Friends of course would write Dear Admiral, Dear General, etc., as the case may be.] The wives of officers, like the wives of clergymen, do not derive any title from the official rank of their husbands.

SPECIAL CASES.

Ambassadors take the title, as do also their wives, of "Excellency"; (*a*) To His Excellency the Earl of——, Ambassador to ————; (*b*) according to rank; (*c*) Your Excellency.

Privy Councillors are addressed as "Right Honourable," but their wives not so.

Governors of Colonies: (*a*) To His Excellency————, Governor of ————; (*b*) According to rank; (*c*) Your Excellency.

Cardinals: (*a*) To His Eminence ————; (*b*) and (*c*) Your Eminence.

Dowagers: Care should be taken to distinguish Dowagers by putting their Christian name before the title, thus: The Right Honble. Jane, Countess of Wigan.

Maid of Honour: (*a*) The Honble. Miss ————; (*b*) and (*c*) Madam.

OBS. It is courteous to add to the ordinary address:—

(1) The letters indicating the order of knighthood that the addressee possesses, such as K.G., K.C.B., etc.

(2) The letters M.P. in the case of a Member of Parliament.

(3) The letters K.C. in the case of a King's Counsel.

(4) The letters indicating a Doctor's degree — D.D., D.C.L., LL.D., M.D., etc.

N.B.—In the above table: (*a*) = How to address the envelope; (*b*) How to begin the letter; (*c*) How to refer to a person's rank when conversing with him.

RULES OF PRECEDENCE.

(1) The precedence of the members of the royal family depends on their relationship to the reigning sovereign and not on their relationship to any of his predecessors.

(2) Ambassadors take precedence immediately after the blood-royal; envoys and ministers accredited to the sovereign after dukes and before marquises.

(3) The five degrees of honour among peers correspond with the titles—duke, marquis, earl, viscount, baron. Of those belonging to the same rank seniority of creation settles the place in the scale of honour.

(4) Peers have precedence according as they are of England, Scotland, Great Britain, Ireland, or the United Kingdom.

(5) Precedence depends partly on rank and partly on place or office; thus, the Lord Steward and the Lord Chamberlain of H.M. Household are above all peers of their own degree.

(6) Younger sons of rank A precede even the eldest son of rank B; thus the younger sons of a Duke precede the elder sons of a Marquis or Earl, and so on.

(7) All sons of Viscounts and Barons precede Baronets, but the eldest sons and daughters of Baronets walk before the eldest sons and daughters of Knights of any degree whatsoever, Knighthood not being an hereditary honour. On the other hand, the eldest sons of Knights precede the younger sons of Baronets.

(8) The official precedence of a husband or father confers no personal precedence on his wife or children; e.g. the Lord Chancellor or the Speaker of the House of Commons does not transmit any rank or place to his wife or children from his official position but only from his personal rank.

(9) Anyone who is entitled to both personal and official precedence is to be placed according to that which implies the higher rank.

(10) Unmarried women take precedency from their father, "share and share alike," which is not the case with sons.

(11) Married women share their husbands' dignities, but can confer none of their own upon their husbands. Nor can the daughter of a peer, unless a peeress in her own right, transmit any rank or place to her children.

(12) Distinctions of birth, creation, or descent are a woman's own, and remain if she marry a commoner; but if she marry a nobleman she must take her husband's place in the order of precedency.

(13) The wife of the eldest son of any degree precedes the daughters of the same degree, and both of them precede the younger sons of the next higher degree. Thus the wife of the eldest son of an Earl walks before an Earl's daughter, and both of them before the wife of the younger son of a Marquis; and the wife of a Marquis precedes the wife of the eldest son of a Duke.

TABLE OF PRECEDENCE AMONG MEN.

THE KING.
The Prince of Wales.
King's other Sons.
*King's Grandsons.
*King's Brothers.
King's Uncles.
King's Nephews.
*King's Sons-in-Law.

(Ambassadors. See rule (2) above.)
Archbishop of Canterbury.
[In Scotland, Moderator of the General Assembly if in attendance at a royal function].
Lord High Chancellor, or Lord Keeper if a peer.

*King George V. has no relatives of this degree.

Archbishop of York.
The Prime Minister.
Lord Chancellor of Ireland.
Lord President of the Privy Council.
Lord Privy Seal.
Lord Great Chamberlain.
Lord High Constable.
Earl Marshal.
Lord Steward of H.M. Household.
Lord Chamberlain of H.M. Household.
The last five rank above all Peers of their own degree.

DUKES.
Eldest Sons of Dukes of the Blood Royal.

MARQUISES.
Eldest Sons of Dukes.

EARLS.
Younger Sons of Dukes of the Blood Royal.
Eldest Sons of Marquises.
Younger Sons of Dukes.

VISCOUNTS.
Eldest Sons of Earls.
Younger Sons of Marquises.

BISHOPS.
(1) London, (2) Durham, (3) Winchester.
English Bishops, according to Seniority of Consecration.
[In Scotland, the Primus of the Episcopal Church immediately follows the Moderator of the General Assembly].
[In Ireland the Bishops of the Disestablished Church are now placed on equality with those of the Roman Communion, and alike taking rank according to seniority of Consecration].
Secretary of State and Chief Secretary to the Lord Lieutenant of Ireland, if at least a Baron.

BARONS.
Speaker of the House of Commons.
Commissioners of the Great Seal.
Treasurer of the Household.
Comptroller of the Household.
Master of the Horse.
Vice-Chamberlain of the Household.
Secretary of State and Chief Secretary to the Lord Lieutenant of Ireland, if below the rank of Baron.
Eldest Sons of Viscounts.
Younger Sons of Earls.
Eldest Sons of Barons.
Knights of the Garter.
Privy Councillors.
Chancellor of the Exchequer.
Chancellor of the Duchy of Lancaster.
Lord Chief Justice of the King's Bench.
Master of the Rolls.
Lords Justices of Appeal, and the President of the Probate Divorce and Admiralty Division.
Judges of the High Court of Justice.
Knights Bannerets made by the Sovereign in person.
Younger Sons of (1) Viscounts. (2) Barons.

BARONETS.
Knights Bannerets not made by the Sovereign in person.
Knights Grand Cross of the Bath.
Knights Grand Commanders of the Star of India.
Knights Grand Cross of SS. Michael and George.
Knights Grand Commanders of the Order of the Indian Empire.
Knights Grand Cross of the Royal Victorian Order.
Knights Commanders of the Bath.
Knights Commanders of the Star of India.
Knights Commanders of SS. Michael and George.
Knights Commanders of the Order of the Indian Empire.
Knights Commanders of the Royal Victorian Order.
Knights Bachelors
Commanders of the Royal Victorian Order.
Companions of the Bath.
Companions of the Star of India.
Companions of SS. Michael and George.
Companions of the Order of the Indian Empire.
Members of the Fourth Class of the Royal Victorian Order.
Companions of the Distinguished Service Order.
Members of the Fifth Class of the Royal Victorian Order.

Eldest Sons of the Younger Sons of Peers.
Eldest Sons of Baronets.
Eldest Sons of Knights of the Garter.
Eldest Sons of Bannerets.
Eldest Sons of Knights according to their fathers' precedence.
Younger Sons of Baronets.
Younger Sons of Knights.
Esquires and Gentlemen.

TABLE OF PRECEDENCE AMONG LADIES.

THE QUEEN.
*The Princess of Wales.
The Queen Mother.
Daughters of the Sovereign.
**Wives of the Younger Sons of the Sovereign.
**Granddaughters of the Sovereign.
**Wives of the Grandsons of the Sovereign.
Sisters of the Sovereign.
**Wives of the Brothers of the Sovereign.
Aunts of the Sovereign.
Wives of the Uncles of the Sovereign.
Nieces of the Sovereign.

DUCHESSES.
Wives of the Eldest Sons of Dukes of the Blood Royal.

MARCHIONESSES.
Wives of the Eldest Sons of Dukes.
Daughters of Dukes.

COUNTESSES.
Wives of the Younger Sons of Dukes of the Blood Royal.
Wives of the Eldest Sons of Marquises.
Daughters of Marquises.
Wives of the Younger Sons of Dukes.

VISCOUNTESSES.
Wives of the Eldest Sons of Earls.
Daughters of Earls.
Wives of the Younger Sons of Marquises.

BARONESSES.
Wives of the Eldest Sons of Viscounts.
Daughters of Viscounts.
Wives of the Younger Sons of Earls.
Wives of the Eldest Sons of Barons.
Daughters of Barons.
Maids of Honour to the Queen.
Wives of Knights of the Garter.
Wives of Bannerets made by the King in person.
Wives of the Younger Sons of Viscounts.
Wives of the Younger Sons of Barons.

Wives of Baronets according to the dates of their Husbands' creation.
Wives of Bannerets not made by the King in person.
Wives of Knights Grand Cross of the Bath.
Wives of Knights Grand Commanders of the Star of India.
Wives of Knights Grand Cross of SS. Michael and George.
Wives of Knights Grand Commanders of the Order of the Indian Empire.
Wives of Knights Grand Cross of the Royal Victorian Order.
Wives of Knights Commanders of the Bath.
Wives of Knights Commanders of the Star of India.
Wives of Knights Commanders of SS. Michael and George.
Wives of Knights Commanders of the Order of the Indian Empire.
Wives of Knights Commanders of the Royal Victorian Order.
Wives of Knights Bachelors.
Wives of Commanders of the Royal Victorian Order.
Wives of Companions of the Bath.
Wives of Companions of the Star of India.
Wives of Companions of SS. Michael and George.
Wives of Companions of the Order of the Indian Empire.
Wives of Members of the Fourth Class of the Royal Victorian Order.
Wives of Companions of the Distinguished Service Order.
Wives of Members of the Fifth Class of the Royal Victorian Order.

Wives of the Eldest Sons of the Younger Sons of Peers.
Daughters of the Younger Sons of Peers.
Wives of the Eldest Sons of Baronets.
Daughters of Baronets.
Wives of the Eldest Sons of Knights of the Garter.
Wives of the Eldest Sons of Knights Bannerets.
Wives of the Eldest Sons of Knights.
Daughters of Knights.
Wives of the Younger Sons of Baronets.
Wives of the Younger Sons of Knights.
Wives of Esquires and Gentlemen.

*There being no Princess of Wales at present the Queen Mother is next in precedence to the Queen.
** The present sovereign has no relatives of this degree.

EPISCOPAL SIGNATURES.

A bishop's signature is composed of his Christian name or initials followed by the name of the cathedral city of the diocese in the place of his surname. In the following instances an ancient form of the city's name is usually adopted.

Aberdon	= Aberdeen	Norvic	= Norwich
Alban	= St. Albans	Oxon	= Oxford
Cantuar	= Canterbury	Petriburg	= Peterborough
Cestr	= Chester	Roffen	= Rochester
Cicestr	= Chichester	Sarum	= Salisbury
Dunelm	= Durham	Truron	= Truro
Ebor	= York	Vigorn	= Worcester
Edenburg	= Edinburgh	Winton	= Winchester
Exon	= Exeter		

The Irish and Colonial Bishops sign with the English title of their See.

MOTTOES.

ORDERS OF KNIGHTHOOD.

The Garter: Honi soit qui mal y pense—"Shame be to him who thinks shame of it."
The Thistle: Nemo me impune lacessit—"No one provokes me with impunity."
St. Patrick: Quis separabit?—"Who shall separate?"
The Bath: Tria juncta in uno—"Three joined in one."
The Star of India: Heaven's light our guide.
St. Michael and St. George: Auspicium melioris Ævi—"Earnest of a better Age."
The Indian Empire: Imperatricis Auspiciis—"Under the auspices of the Empress."
Royal Victorian Order: VICTORIA.

UNIVERSITIES.

[*Some of the Universities have no Motto.*]

University of Aberdeen: Initium sapientiæ timor Domini—"The fear of the Lord is the beginning of wisdom."
University of Birmingham: Per ardua ad alta—"Through difficulties to the heights."
University of Cambridge: Hinc lucem et pocula sacra—"Hence light and draughts of inspiration."
University of Durham: Fundamenta ejus super montibus sanctis—"Her foundations are upon the holy hills."
University of Glasgow: Via Veritas Vita—"The Way, the Truth, the Life."
University of Liverpool: Hæc otia studia fovent—"Such leisure nurtures learning."
University of Manchester: Arduus ad solem—"Steep the ascent to the sun."
University of Oxford: Dominus illuminatio mea—"The Lord my light."
University of St. Andrews: Αἰὲν ἀριστεύειν "Ever to excel."
University of Sheffield: Rerum cognoscere causas—"To ascertain the causes of things."
University of Wales: Orietur in tenebris lux et ædificabuntur deserta seculorum. Edita doctrina sapientum templa serena—"Light will arise in darkness, and the wild places of the world shall be built. Peaceful shrines will spring up from the teaching of sages."

CITY OF LONDON.

(1) THE GREAT COMPANIES.

Clothworkers: My trust is in God alone.
Drapers: Unto God only be honour and glory.
Fishmongers: All worship be to God only.
Goldsmiths: Justitia virtutum regina—"Justice the Queen of Virtues."
Grocers: God grant grace.
Haberdashers: Serve and obey.
Ironmongers: God is our strength.
Mercers: Honor Deo—"Glory to God."
Merchant Taylors: Concordia parvæ res crescunt—"Small means through harmony become great."
Salters: Sal sapit omnia—"Salt gives a savour to everything"; or "Wit imparts a flavour to anything."

Skinners: To God only be all the glory.
Vintners: Vinum exhilarat animum—"Wine gladdens the heart."

(2) The Minor Companies.

[*Some of the Companies have no Motto.*]

Apothecaries: Opiferque per orbem dicor—"I am called a helper throughout the world."
Bakers: Praise God for all.
Barbers: De præscientia Dei—"Of God's fore-knowledge."
Basket Makers: Let us love one another.
Blacksmiths: By hammer and hand all arts do stand.
Brewers: In God is all our trust.
Butchers: Omnia subjecisti sub pedibus oves et boves—"Thou hast put all things (both sheep and oxen) under his feet."
Carpenters: Honour God.
Clockmakers: Tempus rerum imperator—"Time, the tyrant of all." "Time, the chief ruler of things."
Coach and Coach-harness Makers: Surgit post nubila Phœbus—"After clouds comes sunshine."
Coopers: Love as brethren.
Curriers: Spes nostra Deus—"God our Hope."
Cutlers: Pour parvenir bonne foy—"To succeed fidelity (is needed)."
Distillers: Drop as raine, distill as dewe.
Dyers: Da gloriam Deo—"Give glory to God."
Fanmakers: Arts and trade united.
Farriers: Vi et virtute—"By might and manliness."
Feltmakers: Decus et tutamen—"My glory and defence."
Fletchers: True and sure.
Founders or Coppersmiths: God the only founder.
Framework Knitters or Stocking Weavers: Speed, strength, and truth united.
Fruiterers: Deus dat incrementum—"God giveth the increase."
Girdlers: Give thanks to God.
Glass Sellers: Discordia frangimur—"Through discord we get broken."
Glaziers: Lucem tuam da nobis O Deus—"Grant us Thy light, O God."
Gold and Silver Wyre Drawers: Amicitiam trahit amor—"Love draws friendship."
Innholders: Hinc spes affulget—"Hence beams forth our Hope."
Leather Sellers: Soli Deo honor et gloria—"Honour and glory to God alone."
Masons: In the Lord is all our trust.
Painters or Painter Stainers: Amor et obedientia—"Love and Obedience."
Patten Makers: Recipiunt fæminæ sustentacula nobis—"The women get their support from us."
Pewterers: Tota mea fiducia est in Deo—"All my trust is in God."
Plaisterers or Pargettors: Let brotherly love continue.
Playing Card Makers: Corde recto elati omnes—"All are delighted when the heart is right."
Plumbers: In God is all our hope.
Poulters: Remember your oath.
Saddlers: Our trust is in God.
Scriveners: Scribite scientes litera scripta manet—"Write wisely, the written word remains."
Shipwrights: Within the ark safe for ever.
Spectacle Makers: A blessing to the aged.
Stationers: Verbum Domine manet in æternum—"Thy Word, O Lord, endureth for ever."
Tallow Chandlers: Ecce agnus Dei qui tollit peccata mundi—"Behold the Lamb of God which taketh away the sin of the world."
Tin Plate Workers: Amore sitis uniti—"May you be united in love."
Turners: By faith I obteigne.
Tylers and Bricklayers: In God is all our trust.
Wax Chandlers: Truth is the light.
Weavers: Weave truth with trust.
Wheelwrights: God grant unity.
UNITED KINGDOM: Dieu et mon Droit—"God and my Right."
SCOTLAND: Nemo me impune lacessit—"No one provokes me with impunity."

TOWNS.

[*Many towns, especially the more ancient ones, have no Motto.*]

Aberdeen: Bon-accord—"Good-will."
Accrington: Industry and prudence conquer.
Anglesey: Mon mam Cymru—"Mon (i.e. Anglesey) the mother of Wales."
Appleby: Nec ferro nec igni—"Neither by sword nor fire."
Ashton-under-Lyne: Labor omnia vincit—"Labour conquers all things."
Athlone: Urbes stant legibus—"Cities stand by laws."
Bacup: Honor et industria—"Honour and Industry."
Banbury: Dominus nobis sol and scutum—"The Lord is to us a sun and shield."
Barnsley: Spectemur agendo—"Let us be judged by our actions."
Barrow-in-Furness: Semper sursum—"Always upward."
Batley: Floreat industria—"May industry flourish."
Belfast: Pro tanto quid retribuamus—"What can we render in return for so much?"
Berwick-upon-Tweed: Victoria gloria merces—"Victory, glory, commerce."
Birkenhead: Ubi fides ibi lux et robur—"Where there is fidelity, there are light and strength."
Birmingham: Forward.
Blackburn: Arte et labore—"By skill and hard work."
Bolton: Supera moras—"Overcome delays."
Bombay: Urbs prima in Indis—"The first city in India."
Bootle: Respice aspice prospice—"Look, look behind, look before."
Bournemouth: Pulchritudo et salubritas—"Beauty and healthfulness."
Bradford: Labor omnia vincit—"Labour conquers all things."
Bridgnorth: Fidelitas urbis salus Regis—"The loyalty of the city is the safety of the king."
Brighton: In Deo fidemus—"In God will we trust."
Bristol: Virtute et industria—"By virtue and industry."
Burnley: Pretium et causa laboris—"The reward and cause of labour."
Burslem: Ready.
Bury: Vincit omnia industria—"Industry conquers all things."
Bury St. Edmunds: Sacrarium regis cunabula legis—"The king's closet is the law's cradle."
Chatham: Loyal and true.
Chelmsford: Many minds, one heart.
Cheltenham: Salubritas et eruditio—"Healthfulness and learning."
Chester: Antiqui colant antiquum dierum—"Let the ancients worship the Ancient of Days."
Chorley: Beware.
Congleton: Sit tibi sancta cohors comitum—"Mayest thou have a sacred band of comrades."
Cork: Statio bene fida carinis—"A right trusty roadstead for vessels."
(Cornwall): One and all.
Coventry: Camera principis—"The prince's chamber."
Crewe: Never behind.
Croydon: Sanitate crescamus—"Let us grow in health."
Darlington: Floreat industria—"May industry flourish."
Darwen, Over: Absque labore nihil—"Nothing without labour."
Devonport: Prorsum semper honeste—"Straight on and always honourably."
Dewsbury: Deus noster refugium et virtus—"God our refuge and strength."
Doncaster: Confort et liesse—"Comfort and joy."
Dornoch: Sans peur—"Without fear."
Drogheda: Deus praesidium mercatura decus—"God is our protection, our merchandise, and our glory."

Dublin: Obedientia civium urbis felicitas—"Obedience of the citizens is the prosperity of the city."
Dumbarton: Fortitudo et fidelitas.
Dundee: Dei Donum—"The gift of God."
Dunstable: Justitia omnibus fiet—"Justice will be done to all."
Eastbourne: Meliora sequimur—"We pursue the better path"; or, "We aim at higher things."
Edinburgh: Nisi Dominus frustra—"In vain except the Lord."
Elgin: Sic itur ad astra—"Such is the path to the skies."
Exeter: Semper fidelis—"Always faithful."
Eye: Oculus in coelum—"An eye on the sky."
Falkirk: Better middle wi' the de'il than the bairns o' Fa'kirk.
Forfar: Ut quocunque paratus—"As everywhere prepared."
Glasgow: Let Glasgow flourish.
Gloucester: Fides invicta triumphat—"Unconquered loyalty triumphs."
Godalming: Libera deinde fidelis—"Free, then faithful."
Govan: Nihil sine labore—"Nothing without labour."
Gravesend: Decus et tutamen—"My glory and defence."
Halifax: Nisi Dominus custodierit civitatem—"Except the Lord keep the city."
Hamilton: Sola nobilitat virtus—"Virtue alone ennobles."
Harrogate: Arx celebris fontibus—"A city famous for its springs."
Harrow: Stet fortuna domus—"Let the fortune of the house abide."
Hereford: Invictae fidelitatis praemium—"The reward of invincible fidelity."
Heywood: Alte volo—"I fly on high."
Huddersfield: Juvat impigros Deus—"God aids the diligent."
Hyde: Onward.
Inverness: Concordia et fidelitas—"Harmony and fidelity."
Isle of Man: Stabit quocunque jeceris—"It will stand whichever way 'tis thrown."
Jedburgh: Strenue et prospere—"Vigorously and prosperously."
Keighley: By worth.
Kendal: Pannus mihi panis—"Cloth gives me my bread."
Kidderminster: Deo juvante arte et industria floret—"With God's help it flourishes by art and industry."
Kilmarnock: Virtute et industria—"By virtue and industry."
Kirkcaldy: Vigilando munio—"I fortify it by keeping watch."
Kirkwall: Si Deus nobiscum—"If God be with us."
Lanark: Vigilantia—"Vigilance."
Leamington: Sola bona quae honesta—"These things alone are good which are honourable."
Leeds: Pro Rege et Lege—"For King and Law."
Leicester: Semper eadem—"Always the same."
Leith: Persevere.
Lerwick (Shetland): Dispecta est Thule—"Thule has been descried."
Limerick: Urbs antiqua fuit studüsque asperrima belli—"There was an ancient city, in war's pursuits most fierce."
Linlithgow: "Some there are whom not even the might of Michael can raise on high." Collocet in coelis non omnes vis Michaelis.
Liverpool: Deus nobis haec otia fecit—"God has given us this leisure."
London (City of): Domine dirige nos—"O Lord direct us."
Londonderry: Vita, veritas, victoria—"Life, truth, victory."
Loughborough: In veritate victoria—"In truth is triumph."
Luton: Scientiae et labori detur—"Let it be given to knowledge and toil."
Manchester: Concilio et labore—"With prudence and effort."
Mansfield: Sicut quercus virescit industria—"Industry flourishes like the oak."
Margate: Porta maris portus salutis—"The sea's gate (i.e. Margate) is health's harbour."
Middlesborough: Erimus—"We shall be."
Middleton: Fortis in arduis—"Brave in difficulties."
Montrose: Mare ditat rosa decorat—"The sea enriches, the rose adorns."
Morley: Industria omnia vincit—"Industry conquers all things."
Morpeth: Inter sylvas et flumina habitans—"Dwelling amid woods and streams."
Musselburgh: Honesty.
Nelson: By industry and integrity.
Newcastle: Fortiter defendit triumphans—"Valiantly and victoriously it wards off attacks."
Northampton: Castello fortior concordia—"Concord is stronger than a castle."
Nottingham: Vivit post funera virtus—"Virtue lives after death."
Oldham: Sapere aude—"Dare to be wise."
Oxford (City of): Fortis est veritas—"Mighty is truth."
Patrick: Industria ditat—"Industry makes rich."
Peterhead: Veritas vincit—"Truth conquers."
Plymouth: Turris fortissima est nomen Jehova—"The name of Jehovah is an exceeding strong tower."
Poole: Ad morem villae de Poole—"After the custom of the town of Poole."
Portobello: Ope et consilio—"By might and counsel."
Queenstown: Nomine reginae statio fidissima classi—"Named after the Queen, a most trusty roadstead for the fleet."
Ramsgate: Salus naufragis salus aegris—"The salvation alike of the ship-wrecked and of the sick."
Rawtenstall: Floret qui laborat—"He prospers who works hard."
Reigate: Never wonne ne never shall.
Renfrew: Deus gubernat navem—"God guides the ship."
Richmond (Surrey): A Deo et rege—"From God and the King."
Rochdale: Crede signo—"Believe the sign."
Rotherham: Sic virescit industria—"Thus industry flourishes."
Rutherglen: Ex fumo fama—"Fame from fumes."
Ryde: Amœnitas salubritas urbanitas—"Picturesque, healthful, and polite."
St. Helens: Ex terra lucem—"Light from the land."
St. Ives (Hunts.): Sudore non sopore—"By effort, not by sloth."
Salford: Integrity and industry.
Sheffield: Deo adjuvante labor proficit—"With God's assistance our toil is profitable."
Shrewsbury: Floreat Salopia—"Let Salop flourish."
Southend-on-Sea: Forti nihil difficile—"To the brave man nothing is difficult."
Southport: Salus populi—"The health of the people."
Stalybridge: Absque labore nihil—"Nothing apart from labour."
Stranraer: Tutissima statio—"A most safe anchorage."
Sunderland: Nil desperandum auspice Deo—"With God's blessing, never despair."
Taunton: Defendamus—"Let us defend."
Thornaby-on-Tees: Always advancing.
Torquay: Salus et felicitas—"Health and happiness."
Truro: Exultatum cornu in Deo—"My horn is exalted in God."
Tunbridge Wells: Do well, doubt not.
Tynemouth: Messis ab altis—"Our harvest is from the deep."
Waterford: Urbs intacta manet—"The city abides unassailed."
Wednesbury: Arte, Marte, Vigore—"By skill, valour, and strength."
Wells: Hoc fonte derivata copia in patriam populumque fluit—"From this well rises a stream of plenty that flows over the land and its people."
West Ham: Deo confidimus—"In God do we trust."
Wexford: Per aquam et ignem—"Through flood and fire."

Whitehaven: Vincit omnia perseverantia—"Perseverance conquers all."
Widnes: Industria ditat—"Industry enriches."
Wolverhampton: E tenebris oritur lux—"Light is arisen out of darkness."
Woodstock: Ramosa cornua cervi—"A stag's branching horns."
Worcester: Semper fidelis, mutare sperno—"Loyal ever, I spurn to change."
Wrexham: Fear God, Honour the King.
Yarmouth: Rex et nostra jura—"The King and our liberties."

MOTTOES ADOPTED BY VARIOUS REGIMENTS.

Arma pacis fulcra—"Arms the support of peace."
Cedo nullis—"Yield to none."
Celer et audax—"Swift and bold."
Ich dien—"I serve."
In hoc signo vinces—"In this sign shalt thou conquer."
Ne obliviscaris—"Lest thou forget."
Nec aspera terrent—"Nor do hardships terrify."
Nisi Dominus frustra—"In vain without the Lord."
Omnia audax—"Bold in all things."
Per mare, per terram (Royal Marines)—"By sea and land."
Pristinæ virtutis memores—"Mindful of ancient valour."
Pro rege, pro lege, pro patria conamur—"We strive for king, law, and fatherland."
Quis separabit?—"Who shall separate?"
Quo fas et gloria ducunt—"Where duty and glory lead."
Semper fidelis—"Always faithful."
Spectemur agendo—"Let us be judged by our actions."
Te duce vincimus—"With thee as our leader we conquer."
Treu und fest—"True and steadfast."
Ubique—"Everywhere."
Vestigia nulla retrorsum—"No footsteps (of ours) backwards," i.e. we never retreat.
Viret in æternum—"It flourishes for ever."

MOTTOES RELATING TO VARIOUS VIRTUES.

1. Fidelity and Constancy.

Ad finem fidelis—"Faithful to the end."
Aequo adeste animo—"Be ready with constancy."
Basis virtutum constantia—"Constancy is the foundation of all virtues."
Candide et constanter—"Sincerely and steadfastly."
Cœlum non animum—"Sky not mind (we change)."
Constans fidei—"True to my trust."
Constantia et virtute—"By constancy and virtue."
Fidelis ad urnam—"Faithful to the Tomb."
Fidelitas vincit—"Fidelity prevails."
Fortiter et fideliter—"Boldly and faithfully."
Honor fidelitatis præmium—"Honour is the reward of fidelity."
In fide, justitia, et fortitudine—"In fidelity, justice, and fortitude."
Justitiæ soror fides—"Fidelity the sister of justice."
Semper fidelis—"Always faithful."
Sic fidem teneo—"Thus I keep my faith."
Tenax et fidelis—"Steadfast and faithful."
Tenax in fide—"Steadfast in faith."
Toujours fidèle—"Always faithful."
Ubi amor, ibi fides—"Where love, there faith."

2. Firmness and Tenacity.

Aut nunquam tentes, aut perfice—"Either never make the attempt, or else carry it through."
Cor nobile, cor immobile—"A spirit alike bold and steadfast."
Flecti, non frangi—"To be bent, not to be broken."
Frangas, non flectas—"You may break me but not bend me."
Suaviter et fortiter—"Gently and resolutely."
Suaviter in modo, fortiter in re—"The iron hand in the velvet glove."
Tenax propositi, vinco—"Holding to my purpose, I win."
Tenebo—"I shall hold fast."
Tenez le droit—"Maintain the right."
Tiens ferme—"Stand firm."

3. Honour.

Honor fidelitatis præmium—"Honour is the reward of fidelity."
Honor virtutis præmium—"Honour, the reward of virtue."
Honore et amore—"With honour and love."
Hostis honori invidia—"Envy is an enemy to honour."
Intaminatis honoribus—"With honours undefiled."
Invitum sequitur honor—"Honour follows him who seeks it not."
Per angusta ad augusta—"Through hardships to honours."
Probitas verus honos—"Uprightness is true honour."
Virtute acquiritur honos—"Honour is acquired by virtue."

4. Hope.

At spes non fracta—"But my hope is not broken."
Dum spiro spero—"While I breathe I hope."
Fac et spera—"Act and hope."
Lucem spero—"I hope for light."
Nil desperandum—"Never despair."
Spe et labore—"By hope and labour."
Spe melioris alor—"I live on the hope of a better day."
Sperat infestis—"In adversity he hopes."
Spero infestis, metuo secundis—"I hope in adversity and fear in prosperity."
Spes alit—"Hope nourishes."
Spes dabit auxilium—"Hope will lend help."
Spes infracta—"My hope is unbroken."
Spes labor levis—"Hope is a light task."
Spes mea Christus—"Christ is my hope."
Spes non confundit—"Hope does not confound."
Spes tutissima cœlis—"The surest hope is in heaven."
Surgit post nubila Phœbus—"After clouds comes sunshine."

5. Love and Friendship.

Amat victoria curam—"Victory loves watchful care."
Amicitiam trahit amor—"Love draws friendship."
Amicitia præsidium firmissimum—"Friendship the surest protection."
Amor distantia jungit—"Though far apart, yet joined by love."
Amor dulcis patriæ—"Sweet is the love of fatherland."
Amore sitis uniti—"May you be united in love."
Nihil amanti durum—"Nothing is hard to a lover."
Ubi amor, ibi fides—"Where love, there fidelity."

6. Patriotism.

Ducit amor patriæ—"The love of my country leads me."
Nec rege nec populo, sed utroque—"Neither by the king nor the people, but by both."
Non mihi, sed patriæ—"Not for myself, but my country."
Non tua te moveant, sed publica vota—"Let not thy wishes, but those of the State, actuate thee."
Pro aris et focis—"For altars and hearths."
Pro rege et patria—"For my king and country."
Pro patriæ amore—"For the love of my country."
Pro rege, lege, et grege—"For king, law, and people."

7. Truth.

Candor dat viribus alas—"Sincerity gives wings to strength."
Et vitam impendere vero—"To devote even life to truth."
Fortis est veritas—"Truth is strong."
In veritate victoria—"Victory is in truth."
Quærere verum—"To seek out the truth."
Tiens à la vérité—"Adhere to the truth."
Verâ nihil verius—"Nothing is truer than the truth."
Veritas magna est—"Truth is great."
Veritas premitur non opprimitur—"Truth is oppressed but not crushed."
Veritas superabit—"Truth will overcome."
Veritatis cultores, fraudis inimici—"Worshippers of truth, foes of deceit."
Vérité sans peur—"Truth without fear."
Vincit veritas—"Truth prevails."

8. Valour.

Audacter et sincerè—"Boldly and sincerely."
Audacter et strenuè—"Boldly and strenuously."
Audentes fortuna juvat—"Fortune favours the bold."

Consilio et animo—"By prudence and courage."
Fortes fortuna juvat—"Fortune favours the brave."
Fortis esto, non ferox—"Be brave, not fierce."
Fortitudine vincit—"By fortitude he conquers."
Honestè audax—"Honourably bold."
Malo mori quàm fœdari—"Death rather than dishonour."
Palma virtuti—"The palm for valour."
Sans peur—"Fearless."
Sapere aude et tace—"Dare to be wise and keep silent."
Vi et armis—"By force and arms."
Vincere vel mori—"Death or victory."
Virtute non astutia—"By courage, not by cunning."

9. VIRTUE.

Sua præmia virtus—"Virtue is its own rewards."
Unica virtus necessaria—"Virtue is the one thing necessary."
Vim vincit virtus—"Virtue vanquishes violence."
Vincit pericula virtus—"Virtue overcomes dangers."
Virtus basis vitæ—"Virtue is the basis of life."
Virtus in actione consistit—"Virtue consists in action."
Virtus incumbet honori—"Virtue will rest upon honour."
Virtus incendit vires—"Virtue kindles strength."
Virtus invicta gloriosa—"Unconquered virtue is glorious."
Virtus mille scuta—"Virtue is a thousand shields."
Virtus nobilitat—"Virtue ennobles."
Virtus probata florebit—"Tried virtue will flourish."
Virtus propter se—"Virtue for its own sake."
Virtus semper viridis—"Virtue is ever green."
Virtus sola nobilitas—"Virtue is the only nobility."
Virtute acquiritur honos—"Honour is acquired by virtue."
Virtute duce—"Under the guidance of virtue."
Virtute, non verbis—"By virtue, not by words."

MEANING OF CERTAIN CHRISTIAN NAMES.

H=Hebrew. G=Greek. L=Latin.
K=Keltic. T=Teutonic.

Abraham (H.), great father.
Absalom (H.), father of peace.
Abigail (H.), father's delight.
Ada or **Adah** (H.), ornament.
Agatha (G.), good.
Agnes (L.), a lamb.
Alice (T.), noble.
Albert (**Alberta**) (T.), illustrious.
Alethea (G.), open, true.
Alexander (**Alexandra**) (G.), a helper of men.
Alfred (T.), all peace.
Alma (L.), kindly, benignant.
Amabel (L.), loveable.
Amanda (L.), worthy to be loved.
Ambrose (G.), immortal.
Amelia (T.), industrious.
Amos (H.), one who bears a burden.
Amy, short for *Amelia*.
Andrew (G.), a man.
Angelina (G.), angelic.
Anna, Anne, Annie (H.), grace.
Augustus (**Augusta**) (L), majestic.
Aurora (L.), dawn.
Baldwin (T.), bold in battle.
Barbara (G.), foreign, strange.
Basil (G.), kingly.
Beatrice (L.), making happy.
Bede (T.), a prayer.
Bella (L.), beautiful.
Belinda (L.), charming.
Benedict (L.), blessed.
Benjamin (H.), son of the right hand.
Bertha (T.), bright.
Bertram (T.), fair, illustrious.
Blanche (F.), white, fair.
Bessie, from "beth" in *Elizabeth*.
Bona (L.), good.
Boniface (L.), a well-doer.
Caroline, Carlotta, Charlotte, fem. of *Carolus* (L.), for Charles.
Catherine (G.), pure.
Celestine (L.), heavenly.
Charity (G.), love.
Charles (T.), a man.
Christine, Christiana, fem. of *Christian*.
Christopher (G.), bearing Christ.
Clara (L.), clear, bright.
Clarissa (L.), most bright.
Claude (**Claudia**) (L.), lame.
Clement (L.), mild, gentle.
Constance, fem. of *Constantine*.
Constantine (L.), firm, steady.
Cora (G.), a maiden.
Cordelia (K.), a sea-jewel.
Cornelia (L.), horn.
Cyril (G.), lordly.
Daniel (H.), God is judge.
David (H.), beloved.
Deborah (H.), a bee.
Diana (L.), a goddess; the moon.
Dinah (H.), judged.
Dora (G.), a gift.
Dorcas (G.), a gazelle.
Dorothea, Dorothy (G.), the gift of God.
Egbert (T.), bright eye.
Elizabeth, oath (solemn promise) of God.
Ellen, a form of *Helen*.
Emily, a form of *Amelia*.
Eric (T.), kingly.
Esther (H.), a star.
Ethel (T.), noble.
Eugene (G.), well-born.
Euphemia (G.), well spoken of.
Eva, Eve (H.), life.
Evan, Welsh for *John*.
Evangeline, a bearer of good news.
Eveline, short form of *Evangeline*.
Felicia, fem. of *Felix*.
Felix (L.), happy.
Flora (L.), flower.
Florence (L.), flourishing, blooming.
Francis, Frank (T.), free.
Frederick (**Frederica**) (T.), peaceful ruler.
Gabriel (H.), hero of God.
George (**Georgina**) (G.), a farmer, a rustic.
Gerald (T.), skilful with the spear.
Geraldine, fem. of *Gerald*.
Gladys (K.), a fair maiden.
Godfrey (T.), God's peace.
Godwin (T.), good in battle.
Grace (L.), favour.
Hannah (H.), grace.
Harry (T.), ruler of the home.
Harriet, fem. of *Harry*.
Helen, Helena (G.), torch, firebrand.
Henry (**Henrietta**) see *Harry* (*Harriet*).
Herbert (T.), a bright warrior.
Honor, Honora (L.), honour.
Hortensia (L.), fond of gardening.
Irene (G.), peace.
Isabella=fair *Eliza*.
Isaac (H.), he laughs.
Ivan, Russian for *John*.
Jacob (H.), a supplanter.
James, Jaques, see *Jacob*.
Jane, from *Genoa*.
Janet, Janette, little *Jane*:
Jemima (H.), a dove.
Joan, Joanna, Johanna, fem. of *John*.
John (H.), the Lord graciously gave.
Jonathan (H.), the Lord hath given.
Joseph (H.), may He add.
Josephine, fem. of *Joseph*.
Joshua (H.), a Saviour.
Judith (H.), praising.
Kate, Katharine, Kathleen (G.), pure.
Kenneth (K.), leader of men.
Keturah (H.), incense.
Lætitia (L.), joy, gladness.
Lawrence (**Laura**) (L.), bay, laurel.
Lilian (L.), a lily.
Lionel (L.), a little lion.
Llewellyn (K.), lightning.
Lucius, Luke (L.), bright, shining.
Lucy, fem. of *Lucius*.
Madeline, form of *Magdalen*.
Magdalen (H.), of Magdala.
Margaret, Margery (G.), a pearl.
Martha (H.), a lady.
Mary, Maria, Marian (H.), a form of *Miriam*, that is, bitterness.
Martin (L.), martial.
Matthew (H.), gift of the Lord.
Melissa (G.), a bee.
Michael (H.), who is like God?
Mildred (T.), mild in counsel.
Miranda (L.), one to be admired.
Nancy, form of *Annie*.
Naomi (H.), pleasant.
Nathan (H.), He hath given.
Nathaniel (H.), God hath given.
Nora, form of *Honora*.
Nicolas (**Nicola**) (G.), victorious.
Octavius (**Octavia**) (L.), eighth.
Oliver (L.), olive, peace.
Olive, Olivia, fem. of *Oliver*.
Paul (L.), little.
Paulina, Pauline, fem. of *Paul*.
Patrick (L.), a nobleman.
Peter (G.), a rock.
Phi'ip (**Philippa**) (G.), a lover of horses.
Phœbe (G.), light.
Phyllis (G.), foliage, a dish of herbs.
Priscilla (L.), ancient.
Psyche (G.), the soul.
Rachel (H.), a ewe-lamb.
Reuben (H.), behold a son!
Rhoda (G.), a rose.
Rosa, Rosalie (L.), a rose.
Rosabella (L.), a lovely rose.
Ruth (H.), a friend.
Samson (H.), sunny.
Samuel (H.), asked of God.
Sara, Sarah (H.), a princess.
Saul (H.), asked for.
Sebastian (G.), to be reverenced.
Selina (G.), the moon.
Septimus (**Septima**) (L.), seventh.
Sibylla (G.), a prophetess.
Silas, short for *Silvanus* (L.), sylvan.
Simon, Simeon (H.), famous.
Solomon (H.), peaceful.
Sophia (G.), wisdom.
Stella (L.), a star.
Stephen (G.), a crown.
Susan, Susannah (H.), a lily.
Theodore (G.), gift of God.
Theodora, fem. of *Theodore*.
Theophilus (G.), a lover of God.
Thomas (H.), a twin.
Tristram (L.), grave, sad.
Una (L.), one.
Uriah (H.), the Lord is light.
Ursula (L.), a little bear.
Valentine (L.), strong, healthy.
Valeria (L.), a sort of eagle.
Vera (L.), true.
Victor (L.), a conqueror.
Victoria (L.), victory, success.
Vincent (L.), conquering.
Viola, Violet (L.), a violet.
Virginia (L.), maidenly, chaste.
William (T.), a defender.
Wilhelmina, fem. of *Wilhelm*=**William**.
Winifred (T.), winning, peace.
Zoe (G.), life.

PRONUNCIATION OF CERTAIN SURNAMES.

I. Names of Foreign Origin.

NAME.	PRONUNCIATION.
Bache	Baytch.
Bartelot	Bart'lett.
Beauchamp	Beech'em.
Beauclerc	Bo'clair.
Beaufort	Bo'fort.
Beaulieu	Bew'ly.
Beaumont	Bo'mont.
Belvoir	Beaver.
Boisragon	Bar'ragon.
Boleyn	Bul'len.
Bolitho	Bolee'tho.
Bosanquet	Boo'sanket.
Boucher, Bourchier	Bow'cher.
Bruhl	Brool.
Busch	Bush.
Capel	Ca'pel.
Cavalier	Cavaleer'.
Chandos	Shandos.
Chevasse.	Sheva'sse.
Cheyne	Tchee'-ne (English). Tchain (Scotch).
Clarina	Clary'na.
Cohen	Co'hen.
Curtois, Curteis	Cur'tis.
Daimpré	Dem'prey.
Daguilar	Daggilar'.
D'Angibou	Dan'jibou.
D'Auvergne	Dauver'ne (2 syllabs.).
D'Eresby	Dee'rsby.
Desart	Des'sert.
Devereux	x silent or sounded.
De Lessert	Delessair'.
De Moleyns	Demmolee'ns.
De Ros	Deroo's.
De Salis	Desa'lice.
De Saumarez	De So'marezz.
De Vesci	De Ves'si.
Disraeli	Disray'ly.
Duchesne	Dukahn', Dushayn'.
Dumaresq	Doomer'rick.
Dynevor	Din'nevor.
Du Boulay	Dew Boo'lay.
Du Buisson	Dew'bison.
Du Plat	Dew Plah'.
Engström	Eng'strum.
Fiennes	Fynes (1 syllable).
Foljambe	Fool'jum.
Fortescue	For'teskew.
Furneaux	Fur'no.
Gantillon	Gantil'lon.
Geoffrey	Jefrey.
Gobat	Go'bah.
Gorges	Gor'jes.
Grosvenor	Gro'venor.
Guillbaud	Gilbo (g hard).
Harenc	Harron.
Hullah	Hul'lah.
Im Thurn	Im'thurn.
Labalmondiere	Labal'moudeer.
Lefevre	Lefee'ver.
Lutz	Loots.
Le Bas	Le Bah'.
Le Bert	Le Bert'.
Le Brun	Le Broon.
Le Couteur	Lecoo'ter.
Le Lièvre	As in French.
Le Mesurier	Lemeas'urer.
Levi	Lev'vy.
Meux	Mews. (x sounded).
Molyneux	Mul'lineux.
Moilliett	Mo'liet.
Montefiore	Monte-fi-o'-re.
Muschamp	Mus'cham.
Nagel	Nah'gle.
Papillon	Pap'pilon.
Petre	Pe'ter.
Prideaux	Pree'do or Prid'du.
Pultoney	Polt'ny.
Quibell	Quibell'.
Romanes	Roma'nes
Rosenthal	Ro'sental.
Sadleir	Sad'leer or Sadler.
Sartorius	Sartoris.
St. Leger	Sil'linjer.
St. Maur	Seymour.
Tabuteau	Ta'bito.
Tadema	Tad'dimma.
Tollemache	Tol'mash.
Vaillant	Vallant.
Vaux	Vox.
Villiers	Vil'lers.
Vavasour	Vav'vasur.
Zouche	Zowche (1 syllable).

II. Scotch, Irish, and Welsh names.

Abergavenny	Aberge'nny.
Achonry	Achon'ry.
Arbuthnott	Arbuth'nott.
Ballater	Bal'later.
Banchory	Ban'kory.
Bethune	Bee'ton.
Bourke	Burk.
Breadalbane	Bredal'bane.
Burnett	Bur'nett.
Carnegie	Carneg'ie.
Carruthers	Carruth'ers.
Carwardine	Car'den.
Charteris	Char'ters.
Chisholm	Chizum.
Chives, Chivas, Shives	Shee'vus.
Clanricarde	Clanrik'ard.
Claverhouse	Clav'ers.
Cockburn	Co'burn.
Cochran	Cock'ran.
Coghlan	Co'lon.
Connell	Con'nell.
Colquhoun	Cohoon'.
Conynham	Cun'ningham.
Cromarty	Crum'arty.
Dalgairns	Dalgairns'.
Dalziel	Dee-ell'.
Dundas	Dundas'.
Dillwyn	Dil'lon.
Donoghue	Dun'nohew.
Drogheda	Dro heda.
Dymoke	Dim muk.
Dysart	Dy'sart.
Elgin	El'gin (g hard).
Enraght	En'rowt.
Eyre	Air.
Falconer	Fawkner.
Farquhar	Fark'war (*quh* guttural in Scotch).
Fildes	Fildes (1 syll.) rhyming with wilds.
Foulis	Fowls.
Gallagher	Gal'laher.
Geoghegan-Gahagan	Gay'gan.
Gerard	Ger'ard (g soft).
Giffard, Gifford	G soft in England. G hard in Scotland.
Glamis	Glahms.
Gowan	'ow' as in cow.
Gower	Gore.
Graeme	Grame.
Greig	Greg.
Grierson	Greerson.
Halkett	Hak'kett.
Hawarden	Har'den.
Hepburn	Heb'burn.
Hoey	Hoy.
Home	Hume.
Innes	2 syllables.
Iveagh	Ivah.
Iverach	Eeverach ('ch' guttural).
Ives	1 syllable (yves).
Keilor	Keelor.
Kennaird	Kennaird'.
Ker	Carr.
Kirkby	Kir'by.
Kilmory	Kilmur'ry.
Leveson-Gower	Looson-Gore.
Lismore	Lismore'.
Macrae	Macray'.
Maclachlan	Maclach'lan. ('ch' guttural).
Maclean	generally Maclaine.
Macleay	Maclay'.
Macleod & McLeod	Macloud'.
Macmahon	MacMa'hn.
Macnamara	Macnama'ra.
Magee	Magee' (g hard).
Magill	Magill' (g hard).
Maguinness	Magin'ness (g hard)
Mahony	Maho'nie.
Malet	Malet'.
Marjoribanks	Marsh'banks or March'banks.
Maturin	Match'urin.
Maugham (n)	Mawm or Mawn.
Mearns	Merns or Mairns.
Meiklejohn	Mic'klejohn.
Melhuish	Mel'wish.
Menzies	Meng'ez.
Methuen	Meth'uen.
Meyrick	Mer'rick.
Mowat	Moat (2 syllables).
Ogilvie (y)	g hard.
O'Meara	O'Ma'ra.
O'Morchoe	O'Mur'roo.
Onions	Ony'ons.
O'Shaughnessy	O'Shawn'issy.
Osbaldiston	Osbaldis'ton.
Powell	Po'el.
Powys	Po'-is.
Pugh	Pew.
Rees (Rhys)	Reece.
Ruthven	Ruf'fen.
Scrimgeour	Scrim'jur. Scotch).
Strachan	Strawn (guttural in
Suter	Sooter.
Suther	Soother.
Tredegar	Tredee'gar.
Urquhart	Erkwart (*quh* guttural in Scotch).
Wauchope	Waukop.
Wemyss	Weems.
Wolseley	Wool'sly.

III. Change E into A in the first syllable :—

Berkeley, Berkshire, Bernard, Bertie-Cherwell, Clerke, Derby, Feversham, Hertford, Hervey, Ker, Yerburgh.

IV. Change O or OU into U :—

Blount, Bompas, Bromby, Brompton, Cadogan, Compton, Courthope, Cozens, Donoghue, Donoughmore, Monck, Monckton, Monro, Monson, Montagu, Montgomery, Moray, Ponsonby, Stourton, Yonge (Young).

V. Miscellaneous.

Ayscough	As'kew.
Bagehot	Bag'got.
Barraclough, Clough—	Cluff.
Beaconsfield	Beak or Beck.
Beresford	3 syllables.
Bellingham	Bellinjam.
Bicester	Bis'ter.
Blyth	Bly.
Calderon	Caldron.
Cholmondeley	Chum'ley.
Cirencester	Sis'ister.
Cowper	Cooper.
Dynevor	Din'nevor.
Kekewich	Kekwitch.
Knollys	Noles.
Foljambe	Fool'jum.
Gillett, Gillott	g hard.
Gough	Goff.
Lygon	Liggon.
Myerscough	Maskew.
Ouless	Oo'less.
Pole-Carew	Pool-Cary.
Pytchley	Pite-chley.
Reay	Ray.
Rowton	'ow' as in rowdy.
Skrine	Skreen.
St. John	Sin'jun.
Thesiger	Thes'siger
Thynne	Thin.
Tyrwhitt	Territ.
Wriothesley	Roxly.

THE WORLD AND THE EMPIRE.

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CHIEF EVENTS

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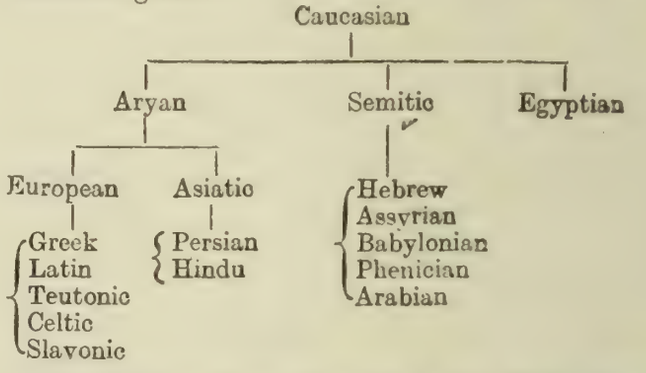
THE HISTORY OF THE WORLD.

INTRODUCTION.

Relatively to the huge periods of time with which geology deals, man's appearance on the earth may be said to be recent; but relatively to the ages measured by history it is of high antiquity, and must be dated earlier by countless centuries than the epoch at which the first records were composed. The geologist is accustomed "to draw a cheque on the bank of time" for something between sixty and three hundred millions of years as being an adequate allowance of time in which the earth's crust might assume its present condition; while from the age when rudimentary forms of life first appeared, he is wont to distinguish twelve great "geological periods," during which life, both animal and vegetable, has been steadily advancing in complexity. The last of these periods is the Post-Tertiary, or Quaternary, and in its course man first appears; the earlier portion of this period is known as the Pleistocene, and during it were deposited beds of drift-gravel (as for instance in the valley of the Ouse), in which are embedded rude hatchets and other implements of flint which have evidently been fashioned by human skill. Hence primitive man is called palæolithic, and the time of his existence is often spoken of as the Old Stone Age, during which the greater part of the continent of Europe was subject to at least two distinct glacial epochs, or ice-ages; but some authorities on the matter hold that primitive man must have lived even earlier than palæolithic man, but have perished without leaving any traces of his existence. At first he seems to have maintained himself by hunting, and to have followed the river valleys in his search for new haunts; later he began to dwell in caves, such as those near Bordeaux, where are to be found his earliest efforts towards the "higher culture"—a rude drawing of a mammoth elephant on a piece of its own ivory.

Gradually the "Cave Man" improved his flint weapons (many of which are to be seen in the British Museum), and became more skilled in the art of drawing; so we pass to neolithic man—man of the New Stone Age, in which his tools are polished and more skilfully wrought. He learns to cultivate the soil, various species of animals are domesticated, and working in clay and wood is commenced. Then follows the Bronze Age, when flint is abandoned for the newly-discovered metal, while gold (only used for ornaments) begins to exercise its fascination over him; this was the pitch of civilization reached by the Aztecs, or natives of Peru, when they were discovered by Europeans early in the 16th century. Last comes the Iron Age, and man is launched on the voyage of discovery and invention which eventually is to lead him to the supremacy over nature such as we enjoy; he awakes to a fuller self-consciousness, the rudiments of law are to be found in tribal custom, the nation, instead of the clan, becomes the unit, society grows more organised and more complex, records of man's progress become both possible and worth making, and the Age of History has at last dawned—an age which must have been preceded by a considerable civilization such as that manifested in the earliest monuments of Egypt and Babylonia.

Other considerations help us to estimate how modern all history, even the earliest, is, when compared with the immense antiquity of man. Ethnologists find in the human race five distinct families—the Caucasian (or white) man, the Mongolian (or Tartar), the Negro, the Malay, and the North-American Indian. Many, but not all, experts would ultimately trace these five families to a common original stock; even if this conjecture be unwarranted, the facts of the case demand thousands upon thousands of years in which the Caucasian family alone might develop its present variations. It has three great sub-divisions, which may easily be understood from the table here given:—



Now philology shows indisputably that all the languages of the Aryan family are derived from one source—an original tongue to which Sanscrit has the closest resemblance, and which was spoken in the cradle of the Aryan race, the highlands of the Oxus, east of the Caspian Sea. A little reflection will convince us how many centuries must elapse for the successive waves of immigration of the Aryans into India and Europe to spend their force, and to develop into such different nationalities with such clearly-marked differences of language.

The table given above may also serve to remind us that the field of history is not co-extensive with the area occupied by man. Of the five great families already enumerated, three may be said not to enter into history at all—the Negro, the Malay, and the North-American Indian; for their self-consciousness, their feeling of the unity of their race, has not developed sufficiently to render history possible. The fourth family, the Mongolians, only touches the skirts of history; for with it society is static, not dynamic, there is no idea of, or capacity for, progress or any sort of development; it is only when the Mongol is brought into touch with Europe and the West (as, for instance, the Magyars of Hungary, the Turks, or the Japanese during the last half-century), that he can occupy a page of history. Even among the Caucasians history finds its scope a very unequal one; the Egyptian is as unprogressive as the Mongol Chinaman—as he was at the opening of history, so has he remained ever since; the Semite—except for the one incalculable factor, the Jew—has disappeared from the march of civilization, though

not without a surpassing influence on man's religious development; the Hindu has proved no more than a dreamer of dreams; and so, in the main, history is occupied with the European branch of the Aryan family; for there alone is freedom loved for its own sake, and therefore there alone is progress—moral, social, and intellectual—possible.

Thus, in barest outline, we commence this article with a peep at the early civilizations of Egypt and Western Asia, when first the curtain of history is raised; then enters the Greek race with its marvellous endowment of intellect and taste; then follows the inevitable attack of the East upon the West—Persia standing for the might of numbers and material resources, Greece for the triumph of thought and freedom; next comes the counter-attack of West upon East, when Alexander's short-lived empire brings nations together by the bond of a common civilization and language; meanwhile Rome is rising in the West, and preparing to imprint the stamp of law and order on all the families of men. Irresistibly and surely her empire grows, until at the commencement of the Christian era it is coterminous with the civilized world—in history, all roads lead to (or from) Rome; but in her power are the seeds of a decay, which Christianity cannot prevent but only retard; her supremacy is seen to be hostile to the best development of the individual, and her degenerate might breaks under the onslaught of the young and vigorous races from the north. There follow three centuries of confusion, when Rome, through its Church, asserts an empire over men's minds such as it had formerly wielded through its State; then arises Charlemagne (800 A.D.), standing at the turning-point in Europe's history between the so-called Dark Ages (6th to 8th centuries) and the Middle Ages (9th to 15th centuries), though often the Middle Ages denote the millennium from the fall of the Western Empire to that of the Eastern (476-1453 A.D.), and often the Dark Ages are taken to cover the first six of these centuries instead of only the first three. Then follows the great upheaval of the Reformation or Renaissance; and thus at last, after the struggles of all the ages, there emerges to our view the Modern Europe, whose existence and whose permanence we often so lightly take for granted.

I.—THE EARLY EMPIRES IN EGYPT AND WESTERN ASIA. (TO 776 B.C.)

EGYPT.

The Old Empire. To the year 3000 B.C.

Consisting of dynasties 1–10, according to the arrangement of the Egyptian priest, Manetho (who lived about 290 B.C.).

B.C.

4450. Menes, the builder of the early capital, Memphis (near modern Cairo), in Lower or Northern Egypt.

3800. The Fourth Dynasty commenced. The Pyramids built by successive kings, Cheops (Khufu), Chephren, and Menkaures (Mycerinus).

The Middle Empire. From 3000 to 2200 B.C.

Consisting of Dynasties 11–13, when Thebes (No, or No-Ammon, Jer. xlvi. 25) in Upper or Southern Egypt became capital.

The Hyksos or Shepherd Kings. From 2200 to 1600 B.C.

Consisting of Dynasties 14–17. Probably Mongolian invaders, Tartar nomads, Chatti (Old Testament Hittites). Their capital was Zoan, which contained monuments by Apepi (c. 1750), Joseph's Pharaoh, who welcomed the Israelites to Goshen.

The New Empire. From 1600 to 525 B.C.

Consisting of Dynasties 18–26. The Hyksos were expelled, probably by the aid of the Ethiopians, and Thebes again became the capital.

B.C.

1533. Thothmes III., who, after the battle of Megiddo, subdued Syria and Mesopotamia. He erected an obelisk at On (Heliopolis), erroneously called Cleopatra's Needle, which was brought to England and set up on the Thames Embankment in 1878.

1324. Ramses II., or Sesostris, "the Great," beautifies Thebes, builds Pithon, and oppresses the Hebrews.

1258. Meneptah, or Merenptah, usually identified as the Pharaoh of the Exodus; but some would suggest Ramses III. (1230–1204).

940. Shishak I., of the 22nd Dynasty, the friend of Israel and foe to Judah (1 Kings xiv.).

From this point the Old Testament records are accepted as being historical, even by the most advanced critics. On Solomon's death (933), the Disruption of his kingdom occurred, Jeroboam ruling over Israel (of which Samaria soon became the capital), and Rehoboam, Solomon's son, ruling over Judah in Jerusalem.

860. Shishak II., in whose reign the Phœnician colony of Carthage was founded.

ASIA.

The Accadian-Summerian Kingdoms. To the year 2239 B.C.

B.C.

6000. Temple of Bel founded at Nippur.

3800. Sargon I. His capital was at Sippar (Sepharvaim, 2 Kings xvii. 24), where was a library of inscribed tablets and cylinders. Accad (Highland) was a Mongolian kingdom, Shumar (Shinar, Gen. x. 10) was probably Semitic.

The Early Babylonian Empire. From 2239 to 1786 B.C.

B.C.

2239. Khammurabi or Hammurabi (Amraphel, Gen. xiv. 1), founds a Semitic Babylonian dynasty in the Euphrates valley. His Code of Laws has recently been discovered and translated, and presents remarkable parallels to much of the legislation in the Pentateuch.

The Kasshite Dynasty. From 1786 to 1210 B.C.

This was probably a warlike dynasty dwelling in the Zagros Mountains (descended from the Cush of Gen. x. 8). During the latter part of this period, Semitic Assyrians began to settle in North Mesopotamia.

B.C.

1392. Burnaburiash II., contemporary with Amenhotep IV. of Egypt—the period of the Tel-el-Amarna correspondence and tablets.

1353. Nazimaruttash, identified by some with Nimrod (Gen. x. 8).

The Hittite sovereignty in North Syria, which prevailed from 1600 to 700 B.C., was now at its height; its capitals were Kadesh on the Orontes, and Carchemish on the Euphrates.

1324. Shalmaneser I., one of the early kings of Assyria.

The Assyrian Empire. From 1210 to 625 B.C.

The warlike and cruel Assyrians gradually subdued the Babylonians in the south, and the Hittites in the north-west. Their capital was first at Assur, and later at Nineveh.

B.C.

1023. Tiglath-Pileser I. consolidates the kingdom and extends it to the Caspian Sea.

[Saul becomes king of Israel.]

[1000. David succeeds Saul as king of Israel, and dies in 960.]

883. Assurnatsirpal III. revives Assyria's greatness, which had suffered from the growth of Syria.

860. Shalmaneser II., whose "Black Obelisk" is in the British Museum.

[845. Successful rebellion of Mesha, king of Moab, against Israel; recorded on the "Moabite Stone."]

INTRODUCTION TO THE HISTORY OF GREECE.

The Greeks knew themselves as Hellenes, and their land as Hellas; but the discoveries of Dr. Schliemann have revealed a pre-Hellenic civilisation which centred round Mycenae and Tiryns and flourished some thirteen or more centuries B.C., and whose elements were derived from Egypt, Phenicia, and Crete. The legend of the Argonauts tells of Greek exploration of the Euxine, under the guise of Jason's expedition to Colchis to gain the Golden Fleece. The traditional date of the siege of Troy is 1184 B.C.—an anticipation, not altogether unhistorical, of the struggle to take place between Europe and Asia some seven centuries later. In 1104 B.C. is dated the "Return of the Heraclidae" or descendants of Hercules to the Peloponnesus (Morea)—a poetical clothing for the fact that Dorian invaders from Thessaly came southwards, and dispossessed the native Achaeans, who in turn drove out many Ionian tribes

These changes led to the Age of Colonisation, during which the west coast of Asia Minor was fringed with Greek settlements—Æolian, Ionian, Dorian. Still later, Greek colonies grew up along the west of the Mediterranean, especially in Sicily and the south of Italy (called Magna Graecia), and including Massilia (Marseilles) and Cyrene (in North Africa), both of which were founded towards the end of the 7th century B.C. Thus the Greeks became the rivals of the Phenicians, who ten or eleven centuries B.C. had planted colonies at Tartessus (Old Testament Tarshish) on the Guadalquiver, at Gades (Cadiz), and at Utica, while later they had numerous colonies along the Mediterranean coasts, and especially in Sicily. Thus in historic times Hellas or Greece denotes all the lands where the Greeks were predominant—the southern part of the Balkan peninsula (Macedonia, except colonies along its coast, was only recognised as Greek in later days), the west coast of Asia Minor, south Italy, and Sicily.

II.—APPROACH OF THE STRUGGLE BETWEEN EAST AND WEST. (776 B.C.—510 B.C.)

GREECE.

The Age of Greek Colonization.

B.C.
776. Lycurgus, the legislator of Sparta, institutes the Olympic Games, which were held every four years and were open to all Greeks. This year of the first Olympiad is the era for Greek chronology.
[753. Traditional date for the foundation of Rome—the year A.U.C. 1.]
743. The First Messenian War, in which Sparta asserts her supremacy in the Peloponnesus against her neighbours of Messene.
685. Second Messenian War, when Spartans are spurred on to victory by the lays of Tyrtaeus, the lame schoolmaster from Athens.
664. Sea-fight between Corinth and her colony Corcyra (Corfu), the earliest naval engagement recorded in history.

The Age of the Tyrants.

The Greek tyrants were despotic rulers, who seized the power during the course of the struggles between the rival factions of aristocracy and democracy; otherwise the unfavourable implication of the term tyranny is modern. Mostly the Greek tyrants consolidated the power of their States, and extended a beneficent patronage to art and letters.

B.C.
624. Severe legislation of Draco at Athens—an attempt to crush the growing democratic tendencies of the Athenians.
612. Cylon aims at the tyranny at Athens, and is sacrilegiously slain by Megacles, of the house of the Alcmaeonidae.
594. Solon's legislative reforms at Athens.
585. Death of Periander, who for 40 years had been tyrant of Corinth.
560. Pisistratus becomes tyrant at Athens, and makes an authoritative collection of the poems of Homer.
527. Hippias and Hipparchus, sons of Pisistratus, succeed to the tyranny at Athens.
522. Polycrates, tyrant of Samos, and patron of the poet Anacreon, is killed by Oroetes, the Persian satrap of Sardis.
514. Conspiracy of Harmodius and Aristogiton, who assassinate the tyrant Hipparchus at Athens.
510. The tyrant Hippias expelled from Athens. He takes refuge at the Court of Darius, whom he assists in the expedition of 490.
Democracy is restored at Athens. Clisthenes, one of the Alcmaeonidae, introduces his constitutional reforms.

ASIA.

The Assyrian Empire (cont.).

B.C.
747. Tiglath-Pileser III. (2 Kings xv. 19).
727. Shalmaneser IV. (2 Kings xvii. 3).
722. Sargon II., Tartan or commander-in-chief, usurps the throne, conquers Syria and Arabia, defeats Egypt and the Hittites, and ends the kingdom of Israel, whose inhabitants are deported (2 Kings xvii. 6). He also reduces to submission his vassal, Merodach Baladan, king of Babylon (Isa. xxxix).
705. Sennacherib conquers Phenicia and Egypt (2 Kings xviii., xix.), and rases Babylon to the ground.
681. Esarhaddon rebuilds Babylon and takes it for his capital.
668. Assurbanipal (Byron's Sardanapalus) founds library at Nineveh, takes Tyre, conquers Egypt, and takes Thebes.
626. Saracus, the last Assyrian king.

The Later Babylonian Empire. From 625 to 538 B.C.

B.C.
625. Nabopolassar, king of Babylon, and vassal to Assyria, renounces his allegiance, and with the aid of Cyaxares, the Mede, takes Nineveh, rases it to the ground (see the book of Nahum in Old Testament), and ends the Assyrian Empire.
604. Nebuchadrezzar II. (2 Kings xxiv.), son of Nabopolassar, ascends the throne.
597. First captivity of the Jews with their king, Jehoiachin.
586. After a three years' siege, Nebuchadrezzar takes Jerusalem, and deports the rest of its inhabitants to Babylon. End of the kingdom of Judah.
561. Evil-merodach succeeds Nebuchadrezzar, and befriends Jehoiachin.
555. Nabonidus, last king of Babylon, of which city probably his son, Belshazzar (Dan. v.), was governor.
538. Nabonidus is defeated by Cyrus the Persian at Borsippa, and Babylonia becomes part of the Persian Empire.

The Persian Empire. From 538 to 331 B.C.

538. Cyrus enters Babylon, and issues an edict permitting the Jews to return to their own land.
529. Cambyses succeeds Cyrus, and conquers Egypt, whither he is accompanied by Crœsus of Lydia.
521. Darius becomes king, restores Zoroastrianism, and organises the empire under 20 satraps or viceroys.
516. Temple at Jerusalem rebuilt (Ezra v., vi.).
Siege of Babylon, which had rebelled, is ended by the stratagem of Zopyrus.

SUPPLEMENTARY.

1. Rise of the Median Power (709-558 B.C.). According to Herodotus, the Medes from the east of the Caspian settled in Persia under Deioces in 709, made Ecbatana their capital, and soon became formidable rivals to the Assyrians. Cyaxares, who helped Nabonidus to take Nineveh, came to the throne in 633. The last Median monarch was Astyages (594-558 B.C.).

2. Rise of the Persian Power (700-538 B.C.). The dynasty of the Achaemenidae began to rule about 700. In 558 Cyrus the Elder (or the Great) overthrew Astyages the Mede; in 546 he took Sardis with its king Croesus, and so ended the Lydian kingdom, which had been predominant in Asia Minor from the time of Gyges (716-678). When Cyrus became master of the Babylonian Empire in 538, his dominions extended from India to the Ægean, and so for the first time East and West were brought face to face with one another.

3. Summary of the subsequent History of Egypt. During the period from 776 to 510 B.C., few important events occurred in Egyptian history. In 625 Necho II., of the 26th dynasty, defeated Josiah at Megiddo (2 Kings xxiii.), but in 612 he was defeated by the Babylonians at Carchemish; he greatly developed the naval power and commerce of Egypt, and during his reign the Phenicians circumnavigated Africa. He was succeeded in 596 by Apries, the Pharaoh-Hophra of Jeremiah xliv. 30, and ally of Zedekiah, the last king of Judah, against Babylon. The last king of the 26th dynasty, Amasis by name, came to the throne in 570, and after a long reign, in which he greatly developed intercourse with the Greeks, was utterly overthrown by Cambyses at Pelusium in 525. Thus Egypt became a **Persian Satrapy** (525-332), but threw off the Persian yoke in 414, and remained independent till it was again subdued by the Persians about the year 350. In 332 Alexander the Great turned aside from completing the conquest of Persia in order to leave no foes in his rear; he easily subdued Egypt, which thus was part of **Alexander's Empire** from 332 to 323. The great conqueror at this time founded the city of Alexandria, but on his death his empire fell to pieces; there were numerous quarrels among those

who claimed to be his Diadochi or successors, of whom the most important were Seleucus who gained Syria, and Ptolemy who took Egypt. **Under the Ptolemies** (323-30 B.C.) Egypt flourished greatly. In the reign of Ptolemy I., Soter, the mathematician Euclid lived; Ptolemy II., Philadelphus, (283-247) enriched the library of Alexandria, and under him the Septuagint (LXX.) or Greek translation of the Hebrew Old Testament is said to have been commenced, especially for the use of the large Jewish colony in Alexandria. In the reign of Ptolemy V., Epiphanes, (205-181) the power of Egypt declined, and Palestine passed under the dominion of the Seleucidae of Syria; the famous "Rosetta Stone," which was discovered by an officer of Napoleon's in 1799, contains the coronation decree of this monarch; its inscription is threefold—in hieroglyphics, demotic (or popular) characters, and Greek—and thus it has furnished us with a key wherewith to decipher Egypt's monumental records; the stone itself is in the British Museum. The last of the Ptolemies was Cleopatra, who ruled jointly with her brothers Ptolemy XII. (51-47) and Ptolemy XIII. (47-43), and then, by the favour of Antony, solely until the battle of Actium (31 B.C.). Egypt then became a **Roman Province**, specially under the emperor's supervision because it was the granary of Rome. Finally, about 640 A.D., it became a prey to the **Muhammadans**, with whose fortunes it has ever since been associated.

III.—THE TWO GREAT CONFLICTS BETWEEN EAST AND WEST. (510 B.C.—323 B.C.)

GREECE.

The Persian Invasions of Greece.

B.C.

[509. Traditional date of the expulsion of the kings, and foundation of the Republic at Rome].

492. The First Persian Expedition, under Mardonius, comes to grief off Mount Athos, in Thrace.

490. The Second Persian Expedition, which crosses the Ægean, under Datis and Artaphernes, is utterly overthrown at Marathon, near Athens, thanks to Miltiades.

480. The Third Persian Expedition, under Xerxes in person, at the head of from one to two and a half million men; heroic but vain resistance of Leonidas and his 300 Spartans at Thermopylae; Athens evacuated, and taken by the Persians; utter defeat of the Persians at Salamis, due to Themistocles; Xerxes returns to Asia.

479. Mardonius, who had been left behind in command of the Persians, is routed at Platea by the Greeks under Pausanias and Aristides; on the same day the Persian fleet is destroyed at Mycale, near Ephesus.

The Rise of the Athenian Supremacy.

B.C.

478. The Confederacy of Delos, a naval league of the Greek states to repel Persian aggressions, formed under Aristides. Its resources were soon applied by Athens to enable her to gain an empire over her allies.

467. Death of Hiero I., tyrant of Syracuse.

466. Cimon the Athenian routs the Persians by land and sea at the Eurymedon, in Pamphylia.

461. The treasury of the Confederacy of Delos transferred to Athens.

456. Athenian victory at Œnophyta, and conquest of Bœotia.

447. Athenian defeat at Chaeronea. Bœotia throws off the Athenian yoke.

431. Athens espouses the cause of Corcyra in her quarrel with Corinth. This is the pretext for the outbreak of the Peloponnesian War. Pericles is now supreme at Athens, where has set in the Golden Age of art and literature.

The Peloponnesian War.

This war lasted from 431 to 404. Athens with her allies, or rather subjects, in the Ægean was pitted against most of the Greek states on the mainland, including all the Peloponnesus (except Argos and Achaia) with Bœotia, Megara, etc., under the leadership of Sparta.

Athens' ultimate downfall was caused by (1) the death of her leading statesman, Pericles, in 429, and the ravages of the plague; (2) the treachery of Alcibiades; (3) the disastrous expedition to Syracuse, 415–413; (4) internal dissensions between democratical and oligarchical factions; (5) intrigues with Persia, notably with Cyrus the Younger, chiefly by Sparta and the disappointed Athenian Alcibiades; and (6) Athenian refusals down to the last to make peace on advantageous terms.

B.C.

404. After the capture of the whole Athenian fleet at Ægospotami, near the Hellespont, by the Spartan admiral Lysander, Athens is taken and has to submit to a humiliating peace which closes the war, but utterly ruins her power.

The Spartan Supremacy.

This is soon found intolerable, and Athens, Corinth, Argos, and Thebes ally against Sparta under Agesilaus.

B.C.

394. The allies lose the battles of Corinth and Coronea on land, but the greater part of the Spartan fleet is destroyed off Cnidus.

ASIA.

The Persian Empire (cont.).

B.C.

510. Darius invades Scythia (south Russia) with small success. The retreat of his army would have been utterly cut off, if the Ionian Greeks left to guard his bridge over the Danube had not listened to the advice of Histiaeus, tyrant of Miletus, rather than to the Athenian Miltiades.

508. Thrace and Macedonia are subdued by the Persians.

501. The Ionian Revolt (of the Greeks in Asia Minor) commences a war between Persia and Greece which lasted intermittently till 449.

500. The Ionians, helped by the Athenians, burn Sardis.

495. Defeat of the Ionian fleet at Lade.

494. Miletus is taken by the Persians. End of the Ionian Revolt.

485. Xerxes (Ahasuerus of the book of Esther) succeeds Darius and puts down a revolt in Egypt.

465. Artaxerxes I., Longimanus, succeeds Xerxes.

458. Second return of the Jews under Ezra the Priest (Ezra vii., viii.).

455. Destruction of the Athenian fleet, which was helping the rebellion of Inarus in Egypt against Persia.

449. Peace finally concluded between Persia and Greece.

445. Nehemiah's visit to Jerusalem (Neh. ii.).

[CAUSES OF THE PELOPONNESIAN WAR. (1) Excessive jealousy of Greek states towards each other. (2) Misuse by Athens of her position as leader of the Greek Confederacy. (3) Internal dissensions among Greek states, and specially intrigues of democracy and oligarchy—Athens being the champion of the former, Sparta of the latter. (4) Exaggerated love of freedom among the Greeks, which forbade their ever founding an Empire, or presenting a united front against a foreign foe.]

B.C.

405. Artaxerxes II., Mnemon, comes to the Persian throne—the fourth king after Artaxerxes I.

401. His younger brother, Cyrus, satrap of Asia, rebels, and gets together a force of 10,000 Greeks, the Peloponnesian War having left the Greeks so disunited that they were ready to take service as mercenaries under any general who could pay them. He sets out from Sardis, crosses the Euphrates, and wins the battle of Cunaxa, near Babylon, but is slain in the fight. The subsequent retreat of the Greek mercenaries to the Black Sea is told by its leader, Xenophon, in his Anabasis.

[COMPARISON OF EAST AND WEST. The Persian empire was an example of absolute autocracy; its king was an irresponsible despot, who developed neither the resources nor the races of his empire, but demanded from his subjects unquestioning submission; it was conscious of no idea of freedom, and so contained no possibility of development; its unity was merely mechanical, not organic; its subjects were not bettered, even in a single point, by belonging to such an empire. But the Greeks were free, alike in thought and government; indeed their love of freedom, unbalanced by other considerations, eventually proved their undoing. With the utmost freedom they interrogated the phenomena of nature and the conventions of human society; thus they laid the foundation for the world's philosophy, and were pre-eminent in ethics, politics, logic, history, poetry, sculpture, and painting; they stood for "life's best against its bulk," for quality against quantity; "but they realised too late, as in the Federal Unions of the Achaean and Ætolian Leagues, that "unity is strength."

GREECE (*continued.*)

B.C.
387. The war ends with the disgraceful Peace of Antalcidas, which recognizes Persia as the arbiter of Greek fortunes, and hands over the Greeks of Asia Minor to her suzerainty.

The Theban Supremacy.

B.C.
371. Thebes now replaces Sparta, whose selfishness and narrow spirit had alienated the other Greeks. The leading Thebans are Epaminondas and Pelopidas, the former inflicting a crushing defeat on Sparta at Leuctra.
369. Messenia throws off her subjection to Sparta, which had lasted since 723. Megalopolis founded as a rival to Sparta.
367. Death of Dionysius the Elder, tyrant of Syracuse.
362. Epaminondas invades the Peloponnesus a second time, and utterly defeats Sparta at Mantinea, but is killed in the battle.

The Macedonian Supremacy.

359. Philip, who had studied the art of war under Epaminondas, ascends the throne of Macedonia. To vindicate his claim to Greek citizenship he avenges the oracle at Delphi against the Phocians.
Demosthenes, the Athenian orator, repeatedly but in vain warns his countrymen against Philip's ambitious schemes.
343. Timoleon of Corinth expels Dionysius the Younger from Syracuse.
338. The utter defeat of Thebes and Athens at Chaeronea by Philip ends all hopes of the Greeks maintaining their independence.
336. Assassination of Philip. The Greeks make a virtue of necessity and appoint his son Alexander, the pupil of Aristotle, to be commander-in-chief against the Persians.

ASIA (*continued*).

B.C.
336. Darius III., Codomannus, the third monarch after Artaxerxes II., becomes king. Probably is the "Darius the Persian" of Neh. xii. 22.
334. Alexander invades Asia, and wins his first great battle at the Granicus in the north-west of Asia Minor.
333. Darius is utterly defeated by Alexander at Issus, in the south-east of Asia Minor.
332. Alexander turns from the pursuit of Darius, and takes Tyre after a seven months' siege; then Gaza falls; Egypt is subdued and Alexandria founded.
331. Alexander resumes his war with Persia, and crushes Darius at the battle of Gaugamela or Arbela. The Persian empire now forms part of Alexander's dominions.
330. Darius is murdered by his satrap, Bessus.
After entering Babylon, Alexander crosses the Oxus and campaigns in India; then he returns down the Indus and along the shores of the Persian Gulf, and so back to Babylon.
323. Death of Alexander at Babylon while planning a campaign in Arabia.

Alexander's empire caused Greek language and civilization to penetrate the East and so paved the way for the more permanent dominion of the Roman Empire. (The Saracen conquests in the Middle Ages caused the tide of influence to flow in the reverse direction—from East to West). Alexander specially encouraged commerce, and the intermarriage of Greeks and Orientals, while he respected local religions and customs.

SUPPLEMENTARY.

1. Early History of Rome. The traditional dates for the foundation of Rome (753) and the constitution of the Republic (509) have been named. The narrative of Livy for the next century and a half cannot be accepted as historical; but it seems clear that the city-state of Rome was several times on the brink of extinction at the hands of her neighbours in Italy, and specially of the Gauls, who won a signal victory at the Allia in 390. Roman history commences with her struggles with the neighbouring Samnites, in which she laid the foundation for her conquest of Italy. The First Samnite War began in 343; the Latin War of 340 was successfully terminated by the self-sacrifice of Decius. The Second Samnite War opened with a crushing defeat for Rome at the Caudine Forks (321), but the tide of fortune was turned by the brilliant exploits of Q. Fabius Maximus.

2. Summary of the subsequent History of Persia. On the death of Alexander in 323, Persia passed under the sway of the Seleucidae of Syria. In 250, Arsaces, a Parthian prince, rebelled against the Seleucid king Antiochus II.; gradually this Parthian (Mongol) dynasty acquired the power over Persia, and the **Arsacidae** ruled from 164 B.C. to 226 A.D. In the former year the Seleucid sovereignty was entirely thrown off, and subsequently the Parthians became the dreaded foes of the Roman empire on its eastern border. Their capital was at Ctesiphon, near Baghdad. In 53 B.C. the Parthians destroyed the forces of Crassus at Carrhae (the Old Testament Haran), but they suffered severe defeats at the hands of Antony's legate, Ventidius, in 39. In 117 A.D. the emperor Hadrian definitely relinquished Mesopotamia to them. The old Persian dynasty of the Achaemenidae was restored by the **Sassanidae**, who ruled from 226 to 651 A.D. In 226 the Sassanid Babegan revolted from the last Arsacid monarch Artabanus, and restored the Zoroastrian religion. Sapor I. (240-273) kept the Roman emperor Valerian in prison from 258 till his death in 265, but his further progress was checked by Odenathus, who maintained an independent kingdom at Palmyra (the Old Testament Tadmor), near Damascus. Sapor II. (310-381) persecuted the Christians severely, and withstood the emperors Julian and Jovian. In 530 Chosroës I. successfully resisted the emperor Justinian and his general Belisarius. In 580 Chosroës II. subdued Egypt and Asia Minor, and even threatened Constantinople, but was driven back by the emperor Heraclius. Finally, in 651, the **Muhammadans** conquered Persia, when Kaleb, general of the Caliph Abu-Bekr, slew the last Sassanid monarch Isdigerd or Yesdigerd III.; the few Zoroastrians left in the land were the forefathers of the modern Parsees.

IV.—TO THE ABSORPTION OF GREECE BY ROME.
(323 B.C.—146 B.C.)

GREECE.

The death of Alexander left no one capable of keeping his empire together. After years of bloodshed among his generals, ending with the battle of Ipsus in Phrygia (301), the Ptolemies took Egypt, and Syria with Western Asia passed to the Seleucidae. Seleucus was the son of Antiochus, which was the name of most of the kings of the line, as well as of the new capital, Antioch, on the Orontes.

Antigonus Gonatas, grandson of one of Alexander's generals, becomes king of Macedonia in 283. In 280 the Gauls invade Greece, and some settle in Asia Minor (whence the name Galatia). In spite of the attacks of Pyrrhus of Epirus (274–272), Antigonus retains the power in Macedonia till his death in 239, and subdues the Peloponnesus, where he establishes tyrants in all the large cities. Demetrius II. succeeded in 239, Antigonus Doson in 229, and Philip in 220.

ROME.

Rome subjugates the Peninsula of Italy.

B.C.
295. The Third Samnite War witnesses a great Roman victory at Sentinum, and the disgraceful execution of the captive Samnite general Pontius.
281. Pyrrhus, king of Epirus, crosses over to Italy, to help Tarentum against Rome. He wins great victories at Heraclea and Asculum; after two years' stay in Sicily he is defeated at Beneventum, and returning to Greece is slain in an attack on Argos.
273. Ptolemy Philadelphus, king of Egypt, concludes a treaty with Rome.

Rome obtains the supremacy of the Mediterranean.

B.C.
264. The First Punic War breaks out. Aryan Rome on the north of the Mediterranean challenges Semitic Carthage

GREECE (*continued*).

Meanwhile, chiefly through the efforts of Aratus of Sicyon, the Achaean League of the Peloponnesian states (except Sparta) was preserving some vestiges of Greek freedom. A similar confederacy was the Ætolian League of the Greek states north of the Peloponnesus and south of Macedonia proper.

The Macedonian Philip V. concluded a treaty hostile to Rome with the Carthaginian Hannibal in 216; but Philopœmen, "the last of the Greeks," was engaged in stimulating the enthusiasm of the Achaean League, which supported the Roman Consul Flamininus against Philip. The latter was overthrown at Cynoscephalae in 197 (the end of Rome's Second Macedonian War), and next year Rome declared Greece free (i.e. from Macedonian supremacy).

The Ætolian League then procured the help of Antiochus III., "the Great," of Syria, who was defeated by the Romans at Thermopylae (191), and the League was subjected to Rome.

Perseus succeeded Philip V. in 179; soon the Third Macedonian War broke out with Rome, which ended in the defeat and capture of Perseus by the consul L. Æmilius Paullus, at Pydna (168). Macedonia was formed into a Roman province in 147.

[Antiochus IV., Epiphanes, of Syria, desecrated the Temple at Jerusalem in 168; then followed the Maccabean revolt and kingdom, which lasted in Palestine till 63 B.C.]

The traditional jealousies among Greek states caused Sparta to appeal to Rome against Corinth and the members of the Achaean League; the latter, in spite of the advice of Polybius the historian, gave Rome a pretext for attacking the Peloponnesus. The consul L. Mummius sacked Corinth (146), and all Greece south of Epirus and Macedonia was formed into the Roman province of Achaia.

ROME (*continued*).

B.C.

on the south (a Phenician or Punic colony, founded in 814). The battle-ground was naturally Sicily, where were many Greek and Phenician colonies; the war was carried on chiefly by sea, and taught Rome the necessity of having a navy. Her fleet was destroyed three times but thanks to the achievements of Duilius, Regulus and Catulus she emerged victorious.

241. At the end of the war Sicily became a Roman province, thus forming the first instalment of Rome's provincial empire.

218. The Second Punic War commences. Hannibal, the great Carthaginian, sets out from Spain, crosses the Rhone and the Alps, and inflicts crushing defeats on Rome at the Trebia, Lake Trasimenus (217), and Cannae (216).

215. South Italy revolts to Hannibal, while the defeats of the Roman arms in Spain leave nothing for him to fear in that quarter. The policy of Fabius Cunctator, and the attacks of Marcellus, gradually wear down the resources of Hannibal, who is ill-supported from Carthage; Capua, Tarentum, and the rest of South Italy are recovered by Rome.

[211. The Great Wall of China is completed.]

207. Hasdrubal, while attempting to join his forces to those of his brother Hannibal, is completely defeated and slain at the Metaurus, in North Italy.

205. The elder Scipio (Africanus) subdues Spain, and carries the war into Africa, whither Hannibal is recalled.

202. The battle of Zama ends the war, and deprives Carthage of her last hope of forming an empire on the Mediterranean.

149. The Third Punic War breaks out, through the urgency of the elder Cato.

146. The younger Scipio, son of Æmilius Paullus, and adopted son of Scipio Africanus, rases Carthage to the ground (which was rebuilt under Augustus); its dominions are formed into the Roman province of Africa.

GREEK LITERATURE AND ART. The Homeric poems, the Iliad and the Odyssey, were produced about the 9th century B.C. Hesiod was born in Bœotia about 735. In lyric poetry Sappho and Alcaeus came at the end of the 7th century, while Pindar was a century later. Then follow the dramatists, Æschylus (525–456), Sophocles (495–406), Euripides (480–406), and Aristophanes (444–380), while Menander, the poet of the "New Comedy," lived from 342 to 291. In History, which the Greeks were the first to treat scientifically, the chief names are Herodotus (born 484), whose history goes down to 478; Thucydides (born 471), who treats of the Peloponnesian War; and Xenophon (born 444), the pupil of Socrates. Among the philosophers, the Sophists flourished during the 6th and 5th centuries, and Socrates lived from 469 to 399. (It may be useful to mention that Zoroaster lived from 589 to 539 probably, the Buddha Gotama from 564 to 484, and the Chinese Confucius from 551 to 478). Plato, the founder of the Academics, lived from 429 to 347; Aristotle, the founder of the Peripatetics, from 384 to 322; Epicurus from 342 to 270; and Zeno, the head of the Stoics, died about 260. Oratory culminates in Demosthenes (385–322), while Antiphon, Lysias, Isocrates, and Æschines, were in the front rank. In Art the Greeks were supreme, but there is only space to mention the names of the sculptor Phidias (490–432), and the painter Apelles, whom alone Alexander the Great would allow to paint his portrait.

V.—DECLINE AND FALL OF THE ROMAN REPUBLIC. (146 B.C.— 27 B.C.)

Rome's supremacy in the ancient world (the Mediterranean basin), is now assured; but her form of government is that of a city-state, the senate being as incapable of governing an empire as a court of aldermen would be. The system of land-tenure in Italy was a failure; the replacement of the old citizen army by legions of professional soldiers constituted a menace to the State; conquest had enriched the few at Rome, while the contrast of the poverty of the many became the more glaring, and the government of the provinces was often rapacious, and fatal to the development even of material well-being. Thus as the area of the empire became consolidated, its government had to become centralized and responsible—the necessities of the case compelled the republican constitution to make way for the imperial.

B.C.

133. Scipio the younger takes Numantia in Spain.
Attalus, king of Pergamus, bequeaths his kingdom and treasures to the Roman people; the province of Asia (i.e. the western half of Asia Minor) is formed.
The poverty of the masses of the Roman citizens drives Tiberius Gracchus to attempt a policy of land-reform.

123. Caius Gracchus revives the policy of his brother, and like him is murdered by the nobles.

118. Transalpine Gaul, between the Alps and the Pyrenees, is added as a province (the modern Provence).

106. Marius brings to a successful close the six years' campaigns against Jugurtha, who had usurped the throne of Numidia in north-west Africa.

102. The Teutones and Cimbri (Germanic and Celtic tribes from central and eastern Europe), after ravaging Gaul and Spain and defeating many Roman armies, are utterly routed by Marius at Aquae Sextiae (Aix) and Vercellae.

89. The Social or Marsic War ends in the granting the Roman citizenship to the citizens of all the allied States (socii) in Italy. Thus Rome begins to lose her character as a City-state; but the franchise could only be exercised in Rome itself.

B.C.

88. Mithridates VI., king of Pontus (south of the Euxine or Black Sea), orders a massacre of the Romans in Asia, in which 80,000 are said to have perished. Athens and other Greek States support Mithridates, but are defeated by Sulla at Chaeronea and Orchomenus.

87. Cinna restores the democrat Marius (who had been expelled the previous year by the aristocrat Sulla), and massacres Sulla's partisans. Marius dies in the following year.

82. In the battle of the Colline Gate outside Rome, Sulla and Crassus crush the Samnites under Pontius, who were supporting the younger Marius. Sulla becomes Dictator (sole magistrate), proscribes his foes, and passes a series of laws to restore the ancient constitution and the power of the Senate.

78. Death of Sulla, who had previously resigned his dictatorship.

71. Crassus and Pompey end the rising of the gladiators under Spartacus, and as consuls repeal most of Sulla's legislation.

67. The Gabinian Law gives Pompey unlimited powers for putting down piracy in the Mediterranean, while the

B.C.

Manilian Law transfers the command of the war against Mithridates from Lucullus to Pompey. Thus the latter has absolute power in the East, where he forms Pontus, Bithynia, and Syria into provinces, and makes the Euphrates the eastern frontier of the Roman dominions.

63. Pompey enters Jerusalem, profanes the Holy of Holies, and makes Judea subject to the legate (governor) of Syria.
The conspiracy of Catiline at Rome is unmasked and punished by the consul Cicero, who now delivers his famous Catilinarian Orations.

60. The first Triumvirate, or informal partition of power amongst three men, is formed between Pompey, Cæsar, and Crassus. Pompey marries Cæsar's daughter Julia; Cæsar becomes consul, and has the province of Gaul for five years, during which period he twice visits Britain.

58. Cicero is driven into exile, for the illegal punishment of the Catilinarian conspirators—chiefly through the personal enmity of Clodius.

56. The Triumvirs meet at Luca, and arrange that Cæsar's command in Gaul is to be renewed for five years, and that Pompey and Crassus are to become consuls and to receive respectively the provinces of Spain and Syria. Cæsar has described his campaigns in Gaul (58–50) in his "Gallic War."

53. Crassus is defeated and slain at Carrhae by the Parthians under Surenas, the general of king Orodes.

52. Riots at Rome between the partizans of Clodius and Milo.

51. Mutual jealousy estranges Pompey and Cæsar, and the former definitely joins the aristocratical party.

49. Cæsar crosses the Rubicon, and thus formally invades Italy; civil war breaks out. Pompey retires to Greece, and is utterly defeated by Cæsar at Pharsalia in Thessaly (48); he flees to Egypt and is there murdered. Cæsar, after crossing to Egypt, defeats his foes at Thapsus (46) in Africa—after which battle the younger Cato commits suicide—and at Munda (45) in Spain, but is assassinated at Rome by Brutus and Cassius (44).

43. Octavian (Cæsar's great-nephew, the future Augustus), Mark Antony (who is bitterly attacked by Cicero in the Second Philippic), and Lepidus, form the second Triumvirate. Murder of Cicero.
Brutus and Cassius are utterly defeated at Philippi (42).
Antony's legate, Ventidius, defeats the Parthians under Pacorus (38).

40. Herod the Great is appointed vassal king of Judea by Octavian and Antony.

37. The second Triumvirate is renewed for a further five years; but Antony deserts his wife Octavia (Octavian's sister), having fallen a victim to the fascinations of Cleopatra, queen of Egypt, and last of the Ptolemies; his campaign against the Parthians is disastrous, and he comes to open enmity with Octavian.

31. Octavian, as sole consul, makes war against Cleopatra, who had been declared an enemy of the State. At the battle of Actium, off the west coast of Greece, Antony and Cleopatra are overthrown; they flee to Alexandria and commit suicide. Egypt becomes a Roman province.

27. Octavian is styled Augustus by the Senate, and the transition from republic to empire is quietly effected.

ROMAN LITERATURE. As the age of Pericles is the Golden Age of Athens, so that of Augustus is the Golden Age of Rome. Grouping the chief Latin writers together, we have to enumerate the poets Lucretius (95–51), Catullus (87–47), Virgil (70–19), Horace (65–8), Tibullus (55–20), Propertius (born in 50), and Ovid (43 B.C.–18 A.D.); the standard of prose-writing is set by the orator Cicero (106–43 B.C.), Cæsar (100–44), Sallust (86–34), Cornelius Nepos (1st century B.C.), and the historian Livy (59 B.C.–17 A.D.).

VI.—THE ROMAN EMPIRE TO THE ACCESSION OF CONSTANTINE. (27 B.C.—313 A.D.)

By a series of legal fictions, Augustus held the sole power over the Empire without unduly offending republican susceptibilities. The old magistracies and titles were retained, while the universal peace which prevailed helped to prevent Roman citizens from realising that they were gaining it at the price of freedom. Communication between the various parts of the empire became safe and speedy, commerce flourished, and the provinces were able at length to share in the prosperity to which they contributed so much; indeed, none but an antiquarian could be found to regret the Republic. For a century the empire grew stronger, for the next century it maintained its ground, but in the third century signs of its decay were unmistakable.

B.C.

4. Year of the Birth of our Lord (probably in December). Death of Herod the Great, king of Judea.

A.D.

6. Archelaus, son of Herod, is banished, and Judea is placed under Roman procurators, of whom the sixth, Pontius Pilate, was appointed in 25.

9. The German prince, Arminius, destroys the legions of Varus near the source of the River Ems, thus preventing Germany from ever becoming a Roman province, and indeed rendering possible the rise of the Teutonic race.

The Claudian Emperors.

A.D.

14. Tiberius succeeds Augustus. From this time the popular assembly (comitia) at Rome ceases either to make laws or to elect magistrates; the Senate enjoys considerable power, but only on the emperor's sufferance.

29. The Crucifixion of our Lord.

37. Caligulus becomes emperor—his acts show him to be a madman.

41. Claudius, emperor—the first to be chosen by the soldiers, not by the Senate.

50. Britain is made a Roman province, after the defeat of the chieftain Caractacus.

54. Nero, last emperor of the Claudian line (the family of Julius Cæsar). The Stoic philosopher Seneca was his tutor and minister, but was driven to commit suicide (65). Nero murders his mother Agrippina and wife Octavia.

61. The rising of Boadicea, queen of the Iceni in East Anglia, is ended by her defeat at Camulodunum (Colchester), by Suetonius Paullinus.

64. Great fire at Rome. Nero initiates the persecution of the Christians, in which SS. Peter and Paul suffered martyrdom.

67. Vespasian, as Nero's legate, subdues Galilee, whose governor was the Jewish historian Josephus.

68. Death of Nero. Galba, Otho, and Vitellius are chosen as emperors by the legions in various parts of the empire; civil war follows, whence the party of Vespasian (who is in Palestine) emerges triumphant.

The Flavian Emperors.

A.D.

70. Vespasian is recognized as emperor. His son Titus brings to an end the siege of Jerusalem, in commemoration of which his triumphal arch was erected at Rome.
[Buddhism is introduced into China as "the Religion of Fo."]

79. Titus succeeds his father.
First eruption of Mount Vesuvius, in which Pliny the Elder lost his life, and the cities Herculaneum and Pompeii were buried.
The Colosseum or Flavian Amphitheatre at Rome is completed.

81. Domitian becomes emperor. Persecution of the Christians is renewed.
Agricola, the father-in-law of Tacitus, subdues finally the south of Britain.

ROMAN LITERATURE. Here conveniently may be enumerated the remaining Latin writers. Their names are:—the poets Persius (34–62), Lucan (59–65), Martial (43–105), and Juvenal (who died about 105); and the prose-writers Pliny the Elder, Seneca, and Tacitus, who have been mentioned above, with Quintilian (40–118), and Suetonius (who was born about 70).

The Empire at its best.

A.D.

98. Trajan, a Spaniard, succeeds Nerva (emperor, 96–98). Dacia, Arabia Petraea, Armenia, and Mesopotamia, are made provinces, and the empire has attained its widest limits. Trajan's Column at Rome commemorates his military successes in Dacia.

107. Martyrdom of Ignatius.

112. Correspondence between Trajan and Pliny the younger, legate of Bithynia, as to the proper procedure against the Christians.

117. Hadrian emperor. He traverses his whole empire, visiting Britain (122), and rebuilding Athens. Jerusalem is refounded as a military colony, under the name of Ælia Capitolina; the revolt in Judea under Barcochab is

A.D.

suppressed, and the Jews are finally dispersed from Palestine. Hadrian gives up all conquests in Armenia and east of the Euphrates, and aims at a policy of peace and internal progress.
Roman Law is codified by Salvius Julianus.

138. Antoninus Pius, first of the Antonine emperors.
The jurist Gaius compiles his Institutes of Roman Law.

161. Marcus Aurelius, the Stoic philosopher and author of the "Meditations," becomes emperor. Persecution of the Christians is again severe, Justin Martyr (166) and Polycarp (167) being among the victims.
The Goths and Franks begin to harass the northern borders of the empire.
Lucian writes his sceptical Dialogues, holding up to ridicule the current religious myths.

180. Commodus, son of Aurelius, succeeds. Henceforth the emperors are mostly the nominees of the praetorian guards or of the legions; only the more noteworthy are mentioned in this list.

The Empire begins to decline.

A.D.

211. Caracalla succeeds his father Severus (who had died at Eboracum or York), and confers the Roman citizenship on all free inhabitants of the empire.

226. The Persians rise against the Parthians, and their dynasty of the Sassanidae replaces that of the Arsacidae.

249. Decius becomes emperor, and attempts the entire extirpation of Christianity by means of persecution. Cyprian, bishop of Carthage, was beheaded (258), and Origen also suffered.

A.D.

268. Odenathus and his wife Zenobia found an independent kingdom at Palmyra, near Damascus.

273. The emperor Aurelian overcomes Zenobia, who had murdered Odenathus, and whose chief adviser was the Athenian philosopher Longinus.
The Neo-Platonic school of Alexandria is now flourishing—its chief names being Plotinus (3rd century), Porphyry (4th century), and Proclus (5th century). It came to an end under Justinian.

284. Diocletian divides the empire with Maximian, the capital of the Eastern Empire being Nicomedia (on the east of the Propontis or Sea of Marmora), and of the Western Empire, Milan. These two emperors are each styled Augustus, while, in 292, Diocletian adds two more—Constantius and Galerius—who are styled Cæsars, and whose task it is specially to defend the border-line of the empire, West and East respectively.
Diocletian initiates the last imperial persecution of the Christians, in which the British proto-martyr Alban suffered.

305. Diocletian resigns, leaving the northern part of the empire permeated by German tribes (who often became its protectors against barbarian attacks).
The Roman Senate had now deteriorated to the rank of a mere town council, and the Empire itself was copying the worst features of an oriental despotism.

313. Constantine, son of the emperor Constantius (who died at York in 306), having defeated and slain his rival Maxentius, becomes sole emperor of the West.

VII.—THE ROMAN EMPIRE (*continued*).—TO THE FALL OF THE WESTERN EMPIRE. (313 A.D.—476 A.D.)

The Roman Empire was now being proved unequal to its self-imposed task of ruling the world. "It could feed and amuse but not educate its citizens," for its avowed ideal of government was limited to *panem et circenses*, to providing bread and the circus-games; the portentous decline in the birth-rate, the enfeeblement of the old Roman type of character under the influence of wealth, the taint of oriental immorality, and the custom of slavery (degrading to masters and slaves alike), had produced deep evils in society which Christianity was too late to cure. But as the Empire grew weaker, the Church grew stronger; the partition of the civil power and the removal of the seat of government from Rome left the Church in the latter city unfettered, and threw on it the responsibility of protecting civilisation as well as Christianity under the attacks of barbarians. Thus the glamour of the name of Rome now enshrined its Church, and on its Pope was almost thrust a great measure of temporal power.

To the Final Partition of the Empire.

A.D.

313. Constantine becomes sole emperor of the West, and issues an edict of toleration to Christianity.

323. Licinius, the Eastern emperor, having been defeated at Hadrianople and Chalcedon, and then treacherously put to death, Constantine becomes sole emperor.
Christianity is recognised as the state religion.

325. First General Council of the Church, at Nicea in north-west Asia Minor. The Arian heresy infests the Church for the next half century, its great opponent being Athanasius, bishop of Alexandria (died 373).

330. Constantine fixes his capital at Byzantium (a Greek colony founded from Megara in 658 B.C.), and calls it Constantinople or "New Rome." Constantine died in 337.

348. Ulfilas, the "Moses of the Goths," commences his missionary labours among that race, who are now constantly threatening the Empire, their eastern tribes being the Ostrogoths, and the western the Visigoths.

361. Julian, "the Apostate," and nephew of Constantine the Great, becomes emperor, and attempts to restore paganism. Julian dies in a campaign in Persia (363).
The Saxon or Low Dutch incursions into Britain begin.

364. Division of the Empire into Eastern and Western empires under Valentinian and Valens respectively.

378. Valens slain in battle at Hadrianople against the Goths, who were seeking a refuge within the empire under the pressure of the Huns (Tartars).

379. Theodosius unites the empire again. The worship of the heathen gods is proscribed by law.

381. Second General Council of the Church, at Constantinople. The Nicene Creed is completed.

390. At the bidding of Ambrose, bishop of Milan (who baptized St. Augustine), the emperor Theodosius does penance for his massacre of the Thessalonians.

To the Fall of the Western Empire.

395. The sons of Theodosius divide the empire, Arcadius taking the East, and Honorius the West. The chief supporter of Honorius is the Vandal general Stilicho, who defeated Alaric at Pollentia (403), and the barbarian Radagaisus (405).

A.D.

398. St. Chrysostom becomes bishop of Constantinople.

408. Stilicho is put to death at Ravenna on a charge of treason.

410. The Goths under Alaric sack Rome. The Roman garrisons are withdrawn from Britain, which is left a prey to its Saxon invaders.

414. The Goth Athaulf, Roman legate in Spain, founds a virtually independent kingdom there.

422. Death of St. Jerome. St. Augustine of Hippo died in 430.

428. Count Boniface of Africa is enticed to rebel by his rival Ætius, the general of Valentinian III., and invites Genseric and his vandals into Africa, where soon a Vandal kingdom is established.

431. Third General Council of the Church, at Ephesus, condemns Nestorianism.

440. Leo the Great becomes Pope. St. Patrick from Scotland converts the Irish.

449. The first Low-Dutch kingdom formed in Britain by the Jutes in Kent.

451. Great defeat of Attila, king of the Huns, at Châlons, by the combined forces of the Romans and Goths under Ætius and Theodoric; thus central Europe was preserved to the Teutonic race, and freed from the inroads of Turanian hordes.
Fourth General Council of the Church at Chalcedon; the authority of the first four councils has been generally accepted throughout the Church.

455. Genseric the Vandal sacks Rome.

475. The Saxons commence their settlements on the south coasts of Britain.

476. Zeno emperor of the East.
The line of Western emperors comes to an end with the youthful Romulus Augustulus, who is defeated by the German Odoacer, the latter assuming the government of Italy.
Rome now stands out as the centre of Western Christianity and the mother of the Churches founded among the younger races of Europe.

VIII.—THE DARK AGES
(476 A.D.—800 A.D.)

The next three centuries are a preliminary to the Middle Ages proper, and are often called the Dark Ages. During this period the Teutonic races are absorbing Christianity, and grafting on to their native institutions customs of Roman law and government along with such Greek culture as the Roman Empire had preserved. In the West there are growing up out of Latin the French, Spanish, and Italian languages; but the East had always been, and still remained, Greek-speaking. This difference in the matter of language is but a reflection of the fact that in the West new nations were being brought to the birth, while yet in the East the Empire at Constantinople had nearly a thousand years' existence before it.

The Merovingian Dynasty in Gaul.

A.D.

480. Birth of St. Benedict, who at his monastery near Naples introduced the threefold rule of poverty, chastity, and obedience (529).
481. Clovis, Ludwig, or Louis, founds the Merovingian dynasty, which rules the Frank or Teuton kingdom of Germany and Gaul until 687 (nominally till 753).
493. Theodoric forms a Gothic kingdom in Italy, which lasts till 526. Boëthius, while imprisoned by Theodoric, wrote his "De Consolatione Philosophiae."
527. Justinian becomes emperor of the East. He codifies Roman Law, and thus lays the basis of all European Law. He also builds the Church of St. Sophia at Constantinople. His famous general Belisarius overthrows the Vandal kingdom in North Africa, and Theodoric's Gothic kingdom in Italy and South Spain.
Thus, till Justinian's death in 565, the Eastern empire possesses the whole Mediterranean basin. The seat of government in Italy is at Ravenna.
553. Fifth General Church Council at Constantinople.
563. St. Columba, an Irishman, founds a monastery at Iona, and preaches in Scotland.
578. The Lombards (Teutons from Pannonia) found a kingdom in the north of Italy, and overrun much of the south (while the centre remains Roman, with the islands of Sicily, Sardinia, and Corsica). Fugitives from the Lombard incursions take refuge in Venice.
570. Birth of Muhammad. He died in 632.
597. Augustine is sent by Pope Gregory the Great to convert England; he converts Ethelbert king of Kent, and becomes the first archbishop of Canterbury.
622. The Eastern Emperor Heraclius saves Constantinople from the attacks of the Persian monarch Chosroës II., who had subdued Egypt and Asia Minor.
Muhammad flees from Mecca to Medina, and thus the year 622 marks the commencement of the Muhammadan Era (the Hejira, or Flight).
639. Egypt and Syria (with Jerusalem) pass into Muhammadan occupation.
651. The Sassanid dynasty in Persia overthrown by the Saracens.
669. Theodore of Tarsus becomes archbishop of Canterbury.
673. First siege of Constantinople by the Saracens.
The Council of Hertford unites the Churches of the English Heptarchy under the see of Canterbury. Birth of the Venerable Bede, who was the author of a History of the English Church, and died in 735. In the 7th century there flourished the English saints Aidan, Cuthbert, Chad, and Benedict Biscop.
680. Sixth General Church Council, at Constantinople, at which the Monothelites and Pope Honorius are condemned.

The Carlovingian Dynasty in France.

687. Pepin, hereditary Mayor of the Palace (i.e. commander-in-chief of the Frankish forces), founds the Carlovingian dynasty over north France and central Germany.
692. Seventh (and last) General Church Council, at Trullo, which embodies the decisions of the 5th and 6th Councils in decrees. These last three councils have not been considered so representative as the first four.
709. North Africa subdued by the Saracens.
713. Tarik and Musa, the Muhammadan leaders, defeat Roderick, "the last of the Goths," and wrest Spain from the Visigsths and Vandals, taking the Gothic capital Toledo. Cordova, etc.
716. Second siege of Constantinople by the Saracens; frustrated chiefly by the efforts of Leo the Isaurian, who afterwards became Eastern emperor, and published two edicts forbidding the adoration of images.
732. In a seven days' battle fought at a place between Tours and Poictiers, the Saracen forces are utterly defeated by Charles Martel (the Hammer, Maccabaeus), the son of Pepin and grandfather of Charlemagne. The Caliph Abderahman is slain, and Europe is saved from becoming Muhammadan.
The Iconoclastic controversies in the Greek Church commence.
753. At the invitation of Pope Stephen III., Pepin, the son of Charles Martel, drives the Lombards out of Italy. Childeric III., the last nominal king (roi fainéant) of the Merovingian line, is deposed and Pepin is crowned king of the Franks by the Pope.
Now definitely there arise the temporal dominions of the Pope beginning with the Exarchate of Ravenna, which was granted him by Pepin—"the Donation of Pepin."
756. The Ommiad Caliphs of Damascus are expelled by the Abbassides (descendants of the Prophet's uncle Abbas), who establish their caliphate at Baghdad. The Ommiad prince Abderahman escapes to Spain, and there establishes an independent caliphate at Cordova. One of the most famous of the Baghdad caliphs was Haroun-al-Raschid (786–808), of the "Arabian Nights."
Thus as there had been Eastern and Western divisions of the Roman Empire (and were to be again, at least in name), and as Christendom was divided into Eastern (or Greek) and Western (or Latin) Churches, so the Muhammadan world was split into an Eastern caliphate of Baghdad and a Western caliphate of Cordova.
771. Charles the Great (whose name is better known under its misleading French form Charlemagne), son of Pepin and grandson of Charles Martel, becomes king of the Franks.
773. Charlemagne protects Pope Adrian I. from the Lombards, and is crowned king of Lombardy.
778. Charlemagne conquers Spain as far as the Ebro, and drives back the Avars (Tartars) of Hungary.
800. Charlemagne crowned "Emperor of the West" at Rome.

IX.—THE MIDDLE AGES.
(800 A.D.—1453 A.D.)

The term "Middle Ages" strictly covers the ten centuries from the fall of the Western Empire (476) to the commencement of the Reformation; but the first three of these have a distinct character of their own, and are often, as has been seen, called the Dark Ages; while a new stage in European history was inaugurated on the Christmas Day of 800 A.D., when Charles the Great was crowned "Emperor of the West" at Rome.

The Holy Roman Empire. This resuscitated Western Empire, known as the Holy Roman Empire, endured through many vicissitudes till 1806; but almost throughout its history the term denotes no specific area, but only confers the honorary title of Emperor on the leading prince of Western Europe.

The Feudal System. Under Charlemagne the Feudal System may be said to have begun. It was due to a blending of Latin and Teutonic ideas, the land being held by vassals who were protected by, and had to render service to, their suzerain or supreme lord; the labourers on the land were serfs, who changed masters as the land to which they were attached changed owners; but the great vassals or barons were often so powerful that their lord had little real control over them. The downfall of this system was brought about by such causes as (1) the growing importance of commerce and manufactures, the creation of wealth other than in land, and the consequent rise of the Middle Classes, of chartered municipalities, of commercial republics such as those in Italy, and of free

towns such as those in North Germany; (2) the spread of learning, and development of the claim for individual freedom; (3) inventions such as gunpowder, which revolutionised methods of warfare and rendered the feudal castles useless; (4) the decrease in the number of barons, due to mutual quarrels, the Crusades, and wars like our Wars of the Roses; and (5) the influence of the Church, which tended to foster the monarchy at the expense of the barons.

Age of Chivalry. The best side of the Feudal System is presented in the Age of Chivalry, which was marked by a love for warlike adventures, a Teutonic reverence for women, a loyalty to one's friends, and a keen sense of honour. The harshness of feudal institutions was also greatly mitigated by the Church, which brought all classes together within the monasteries (where was afforded a sanctuary from the violence of the times), and opened to all men alike a career in which their talents could find full exercise. The founding of universities, beginning with Paris (1104), developed the work begun by Charlemagne's cloister schools; and the Crusades promoted communication between the East and West, bringing the younger European nations into touch with the older learning which was still cherished among the Arabs.

Islam (the Muhammadan world). The power of Islam was making a bold bid throughout the Middle Ages for supremacy in Europe, but in vain; in the 15th century it was manifest that it had begun to decline, and though its capture of Constantinople gave it a firm footing in south-eastern Europe, its gain here was more than compensated by the utter extinction of its empire in Spain.

Great Scholars. In literature, art, and science, as in all else, the Middle Ages were the seed-time, whence was in due course to emerge the luxuriance of the Renaissance (or Reformation Period). During these six and a half centuries, learning and thought were dominated by the "Schoolmen," whose great names (besides those mentioned below) include John Scotus Erigena (died 886); Thomas Aquinas, the author of the "Summa Theologica" (died 1274); and Duns Scotus (died 1308). These scholastic philosophers were sharply divided into two schools—the followers of Aquinas, known as Thomists, who were Aristotelians and Nominalists; and the followers of Duns Scotus, known as Scotists (and nicknamed Dunces), who were Platonists and Realists. The **Thomists** were mostly Dominicans (founded by S. Dominic at Toulouse in 1215), among whom Albertus Magnus was specially illustrious, but who gained such ill repute for their connexion with the Inquisition, although their services to learning were great. The **Scotists** were chiefly Franciscans or Grey Friars (founded by S. Francis of Assisi in Italy in 1210), who emphasised the value of preaching and the need of poverty, and among whose great names were Roger Bacon and Bonaventura. Mention also must be made of Averroes and Maimonides among the numerous Saracen and Jewish scholars (chiefly in Spain) who carried on so bravely the study of mathematics and of physical science. In architecture the Norman type gave way, about the middle of the 12th century, to the Gothic, with its three stages (amongst ourselves) of Early English, Decorated, and Perpendicular.

In the following list of events no attempt is made at any sort of completeness in the column of our own history; well-known matters are often not mentioned, but significant occurrences that are sometimes overlooked are inserted, as are those events which specially bring our own islands into touch with the rest of the world.

BRITISH ISLES.

The Saxon Kingdom of England.

A.D.

802. Egbert recalled from exile at the court of Charlemagne, and elected king of Wessex.
827. Egbert becomes Overlord of all England.
851. The Danes sack London and Canterbury.
871. Alfred the Great becomes king.
878. Alfred defeats the Danes at Ethandune, and assigns them the eastern part of England by the Treaty of Wedmore.
901. Edward the Elder succeeds Alfred. He calls himself "King of the English," and succeeds in making himself the real ruler of all England south of the Humber.
937. Battle of Brunanburg, which left Athelstan the king of all England.
959. Dunstan becomes Archbishop of Canterbury.
979. Ethelred the Unready becomes king. In his reign "no shire would help another," and England again became a prey to Danish invaders.
991. Ethelred the Unready tries to buy off the Danes, and imposes the tax called Danegeld, in order to find the money.
1002. Massacre of the Danes on St. Brice's Day. Sweyn invades England for vengeance.
1017. Canute, son of Sweyn, becomes king of England. He held the balance of justice evenly between Englishman and Dane. He was also a good friend of the Church.
1035. Canute's prosperous reign ends. Earl Godwin now becomes the greatest man in England.
1042. Edward the Confessor restores the Saxon line, succeeding Hardicanute, the last Danish king. Norman influence is predominant at his court. Westminster Abbey founded.

The Norman Kings.

1066. Harold Godwinson, Earl of Wessex,

THE CONTINENT.

The Carlovingian Dynasty.

A.D.

800. Pope Leo III. and the Romans make Charlemagne "Emperor of the Romans" in addition to his being king of the Franks and of Lombardy.
From the opening of the cloister schools under Charlemagne there arose the "Schoolmen," who dominated learning and thought until the Reformation.
814. Louis the Pious succeeds Charlemagne.
843. Treaty of Verdun, by which Western Europe was partitioned among Louis' three sons—Lothar (from whom Lorraine or Lothringen takes its name), Louis, and Charles.
847. Rurik, a Scandinavian chief, founds the kingdom of Russia with its capital at Novgorod, which shortly receives Christianity from the Greek Church.
865. The Russians try to take Constantinople.
885. The Northmen from Scandinavia and Jutland lay siege to Paris, which is saved by its Count Odo.
887. The Frankish kingdom finally divides into Eastern (Germany) and Western (France), Odo ruling the latter.
900. The age of the Forged Decretals, under Pope Nicholas I.
913. Settlement of Rolf or Rollo the Northman at the mouth of the Seine, whence arises the Duchy of Normandy.

The Saxon Emperors.

918. Henry, Duke of the Saxons, is elected king of Germany, and wards off the attacks of the Magyars (Tartars) of Hungary.
936. Henry is succeeded by his son Otto or Otho the Great, whose wife was Edith, the daughter of Edward the Elder of England.
954. Otto inflicts a severe defeat upon the Magyars.
962. Otto, having driven out Berengar, becomes king of Italy as well as of Germany, and is crowned emperor at Rome by Pope John.
From this time, whoever is elected by the German Princes (or Electors) as their king, is considered entitled to be the Western Emperor.
973. John Tzimiskes, the eastern emperor, drives off the Russians (Slavs) who had attacked Constantinople by sea. Slavonic tribes settle in Servia, Dalmatia, and Bulgaria, and gradually receive Christianity and civilization, as does Russia under its king Vladimir.
987. Hugh Capet is elected king of France, thus ending the Carlovingian dynasty of Charlemagne, and constituting France into a separate kingdom entirely independent of Germany and the Western Emperor, with Paris for its capital.
1000. The conversion to Christianity of Europe (except Prussia and Lithuania) is now complete, all the churches being in communion with Rome, except that of Russia, which is in communion with Constantinople.

The Franconian Emperors.

1024. Conrad II., king of Franconia (or Eastern Francia), becomes Emperor.
1026. Birth of Don Rodrigo (Ruy) Diaz, "the Cid" (a Moorish word for lord), the Spanish hero, who was regarded as the flower of chivalry, and rendered invaluable help to Castile against the Moors.
1031. The Moors are invited to help the Saracens in Spain against the growing power of the newly-founded Christian kingdoms of Castile, Aragon, etc. They replace the Western Caliphate of Cordova by a Moorish kingdom in south Spain.

BRITISH ISLES (*continued*).

A.D.

is chosen king by the Witan. He defeats his brother Tostig and the king of Norway at Stamford Bridge, but is defeated and slain by William of Normandy at Senlac, near Hastings.

William the Conqueror ascends the throne of England as William I.

1071. Hereward the Wake's resistance at Ely fails, and the Norman Conquest is complete.

William introduces the Feudal System into England.

1085. Compilation of the Domesday Book.

1093. Anselm, an Italian, Abbot of Bec in Normandy, is made Archbishop of Canterbury. He is often regarded as the father of the scholastic philosophy, his great work being on the Incarnation (Cur Deus Homo).

1100. Henry I. becomes king, and marries Matilda, niece of Edgar Atheling. Their grandson, Henry II., unites the Norman and Saxon lines.

1106. Battle of Tenchebrai, in which Robert of Normandy was defeated and made prisoner for life.

1120. Wreck of the *White Ship*, in which Prince William perished.

1135. Death of Henry I., who had earned for himself the title of *Lion of Justice*.

The Monarchy and the Barons.

1135. Stephen, nephew of Henry I., usurps the throne, and is involved in war with the barons, who support the "Empress Maud," Henry's daughter.

1138. David of Scotland is defeated at the battle of the **Standard** at Northallerton, while maintaining his niece Matilda's claims to the English crown.

[The reign of Stephen was disastrous to the nation. Every baron had his castle, which too often became the haunt of lawless men, who plundered and killed unchecked. It was a hopeless task to plough and sow, when no man's rights were respected; consequently famine and disease became rampant.]

1153. The Treaty of Wallingford acknowledges Stephen as king, and fixes the succession on Matilda's son Henry.

1154. Henry II., the first Angevin (his father being Geoffrey, Count of Anjou) or Plantagenet king, possesses more land in France than his feudal lord, the king of France.

Normans and Saxons now blend into one race.

1158. Pope Adrian IV. (Nicholas Breakspear, the only Englishman who ever was Pope), issues a bull to Henry for the conquest of Ireland.

1162. Thomas à Becket becomes Archbishop of Canterbury (mrdered.1170).

1171. Henry II. receives the submission of many Irish chieftains.

1189. Richard I. becomes king, and proceeds on the Third Crusade, in which he takes Acre and Jaffa.

1204. John loses all the English possessions in France, except the Channel Isles and part of the land between the Garonne and the Pyrenees.

1206. John's quarrel with the Pope begins over the nomination by the latter of Stephen Langton to be Archbishop of Canterbury.

1213. John does homage for his crown to Pandulf, Legate of Pope Innocent III.

1214. Birth of Roger Bacon, the philosopher (died 1294).

1215. The barons, under Langton and the Earl of Pembroke, extort Magna Charta from John.

1216. Henry III. becomes king.

THE CONTINENT (*continued*).

A.D.

1039. Henry III. succeeds his father Conrad as Western Emperor, and gives great encouragement to the monastery schools.

1054. Pope Leo IX. finally excommunicates Michael Cerularius, the Patriarch of Constantinople, and the schism between the Greek and Roman Churches is complete.

1056. Death of Henry III., who was king of Germany, Italy, and Burgundy, as well as Western Emperor.

1071. The Turks defeat the Eastern Emperor Romanus at Manzikert, and establish their power throughout Western Asia.

1077. The Western Emperor, Henry IV., is excommunicated by Pope Gregory VII. (Hildebrand), who confines the title of Pope or Papa, which had been held by all bishops, to the bishops of Rome. The period of the disputes between the Popes and the Western Emperors now sets in, the temporal power of the Papacy grows rapidly, and is specially augmented by the insistence of Rome on the celibacy of the clergy (thus making the clergy a separate caste, whose ambitions are confined to the privileges of their order). Hildebrand acquired the right to invest all bishops and abbots with their temporal possessions.

1085. Toledo is retaken by the Christians, and the Moslem power in Spain decays until only Granada is left.

1095. Peter the Hermit, a monk of Amiens, stirs up Christendom against the Turks, and, at the Council of Clermont, Pope Urban II. decrees the First Crusade or Holy War for the recovery of Palestine. Nicea is taken, the Moslem Soliman is overthrown at Dorylaeum in Phrygia, Antioch and Jerusalem (1099) are taken, and Godfrey of Boulogne is made king of Jerusalem. The chief defenders of this tiny kingdom, which lasted till 1187, are the two orders of military monks—the Knights Templars and the Knights Hospitallers or Knights of St. John; a settlement of the former in London, near Fleet Street, is still marked by "the Temple"; the latter, after 1187, had their head-quarters at Cyprus, Rhodes (till 1522), and Malta (till 1789).

1104. Abelard, the lover of Heloise, and teacher of St. Bernard and Peter Lombard, begins to teach at Paris, whence the University of Paris may be said to originate. Oxford and Cambridge soon followed suit, then came Salamanca in Spain, and the German universities of Prague (1350) and Leipzig (1409).

1122. The Emperor Henry V. concedes to the Pope the right of investing bishops and abbots with their spiritual authority, but retains that of investing them as his vassals with their temporalities.

1130. Sicily is wrested from the Saracens by the Normans, and with south Italy (taken from the Eastern Empire) is constituted into a kingdom; later the mainland of Naples gets separated from the island, and so comes the title of "the two Sicilies."

1137. Alphonso I. throws off the supremacy of Castile, and founds the modern kingdom of Portugal (the ancient Lusitania).

The Swabian Emperors.

1138. With the accession of Conrad III. to the crown of Germany, the Swabian line replaces the Franconian.

In the quarrels between Popes and Emperors, the supporters of the latter are dubbed Ghibelins, and of the former, Guelphs (originally a name for the supporters of the Italian Free Cities against the emperor Frederick Barbarossa). So the Ghibelins stand for imperial control, and the Guelphs for local freedom.

1147. St. Bernard of Clairvaux preaches the Second Crusade, which is led by the emperor Conrad III. and Louis VII. of France, but meets with no success.

Gothic architecture now begins to succeed Norman. In Germany is composed the epic poem of the "Nibelungen Lied," which gives the adventures of Siegfried and Brunhild, and embodies early Scandinavian and Teutonic myths.

1152. Frederick Barbarossa (Red-Beard) succeeds Conrad III. He is involved in struggles with the Popes, with Sicily, with Henry, Duke of Saxony, and with the cities of Northern Italy which had formed themselves into the Lombard League. After defeating Frederick at Legnano (1176), the League secured its internal independence by the Treaty of Constance (1183).

1160. The Waldenses, an heretical sect which repudiated papal authority, begins to spread in France and Germany.

1187. Jerusalem taken by Saladin, who had recovered Egypt for the Caliphate of Baghdad.

1190. Henry VI. succeeds Frederick (who was drowned on the way to the Third Crusade), and conquers the kingdom of Sicily.

1204. In the so-called Fourth Crusade, which was chiefly maintained by Henry Dandolo, Doge or Duke of Venice, but which never reached Palestine, Baldwin, Count of Flanders was set up as Latin Emperor of Constantinople: the old Eastern or Greek empire was not restored till 1261, when Michael Palaeologos re-took Constantinople. The possessions of the Venetians in the south-east of Europe date from this Crusade.

[Jenghis Khan spreads the Mongol power into China, over central Asia, and through south-eastern Russia].

1208. Persecution of the Albigenses, an heretical sect in the south of France near Toulouse. Under Pope Innocent III., Dominic preaches a "crusade" against these heretics, in which Simon de Montfort, father of the English Earl of Leicester, took part, and which soon extirpated the sect. This is the origin of the Inquisition.

1214. Philip Augustus of France consolidates his kingdom (the northern part of modern France) by defeating Otto of Germany and John of England at Bouvines.

1220. Frederick II. is crowned Western Emperor. In 1228 he went to Jerusalem and was crowned its king, but in 1244 the Muhammadans retook that city. He was excommunicated by Pope Innocent IV. at Lyons in 1245, but reigned till his death in 1250.

BRITISH ISLES (*continued*).

A.D.

1217. The battles of Lincoln and Dover end the attempt of the French prince Louis to take the English crown.

1258. Simon de Montfort, Earl of Leicester, draws up the Provisions of Oxford, to reform the Government.

1264. The Mise of Lewes, leaving Earl Simon real ruler.

1265. Simon summons to a Parliament two knights from each county and two burgesses from each borough—the beginning of the *House of Commons*. The Civil War is ended by the victory of Prince Edward at Evesham.

1270. Prince Edward accompanies Louis IX. of France on the last Crusade.

1272. End of Henry III.'s reign, during which many of the oldest colleges of Oxford and Cambridge were founded, and many splendid churches built. Edward I. becomes king. His motto was *pactum serva*, "Keep your word." He was the first real English king since Harold, a wise statesman and a great warrior.

1283. On the refusal of Llewellyn to obey Edward I. as his feudal lord, the English king overruns Wales. Next year his son Edward is born at Carnarvon—the first "Prince of Wales."

1291. Edward I. awards the Scotch crown to John Baliol, thus passing over Robert Bruce and John Hastings.

1296. Edward invades Scotland, and brings the Coronation Stone from Scone to Westminster Abbey.
Rebellion of Sir William Wallace.

1314. In the battle of Bannockburn, Robert Bruce the younger frees Scotland from English suzerainty. Scotch independence is formally acknowledged in the Treaty of Northampton (1328).

1328. Birth of Geoffrey Chaucer (died 1399).

England freed from Continental Politics.

1337. Commencement of the Hundred Years' War between England and France.

1341. The House of Commons first meets separately from the Lords.

1346. Victory of Edward III. at Crecy.

1348. The Black Death visited England.

1356. Victory of Black Prince at Poictiers.

1362. English became the language of the law-courts.

1381. Wat Tyler's rebellion.

1384. Death of John Wycliffe, the "Morning Star of the Reformation." His great opponent had been William of Wykeham, Bishop of Winchester.
William Langland wrote "Piers Plowman" about this time.

1388. Border raid of Otterbourne or Chevy Chase.

1399. Deposition of Richard II., and accession of Henry IV.

1401. The Statute of Heresy passed, providing that heretics were to be burned at the stake; this was directed against the Lollards, or followers of Wycliffe.

1415. Henry V.'s victory at Agincourt over the French.

1420. The Treaty of Troyes, providing for Henry's marriage with Catharine, the heiress and daughter of the French king, is rendered void by Henry's death (1422).

1445. Henry marries Margaret of Anjou.

1450. A year notable for its riots and disorders throughout the kingdom. Peasantry of Kent and Sussex rise under Jack Cade.

1453. End of the Hundred Years' War, England having lost all her French possessions except Calais and the Channel Isles.

THE CONTINENT (*continued*).

A.D.

1230. Ferdinand III. unites the kingdoms of Castile and Leon, the rest of the Spanish peninsula being occupied by the Christian kingdoms of Aragon (in the south-east) and Portugal, and the dwindling Muhammadan power in Granada and Cordova.

1241. Great Mongol incursion into Central Europe.

1254. Death of Conrad, son of Frederick II., and end of the Swabian line.

The Rise of France.

Germany is now growing weaker, as Italy tends more to permanent separation from it. Venice rises in power—an oligarchic republic (cf. Sparta), while Florence in the next century is democratic (cf. Athens). France gains as Germany loses; her king, Louis IX., or St. Louis, who succeeded Philip Augustus in 1226, gained the territory of Toulouse, and thus gave France a sea-board on the Mediterranean.

1258. Holaghon, grandson of Jenghis Khan, takes Baghdad and ends the caliphate of the Abbassides.

1265. Birth of Dante at Florence. He died in banishment in 1321.

1271. Travels of Marco Polo, the Asiatic explorer, and first European to visit China.

1273. Rudolf, Count of Hapsburg, is chosen king of Germany, thus ending the "Great Interregnum," which had lasted since 1254. His son Albert becomes Duke of Austria, and so is the ancestor of the present royal family in Austria.

1276. Birth of the Florentine Giotto, the father of modern painting.

[1279. Kublai Khan completes the work of his grandfather Jenghis Khan, founds the Mongol dynasty in China, and makes Pekin his capital.]

1291. The Muhammadans retake Acre, the last Christian stronghold in Palestine.
The cantons of Schwyz (whence Switzerland), Uri, and Unterwalden, form a League of defence against the house of Hapsburg.

1298. Albert, Duke of Austria, succeeds his father Rudolf on the German throne. In this reign William Tell makes his stand for Swiss freedom.

1304. Pope Clement V., the puppet of the French king Philip, resides at Avignon.
Suppression of the Knights Templars.
Petrarch, the Italian lyric poet, born. He died in 1374.

1315. The Swiss League defeats Duke Leopold of Austria at Morgarten, near Lake Zurich; thus is laid the foundation of the confederacy which was in a century to develop into the Swiss Republic.

1326. Death of Othman, the founder of the Empire of the Ottoman Turks.

The French House of Valois.

1328. Philip of Valois becomes French king, and founds the dynasty which ruled till 1589.

1361. Amurath or Morad, leader of the Ottoman Turks, takes Hadrianople and makes it his capital. The Muhammadan power spreads over Servia and Bulgaria.

1376. Pope Gregory XI. brings back the papal seat from Avignon to Rome.

1378. The rival popes, Urban VI. at Rome and Clement VII. at Avignon. Thomas à Kempis flourishes.

1386. Ladislaw II., of the Jagellons or Grand Dukes of Lithuania (which stretched across Russia from the Baltic to the Sea of Azov), becomes a Christian and marries the Queen of Poland.
The Swiss cantons inflict severe defeats on Austria at Sempach and at Näfels in 1388.

1389. Amurath defeats the Slavs at Kossova in Servia. Bajazet succeeds him as Sultan, and leaves only Constantinople and a little of Greece to the Eastern Empire.

1397. The Union of Calmar places Margaret of Norway on the thrones of Denmark and Sweden.
Now Poland and Lithuania form a large kingdom in south central Europe, which is often united with Hungary, and acts as the protector of Europe from Muhammadan incursions. Italy is occupied by such city states as Venice, Milan, Genoa, Pisa, and Florence (whose power culminated in the 15th century under the Medici); meanwhile the Popes were temporal sovereigns over the centre of Italy, but thereby lost much of their predominance in the councils of Western Europe; south Italy (Naples) and Sicily constituted the two Sicilies.
Froissart of Flanders, the author of the Chronicles, flourishes.

1402. General Council of the Western Church at Pisa deposes both the rival Popes.
Timour or Tamerlane the Tartar defeats and captures the Sultan Bajazet at Angora. He had previously (1398) invaded India and taken Delhi.

1415. The Council of Constance deposes all three Popes, and elects Martin V. The reformer John Huss of Bohemia is burned at the stake, in spite of the pledge of safety given him by the emperor Sigismund.

1429. After successes at Verneuil (1424), and in the battle of the Herrings (1429), the English have to abandon the siege of Orleans, through the efforts of Joan of Arc, the "Maid of Orleans." The dauphin is now crowned King of France at Rheims, with the title of Charles VII.

1439. Council of Florence under Pope Eugenius IV.—a reply to the anti-papal Council of Basle (1431–1439).

1448. Christian I., the founder of the house of Oldenburg, the present royal family of Denmark, begins to reign.

1450. The Mazarin Bible is issued—probably the first printed book.

1452. Frederick, Duke of Styria, is the last Western Emperor to be crowned at Rome.
Henceforward the title is nearly always claimed by the head of the house of Hapsburg, who not receiving coronation is strictly styled Emperor-elect.

1453. The Eastern empire ends with the fall of Constantinople and death of Constantine Palaeologus. Cannon were first effectively used in this siege. The victor, Muhammad II., makes Constantinople the capital of the Ottoman Empire, which soon covers nearly all the Balkan peninsula.

X.—THE REFORMATION PERIOD.
(1453 A.D.—1600 A.D.)

The Renaissance. This is a period of transition, bridging the gulf between the Middle Ages and modern times. It was occupied with the revolt—political, intellectual, artistic, as well as religious—against any authority which could not justify its existence; society was feeling its way "from status to contract"; and the ideal of individual freedom, of liberty for self-realization, and of responsibility to the authority of conscience as supreme, first arose distinctly in men's minds. The immediate causes of this revolt, which had long been secretly preparing, were (1) the spread of Greek learning consequent on the fall of Constantinople, producing that great revival of learning and awakening of thought which is called the Renaissance. The limitations and defects of Scholasticism became apparent, and the Church and human institutions, equally with nature itself, were summoned to the tribunal of reason, and severely interrogated. The process was eminently successful in at least one direction, viz., the marvellous progress of natural science and mechanical inventions; (2) the break-up of the Feudal System, the causes of which have been already traced; (3) the discovery of America, which widened the mental as much as the physical horizon, and developed a love of adventure and a spirit of self-reliance and originality in some at least of the European nations; and (4) increased facilities for inter-communication of ideas and experience, both by the invention of printing and by readier means of travel and exploration.

Political Changes. Feudalism and imperialism, with the ideals of Rome's Empire and of Rome's Church, are now challenged, and reluctantly they have to yield before the growth of constitutional government. By the end of the period nearly all the nationalities of modern Europe are represented on the map; but the balance of power, the centre of gravity, is steadily shifting westwards, from the Mediterranean basin to the Atlantic sea-board; first, Venice gives way to Spain and Portugal, and later, these in turn fade before Holland and England. After a struggle the Latin races are passed in the race by the Teutonic, and at the beginning of the 17th century France stands out as the champion of the former, England of the latter; while in the south-east of Europe, the Muhammadan power still maintains its menace to Christendom.

Literature, Art, and Science. In these domains there is a mighty stirring in both Latin and Teuton races. Now comes the era of the "Great Florentines"—Petrarch, Dante, Boccaccio; the painters Leonardo da Vinci, Andrea del Sarto, Raphael (born 1483), and the mighty Michael Angelo (born 1475), with the Venetian Titian, the Lombard Correggio, and Galileo the great astronomer (born 1564). The German Copernicus (born 1473), the Swede Tycho Brahe, and the German Kepler, form a noble trio whose work is to be continued by Newton in the 17th century. Palestrina (died 1594) the Italian is the father of modern music; and mention must be made, too, of the scholar Cardinal Bellarmine, the Italian poets Ariosto and Tasso, and the French writers Rabelais and Montaigne. Among our own writers we can enumerate besides Shakespeare (1564-1616), the great Elizabethan dramatists Beaumont and Fletcher, Ben Jonson, and Christopher Marlowe; Edmund Spenser, the poet of the "Faerie Queene"; the theologian Richard Hooker; and Francis Bacon (1561-1626), whose "Novum Organum" prepared the way for modern inductive science.

BRITISH ISLES.

A.D.

1455. The Wars of the Roses between the rival houses of York and Lancaster for the crown begin. The war was confined to the great feudal barons, and greatly contributed to the decay of the Feudal System and rise of the Middle Class.

1461. Edward, son of the Duke of York, is proclaimed king as Edward IV.

1471. After victories at Barnet and Tewkesbury, the Lancastrian party is hopelessly weakened, and Henry VI. is put to death.

Absolute Monarchy in England.

1485. The battle of Bosworth Field ends the Wars of the Roses. Richard III., the Yorkist king, was killed, and Henry of Richmond comes to the throne as Henry VII., uniting the rival houses of York and Lancaster by his marriage with the Yorkist heiress, Elizabeth. Henry VII. is the first monarch of the Tudor line.

1495. Poyning's Law, or the Statute of Drogheda, subjects Ireland to English law.

1497. Discovery of the mainland of America by Sebastian Cabot, a Venetian in service of Henry VII. America was named after Amerigo Vespucci, a friend of Columbus).

1503. James IV. of Scotland marries Margaret, the daughter of Henry VII., from whom was descended the Stuart kings of Scotland and England.

1509. Henry VIII. succeeds to the throne. England now begins to take a front place as a naval power. Dockyards are established at Deptford and Woolwich. The *Great Harry* is built.

1513. Battle of Flodden, in which James IV. of Scotland is defeated and slain.

1520. Meeting of Henry and Francis I. of France at the Field of the Cloth of Gold (near Calais).

THE CONTINENT.

A.D.

1458. Æneas Silvius becomes Pope as Pius II.

1469. Florence is at the height of her political, literary, and artistic greatness under Lorenzo de Medici, who ruled till 1492.

The Ascendency of Spain.

1471. The marriage of Ferdinand of Aragon and Isabella of Castile, followed by the surrender of Abu-Abdallah and the end of the Moorish kingdom of Granada (1492), unites the whole of the Spanish peninsula except Portugal and Navarre into one kingdom, and thus lays the foundation of the Spanish empire in the 16th century.

1476. The Swiss Confederates successfully resist Charles, Duke of Burgundy, in the battles of Granson, Morat (or Murten), and Nancy.

The Duchy of Burgundy is added to the French crown under Louis XI. (1461-1483).

Ivan Vasilovitz overthrows the Mogul kingdom of Kazan, and frees Russia from Mogul tyranny.

1481. The Inquisition is established in Spain under the Dominican monk Torquemada.

1487. Bartholomew Diaz, a Portuguese, sails round the Cape of Good Hope. Portugal commences its trade with India; Vasco da Gama reaches the Malabar coast in 1498.

1492. The West Indies discovered by Christopher Columbus, a Genoese in the service of Ferdinand and Isabella. Spanish settlements are made at Hayti.

1494. Charles VIII. of France subdues the kingdom of Naples.

1499. The independence of Switzerland formally recognized.

1504. Ferdinand of Spain obtains the kingdom of the Two Sicilies, thanks to the efforts of Gonsalvo de Cordova, "the Great Captain." Death of Isabella.

1508. League of Cambray between Ferdinand, Louis XII. of France, Pope Julius II., and Maximilian of Germany, the "Emperor-elect," for the partition of Venice.

1512. The allies quarrel, Louis defeating Ferdinand at Ravenna, but Pope Julius expels the French by the aid of the Swiss, who are ready to act as mercenaries for any cause.

1515. Francis I. succeeds Louis XII. of France, and defeats the Swiss at Marignano.

1516. Charles I. comes to the throne of Spain, and from 1519 is known as the Emperor Charles V. He was the son of Philip of Austria and Joanna the daughter of Isabella of Castile. Thus he is the first of the "Austrian kings" of Spain, and his dominions included Spain, the Netherlands, the Two Sicilies, and Sardinia.

1517. Martin Luther's declaration against the sale of Indulgences by Tetzel, the agent of Pope Leo X.

1519. Zwingle, the reformer, begins to teach at Zurich.

The Portuguese circumnavigate the world under Fernando de Magellan (1519-1522).

Spain's empire in the New World is now growing rapidly: Jamaica was occupied in 1509, Colombia (South America) in 1510, Cuba in 1511, Florida in 1512, while from 1519-1521 Fernando Cortez was occupied in the conquest

BRITISH ISLES (*continued*).

A.D.

[Henry's chief adviser in the first half of his reign was Cardinal Wolsey, a man of humble birth but extraordinary talents. For seventeen years he enjoyed the royal favour and lived in regal splendour. Then came his fall, caused by his failure to procure from the Pope the divorce of Henry's wife, Katharine of Aragon.]

1530. Death of Cardinal Wolsey.
1532. Cranmer becomes Archbishop of Canterbury.
1534. Henry declared Supreme Head of the Church.
1535. The union of England and Wales completed.
1536. Rising in the North, known as the Pilgrimage of Grace, consequent on the suppression of the monasteries.
1538. Execution of Henry's minister, Thomas Cromwell.
1539. Act of Six Articles passed.
1547. Accession of Edward VI., whose first Prayer Book is issued in 1549.
1549. First Act of Uniformity.
1553. Accession of Mary, and execution of Lady Jane Grey.
1555. England submits to the Pope, and Cardinal Pole is made Archbishop of Canterbury.
Persecution breaks out, in which Cranmer is burned.
1558. Calais, the last English possession in France, is retaken by the French.
Elizabeth succeeds her sister Mary.
1563. The Thirty-nine Articles of the Church of England compiled.
1567. Murder of Darnley, husband of Mary Queen of Scots, by Bothwell, whom she afterwards marries. In a few months she has to abdicate, and flies to England.
1570. Elizabeth is excommunicated by the Pope, who deposes her and transfers the Crown to Mary of Scotland. Hence arise many plots to bring about Mary's release and Elizabeth's death.
1571. The Royal Exchange in London opened (founded by Sir Thomas Gresham).
1577. Sir Francis Drake starts on his three years' voyage round the world.
1580. Episcopacy abolished in Scotland.
England becomes a land of refuge to all the Continental Protestants, and being kept at peace by Elizabeth's astute policy, greatly extends her maritime commerce, and rapidly grows in wealth and power.
1585. Sir Walter Raleigh attempts to colonize Virginia.
1587. Execution of Mary Queen of Scots at Fotheringay Castle.
1588. Defeat of the Spanish Armada. England's great seamen now include Drake, Hawkins, and Frobisher.
1591. Trinity College, Dublin, founded by Royal Charter.
1594. Great rising in Ireland under Hugh O'Neill, Earl of Tyrone, against the Reformation.
1596. Cadiz, the great naval port of Spain, taken by the Earl of Essex, and all the vessels anchored there destroyed.

THE CONTINENT (*continued*).

A.D.

of Mexico (which had been under the Aztec monarch Montezuma), and in 1535 Francisco Pizarro completed the conquest of Peru and founded Lima.
[The Mogul Empire in India founded by the Sultan Baber].
1521. The Diet of Worms condemns Luther, who had burned Leo's bull of excommunication (1520).
1525. Francis I. of France taken prisoner at the battle of Pavia by the Emperor Charles V.
1526. Soliman II. defeated and killed Louis II. of Hungary at Mohacs on the Danube, and the greater part of Hungary became a province of the Ottoman Empire.
1527. Rome, under Clement VII., sacked by Charles V.
1528. Gustavus Vasa throws off the Danish yoke and ascends the throne of Sweden as Gustavus I. (reigning till 1560).
1529. The Diet of Spires condemns all changes in doctrine, and the Lutheran minority who object to this decision are called Protestants.
The Sultan Soliman is utterly overthrown at the battle of Vienna, and again Europe is saved from becoming Muhammadan.
The Peace of Cambrai ends the war between Charles V. and the Holy League (of England, France, etc., with the Pope); Charles is crowned King of Italy.
1530. The Lutheran Confession of Augsburg is drawn up, chiefly by Melanchthon.
1531. The Portuguese commence their settlements in Brazil.
1539. Ignatius Loyola, a Spaniard, founds the Society of Jesus (S.J.), or Jesuits, one of its first members being S. Francis Xavier. Now sets in the Counter-Reformation, the attempt to purify abuses in the Church from within.
First French settlements in Canada, under the explorer Jacques Cartier.
1545. Meeting of the Council of Trent, which continues intermittently till 1563, when its decrees (known as Tridentine) are embodied in the Creed of Pius IV., who was Pope from 1559-1566.
1546. Death of Martin Luther.
1547. Henry II. succeeds Francis I. as King of France.
1556. Philip II., grandson of Charles V., and husband of Mary, Queen of England, becomes King of Spain and the Netherlands.
1559. The peace of Câteau-Cambresis made between France and Spain after French defeats at St. Quentin (1557) and Gravelines.
Francis II., husband of Mary Queen of Scots, and son of Catharine of Medici, becomes king of France.
1560. Charles IX. succeeds his brother Francis II.
1562 Civil War in France, nominally on religious grounds—Catharine of Medici, the Duke of Guise, and De Montmorency, the Constable of France, being opposed to the Huguenots (French Calvinists) under the Prince de Condé and Admiral Coligny. The chief battles are Dreux (1562), S. Denis (1567), and Jarnac (1569).
1564. Death of John Calvin at Geneva.
1565. St. Augustine, the oldest town in the U.S.A., founded by Spain.
1568. The cruelties of the Duke of Alva, regent for Philip II. of Spain, and especially the attempt to introduce the Inquisition, drive the Netherlands to revolt under William of Orange, "the Silent."
1571. Battle of Lepanto, in which the fleets of Spain and Venice destroy that of the Turks, and at which was present Cervantes, the author of Don Quixote; but the Venetians lose Cyprus to the Turks.
1572. The Massacre of the Huguenots on St. Bartholomew's Day.
1574. Henry III. succeeds his brother Charles IX. of France.
Leyden successfully withstands a long siege by Spain.
1576. The Catholic League formed in France to prevent any concessions to the Huguenots.
1579. William of Orange forms the northern provinces of the Netherlands into a League by the Union of Utrecht.
1580. Philip II. of Spain conquers Portugal.
1581. The Federal Commonwealth of the Seven United Provinces of the Netherlands is formed.
1584. Murder of William of Orange.
Death of Ivan the Terrible, the first Czar of Russia, who had reigned since 1533, and spread his dominions to the Caspian (the Turks still occupying the coasts of the Black Sea, and the Poles those of the Baltic).
1585. Antwerp taken by the Duke of Parma.
1586. Death of Sir Philip Sidney at Zutphen, while aiding the Dutch.
1589. Henry of Navarre succeeds Henry III. as King of France, the house of Bourbon thus replacing that of Valois. Henry defeats the Catholic League at Arques, and next year at Ivry.
Death of Catharine of Medici, widow of Henry II. of France.
1598. Philip II. of Spain forms the southern provinces of the Netherlands into a separate kingdom under his nephew, the Archduke of Austria.
Henry of Navarre, or Henry IV. of France, who is at heart a Huguenot, issues the Edict of Nantes, which gives full toleration to the Protestants in France. His great minister is the Duc de Sully, Marshal of France, whose financial reforms paved the way for the French supremacy in the next century.
Philip III. succeeds Philip II. of Spain, whose power is now on the wane.

XI.—MODERN HISTORY.
(FROM 1600 A.D.)

Political and Social Progress. The revolt against arbitrary authority, which in the Reformation Period was chiefly concerned with religion, is carried in the 16th and 17th centuries into the domain of politics; that every government exists for the sake of those who are governed is now accepted (in word, at least) as an axiomatic truth, but it was only established through violent revolutions such as those in England (1642), the United States (1776), and above

all, France (1789). When this principle has been successfully demonstrated, there still remained to apply it in detail; and so the 19th century was engrossed with such topics as slave emancipation, parliamentary reform, universal education, the betterment of the poorer classes, international arbitration, etc. Diplomacy now concentrates its efforts on the maintenance of the "balance of power," the preservation of political equilibrium by the action of equal and opposite forces, in which the smaller States, such as the Netherlands, Switzerland, and those along the Danube, play no mean part; while Napoleon's meteoric career has effectually discouraged a tendency which had been growing stronger—to indulge in war merely as a means to self-aggrandisement; and probably the death-blow to this tendency was given in 1870 in the Franco-German War, when vaulting ambition so signally over-leaped itself.

Great Political Changes. The last two centuries have witnessed the entrance of Russia into European politics as a civilized power; the gradual weakening of the Turkish Empire, "the sick man of Europe," who now exists only on sufferance; the consolidation of the Italian peninsula into one kingdom, and the disappearance of the Pope's temporal power; the birth of a united Germany, with a proportional decrease in the power of France; and the unprecedented expansion of a single empire (the British), and of the English-speaking people throughout the world. But transcending in importance, perhaps, these changes on the chess-board of Europe is the recurrence, in the war between Russia and Japan, of the problem that is almost as old as history itself—what is to be the relation of Europe and Asia? how can East and West be harmonized in one wide-embracing unity? or has the Aryan race already passed its zenith?

Literature, Art, and Science. In this department of human life the record of the last three centuries affords food for serious thought. The triumphs of physical science, and the accompanying betterment of man's material surroundings, are marvellous, and yet appear only to be a small instalment of what nature is ready to pay on man's demand. But the betterment of man himself seems more questionable; at all events, literature and art have to tell a tale of quantity gained at the expense of quality, of life's bulk being preferred to life's best, of skill in criticism growing but creative power diminishing, of the newly-won freedom for self-realization producing a morbid self-consciousness that tends to self-destruction; the great names here to be recorded cannot compare with the mighty Florentines and Elizabethans. We can only mention a few representative names, excluding living writers.

(1) In our **own country** we find among the poets Milton (*b.* 1608), Dryden (*b.* 1631), and Pope (*b.* 1688); in the first half of the 18th century Thomson, Gray, Oliver Goldsmith, and Cowper; then follow Burns (*b.* 1759), Wordsworth (*b.* 1770), Scott, Coleridge, Southey, Campbell, Moore, Byron, Shelley, and Keats; and in the 19th century Hood, Tennyson, Browning, Matthew Arnold, William Morris, the Rossettis, and Sir Edwin Arnold. In English prose there are Bunyan (*b.* 1628); Defoe (*b.* 1661), Swift, Addison, Steele; Fielding (*b.* 1707), Dr. Johnson, Smollett; Charles Lamb (*b.* 1755), Walter Savage Landor, Sydney Smith, Leigh Hunt, De Quincey, Carlyle; Thackeray (*b.* 1811), Dickens, Charles Reade, Kingsley, Wilkie Collins, and R. L. Stevenson. Among historians we have Hume (*b.* 1711), Gibbon (*b.* 1737), Hallam (*b.* 1777), Grote (*b.* 1794), Macaulay (*b.* 1800), Froude, Freeman, and J. R. Green. The philosophers, theologians, etc., include Hobbes (*b.* 1588), Locke (*b.* 1632), Sir Isaac Newton (*b.* 1642), Bishop Butler (*b.* 1692), Adam Smith (*b.* 1723), Burke, Paley, Jeremy Bentham, Sir W. Hamilton (*b.* 1788), J. S. Mill, Bain, Ruskin, Herbert Spencer, and Max Müller (*b.* 1823). Science boasts of Cavendish (*b.* 1731), Priestley, Dalton, Sir Humphry Davy, Faraday, Herschel, Sir Richard Owen (*b.* 1804), Darwin, Tyndall, and Huxley. Eminent painters are Hogarth (*b.* 1697), Sir Joshua Reynolds, Gainsborough, Turner (*b.* 1775), Constable, Landseer (*b.* 1802), Watts, Millais, Leighton, and Burne-Jones (*b.* 1833).

(2) Among **French** names must be mentioned the dramatists Corneille (*b.* 1609), Molière, and Racine (*b.* 1629); the philosophers Descartes (*b.* 1596), Pascal, Voltaire (*b.* 1694), Rousseau (*b.* 1712), Comte (*b.* 1798), Montalembert (*b.* 1810); the historian Guizot (*b.* 1787); the Encyclopædists of the 18th century, led by Diderot; the novelists Balzac (*b.* 1799), Victor Hugo, and Georges Sand; the poets Béranger (*b.* 1780) and Alfred de Musset; the musicians Auber (*b.* 1782) and Gounod; and the painters David (*b.* 1748), Delaroche, Delacroix, Meissonier (*b.* 1815), Rosa Bonheur, and Doré.

(3) With **Germany** (a vague term) may be associated the poets Goethe (*b.* 1749), Schiller (*b.* 1759), and Heine (*b.* 1799); the philosophers Leibnitz (*b.* 1646), Kant (*b.* 1724), Lessing, Fichte, Hegel (*b.* 1770), Schelling, and Grimm; the historians Niebuhr (*b.* 1776), Curtius, and Mommsen; the scientists von Humboldt (*b.* 1769) and Liebig (*b.* 1803); and the musicians (in nearly every case closely connected with Vienna) Handel (*b.* 1684), J. S. Bach, Gluck, Haydn (*b.* 1732), Mozart (*b.* 1756), Beethoven (*b.* 1770), von Weber, Schubert, Schumann, Spöhr, Meyerbeer, Mendelssohn (*b.* 1809), and Wagner.

(4) Among the **Italian** musicians are Cherubini (*b.* 1760), Rossini, Donizetti, Bellini (*b.* 1802), and Verdi (*b.* 1813); the great **Spanish** painters include Velasquez (*b.* 1599) and Murillo (*b.* 1618); the Flemish painters are Rubens (*b.* 1577), Vandyck, and Rembrandt (*b.* 1607). Mention also must be made of the **Dutch** philosophers Hugo Grotius (*b.* 1583), and Spinoza the Jew (*b.* 1632); of the **Swedish** naturalist Linnaeus (*b.* 1707); and in **Denmark**, of the novelist Hans Christian Andersen (*b.* 1805), and of the sculptor Thorwaldsen (*b.* 1770).

(5) **America** can point with pride to such well-known writers as the poets Longfellow (*b.* 1807), Edgar Allan Poe, and Whittier; the historians Prescott (*b.* 1796) and Motley; and Washington Irving, the essayist (*b.* 1783), Nathaniel Hawthorne, Emerson, the novelist Fenimore Cooper, and the sculptor Hiram Powers (*b.* 1805).

BRITISH EMPIRE.

A.D.

1600. Charter granted to the East India Company.

1601. The first Poor Law enacted—rendered necessary after the dissolution of the monasteries.

Struggle between King and Parliament.

1603. James VI. of Scotland becomes King of England as James I., thus founding the Stuart line, and uniting the crowns of England and Scotland. The "divine right of kings" now comes to the fore, and the struggle between King and Parliament (which the Tudor sovereigns had ignored) becomes acute.

1607. Henry Hudson starts on his Arctic voyages.

1611. The Authorized Version of the Bible translated.

EVENTS ABROAD.

A.D.

The Ascendency of France.

1608. Champlain, a Frenchman, founds a settlement at Quebec, and gradually French influence predominates along the St. Lawrence in Canada.

1609. Spain makes a truce with the United Provinces of the Netherlands, virtually recognizing their independence.

1610. Assassination of Henry IV. of France, who is succeeded by Louis XIII. His great minister is Cardinal Richelieu, who maintains the royal supremacy against the great nobles and the Huguenot factions.

1611. Gustavus Adolphus, grandson of Gustavus I., becomes King of Sweden. The Duchy of Prussia and the Electorate of Brandenburg are united under the house of Hohenzollern.

1613. Michael Romanoff, descended from Rurik in the female line, becomes Czar of Russia and founds the present dynasty.

1614. New York founded by the Dutch, and at first called New Amsterdam.

1619. The Thirty Years' War breaks out between the Romanist and Protestant parties in central Europe; on the former side are the Emperors Ferdinand II. and III. (whose generals were Tilly and Wallenstein), and the French kings Louis XIII. and XIV. (whose generals were Turenne and the Prince of Condé); the Protestant leaders were Christian IV. of Denmark and Gustavus Adolphus of Sweden.

BRITISH EMPIRE (*continued*).

A.D.

1615. Chief Justice Sir Edward Coke condemns benevolences as illegal.
1618. Execution of Sir Walter Raleigh.
1619. The first negro slaves introduced into America (Virginia).
1620. The "Pilgrim Fathers" sail in the "Mayflower" and found Plymouth and the colony of New England (Massachusetts).
1625. Accession of Charles I.
1628. The "Petition of Right" against the Royal tyranny is passed by the Commons, and receives the King's assent.
Harvey demonstrates the circulation of the blood.
1629. Charles dissolves his Parliament, and rules for eleven years without one.
1633. William Laud becomes Archbishop of Canterbury.
1637. John Hampden refuses to pay ship-money.
1638. The "Solemn League and Covenant" signed in Scotland to defend the Reformation.
1640. Settlement at Madras by the East India Company.
The Long Parliament summoned.
Charles allows the Earl of Strafford to be executed.
1641. Massacre of the Ulster Protestants.
1642. Civil War breaks out between the Royalists and Parliamentarians. Charles's great defeats were at Marston Moor (1644) and Naseby (1645).
1643. General Assembly of Presbyterian and Independent Divines at Westminster.
1649. Execution of Charles I.
Cromwell harries Ireland.
1651. The Navigation Act only allowed goods to enter England in English vessels. War follows with Holland.
1653. Cromwell is made Lord Protector.
1655. Jamaica taken from Spain.
1658. Death of Cromwell.
1660. Restoration of the monarchy under Charles II.
1662. The Royal Society founded.
Charles receives Bombay from Portugal as part of the dowry of his wife Catharine.
1664. New Amsterdam taken in the Dutch War, and re-named New York.
1665. The Great Plague of London.
1666. The Great Fire of London.
1670. The Secret Treaty of Dover between Charles and Louis of France undoes the Triple Alliance of England, Holland, and Sweden against France (1668).
1679. Habeas Corpus Act passed.
1681. Penn founds the Quaker colony of Pennsylvania.
1685. Accession of James II. Monmouth's rebellion.
1688. James flees to France, and the crown is offered to William of Orange (grandson of Charles I.) and his wife Mary (daughter of James II.).
1689. Siege of Londonderry.
England, Spain, Germany, Holland, and Sweden make an alliance against France.
1690. Battle of the Boyne ends James II.'s hopes in Ireland. The Pacification of Limerick promises liberty to the Irish Romanists.
1693. Commencement of the National Debt.
1694. The Bank of England founded.
1697. The Peace of Ryswick ends the French War.
1701. The Grand Alliance of England, Holland, Austria, Portugal, Denmark, and Sweden supports the Archduke Charles's claim to the Spanish crown.

EVENTS ABROAD (*continued*).

A.D.

1621. Philip IV. becomes King of Spain, and the Netherlands entirely renounce allegiance to Spain.
1623. Ferdinand II. of Bohemia overthrows his rival Frederick, Elector Palatine, husband of Elizabeth, the daughter of James I. of England.
1626. Wallenstein wins the victory of Dessau.
1628. Richelieu takes La Rochelle, a Huguenot fortress, aided by the Duke of Buckingham.
1631. Tilly takes Magdeburg by storm, but is defeated by Gustavus Adolphus at Breitenfeld, and again the next year at the Lech.
[Manchu Tartars conquer China and found the present dynasty].
1632. Gustavus Adolphus gains the battle of Lutzen, but is killed on the field.
1637. Death of the Emperor Ferdinand II.
1640. Portugal revolts from Spain, and sets up the royal house of Braganza.
1642. Death of Cardinal Richelieu.
1643. France wins a great victory over Spain at Rocroi.
Louis XIV., the "Grand Monarque," ascends the throne of France, his chief minister being Cardinal Mazarin. He marries Maria Theresa (1659), and engages in various wars of aggrandisement, which are concluded by the Treaty of Ryswick (1697). In his reign flourish the great writers Racine, Corneille, Pascal, Molière, and Bossuet.
1648. The Peace of Westphalia ends the Thirty Years' War, adding Alsace to France, and weakening Germany by formally approving her disunion. The independence of the Federal Commonwealths of the Netherlands and Switzerland is recognized.
1657. Under William I., the Duchy of Prussia becomes independent of Poland.
1658. Marshal Turenne, helped by the English, defeats Spain at Dunkirk.
1661. On the death of Cardinal Mazarin, Louis XIV. becomes autocratic ruler, with Colbert as his finance minister. "L'état, c'est moi," (I am the State), was a saying of Louis'.
1669. The Turks take Crete from the Venetians, after besieging its chief town, Candia, for twenty years.
1672. Murder of De Witt, the Dutch statesman and patriot. William (afterwards William III. of England) becomes stadholder of Holland.
1678. Peace of Nimeguen, ending France's war with Spain and Holland.
1683. John Sobieski, king of Poland, comes to the rescue of the German forces under the Duke of Lorraine, and saves Vienna from the Turks under Muhammad IV.
1685. Louis revokes the Edict of Nantes (1598) and proscribes the Huguenots.
1687. The Turks defeated at the battle of Mohacs and driven out of Hungary.
1689. Peter the Great, son of Alexis and grandson of Michael Romanoff, after reigning with his brother Ivan V. for seven years, becomes sole ruler of Russia. He takes the title of "Emperor of all the Russias," founds St. Petersburg and makes it his capital, and lays the foundations of his country's navy, army, and commerce. Hitherto Archangel had been the only Russian port, but Peter makes his empire touch the Sea of Azov, the Caspian, and the Baltic, at the expense of the Turks, Persia, and Sweden respectively.
1697. Charles XII. becomes King of Sweden.
Prince Eugene of Savoy routs the Turks at Zenta on the Theiss.
1698. Gold mines discovered in Brazil.
1699. The Treaty of Carlowitz (the first between Christians and Turks) limits the Turkish dominions, giving Hungary to Austria, and Dalmatia and the Peloponnesus to Venice.
1700. Charles XII. of Sweden defeats Russia at Narva.
Death of Charles II. of Spain without a son. Louis XIV. of France and the Emperor Leopold of Austria, both being grandsons of Philip III. of Spain, nominate claimants to the throne; the former proclaims his grandson Philip of Anjou as Philip V., the latter proclaims his son the Archduke Charles as Charles III. (Louis XIV.'s wife, Maria Theresa, was a daughter of Philip IV. of Spain, and on her marriage had renounced all claims to the Spanish throne.) Thus the War of the Spanish Succession breaks out.
1702. Prince Eugene of Savoy defeats the French forces under Villeroy at Cremona.
1709. Charles XII. of Sweden is utterly overthrown by Peter the Great at Pultowa.
1713. The Treaty of Utrecht ends the War of the Spanish Succession. Philip V. is recognized as King of Spain, but in order to maintain the balance of power (a principle which now for the first time distinctly comes to the front in international politics) it is settled that he must renounce any claim to the French crown on the death of Louis XIV.; the Archduke Charles (who had become the Emperor Charles VI. in 1711) receives Lombardy, Naples, Sardinia, and the Netherlands; Gibraltar is left in English possession.
1715. Louis XV. becomes King of France. In his reign live Voltaire and Rousseau.
1718. Charles XII. of Sweden killed at the siege of Frederickshall. Sweden's power now declines, as Russia's increases.
The Peace of Passarowitz gives the Morea and other Venetian dominions in the eastern Mediterranean (except the Ionian Isles) to Turkey.
1720. The Pragmatic Sanction by the Great Powers recognizes that the Emperor Charles VI. shall be succeeded by his female heirs if he has no son.
1725. Death of Peter the Great, who is succeeded by his widow Catharine.
1728. Diamond mines discovered in Brazil.
1739. Austria cedes Servia to Turkey.
1740. Death of the Emperor Charles VI., who is succeeded on the throne of Austria (with Hungary and Bohemia) by his daughter Maria Theresa. Charles, Elector of Bavaria (Emperor from 1742 to 1745) claims the throne, and Frederick II., "the Great," of Prussia takes Silesia. So comes the war of the Austrian Succession, in which England and the Netherlands help Maria Theresa, "The Empress Queen," against the Bourbons of France and Spain, with Prussia and Bavaria.

BRITISH EMPIRE (*continued*).

A.D.
1702. Accession of Queen Anne. Whigs and Tories now become party names.
France recognizes the "Elder Pretender" as James III. of England.
1704. Marlborough, by a forced march, prevents Villeroy's forces joining Marshal Tallard's, and defeats the latter at Blenheim.
Sir George Rooke takes Gibraltar.
1706. Marlborough defeats Villeroy at Ramillies.
1707. Act of Union of England and Scotland passed.
1708. Marlborough and Prince Eugene win Oudenarde, and next year Malplaquet.
1710. St. Paul's Cathedral completed by Sir Christopher Wren.
1714. George I., grandson of Elizabeth the daughter of James I., ascends the throne, and founds the Hanover line.
1715. The Earl of Mar's rebellion on behalf of the "Elder Pretender." Battles of Sheriffmuir and Preston.
1716. The Septennial Act passed.
1720. The South Sea Bubble gives Walpole the opportunity for showing his financial genius.
1727. George II. becomes King.
1736. The Porteous Riots at Edinburgh.
1740. Anson starts on his voyage round the world.
1745. Rebellion on behalf of the "Young Pretender," Charles Edward, grandson of James II. Battles of Prestonpans and Culloden.
1752. The New Style (of the Calendar) introduced.

Growth of the British Empire.

1757. Clive's victory at Plassy, from which dates the British Empire in India.
1759. Wolfe's victory at Quebec.
1760. George III. becomes King.
1763. The Treaty of Paris acknowledges Britain's right to her conquests in India, Canada, and elsewhere.
1768. Captain Cook explores New Zealand and the east coast of Australia.
1774. Warren Hastings, first Governor-General of India.
1775. War of American Independence begins.
1776. The thirteen North American Colonies issue their Declaration of Independence (July 4th).
1777. Burgoyne surrenders at Saratoga.
1780. Admiral Rodney defeats the Spanish off Cape St. Vincent.
1781. Lord Cornwallis surrenders at Yorktown.
1782. The siege of Gibraltar by the French and Spanish raised after lasting three years.
Rodney defeats the French fleet off Dominica.
Independent Parliament established at Dublin.
1783. By the Treaty of Versailles, American Independence recognized.
[In 1764 James Watt began his improvements in the steam-engine, and Hargreaves designed the spinning-jenny; in 1769, a barber named Arkwright invented the spinning-frame, and in 1776 Crompton brought out his mule. Shortly afterwards a power loom for weaving was designed by Cartwright, a clergyman, and another by Horrocks, a weaver.]
1788. First settlement of the British in Australia; Sydney made a convict station, with Captain Phillip as Governor.
1794. On June 1st, a day known as "the glorious first of June," Lord Howe defeats a French fleet off Brest.

EVENTS ABROAD (*continued*).

A.D.
1743. France defeated at Dettingen (the last battle in which an English king was present in person).
1745. The Allies, under the Duke of Cumberland, defeated by France at Fontenoy.
1748. The Peace of Aix-la-Chapelle ends the War, and recognizes Francis, the husband of Maria Theresa, as Emperor.
1755. Great earthquake at Lisbon.
1756. The Seven Years' War begins, in which Great Britain and Prussia are allied against France and Austria.
France captures Minorca from the British.
1757. France compels a British army to evacuate Hanover.
Frederick the Great of Prussia defeats the French at Rossbach and the Austrians at Leuthen.
1758. The French lost Louisburg, taken by the British.
1759. The French were defeated at Minden by the Prussians and their British allies.
In Canada the French lost Quebec, taken by the British under General Wolfe.
1760. The French troops in Canada surrender to the British.
1762. Murder of Peter III. of Russia, and succession of his widow, Catharine II.
Russia takes the Crimea from the Tartars and encroaches on Poland.
The Spaniards join the French and lose Havana in the West Indies and Manilla in the Philippines, both taken by the British. They invade Portugal, an ally of Great Britain, but are driven out of the country by a combined force of Portuguese and British.
1763. The Treaty of Paris, by which France renounces all claims to Canada and Nova Scotia.
1768. France takes Corsica from the Genoese.
1771. Suppression of the Parliament of Paris (the supreme legal tribunal of France).
1772. The first partition of Poland among the three neighbouring powers—Russia, Austria and Prussia.
1774. Louis XVI. becomes King of France. He marries Marie Antoinette, daughter of Maria Theresa of Austria.
The Treaty of Kainardji recognizes Russia's right to protect the Greek Church in Turkey.
1776. Necker becomes Finance Minister in France and restores public credit.
1781. Necker dismissed, and France in the next few years is brought to the eve of bankruptcy and anarchy.
1786. Death of Frederick the Great, who had greatly extended the territory and power of Prussia.

The French Revolution.

1789. France has in the course of the last century passed through many revolutions and made trial of many different forms of government. The first great upheaval in the fabric of society of France occurred in 1789. This great catastrophe was the result of an unjust code of laws, of an oppressive system of taxation, and of a corrupt court. Society was divided into the privileged classes and the unprivileged. No Frenchman who was not of noble birth could rise to high office in the state, the church, or the army. Not only were the taxes enormous, but they were unjustly distributed. Thus the land tax, one of the heaviest, was paid by only a third of those who held land; the nobles, the clergy, and those in the service of the government were exempt from payment. But of all the imposts the most detested was the *gabelle* or salt-tax. The government monopolised the trade in salt, and put on this necessary article any price it pleased. Every householder was compelled to purchase a certain quantity, fixed for him by the authorities, whether he desired to purchase it or not. Further, the quantity differed in the several provinces, and some of them were free entirely from the gabelle. Such arbitrary and unequal measures as these were the seeds of the Great Revolution.
Signs of the coming harvest were visible before Louis XIV. died in 1715, leaving his crown to his great grandson, Louis XV. Under this monarch the French court revelled in every form of costly luxury and shameful debauchery. Crowds of courtiers, worthless and dissolute men, hung about the palace and lived in the most extravagant style, chiefly at the public expense. The people, ground down with taxes to pay for all this vice and luxury and to bear the burden of the accumulated debts of past centuries, became at last almost mad with misery and despair, and, like working bees, banded together to kill the drones, or expel them from the hive.
Louis XV. foresaw that some fearful catastrophe would, after his death, befall France: *Après nous le déluge* was his oft-repeated saying. He was succeeded, in 1774, by his grandson, Louis XVI. Revolution could have been averted only by a just distribution of the national burdens over all classes of the community. The attempt was made by Turgot, the prime minister, in the beginning of this reign, but the opposition of the privileged classes was too strong, and the support of the king too weak for him to effect any real reform. At length, in 1788, finding his kingdom on the verge of bankruptcy, Louis XVI. convoked the *States General*, an assembly (corresponding to our Parliament) which had not met since Richelieu took the helm of state in 1614. The short outline that follows must suffice to show the course of events that led up to the establishment of the French Empire.
1789. The National Assembly meets at Versailles (May 5).
The Bastille is stormed (July 14) and the king and queen are brought from Versailles to Paris, practically as prisoners.
1790. A grand pageant in the Champ de Mars, where the king, the assembly, the soldiers, and the people swore a solemn oath to maintain the new constitution which had been recently framed.
1791. Death of Mirabeau, the master spirit of the Assembly, who might have moderated the Revolution. Futile attempt of the royal family to escape from Paris (June 30). Louis intrigues with Prussia and Austria.

BRITISH EMPIRE (*continued*).

A.D.

1795. Britain has to contend against a combination of three great maritime powers—France, Spain, and Holland.
Mungo Park explores the Niger.
Edward Jenner discovers vaccination as a safeguard against small-pox.

1797. Two great naval victories: (1) over the Spaniards off Cape St. Vincent by Sir John Jervis, (2) over the Dutch off Camperdown by Admiral Duncan.
A mutiny among British sailors, both at Spithead and the Nore, subsided on the redress of their grievances.

1798. Nelson's victory of the Nile. The French fleet almost totally destroyed in Aboukir Bay, and the French army in Egypt under Bonaparte cut off from France.
Risings in Ireland. The rebels defeated at Vinegar Hill by the troops under General Lake.

1799. With the aid of two British ships under Sir Sidney Smith, the Turks successfully defend Acre against Bonaparte.
The British, under the Duke of York, make an abortive attempt to drive the French out of Holland.

1800. Act of Union passed between Great Britain and Ireland, coming into operation on January 1st, 1801.
Malta surrendered by the French to the British after a long blockade.

1801. General Abercrombie defeats the French forces left in Egypt at Alexandria. This led to the evacuation of Egypt by the French.
Danish fleet compelled to surrender to the British after a terrible struggle at Copenhagen (Sir Hyde Parker and Nelson in command).

1802. Peace of Amiens concluded between England and France.

1803. Napoleon imprisons all British subjects travelling in France. War declared. Preparations made at Boulogne for the invasion of England.
Battle of Assaye, in Southern India, won by Sir Arthur Wellesley.

1805. Nelson destroys the fleets of France and Spain off Cape Trafalgar (21st October). Nelson is killed on board he *Victory*.
By the end of the year all the sea coast of India is in the hands of the British.

1806. Cape Colony taken from the Dutch. Colonization in Australia by free immigrants now begins.

1807. Bombardment of Copenhagen. Heligoland seized.
The slave trade abolished throughout British dominions, chiefly through the efforts of Granville Sharp, Clarkson, and Wilberforce.

1808. Sir Arthur Wellesley lands in Portugal and wins battle of Vimiero.

1809. Sir John Moore, chief commander of the British in the Peninsula, compelled to beat a hasty retreat before Napoleon. He succeeded in reaching Corunna, where he defeated the pursuing army, but fell in the battle.
Wellesley's victory at Talavera.
The Walcheren expedition fails.

1810. Wellesley (now Viscount Wellington) withdraws his troops behind the Lines of Torres Vedras in front of Lisbon. Marshal Massena recoils from the lines and evacuates Portugal.

1811. Beresford defeats Marshal Soult at Albuera.

1812. Wellington at last storms Badajoz, and wins the battle of Salamanca.
War commenced with the U.S.A., who resented our claim to search neutral ships. Washington was taken (1814), but our troops under General Pakenham were repulsed at

EVENTS ABROAD (*continued*).

A.D.

1792. France declares war with Austria and Prussia. The Tuileries Palace is stormed (August 10) and monarchy is abolished.
The Legislative Assembly gives way to the *National Convention* (September 21) in which are two parties—the Girondists, or Moderates, chiefly representing the country districts; and the Jacobins, or Extremists, who are urged on by the Parisian mob, and led by Marat, Robespierre, and Danton.
The Republican General Dumouriez defeats Prussia at Valmy.

1793. The Reign of Terror begins with the execution of Louis XVI. (January 21) and the institution of the *Committee of Public Safety*. France declares war against England and Holland. The *Revolutionary Tribunal* is appointed (March 10) and Marie Antoinette guillotined (October 16).

1794. Generals Hoche and Jourdain put down Royalist revolts, and drive off the attacks of Prussia and Austria. Robespierre is executed (July 28); downfall of the Jacobins and of the Revolutionary Tribunal; end of the Reign of Terror.

1795. The Convention devises a new constitution, consisting of the Assembly of 500 members, the Senate, and the *Directory* (an executive government of five men, of whom Carnot was the most influential).
Final partition of Poland between Russia, Austria, and Prussia. (Previous partitions had been made in 1772 and 1793).

1796. Death of Catharine II. of Russia, who is succeeded by Paul (murdered in 1801) and then by Alexander.
Napoleon Bonaparte, who had distinguished himself at the siege of Toulon (1793), is in command of the French armies against Austria and Sardinia.

1797. After Napoleon's brilliant successes at Lodi and Rivoli, the Treaty of Campo Formio cedes the Austrian Netherlands (Belgium) and Lombardy to France, and the Venetian Republic to Austria.

1798. Napoleon's expedition to the East (really to threaten India). He wins the battle of the Pyramids and occupies Egypt.

1799. Napoleon invades Syria, fails to take Acre, and returns to France. France takes Pope Pius VI. prisoner, and sets up a Republic in the Papal States.
Napoleon ends the government of the Directory (October), and becomes *First Consul* with practically absolute power.

1800. Napoleon's victory at Marengo, and the French general Moureau's defeat of Austria at Hohenlinden.

1801. Alexander I. becomes Czar of Russia.
Thomas Jefferson, who had helped to draw up the Declaration of Independence, becomes President of the U.S.A. for two terms of four years.
The Peace of Luneville between France and Austria fixes the Rhine as the French frontier on the east.

1802. Napoleon institutes the Legion of Honour, and has the Code Napoléon drawn up.

1803. Napoleon sells Louisiana to the U.S.A.

The French Empire.

1804. Napoleon makes himself Emperor of the French and King of North Italy. He has the Bourbon Prince, the Duc d' Enghien, arrested on foreign soil and shot without trial.

1805. Surrender of the Austrian General Mack with 30,000 men to Napoleon at Ulm, who defeats the Austrians and Russians at Austerlitz.

1806. The various German princes renounce all allegiance to the Western Empire, and form themselves into the Confederation of the Rhine (under Napoleon's protection); Bavaria, Saxony, and Wurtemburg become separate kingdoms; Francis II. resigns the title of Emperor, and so the Holy Roman Empire, which had existed for a thousand years, comes to an end, though Francis continues to be Emperor of Austria.
Napoleon defeats Prussia and Saxony at Jena and enters Berlin. He issues the *Berlin Decrees*, which inaugurate his Continental System intended to ostracise England—all British goods being declared contraband, and her ports in a state of blockade.
Joseph Bonaparte is made King of Naples, and Louis of Holland.

1807. Napoleon defeats Russia at Friedland, and concludes the Peace of Tilsit, which brings Russia on to France's side, while Westphalia is taken from Prussia and Jerome Bonaparte is made its king.
Portugal refuses to carry out the Berlin Decrees, and is attacked by Napoleon, who thus commences the Peninsular War.
The first steamboat runs on the Hudson River (U.S.A.).

1808. Napoleon sets up his brother Joseph as King of Spain, and puts Murat in his place as King of Naples. The Inquisition is abolished in Spain.

1809. Austria declares war on Napoleon, and after varying successes the Archduke Charles is overthrown at Wagram.

1810. Revolt of Chili from Spain.
Napoleon having divorced Josephine marries Maria Louisa, daughter of the Emperor of Austria.

1812. Russia grows tired of enforcing the Continental System. Napoleon's invasion, and victories at Smolensk and Borodino; Moscow is taken and fired (September), and the disastrous retreat of the French commences (October), in which nearly half a million men perish.

1813. After a victory at Dresden, Napoleon is utterly defeated by the Allies at Leipzig, and Germany regains her freedom. The Allies invade France from the east, as does Wellington from the south, King Ferdinand VII. having been restored to the Spanish throne.

1814. The Allies take Paris, Napoleon abdicates (March 31) and retires to Elba; the Bourbon line is restored in Louis XVIII., the younger brother of Louis XVI.

1815. Napoleon lands on the south coast of France (March 1), and Louis XVIII. flees. After the battle of Waterloo, Napoleon is banished to St. Helena

BRITISH EMPIRE (*continued*).

A.D.

New Orleans. The famous fight between the frigates *Shannon* and *Chesapeake* occurred in this war.

1813. Wellington, after a great victory at Vittoria (thus closing the Peninsular War), enters France.
Australian explorers make their way across the Blue Mountains and open up a new country to the colonists.

1815. Wellington, who had driven back Marshal Ney at Quatre Bras, reinforced by Blucher, whom Napoleon had repulsed at Ligny, wins the battle of Waterloo (June 18th).

The Long Peace.

1816. Algiers, a nest of pirates, bombarded by a fleet under Lord Exmouth, and 2,000 prisoners set free.

1818. Ross and Parry start on their Arctic Exploration voyage.

1819. Singapore seized by Sir Stamford Raffles for the British.

1820. George IV., who had been regent during his father's insanity since 1810, comes to the throne.
English immigration begins in Cape Colony.

1824. All laws restricting combinations of workmen are repealed, and an Act passed defining what was legal and what not.

1828. Sir Robert Peel organises the London police force.
Repeal of the Corporation and Test Acts, thus opening all offices in the State to Dissenters.

1829. Passing of the Catholic Emancipation Act, by which the Roman Catholics were set free from all the disabilities which had for nearly three centuries been fastened on them.

1830. William IV. succeeds to the throne.
George Stephenson, who had constructed the "Rocket" locomotive, completes the first English railway, between Liverpool and Manchester.

1832. The First Reform Act passed.

1833. Act passed abolishing slavery throughout the British dominions, but not to take effect till 1838. £20,000,000 paid in compensation to the slave-owners.

1837. Accession of Queen Victoria (June 20th); the crown of Hanover is separated, under the Salic Law, from that of Great Britain.

1838. The first steamship crosses the Atlantic.

1839. Aden, at the entrance of the Red Sea, is occupied by the British.
Chartist risings begin.
New Zealand begins to be colonized by British immigrants.

1840. Queen Victoria marries her cousin, Prince Albert.
Penny Post instituted, thanks to Sir Rowland Hill.

1841. Local self government granted to Canada.
O'Connell's agitation begins for repeal of the Union between Great Britain and Ireland.

1842. The First War with China, begun over the opium traffic, ends in the cession of Hong-Kong, and opening of five Chinese ports to foreigners.

1843. General Pollock makes an expedition into Afghanistan and takes Cabul.
Natal (settled by Dutch Boers or farmers from the Cape in 1837) occupied by British.

1845. Potato famine in Ireland.
Sir John Franklin's ill-fated Arctic expedition.

1846. Repeal of the Corn Laws by Sir Robert Peel.
End of the First Sikh War in India.

EVENTS ABROAD (*continued*).

A.D.

(where he died on May 5, 1821) and Louis is reinstated on the throne of France.
[At the close of the Napoleonic wars in 1815, the Congress of Vienna adjusts the boundaries of the European states and determines their foreign possessions: (1) the German states are grouped in a Confederation with the Emperor of Austria as President; (2) Norway is taken from Denmark and joined with Sweden; (3) Poland is placed as a separate kingdom under the crown of Russia; (4) Italy is divided into a number of small states including the Papal states and the two Sicilies (Naples and Sicily)—the northern states being placed under Austria; (5) Belgium is united with Holland; (6) Great Britain is assigned what is now called British Guiana, Ceylon, and Cape Colony, Mauritius, Trinidad, Tobago, and Malta, all of which she had taken during the war.]

1818. Napoleon's marshal Bernadotte becomes King of Sweden as Charles XIV.
The German States form a zollverein or commercial union, repealing all duties on their mutual frontiers, and only maintaining duties along their external boundaries. Prussia is now rising in importance.

1820. John VI. returns from Brazil and accepts the constitutional monarchy of Portugal.

1821. The Greeks rebel against the Ottoman power, and their cause is espoused by Lord Byron.
Peru and the various Republics of Central America revolt from Spain; Bolivar, who died in 1830, frees the South American States of Venezuela, New Granada, and Upper Peru (called in his honour Bolivia) from Spain.
Missouri is admitted among the U.S.A. as the first "slave state," i.e. stat in which slavery was legally recognized. The President is James Monroe, who in a message to Congress enunciated the "Monroe Doctrine" of "America for the Americans"—that any attempt by a European nation to acquire territory in America would be considered an unfriendly act.

1822. Brazil is declared independent of Portugal, though remaining under the rule of John VI., who is succeeded by his son Pedro as Brazilian Emperor, and his daughter Maria as Portuguese Queen (1826).
The revolt of Chile from Spain is successfully established, thanks to the help of Lord Cochrane, the Earl of Dundonald.

1824. Louis XVIII. is succeeded by his brother Charles X.

1825. The Mexican Republic established in independence of Spain.
Alexander I. succeeded by his brother Nicholas I. as Czar of Russia.

1826. The Sultan Mahmoud II. massacres his Janissaries or Praetorian Guards.

1827. England, France and Russia intervene in the war between the Sultan and the Greeks. The Ottoman fleet is utterly routed at Navarino by the allied Powers, who establish an independent Greek kingdom under Otto of Bavaria.

1828. Don Miguel, brother of Don Pedro, is made King of Portugal in opposition to Queen Maria.

1830. Ferdinand VII. of Spain abolishes the Salic Law in order to make his daughter Isabella eligible for the crown.
Charles X. abolishes the freedom of the press, and dissolves the Chamber of Deputies. He is driven out by the "Revolution of July" (27th to 29th), and his cousin Louis Philippe, Duke of Orleans, and son of Philippe Egalité, is made King of the French. France acquires the coast of Algiers.
Revolt of the Southern Provinces of the Netherlands, which form the separate kingdom of Belgium under Leopold of Coburg, husband of the English Princess Charlotte; the Northern Provinces continue, as the Kingdom of Holland, under the House of Orange.

1831. Don Pedro I. resigns the crown of Brazil to his son, and comes to Europe to support Maria in Portugal; Don Miguel is overthrown, and Maria becomes Queen again (1833), and marries Ferdinand of Saxe-Coburg, the brother of the late Prince Consort.
Revolt of the Poles at the cruelties of the Grand Duke Constantine ends in their losing their constitution and name, and being entirely absorbed in Russia.
A new Federal Constitution is created in Switzerland to end the war between the Protestant and Romanist cantons.

1833. Russia aids Turkey against the rebel Muhammad Ali, Pasha of Egypt.
On the death of Ferdinand VII. of Spain, civil war breaks out between the supporters of his daughter Isabel and his brother Don Carlos; the latter are strong in the north, but are finally subdued in 1840.
The Genoese Mazzini forms the "Young Italy" party to free Italy (especially its northern states) from Austrian or other foreign control.

1840. Muhammad Ali rebels again, and though reduced to submission by England Russia, and Austria, is recognized as hereditary Viceroy of Egypt, on condition of paying homage and tribute to the Sultan.

1841. The Treaty of London (between England, France, Austria, Russia, and Turkey) closes the Dardanelles to all men-of-war so long as Turkey remains at peace.
Elias Howe invents the sewing machine.

1844. The Mormons settle at the Great Salt Lake under Brigham Young.

1846. Pius VI. becomes Pope.
Austria gains the commonwealth of Cracow.

1848. In France, corruption and financial mismanagement lead to the Revolution, when Louis Philippe flees to England, and a Republic is constituted (the Second Republic). After a revolt of the extreme republicans in June, Louis Napoleon Bonaparte, son of Louis Bonaparte, King of Holland, and nephew of the great Napoleon, is chosen President.
A revolution at Berlin (March) compels the King of Prussia, Frederick William IV., to grant a free constitution to his subjects.
Mazzini and Garibaldi expel the Pope, and set up a Republic in the States of the Church.
The Emperor Ferdinand I. abdicates, and is succeeded by his son Francis

BRITISH EMPIRE (*continued*).

A.D.

1848. Suppression of the great Chartist rising in London.
Lord Gough ends the Second Sikh War with the victory of Goojerat, and annexes the Punjab.

1849. Repeal of the Navigation Acts, thus admitting foreign vessels to our ports without any restriction.
Local self-government granted to the Australian colonies.

1850. Death by accident of Sir Robert Peel.

1851. The first Great Exhibition, held in Hyde Park, London, of the art and industries of all nations.
Gold discovered in Australia. This led to a great influx of people, and gave a great impetus to all kinds of employment. In the next ten years the population nearly trebled itself. In the following 40 years £300,000,000 worth of gold has been extracted.

1852. The Second Burmese War, by which the whole Burmese seaboard passed into British hands.

End of the Long Peace.

1854. Beginning of the Crimean War. Britain in alliance with France comes to the help of Turkey against Russia. The war centred in Sebastopol, which withstood for a year all attempts of the allies to capture it. The chief battles outside Sebastopol were the Alma, Balaklava, Inkermann, and Tchernaya. The famous charge of the Light Brigade occurred in the Battle of Balaklava.
Florence Nightingale goes out with a band of nurses to nurse the sick and wounded in the soldiers' hospital at Scutari.

1855 The fall of Sebastopol after the French had taken the Malakoff by storm.

1856. Peace concluded with Russia (See opposite).

1857. The India Mutiny breaks out at Meerut (May 10th).

1858. The Mutiny suppressed. The governing power transferred from the India Company to the British Crown. The title of Empress of India was not assumed by Queen Victoria until 1876.
Fenian movement begins in Ireland.
The Treaty of Yeddo opens Japan to British commerce.
Speke and Burton discover Lake Tanganyika.

1859. A rumour of invasion by France causes the formation of our Volunteer force.

1860. War with China, when Pekin was taken and the country opened up still more to Western commerce and influence.

1861. Death of the Prince Consort from typhoid fever.
Cotton famine fund started to relieve distress in Lancashire from the failure of the cotton supply through the American War.

1862. Speke and Grant discover the source of the Nile.

1863. The Prince of Wales (now Edward VII.) marries Princess Alexandra of Denmark.

1865. Death of Lord Palmerston, who for six years previously had been Prime Minister.

1866. The first electric cable laid across the Atlantic.

1867. The Fenians make a futile attempt to raise an insurrection in Ireland. Later, they begin a series of dastardly outrages with gunpowder and dynamite.
Dominion of Canada constituted.

EVENTS ABROAD (*continued*).

A.D.

Joseph, whom Hungary will not accept, setting up instead a Republic under Louis Kossuth. This is crushed with Russia's help, and the two kingdoms of Austria and Hungary are united under a common sovereign, the Emperor Francis Joseph (1867).
The war between Mexico and the U.S.A. ends in the cession of New Mexico and Upper California to the latter.
Gold is discovered in California, and San Francisco springs up at once into a large town.

1849. Charles Albert, King of Sardinia, who had invaded Austria, is defeated at Novara. On his abdication he is succeeded by his son Victor Emanuel II., who with his minister Count Cavour consolidates the power of Sardinia, and prepares for the unification of Italy.

1850. The Pope is re-instated in Rome, which had been taken by France after a splendid defence by Garibaldi.
Amidst great opposition, the Fugitive Slave Law is passed in the U.S.A., providing for the restoration of slaves to their owners, even if they had taken refuge in a "Free State" (i.e. one in which slavery was illegal).

1851. Louis Napoleon achieves a *Coup d'état*. He dissolves the National Assembly by force, and seizes absolute power.

1852. A plebiscite is taken and Louis Napoleon is accepted as Emperor of the French with the title Napoleon III.

1853. Pedro V. succeeds his mother Maria on the throne of Portugal.
Russia invades Turkey, and is several times defeated by Omar Pasha.

1854. Beginning of the Crimean War (See opposite).

1855. Alexander II. succeeds his father Nicholas I. as Czar of Russia. The fortress of Kars capitulates to the Russian general Mouravieff. The Russians evacuate Sebastopol, after losing the Malakoff to the French.

1856. The Treaty of Paris ends the Crimean War, and guarantees the integrity of the Ottoman Empire, Russia losing all claim to the mouth of the Danube, and the Black Sea being declared neutral (a provision which was annulled in 1871).

1859. War breaks out between Austria and Sardinia, France helping the latter and defeating the former at Magenta and Solferino. Lombardy and other duchies in North Italy join the kingdom of Victor Emanuel; Garibaldi's efforts and triumphs over Francis II. of Naples add the Two Sicilies, and Victor Emanuel enters Naples and becomes King of Italy (1861) just before the death of the patriot and statesman, Count Cavour, who had laboured to unite the Italian peninsula. Only the Papal States (the city of Rome and a small territory round it) hold aloof.
The famous incident of "John Brown's Raid," when Captain John Brown sought to establish a slave-refuge in Virginia, U.S.A.

1860. Abraham Lincoln elected President of the U.S.A. In December South Carolina secedes from the Union, and is followed by other Southern States, which form the "Confederate States of America" under Jefferson Davis as first President.

1861. Alexander II. emancipates over 40 million serfs in Russia.
Louis I. succeeds to the throne of Portugal, and William I. succeeds his brother Frederick William IV. in Prussia.

American Secession War.

1861 to 1865. This war arose out of the slavery question in the United States. On one side were the *Democrats*, who wished to allow each State of the Union entire freedom of action, even to the extent of seceding from the Union. They were in favour of free-trade, and greatly predominated in the South, where slavery was a common institution. On the other side were the *Republicans*, who were resolved to maintain the Union at all costs, and ready to support the Central Government—even at the expense of the freedom of individual States. They were Protectionists, and formed the bulk of the population of the North, and were to a man in favour of the abolition of slavery.
In 1861 war broke out in the U.S.A. between the North (Abolitionists or Federals) and the South (Secessionists or Confederates). The chief generals on the former side were Grant, McLellan, and Sheridan; on the southern side, Lee and "Stonewall" Jackson. The chief engagements were at Bulls' Run (1861); the Potomac, Fredericksburg, and New Orleans (1862); Gettysburg, Chattanooga, and Chancellorsville (1863). Gradually the North under Grant, as commander-in-chief, asserts its superiority. Richmond in Virginia, the Southern capital, was taken after a splendid defence by General Lee, who with his remnant of 8,000 men had to surrender to General Grant on the James River (1865).
The Confederates then laid down their arms, the Union was restored, and slavery abolished. President Lincoln was assassinated by John Wilkes Booth five days after Lee's surrender. During the war the trade of the Northern States had been driven off the sea mainly through the raids of the "Alabama," a ship built in England but manned by American sailors fighting on the Southern side. The indignation roused in America against England for allowing, through negligence and sympathy with the Southerners, the Alabama to leave port and to be handed over to an American crew, nearly resulted in war, which was happily averted by the two nations agreeing to refer the matter to arbitration, with the result that Great Britain had to pay £3,000,000 damages to the United States (1872).

1863. Otto of Bavaria having abdicated the throne of Greece (1862), Prince George of Denmark, brother of Queen Alexandra, is chosen to succeed him.
Britain cedes the protectorate of the Ionian Islands to Greece.

1864. Russia subdues the tribes of the Caucasus.
Denmark is compelled to cede Schleswig-Holstein to Germany.
France sets up the Austrian Archduke Maximilian as Emperor of Mexico.

1865. End of the Secession War in U.S.A.
Leopold II. succeeds Leopold of Saxe-Coburg on the throne of Belgium.

BRITISH EMPIRE (*continued*).

A.D.

All the provinces except Newfoundland join the Confederation.

1868. Mr. Gladstone becomes premier and begins the attempt to remove Irish grievances.
An Abyssinia expedition sent under Sir Robert Napier against King Theodore. War ends with the king's suicide.

1870. Diamonds discovered at Kimberley.
End of the war with the Maoris of New Zealand.

1871. Purchase in the army abolished.

1872. Vote by ballot adopted in parliamentary and municipal elections.

1874. Disraeli becomes premier.
General Wolseley takes Kumasi, the Ashanti capital.
Fiji Islands ceded to Britain.

1875. The British Government purchases the Khedive's shares in the Suez Canal.
The Prince of Wales pays a state visit to India.
The Transvaal annexed.

1876. Queen Victoria proclaimed Empress of India.

1878. Second Afghan War begins.

1879. War with the Zulus and Ketshwayo their king. British disaster at Isandlana. Defence at Rorke's Drift. Victory at Ulundi. Capture of Ketshwayo. Prince Louis Napoleon killed in this war.

1880. British defeat at Waiwand, Afghanistan. Disaster retrieved by Lord Roberts. Abdur Rahman made Ameer.
Dutch Boers of the Transvaal claim their independence.

1881. After a Boer victory at Majuba Hill, their independence granted by the Gladstone Government.

1882. A military revolt in Egypt under Arabi Pasha against the Khedive leads to British intervention.
Alexandria is bombarded by the British fleet. Lord Wolseley's victory at Tel-el-Kebir ends the revolt. British troops enter Cairo, where they are still retained.

1884. General Gordon is hemmed in by the Mahdists at Khartoum. General Graham defeats the Mahdists under Osman Digna in the Eastern Soudan at El-Teb and Tamai.
Passing of the Third Reform Bill, giving household suffrage to the counties.
A British force is sent to Gordon's relief.

1885. General Stewart defeats the Mahdists at Abu-Klea and Metammeh, but the British advance is too late to save Gordon, who perishes in the fall of Khartoum (January 26th).
Upper Burma is annexed.
A British Protectorate is proclaimed in Somaliland, and Bechuanaland is made a British Colony.

1886. Mr. Gladstone's Home Rule Bill is rejected.
The Canadian Pacific Railway is opened from Montreal to Vancouver.

1887. Queen Victoria's first Jubilee.
Zululand is annexed.
Gold-mining begun in the Transvaal, and Johannesburg founded.

1888. British East Africa Company is formed under Sir W. Mackinnon.
Local Government Act creating County Councils.

1889. Charter granted to the British South African Company under Mr. Cecil Rhodes, to develop the district north of the Transvaal (called Rhodesia in 1895).

EVENTS ABROAD (*continued*).

A.D.

Rise of Prussia.

1866. The "Seven Weeks' War" breaks out between Prussia (with Italy) and Austria. The latter gains successes in Italy, but the war is speedily terminated by the victory of Sadowa, gained by Count von Moltke and the Crown Prince Frederick William of Prussia. The Treaty of Prague that follows shuts out Austria from Germany, and recognises Prussia as the head of the North German Confederation; Venice is handed over by Austria to Italy; Bismarck becomes Chancellor of the Confederation, and Prussia bids fair to be the leading continental power.

1867. The Emperor Maximilian of Mexico, left by the French to defend himself, is shot and the President Juarez is restored.

1868. An insurrection is raised by General Prim and Marshal Serrano against Queen Isabel of Spain, who flees to France.
The insurrection of the *Daimios*, or independent feudal lords in Japan, results in the crushing of the *Tycoon* (or lay-emperor) by the forces of the *Mikado* (or priestly emperor), who henceforth becomes sole emperor. The Japanese now begin to acquire Western civilization, which they assimilate very rapidly.

1869. The Suez Canal is completed (constructed by M. Ferdinand de Lesseps).
General Grant elected President of the U.S.A. The Pacific Railroad from New York to San Francisco is opened.

1870. Amadeus, Duke of Aosta and son of Victor Emanuel, is chosen King of Spain.
Outbreak of war between France and Germany:—
Prussia is joined by Bavaria and the other German States. The allies with Moltke in supreme command cross the French frontier (August 4). Napoleon III. takes the chief command, with Marshals Bazaine and MacMahon as his chief generals. After the battle of Gravelotte (August 18), Bazaine is shut up in Metz, and with 170,000 men has to surrender (October 28); Mac Mahon's forces attempting to relieve Metz are routed at Sedan, and 80,000 men accompany their Emperor as prisoners of war to Germany. A revolution now occurs at Paris, and the third Republic is set up under M. Gambetta. Paris is invested (September 21). The French troops are withdrawn from Rome, which is entered by Victor Emanuel, and becomes the capital of Italy, the Pope's temporal power now ceasing.

1871. William I. of Prussia is acclaimed German Emperor at Versailles (January 18, 1871); ten days later, in spite of desperate attempts to raise the siege, Paris has to surrender. M. Thiers is elected President of the French Republic; the Communists rise in Paris (March), but after great bloodshed they are crushed by the Republican troops. The Treaty of Frankfort ends the war, France having to pay £200,000,000, and ceding Alsace and Lorraine, with her Rhine frontier, to Prussia.

1873. Marshal Mac Mahon is elected President of the French Republic.
King Amadeus of Spain abdicates, because of Carlist insurrections; a Republic is declared.

1874. The Carlists (supporters of the son of Don Carlos, the claimant to the throne in 1833) win the battle of Estella, but lose Pampeluna and Irun.

1875. Queen Isabella's son comes to the throne of Spain as Alphonso XII.
Insurrections against Turkish tyranny in Herzegovina, Bosnia, Servia, and Montenegro, which are followed by atrocious massacres by Turkish troops in Bulgaria (1876).

1877. Russia goes to war with Turkey, avowedly to redress the wrongs of the Christians. After making a stand at Plevna for six months, Osman Pasha and his army surrender.

1878. The treaty of San Stefano ends the war between Russia and Turkey. This treaty is considerably modified by a Congress of the Great Powers at Berlin. As a result, Servia and Montenegro gained independence, Bosnia and Herzegovina became dependent on Austria, a new State, Bulgaria, was carved out of Turkey, and Thessaly was ceded to Greece, while England received Cyprus from Turkey.
Victor Emanuel dies and is succeeded by his son Humbert.

1879. M. Jules Grévy elected President of the French Republic.
Through disputes over boundaries, Chile and Bolivia declare war on Peru.
Attacks of the Nihilists cause the Czar, Alexander II., to enter upon a reactionary policy.

1881. Alexander II. of Russia is assassinated and succeeded by Alexander III.
President Garfield, of the U.S.A., is assassinated.
Anti-Semitic League formed at Berlin.
Muhammad Ahmed claims to be the Mahdi, and makes war upon the Egyptian forces in the Soudan.
The International African Association, founded to suppress slavery in Africa, forms the Congo Free State, which is financed by Belgium.
The St. Gothard railway tunnel opened between Italy and Switzerland.

1883. Hicks Pasha's Egyptian army is annihilated by the Mahdi at El-Obeid.
Paul Kruger is elected President of the Transvaal Republic.
End of the war between Chile and Peru in favour of the former.

1884. British and German Protectorates established in New Guinea—the former in the south, the latter in the north.
Dr. Nachtigal founds a German colony in the Cameroons, West Africa.

1885. King Leopold of Belgium is proclaimed Sovereign of the Congo Free State.
Great Britain and Russia come to terms as to the boundaries of Afghanistan.
Italy annexes Massowah, a port on the Red Sea.
War between France and China closes with the latter's recognition of a French protectorate over Annam and Tonquin.
Death of Alphonso XII. of Spain; his posthumous son, Alphonso XIII., was born to the Queen Regent Christina in May, 1886.

1886. The German East African Company formed, chiefly through the efforts of Dr. Peters.

BRITISH EMPIRE (*continued*).

A.D.

1890. Matabeleland and Mashonaland occupied by the British South African Company.
M'wanga places his kingdom of Uganda under British protection.

1891. British Central Africa (between Rhodesia and Lake Nyassa) formed into a Protectorate.

1892. British South-West Africa Company formed to develop Damaraland.

1893. The Matabeleland tribes defeated and Buluwayo taken. Their country annexed.

1894. Mr. Gladstone retires from parliamentary life and Lord Rosebery becomes Prime Minister.
British Protectorate established over Uganda.

1895. The Government takes over the British East Africa Company's territory.
The Jameson raid into the Transvaal, defeated at Krugersdorp and Vlakfontein.

1896. Sir Herbert Kitchener starts on a campaign to suppress the Khalifa.
Sir Francis Scott occupies Kumasi, and a British Protectorate is established in Ashanti.
Severe famine in India.

1897. Expedition to subdue the frontier tribes in Chitral.
Queen Victoria's Diamond Jubilee.
Gold discovered in the Klondyke and Yukon districts of British North America.
Sir W. Lockhart leads the Tirah expedition against the Afridis; battle of the Darghai Heights.

1898. Lord Kitchener defeats the Khalifa at the Atbara and at Omdurman, thus bringing the Soudan back into subjection to the Khedive of Egypt.

1899. The Khalifa is defeated and slain at Om Debrikat.
Famine severe in India.
The Boer War begins. Ladysmith, Kimberley, and Mafeking besieged by the Boers. In one week in December three British reverses—at Stormberg, Magersfontein, and Colenso. Lord Roberts, with Lord Kitchener as his chief of staff, now took the chief command. In 1900 Kimberley, Ladysmith, and Mafeking relieved; Cronje surrendered with 4,000 men at Paardeberg; Bloemfontein and Pretoria entered by the British army, and the Boer army broken up. A guerilla war ensued, and for eighteen months longer the stubborn struggle went on. Meanwhile Lord Roberts returned to England, leaving Lord Kitchener "to fight to a finish." The end came on May 31, 1902, when peace was signed at Pretoria.

1900. British Protectorate established in Nigeria (taken over from Royal Niger Company).
Sir J. Willcocks relieves Kumasi, and puts down the rising in Ashanti.

1901. Proclamation of the Australian Commonwealth (January 1st).
Death of Queen Victoria (January 22nd) and accession of Edward VII.

1902. Anglo-Japanese alliance concluded, maintaining the independence of China and of the Corea, and enforcing the "open door."
Death of Mr. Cecil Rhodes.
Terms of peace accepted in the Transvaal, thus closing the Boer War (May 31st).
Mr. Balfour becomes Prime Minister.
Education Act passed.
Illness of King Edward VII., post-

EVENTS ABROAD (*continued*).

A.D.

1887. Great Britain and Russia again mark out the Afghan frontier.
Ferdinand of Saxe-Coburg elected Prince of Bulgaria, but not recognized by all the Powers till 1896.
Triple Alliance formed between Germany, Austria, and Italy.

1888. Death of William I., Emperor of Germany (March 9th), and of his son Frederick III. (June 15th), who is succeeded by his son William II.

1889. Revolution in Brazil; the Emperor Pedro II. deposed; a Republic formed.
Dom Carlos succeeds his father, Louis I., as King of Portugal.
King Milan of Servia abdicates, and is succeeded by his son Alexander.

1890. Death of Count von Moltke, and of William III. of Holland, who is succeeded by his daughter Wilhelmina.
Treaties between Great Britain, France, Germany, Italy, and Portugal, defining their respective spheres of influence in Africa; Heligoland is ceded to Germany, by whom Zanzibar is left wholly to Britain.
The German East Africa Company transfers its rights to its Government.
Railway completed from Delagoa Bay into the Transvaal.
First Parliament elected in Japan.

1891. Great earthquake in the Niphon Islands of Japan.

1892. Death of Tewfik, Khedive of Egypt, who is succeeded by his son Abbas.

1893. Dr. Nansen's Arctic Expedition sets out from Christiania on the "Fram" (returning in 1896).
Seal fishing dispute between Britain and U.S.A., in the Behring Sea, settled by arbitration.

1894. Death of Alexander III., who is succeeded by his son, the Czar Nicholas II.
Treaty between Great Britain and Belgium, defining the limits of the Congo Free State.
The French President Carnot assassinated.
Japan invades the Corea and Manchuria; war follows with China, and Port Arthur is taken by Marshal Oyama.

1895. Great Britain and Russia settle their respective spheres of influence in the Pamirs (Turkestan).
Insurrections in Cuba against Spanish rule.
Wei-hai-wei bombarded by the Japanese under Admiral Ito and Marshal Oyama.
Peace is made between China and Japan, Corea being rendered independent of China, and Japan gaining the Liao-tung peninsula (but on protest from Russia, France and Germany, Japan abandons her claims to it).
Numerous massacres of Europeans occur in China, at Ku-cheng, etc.
The French, under General Duchesne, bombard Antananarivo, and compel the Queen of Madagascar to submit to French suzerainty.

1896. Defeat of the Italian forces under General Baratieri at Adowa (near Massowah).
Assassination of the Shah of Persia.
The U.S.A. urge Spain to recognize the independence of Cuba.
Great earthquake and seismic wave in Japan, destroying 25,000 people.

1897. Treaty between Russia and Japan to preserve the independence of the Corea under the protection of the two Powers.

1898. Major Marchand occupies Fashoda on the White Nile in the name of France, but is directed by his Government to withdraw.
The Anglo-French Convention settles the boundaries of Northern Nigeria.
The German Navy League is founded. Death of Prince Bismarck.
The Empress of Austria assassinated.
The United States annexes the Sandwich Islands, and war breaks out with Spain, who refuses to recognize Cuban independence. Admiral Sampson bombards Santiago, which at length has to surrender; Admiral Dewey destroys the Spanish fleet off Manila in the Philippines.
Russia obtains from China a twenty-five years' lease of Port Arthur and Ta-lien-wan.

1899. Peace made between the United States and Spain, the latter abandoning all claims to Cuba and the Philippines, and receiving an indemnity of twenty million dollars.
The International Peace Conference meets at the Hague.
Captain Dreyfus, found guilty of high treason in 1894, is again tried and found guilty, but is pardoned by President Loubet.

1900. The Samoa Treaty cedes Samoa to Germany, and the Tonga, Savage, and Solomon Islands to Great Britain.
Death of the Duke of Edinburgh, Prince of Saxe-Coburg and Gotha.
King Humbert of Italy assassinated, and succeeded by his son Victor Emanuel III.
Numerous massacres by the Boxers in China; the rioters besiege the Pekin Legations, which are saved by a combined force of the Great Powers, including Japan.

1901. Capture of Aguinaldo, the Philippine insurgent leader.
Death of ex-King Milan of Servia at Vienna.
The constitution of the Hague Arbitration Court settled, its first case being between the United States and Mexico in October, 1902.
Assassination of President Mc Kinley, who is succeeded by President Roosevelt.

1902. The Triple Alliance renewed between Germany, Austria, and Italy.
Volcanic eruptions destroy St. Pierre in Martinique, when 80,000 people are said to have perished.
Cuba is organized as a republic under the suzerainty of the United States.

1903. Alexander I. of Servia and his wife Draga assassinated in a military insurrection.
Cardinal Sarto (Pius X.) succeeds Pope Leo XIII.

BRITISH EMPIRE (*continued*).

A.D.

poning the Coronation from June 24th to August 9th.
The Uganda Railway to Lake Victoria Nyanza nearing completion.

1903. The Tariff Reform League inaugurated.
Col. Morland takes Kano and Sokoto, and subdues Hausaland in W. Africa.

1904. General Egerton represses Dervish risings in Somaliland.
An Anglo-French agreement is signed in April as the result of the *entente cordiale* established between the two nations, chiefly through the tact, geniality and wisdom of King Edward. The agreement consisted of a convention concerning Newfoundland and West Africa, a declaration dealing with Egypt and Morocco, and also with Siam, Madagascar and the New Hebrides.
Colonel Younghusband, escorted by a force under General MacDonald, penetrates Tibet and concludes a treaty with the authorities at Lhasa.

1907. The grant of self-government to the Transvaal and Orange River Colony.

1908. Franco-British Exhibition in London.
Remarkable suffragist demonstrations.

1910. Death of Edward VII., May 6th, and accession of George V.
Inauguration of the Union of South Africa, with Lord Gladstone as Governor General, and General Botha as Premier, May 31st.

EVENTS ABROAD (*continued*).

A.D.

Disturbances become serious in Macedonia, and Austria and Russia jointly intervene to impose reform.
The Alaska Boundary Commission meets and defines the rights of Canada along the Pacific coast adjoining territory ceded by Russia to the United States.
Corea is gradually drawn under Russian influence and control, and refuses to open Wi-ju to Japan; the situation is made worse by Russia's refusing to withdraw from Manchuria by the specified date (October 8) without first gaining important concessions. The Grand Duke Alexieff is sent out as viceroy of Eastern Siberia—apparently to foster Russia's forward policy.

1904. Japan refusing to temporise, war breaks out with Russia; Japan makes many attacks on Port Arthur, which is isolated by Kuroki's victory at the Ya-hu River; the Russians fall back to Liao-Yang, and after much fighting to Mukden, where is fought an eleven days' battle on the Shaho.
The Russian Baltic fleet, en route for the East, fires on British trawlers in the North Sea.
There is great discontent in Russia; assassinations of General Bobrikoff (Governor-General of Finland), and M. de Plehve (Minister of the Interior).
President Roosevelt re-elected in the United States.

1905. Fall of Port Arthur, after an eleven months' siege. Great Japanese victory near Mukden. A still greater Japanese victory in the Strait of Corea. The Japanese fleet, under Admiral Togo, sunk or captured nearly all the ships of the Russian fleet, under Admiral Rojdestvensky (May 27, 28).
Peace was concluded, 29 August, Russia agreeing to evacuate Manchuria, to leave Corea under the protection of the Japanese, and the Liao-tung peninsula in their possession.

1906. International Conference at Algeciras, Spain, to settle certain questions relating to Morocco.

1907. Anglo-Russian Convention respecting Persia and Afghanistan.

1908. Peaceful revolution in Turkey, the Sultan conceding a constitution with Parliamentary representation.
Terrible earthquake at Messina and Reggio.
Assassination of the King of Portugal and the Crown Prince, whilst driving through the streets of Lisbon.

1909. Revolution in Turkey and deposition of the Sultan, Abdul Hamid II.

THE RELIGIONS OF THE WORLD.

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INTRODUCTION.

It would be a vain task here to give a sketch of Christian doctrine; an acquaintance with this must be assumed, and all that will now be attempted as an introduction to the treatment of the other world-religions, will be to survey the latter from the Christian standpoint. Two dangers are to be guarded against: one, of disparaging other religions by minimizing the truth they contain in common with Christianity, of forgetting that "the true Light lighteth every man as he cometh into the world"; the other, of disparaging our own religion by minimizing the truth that is peculiar to it, of overlooking the correctness of proportion which completeness alone can give, and so of deeming unnecessary the command to "make disciples of all the nations." We shall examine the great "Book Religions" of the world—Hinduism, Buddhism, and Zoroastrianism, springing up among the Aryan race; Confucianism, Taoism, and Shintoism, belonging to the Mongolian or Turanian race; and Semitic Muhammadanism. In all these can be discerned the purity of a primitive monotheism, which in course of time has been overlaid by baseless speculation or meaningless ceremonial, and so has degenerated into superstition; but it is not to be forgotten that these two causes of corruption tend to operate universally, and have played no little part in the history of Christianity itself; nor should a religion's degradation blind us to its underlying, if distorted or exaggerated, truth; while the study of other religions may furnish us with illustrations of our own, and criteria to test its purity.

Hinduism and Buddhism take a wholly pessimistic view of man; the former feels the need for sacrifice, but its sacrifices insist on no corresponding moral activity; the latter knows the value of meditation, but meditation does not lead to a "walk with God." The Hindu system of caste speaks of subordination in unity, of the religious character of all life; the Buddhist denial of caste tells of the brotherhood of man. In both systems, the transmigration of souls shows forth the unity of all life—"the whole creation groaneth and travaileth in pain together";

both look for the extinction of personality, for Brahman is not the "I AM" of Exodus, but merely the "It is"; both speak of incarnation, but the Hindu incarnations of Vishnu are apparent only, and Buddhist incarnations do not serve to raise man's whole nature; neither system has learnt to distinguish subject from object, imagination from reality, fancy from truth. On the other hand, the third Aryan religion, **Zoroastrianism**, views the universe not as a delusion or a snare, but as an expression of the glory of the Creator, to which man may contribute, and in which man may eternally share.

Confucianism and **Taoism** are optimistic in their view of man; he is by natural endowment good, so that sin as a fact and power in life drops out of sight. Thus they indulge in so profound a reverence for the past as to set effectual limits to all aspirations for the future. They realise vividly the oneness, the solidarity, of the human race throughout history, but they know no Incarnation which can enable them along the vista of humanity to catch a glimpse of God.

Last comes **Muhammadanism**, the only great world-religion later than our era. It made its protest against a lifeless Christianity which had ceased to preach the gospel, but it proceeded itself to proselytise with the sword; it realised the need for man's submission to God, but not for his co-operation with Him; it put away the idols of the day, and replaced them with an idolatrous regard for places, times, and formulas; it caught a fleeting vision of truth, and sought to fix it as an eternal ideal; and as its self-imposed limitations grow more apparent in the march of history, so is its human origin more clearly established.

The Christian's Faith is not in a book, like the Muhammadan's in the Koran, but in a Person, Whose Life does not belong to the past, whither Confucianism and Taoism would have us look, but covers past, present and future; yet that Life which was from all eternity has entered the realm of history, and so submits to the test of verification which Brahman or Buddhist neither expects nor gives. It is a power in man's life now, and a hope for the life to come, and thus offers what none else has professed to offer—pardon for the past, grace for the present, glory in the future. The Christian's view of man's nature, development, and destiny is marked by neither a hopeless pessimism nor a baseless optimism, but it foresees the time when the actual and the ideal shall be harmonised in one great reality; and so it contains the living germ of all progress, both for the individual and the race.

If such be the facts, doubly sad is it to turn to the next portion of our task, and to seek to portray the differences which exist among those who profess a common allegiance to one Divine Master. Such differences are inevitable, if the divine truth transcends any one expression of it; they are natural if the revelation is many-sided, while man is limited; they are pitiable if they lead men to "compromise for the sake of peace, rather than comprehension for the sake of truth"; they are inexcusable if they are made the cause of mutual jealousy, hatred, or dissension; but they must be understood before they can be reconciled, and with this as an aim, their study becomes most profitable.

We shall attempt, therefore, to present the characteristic tenets of the various Christian bodies in the light in which they themselves regard them, and to abstain from criticism; just as in dealing with other religions we shall try to outline the positive teaching of each, without emphasising any errors or lack of proportion in handling the truth. If any appearance of dogmatism be incurred, the limits of space must be pleaded, which prevent any discussion of moot points. The purpose of this article will be served if it stimulates any reader to further research for himself.

CHRISTIANITY.

Christendom consists of three great divisions—the Roman, Greek, and Anglican communions—together with the Lutherans, the Wesleyans, and a number of smaller bodies more or less independent of each other. The Roman Church extends no recognition to any other, as it insists on submission to the Papacy, as an essential to Catholicity; but intercourse between the Greek and Anglican communions seems growing in intimacy and cordiality. In England we have the unhappy spectacle of a country whose Christianity is too divided to fight effectually against the common foes of sin and ignorance, though we all hope that it may yet be reunited by mutual charity to perform its mission in the world.

1.—THE CHURCH OF ENGLAND.

Its History. Acting on the principle stated near the end of the Introduction, we shall, in speaking of the Church of England, let history and her own formularies speak as much as possible for themselves. The conversion of the English to Christianity began with the preaching of Augustine in 597. During the next century, the work of conversion went on with varying success. This work was carried on by Birinus and other missionaries from Rome, and by Aidan and other missionaries from Columba's monastery of Iona. The Anglo-Saxons Kingdoms were thus Christianised by a number of different missions of different origin; but in 673 at the Council of Hertford the Churches of the Heptarchy were united into one Church, under the headship of the See of Canterbury, in communion with that of Rome. Archbishop Theodore, under whose leadership this union was effected, then proceeded to organise the Church of England, settling the number and boundaries of its dioceses, and dividing each diocese into parishes. This settlement of the English Church preceded by a century and a half the nominal union of the English State under Egbert, 827. With the advent of William I., the National Church came more immediately under the jurisdiction of the see of Rome, but it never ceased to resist the encroachments of the Papal power until, at last, in the reign of Henry VIII., by the action of the Crown, and with the assent (willing or unwilling) of the Church, as represented by Convocation, it was withdrawn entirely from the Pope's jurisdiction, 1534.

The Reformation, thus begun, after a struggle lasting more than a century, ended, 1662, in the *Act of Uniformity*, which ordered the performance of public worship in accordance with "The Book of Common Prayer," then issued in the form in which we see it still. But the Church thus reformed claims to be historically and essentially the same Church that was organised in 673, just as England remained the same kingdom after the Revolution which placed William of Orange on the throne, as before that event. "The popular notion," says Freeman, the historian, "clearly is that the Church was 'Established' at the Reformation. People seem to think that Henry VIII. or Elizabeth having already 'disestablished' an older Church, went on of set purpose to 'establish' a new one, whereas in reality in all that they did, Henry and Elizabeth had no more thought of establishing a new Church than they had of founding a new nation." Bishop Chavasse, in his address to the Church Congress of 1904, sums up the historical position of the English Church in these few words: "The position of the Church of England is unique. She is English and not foreign. The State did not make her. No Parliament or political party can claim her as their creation. She is older than the State and stood at its cradle. . . Like the State, she has passed through change and revolution, but her continuity has remained unbroken. . . . She is the same Church in the same sense as the English people are the same people."

Catholic and National. The Church of England claims to be as truly Catholic and Apostolic as that of Rome, whilst protesting against the departure of the latter from the doctrine and discipline of the Christian Church in the first four or five centuries of its history. She asserts that her ministry of three orders—bishops, priests, and deacons—is not only in accord with the rule of the Church in the days of the Apostles, but that the bishops derive their authority (so she maintains) by uninterrupted succession from the apostles themselves. Whilst claiming to be as truly Catholic as any branch of the Christian Church, the Church of England has persistently, through the centuries

of her history, maintained her ideal of national churches existing within the Church Catholic, and has asserted the right of "every particular or national Church to ordain, change and abolish ceremonies or rites of the Church ordained only by man's authority" (Art. xxxiv.). Whilst affirming that the Sovereign has "the chief government of all estates of this realm, whether they be ecclesiastical or civil," she declares that "the Bishop of Rome hath no jurisdiction in this realm of England" (Art. xxxvii.). The English Church has undoubtedly played a great part in the cause of national freedom.

Its Diversity and Comprehensiveness. Nowhere does the Church of England lay claim to "distinctive doctrines." What she calls upon her members to believe is contained in the three Creeds of antiquity—the Apostles' Creed, the Nicene Creed, and the Athanasian Creed. The acceptance, indeed, of the Apostles' Creed is all that she demands of those who come to be admitted into the Christian Church. She aims at preserving the unity and proportion of the faith and avoiding the presentation of a distorted image of the truth by bringing any doctrine into undue prominence.

One of the most striking differences between the Church and the various sects which have gone out from her, lay in the fact that in the seceding bodies the bond of union consisted in identity of opinions or similarity of religious experiences; certain distinctive views or spiritual experiences marked a man off as a Baptist or as a Wesleyan; but the Church of England tolerated within her borders a great diversity of views among her members. Owing to the freedom of thought, which was both the cause and the consequence of the Reformation, there have been always since that event two extreme parties within her fold. But the great body of her members has usually followed the *via media*, which at the Reformation was deliberately taken between Rome and Geneva. "It hath been the wisdom of the Church of England," as we read in the opening lines of the Preface to the Prayer Book, "ever since the first compiling of her Public Liturgy, to keep the mean between two extremes."

Supremacy of Holy Scripture. Another characteristic of the English Church—which she shares with all Protestant bodies—is the commanding position she assigns to Holy Scripture, which she regards as the final court of appeal in all things pertaining to spiritual life and godliness. "It is not lawful," she says, "for the Church to ordain anything that is contrary to God's Word written, neither may it so expound one place of Scripture that it be repugnant to another" (Art. xx.). And of Holy Scripture as a fountain of heavenly knowledge she declares, "Holy Scripture containeth all things necessary to salvation; so that whatsoever is not read therein, nor may be proved thereby, is not to be required of any man that it should be believed as an article of the Faith, or be thought requisite to salvation" (Art. vi.).

Besides the Church of England, which is limited to England and Wales, there are in the "**Anglican Communion**" many Churches elsewhere which are in full communion with her, but in independence of her. These Churches are: (*a*) The Episcopal Church in Scotland; (*b*) the Church of Ireland, under the archbishops of Armagh and Dublin; (*c*) the Protestant Episcopal Church in the United States of America; and (*d*) the Churches of the following Provinces: (1) Canada, (2) Rupert's Land, (3) the West Indies, (4) New South Wales, (5) New Zealand, (6) India and (7) South Africa. There are, in addition, in each continent several independent dioceses which have not yet been grouped into provinces.

2.—THE ROMAN CATHOLIC CHURCH.

The members of this Church so predominate in number as to constitute nearly the half of Christendom. Holding that the Church of Christ is a visible unity, they believe that for the Church upon earth there has been divinely appointed a visible Head, who is the Pope, "the Vicar of Jesus Christ, the successor of Saint Peter, Prince of the Apostles." Consequently they hold that membership of the Church involves submission to its Supreme Pontiff; and that that alone can be the true Church, which is in communion with the Roman Pontiff sitting in the seat of the Apostle Peter, who, as they believe, received supreme authority from Christ Himself (Matt. xvi. 17. 18).

The Creed of Pope Pius IV. (1564), to which all converts subscribe, begins with the Nicene Creed, and then professes acceptance of apostolic and ecclesiastical tradition, and of Holy Scripture in that sense in which the Catholic Church has held and holds it. It admits seven sacraments—Baptism, Confirmation, the Eucharist, Penance, Extreme Unction, Orders, and Matrimony. As to the explanation of the manner of Christ's presence in the Holy Eucharist, it receives the doctrine of Transubstantiation—the change of the whole "substance" of the Bread and Wine into the Body and Blood of Christ. And, finally, it affirms a belief in Purgatory, Prayers for the Dead, and Invocations of the Saints, with an acceptance of Indulgences, Images, and obedience to the Holy See.

Though *semper eadem* (always the same), Rome recognises a possibility of development in doctrine; for instance, in 1854 the dogma of the Immaculate Conception of the Blessed Virgin Mary was promulgated; and in 1870, the Vatican Council regulated and legitimized this development by decreeing the Papal Infallibility, viz., "that the Roman Pontiff, when he speaks *ex cathedrâ* (i.e., when, fulfilling his office of Pastor and Teacher of all Christians, in his supreme apostolic authority, he defines a doctrine of faith or morals to be held by the Universal Church), through the divine assistance promised him in the Blessed Peter, is endowed with that infallibility with which the Divine Redeemer has willed that His Church—in defining doctrine of faith or morals—should be built up: and that therefore such definitions of the Roman Pontiff are of themselves, and not merely because of the consent of the Church, irreformable." To this decree the **Old Catholics** of Switzerland, Germany, and Bohemia refused assent; they were headed by Dr. Döllinger and Professor Friedrich, and procured an episcopal succession through the Archbishop of Utrecht.

3.—THE GREEK CHURCH.

This Church, which is often known as the Eastern or **Orthodox Church**, numbers some 85 millions of adherents, two-thirds of whom are Russians, and includes among its sects the Armenian, Abyssinian, and Nestorian Christians, and other bodies round the east end of the Mediterranean. The schism of Christendom into Eastern and Western, had many causes: the rivalry of Rome and Constantinople, the differences of temperament between the Latin and the Greek, and the variations of doctrine and ritual that naturally followed; but the main cause was Papal aggression, and the centralizing tendencies of the Roman See, which outraged Greek susceptibilities and traditions.

The final separation came in 1054, when Pope Leo IX. excommunicated the Patriarch of Constantinople, Michael Cerularius. While submission to the Pope presents an insurmountable barrier to the re-union of the Greek Church with Rome, no such obstacle exists towards the Anglican Church, and the last half century has witnessed a great development in cordiality and mutual understanding between these two bodies.

The Greek Church has maintained a conservative attitude in doctrine and ceremonial, and can make the appeal to antiquity with entire composure. It accepts the first seven Councils as Œcumenical, but protests against the surreptitious insertion of the *Filioque* (the clause stating the Procession of the Holy Ghost from the Son as well as from the Father) into the Nicene Creed. It requires its parochial clergy to have married before ordination, but its bishops are celibate, being selected from the monastic orders. It recognises seven sacraments, uses triple immersion in Baptism and leavened Bread in Holy Communion, and gives the Cup to the Laity. It uses an elaborate and ancient ceremonial in its worship, and its churches are adorned with pictures, but sculptured or graven images are rigorously forbidden. The *ikons*, which take so prominent a position in Russian homes and Churches, are only pictorial representations or

portraits of Christ, the Virgin, or Saints. Not even the Crucifix is now used in the East.

4.—LUTHERANISM.

LUTHERANISM is the form of Protestantism which prevails among the Teutonic races of continental Europe, with the exception of Upper Germany. It is computed that there are over 30 millions of Lutherans in the world, chiefly in Lower Germany, Denmark, Norway, Sweden, some of the Russian Baltic Provinces, and the United States of America. The name "Protestant" was first applied to the minority at the Second Diet of Spire in 1529, when the majority reversed the verdict of the First Diet (1526), which allowed every prince to regulate religious disputes within his dominions until a General Council should be held; whereas the Second Diet decreed that no change should be made until the holding of a General Council. Thus the term "Protestant" historically denotes simply opposition to the papal theory of Church government.

Strictly, the leading tenet of Lutheranism is *Consubstantiation*—namely, that in the Holy Communion Christ's Body is "present in, with, and under the unchanged bread and wine"; thus Transubstantiation is rejected, which makes the substance of the bread and wine disappear after consecration; and a denial is given to the view of the Swiss reformers, headed by Calvin and Zwingle, who taught that the bread and wine were mere symbols of the Body and Blood of Christ, Who is not really present in the Sacrament at all.

The belief of the Lutherans is summarised in the *Confession of Augsburg*, which was drawn up in 1530, under the guidance of Luther's friend, Melanchthon; and as Luther, in his protest against the Papacy with its system of Indulgences and Pardons, made no objection to the use of vestments, the crucifix, or paintings, these things still are used in worship in Lutheran Churches. In the 18th century, *Rationalism* made its appearance in Germany, and now permeates Lutheranism very widely, so far as to reject some of Luther's most cherished dogmas (as for example on the Inspiration and Authority of Holy Scripture), while claiming to expound more faithfully the spirit of his teaching. The **Old Lutherans** are the separatists in the early years of the 19th century—the conservative minority, who objected to the action of the Prussian Government in uniting the Lutherans and other Reformed (often anti-Sacramentarian) bodies into one National Church.

5.—PRESBYTERIANISM.

PRESBYTERIANISM has been maintained in the Established Church of Scotland since 1689. It is worthy of note that Scotland has passed from one extreme to the other: before the Reformation it was, like France, devoted to the Papacy in a way that England never was; since the Reformation it has shown a distaste for episcopacy and other marks of Catholic antiquity, such as England has never felt. Presbyterianism holds stoutly to the authority and divine appointment of the sacred ministry, but maintains that the apostolic succession lies in the order of presbyters, and that the bishops' assumption of the sole power to ordain is a usurpation; herein is a marked contrast to the attitude of the Congregationalists, who regard ministers as the delegates of the congregation, without any special divine commission. The machinery of Presbyterian government consists of Kirk-Sessions, Presbyteries, Synods, and General Assemblies; but its doctrine has very largely been permeated by the teaching of the French reformer, John Calvin, as preached in the 16th century by John Knox. The main tenets of **Calvinism** are:—

(1) *Election:* that God fore-ordained Adam's fall, and from all eternity elected some men to be saved, others to be lost. (2) *Particular redemption:* that Christ died for the elect only. (3) *Denial of free-will:* that unregenerate man has no freedom of the will. (4) *Effectual grace:* this is given only to the elect. (5) *Final perseverance:* that the elect have irresistible grace, and cannot fail of final salvation.

In the Confession of Faith drawn up at Westminster in 1643 by an Assembly of Divines, who had been convened by Parliament to organise a Presbyterian Establishment in England, there were thirty-three articles, to which the ministers of the Scots Established Church still subscribe assent; and these articles embody Calvin's teaching on all the above points. On these articles also were founded the Longer and Shorter Catechisms, which are in general use in Scotland.

Presbyterianism and Episcopacy struggled with each other for supremacy in Scotland from the Reformation until the Revolution. But from 1689 onwards, the **Established Church of Scotland** has been Presbyterian. During the 19th century numerous secessions occurred on the question of patronage (which was claimed for the whole congregation, not merely for its lay-elders, still less for private patrons); the bodies thus formed amalgamated in 1847 as the **United Presbyterian Church** ("U.P."). In 1843 the **Free Church of Scotland** seceded from the Established Church in condemnation of its system of private patronage (which was abolished in 1874), although the seceders fully approved of Establishment in principle. In 1900 the Free Church with the assent of all its members, except a small minority, joined the "U.P.", but in doing so forfeited all right to its former property, which was adjudged by the House of Lords (1904) to belong to the minority that had refused to join the "U.P." But by an Act, passed in 1905, the property has been equitably divided between the two sections. The Presbyterian Churches now in Scotland are the **Established**, the **United Free**, and the **Free**.

6.—NONCONFORMISTS.

1.—THE CONGREGATIONALISTS, or INDEPENDENTS. These were the first formally to separate themselves from the Church of England. They were at first called *Brownists*, from the Rev. Robert Brown, of Southwark, who led the secession in 1570; the part they played in the national history during the 17th century, under the name of Independents, is too familiar to all to need telling here. They regard creeds and articles of religion as needless, and protest against requiring subscription to human formularies as a condition for communion; but their main reason for secession was due to their principles of Church order and discipline. By the circumstances of their origin they were Presbyterian in sympathy, and "they believe that the only officers placed by the apostles over individual Churches are the bishops or pastors, and the deacons; . . That to these, as the officers of the Church, is committed respectively the administration of its spiritual and temporal concerns—subject, however, to the approbation of the Church. . . . That the power of a Christian Church is purely spiritual, and should in no way be corrupted by union with temporal or civil power."

Each congregation, or society of true believers who voluntarily assemble together, constitutes a Christian Church: and while it is the duty of Christian Churches to hold communion and to co-operate with each other, yet "no Church, nor union of Churches, has any right or power to interfere with the faith or discipline of any other Church, further than to separate from such as, in faith or practice, depart from the Gospel of Christ." Every Church, therefore, has New Testament precedent for electing its own officers and managing its own affairs, in independence of, and without responsibility to, any human authority; and this it does by the vote of the majority of its Church members, i.e., of those who have formally been enrolled in the Church body, after having given to the pastor and the deacons satisfactory evidence of their being Christians. However, to promote fellowship and co-operation it was deemed well, in 1832, to form the Congregational Union of England and Wales.

2.—THE BAPTISTS. They are successors of the *Anabaptists* (i.e., re-baptizers), who at the end of the 16th century found a home in the newly enfranchised States of Holland, whence they exerted a powerful influence in England, and specially in its eastern counties. Their formal secession from the Church of England took place in 1633, and among their early and most distinguished names are those of Milton and Bunyan.

Their theory of Church government was Presbyterian, as was that of nearly all bodies which dissented from the Church in the 16th and 17th centuries; their essential characteristic was Puritan, or as they put it in their Confession of Faith (1646), "The Church is a company of visible saints, called and separated from the world by the Word and Spirit of God, to the visible profession of the faith of the Gospel, being baptized into that faith." Therefore the baptism of infants or of ignorant persons, or of people whose after life was ungodly, was worthless; "those who do actually profess repentance towards God, faith in, and obedience to, our Lord Jesus Christ, are the only proper subjects of this ordinance (i.e. baptism); . . . immersion, or dipping of the person in water, is necessary to the due administration of that ordinance" (Confession of Faith, 1689).

Though their form of government is congregational, the Baptists of the United Kingdom, in 1813, formed a Union for the purpose of mutual support and encouragement, and for the better ordering of Christian missions to the heathen, in which they have long taken a distinguished part, as witness the names of Carey and Marshman. The Baptists are most numerous in America, where they number more than four millions, a number about ten times as large as that of the Baptists in Great Britain and Ireland. The distinction between General and Particular Baptists was originally similar to that between Arminians and Calvinists, a distinction that no longer holds good.

3.—THE QUAKERS, or SOCIETY OF FRIENDS. This society came into being with the preaching of George Fox in 1646. A chance phrase of his about "quaking at the Word of the Lord," led to what is really a popular nickname; but they speak of themselves as forming the Society of Friends. Neither the Church, nor the Scripture, is to them the sure source of truth; truth only comes by direct and personal inspiration. In the quest for an entire spirituality, and for a perfect response to the divine visitation, all that is outward or formal must be abandoned, as it proceeds from human volition. They, therefore, reject any ordained ministry (for the Spirit moves whom He will), Baptism (except that of the Spirit), Communion (except the inward and spiritual participation of Christ's flesh and blood), a liturgy, and all ritual acts. Specially strong was their protest against Calvinism: "Christ hath tasted death for every man; not only for all kinds of men, as some vainly talk, but for every one, of all kinds." (Article VI., Apology for Quakers, 1678).

Hence came a lengthy conflict with the Baptists, with whom, however, they shared persecution in New England at the hands of the Independents. But in spite of frequent persecutions, and of small numbers, the influence of the Society of Friends has been great. In religion, their protest has been for spiritual experience, rather than intellectual, still less merely conventional, assent. To them, chiefly, has been due the abolition of slavery, even as now they are striving for the abolition of war; and it is rich Quakers who in the present day are most successful in solving the problem of the relationship of employees to employers.

4.—THE UNITARIANS. They first appeared as a distinct denomination in 1719, but they represent a tendency of thought which has always existed in the Church, among its most famous exponents having been Arius in the beginning of the 4th century, and such men as Servetus the Spaniard (who was burnt at the stake by Calvin in 1552), and his contemporary, Socinus the Italian, after whom these views are often called *Socinian*. The Unitarians reject the Catholic doctrine of the Trinity, because they consider that it destroys the Unity of God, but they vary widely in their estimate of our Lord's Person—some acknowledging Him to be divine, others regarding Him merely as a man. They all deprecate a fixity of creed as being an incubus, not an impetus, to free thought; they seek to protect religious thought from crystallization through over-definition; and they agree in laying special stress on morals, and in devoting their foremost attention to the cultivation of character. In the last half century, their most brilliant representative was the famous Dr. James Martineau, most of whose writings would receive the cordial assent and admiration of any Churchman. The Unitarians primarily appeal to the intellect, and their tenets have permeated many other sects—largely in reaction from the Calvinistic view of the Atonement, as the propitiation of an angry Father by the Son. Their organization is *Independent* or *Congregational* in principle.

5.—THE WESLEYANS, or METHODISTS. John Wesley was born in 1703 and ordained in 1725. At Oxford he had been deeply moved at the spiritual lethargy of the Church, and with his brother Charles and others, among whom Whitefield was pre-eminent, he formed a small society of undergraduates to observe the Prayer Book more closely, to keep its appointed fasts, to attend Holy Communion regularly, and to apportion their time methodically. Hence came the name Methodists, which was originally a nickname, such as Ritualists in the present day. In 1735 Wesley entered on his unsuccessful mission to Georgia, and fell in with some Moravians, by whose system he was captivated for years.

The **Moravians** insist on the need of instantaneous and sensible conversion, and consequently depreciate the value of Baptism. Those who have a living faith in Christ have a vivid assurance of their deliverance from sin; and so the life of the Christian is marked by confidence and tranquility. They recognise episcopacy, and their missionary efforts have been the most brilliantly successful of any denomination. Indeed, were their enthusiasm and success reproduced elsewhere in like proportions, the whole world would probably now be Christian. From this sect Wesley broke away to start his revivalist preaching up and down England, appealing to men's emotions, and trying to raise the lives of the most debased.

As Wesley's teaching became distinctly Arminian (i.e., anti-Calvinist), George Whitefield, with the Calvinistic Methodists, seceded in 1741, and formed what is commonly known as the **Countess of Huntingdon's Connexion**, a body which is partly Presbyterian and partly Congregational in attitude. The results of Whitefield's preaching in Wales led to the formation of the **Welsh Calvinistic Methodists**, who became fully organized on a Presbyterian basis in 1811.

In 1744 Wesley summoned a conference of six Methodist clergy of the Church of England and four lay-preachers, and this is commonly regarded as the first of the famous series of Wesleyan Conferences. In 1784, after much hesitation, he consecrated two clergymen as bishops of the long-neglected Christian laity in the United States, whence has sprung the **Episcopal Methodist Church** of that country; yet Wesley, down to his death, stoutly maintained his membership of the Church of England, and earnestly warned his followers never to secede from her. Herein his words and acts were not altogether consistent, and in 1795, four years after his death, an open separation came. The Conference at Manchester yielded to the pressure of the majority of the adherents, and sanctioned the administration of the Sacraments in Methodist chapels, whereas till then they had been received in the parish churches.

Two years later, the **Methodist New Connexion**, which is now so strong in Yorkshire and Lancashire, was formed as a separate body, because the parent body had refused to admit lay representatives to Conference. In 1810 the **Primitive Methodists** began as a separate body, their founder refusing to conform to some new regulation respecting Camp Meetings. In 1815 the followers of Mr. O'Bryan, a lay-preacher, seceded under the name of **Bible Christians**. In 1907 the Bible Christians and the Methodist New Connexion united with another Methodist body, under the name of the **United Methodist Church**. There are many other small Wesleyan bodies, but all agree in regarding preaching as the work of the laity (under suitable restrictions), as well as of the clergy, and in insisting on a definite spiritual experience as the universal foundation of the religious life.

7.—OTHER RELIGIOUS DENOMINATIONS.

We may briefly mention a few other Christian bodies which have gained some adherents:—

(1) **The Free Church of England** was founded in 1844 in protest against the "Oxford Movement" of Keble, Newman, Pusey, etc.; it has bishops, but is distinctly Evangelical and Protestant in character.

(2) **The Catholic Apostolic Church** takes the other extreme. Its adherents only claim to be members of *a congregation of* the Catholic Church, not to form the whole Church. Each congregation has its fourfold ministry of elders, prophets, evangelists, pastors, with deacons—all under an "angel." The members are often called *Irvingites*, because they hold that the miraculous gifts of prophesying and tongues have not ceased from the Church, and this was taught by Edward Irving, who died in 1834; but the Catholic Apostolic Church was not organized till the following year.

(3) **The Plymouth Brethren** form an evangelical sect of strongly Calvinist views, which rejects any organised ministry. They have sometimes been called *Darbyites*, after one of their founders, who enunciated his peculiar views to his congregation at Plymouth in 1830.

(4) The **Swedenborgians** are the followers of Emanuel Swedenborg, who was born at Stockholm in 1688, and died at London in 1772. He was a great scientist and philosopher, and for the last thirty years of his life a great mystic; to him God is Christ and Christ is God, and the New Jerusalem is now on earth.

(5) The **Salvation Army**, under *General Booth* (who was formerly a minister of the Methodist New Connexion), recognizes a truth often forgotten—that the mission of the Church is to the outcast, "to compel them to come in"; unfortunately, in its protest against conventionality, it has lost hold on the Sacraments.

(6) **Christian Science** is the name given by Mrs. Eddy to what she believed to be the discovery of the manner in which Jesus healed the sick and reformed the sinner. It claims that the creation is spiritual and perfect, and evil unreal, and that it proves its position by healing disease without resort to material remedies.

JUDAISM.

Judaism as a religion of the present day has two distinct varieties, which may be termed *Orthodox* (or Strict), and *Reformed* (or Progressive). Nearly all Jews accept the Old Testament as inspired, and consequently are strict monotheists.

The Orthodox Jews add to the Old Testament the Rabbinical traditions. These began to grow up round the Mosaic Law from the time of the return from the Captivity (539 B.C. and onwards), and they were committed to writing in the Jerusalem and Babylonian Talmuds of the fourth and fifth centuries A.D., respectively. Such a Rabbinical Jew looks forward to the coming of the Messiah and the restoration of his race to Palestine, when the Temple will be rebuilt and the sacrificial ritual revived. Meanwhile he observes the Mosaic Law as far as possible, with the Rabbinical traditions that have since been added, and has the highest regard for ceremonial purity in even the smallest minutiæ.

The Reforming Jew has no such hopes, and keeps no ritual observances. He mostly regards the Mosaic sacrifices as only incumbent on a primitive age, and his belief is deeply tinged by a Rationalism similar to that which has invaded German Lutheranism. He is without aspirations for his nation as such, and seeks to assimilate himself to the citizens of the country in which he dwells. Among ourselves, the Jews of East London are mostly strict Talmudists, but as they gain wealth and rise in the social scale, they move to the North or West of London, and abandon the more distinctive tenets and practices of their faith, while they are often entirely ignorant of Hebrew.

The persecution of the Jews in Russia led to the movement known as *Zionism*, which was inaugurated by the late Dr. Herzl. To relieve the oppressed and poorer Jews, a kind of Joint-Stock Company was formed to purchase from the Sultan permission for the Jews to return to Palestine, and there form a commonwealth of their own; but as a rule, the idea has not received support among the richer and more influential Jews. Nevertheless the number of Jews in Palestine has been steadily growing. It is computed that in 1841 there were 8,000; that in 1881 there were 40,000; and that now there are upwards of 120,000, of whom 40,000 reside in Jerusalem itself.

MUHAMMADANISM.

LIFE OF MUHAMMAD. The Christian religion had scarcely supplanted paganism within the limits of the old Roman Empire, when a rival religion was promulgated in the deserts of Arabia by a remarkable man named Muhammad, or Mahomet, who appeared early in the 7th century with the sword in one hand and the Koran in the other for the conversion and subjugation of the nations. Long before the Prophet's birth, Mecca, his native place, had been esteemed a sacred town. Thither came pilgrims to make seven times the circuit of the *Kaaba*, the temple which contained the famous Black Stone, probably an ærolite, but said to have been given to Abraham by an angel; and there, too, sprang up in course of time idolatry of all kinds, entirely obliterating any true worship of the One God. The guardianship of the Kaaba was in the hands of a priestly caste, the Arab tribe of the Koreish, which claimed descent from Ishmael, the son of Abraham and Hagar; and to this tribe belonged both the parents of Muhammad—Abdallah and Amina by name. Their son was born at Mecca in 570 A.D., a few months after the death of his father.

The child was brought up by his nurse, Halima, of the hill-tribe of the Beni-Saad, for five years; and shortly after his return to his mother, Amina, the latter also died. The orphan boy was then taken care of at Mecca by his grandfather, Abd-al-Muttalib, and later by his uncle, Abu-Talib, the high-priest of the Kaaba. After journeying with caravans and acting as a shepherd, Muhammad entered the service of Khadija, a rich widow of Mecca; and so well did he manage her business, that he soon won her hand and fortune. Having thus become a rich man, he had more leisure to indulge in the meditations to which he had always been prone. Each year he spent longer time in solitary contemplation in the cave of Hira (3 miles north of Mecca), where he saw many visions, and experienced many ecstasies, which were perhaps not entirely unconnected with the epileptic seizures to which he had been subject from childhood.

In his fortieth year he saw in a vision the angel Gabriel, and was told that he was to be the prophet of the Almighty, to drive out idolatry, and to restore the pure worship of the One True God. For four years he laboured quietly among his relatives and friends, announcing to them from time to time the divine messages which he received (the earliest elements of the Koran). After thus making only thirteen converts, at the command of an angel to preach openly, he took the "house of Arcam," near the Kaaba, and commenced his public mission. His denunciations of idolatry aroused the hostility of the Koreish, who persecuted his followers, and harshly treated the Prophet himself; and in spite of the generous protection afforded him by his uncle, Abu-Talib, Muhammad would doubtless have been crushed if his foes had been united. In 619 death deprived him of his wife Khadija, to whom he had always been faithful. Her sympathy with her husband's aims had enrolled her name among the four "perfect women," the other three being Pharaoh's wife Asia, the Blessed Virgin Mary, and the Prophet's daughter Fatima. Muhammad's cup of misfortune was filled by the death of his uncle in 620; but then the tide turned. Some pilgrims from Medina were attracted by the new doctrine, and offered their town as a refuge to the persecuted Moslems of Mecca. This was gladly accepted, the last to leave Mecca being Muhammad and his bosom friend and early convert, Abu-Bekr. These two spent three days in hiding in the cave on Mount Thaur, and then made their way into Medina on June 28th, 622, this episode of the HEJIRA or Flight marking the commencement of the Muhammadan era.

But Muhammad's character could not stand the test of prosperity so well as that of adversity. At Medina he extended his sanction to polygamy, and in a few years had taken to himself eleven wives, besides numerous concubines. The Koran having prescribed four wives as a limit, he obtained a special revelation entitling him to

this "peculiar privilege above the rest of the believers," and exonerating him for marrying Zeinab, the wife of his adopted son Zeid. At Medina, too, his former friendliness with the Jews, due to a common monotheism, became the bitterest hostility, and he substituted Mecca for Jerusalem as the *Kibla*, or point to which the faithful must turn in prayer.

Now began his marauding attacks on the caravans from Mecca, his brigandage being viewed as missionary effort, receiving divine approbation. More and more did Muhammad indulge in treachery and assassination, his victims being chiefly Jews or members of the unbelieving hill-tribes; while in 627, after Abu Sofian, the chief of Mecca, had unsuccessfully laid siege to Medina, the Prophet in cold blood butchered 800 of Abu's allies, selling their women and children into slavery. Three years later he found his chance for attacking Mecca, and Abu Sofian, being too weak to resist, was obliged to admit Muhammad into the city, and to profess his own adhesion to the new faith. The Prophet entered Mecca in triumph, and at once swept the city of idols. Then he proceeded to declare a holy war against all idolaters, while Christians and Jews were only permitted to exist in subjection as tributaries. Thus his sway spread over all Arabia; but his end was at hand. He had long been in ill-health, and in 632, after setting an example of making a pilgrimage (*Hadj*) to Mecca, he died at Medina in his 63rd year.

TENETS OF MUHAMMADANISM. The two main points inculcated by Muhammad, were the hatred of idolatry and the worship of the One God. The two chief articles of his creed which every convert had to profess were these: "There is no God but God (*Allah*), and Muhammad is His prophet." His teaching was fully developed in the *Koran*, a book containing the revelations he claimed to have received from the angel Gabriel. Therein was taught the existence of angels (Gabriel, Michael, Azrael, and Israfil, as well as Eblis, the devil), the immortality of the soul, the resurrection of the body, and a state of future rewards or punishments in one of the seven heavens or seven hells. God's predestination was absolute, and therefore it behoved man to be submissive to His will (*Islam*=resignation; *Moslem* or *Mussulman*=one who has surrendered). The chief religious practices imposed were (1) prayer (five times a day, especially on Fridays, while certain seasons and places gave it a special efficacy), (2) fasting (specially in the ninth month Ramadhan), (3) almsgiving, (4) a pilgrimage to Mecca (the Kaaba being still deemed sacred, only its idols had been cleared away), and (5) recitation of the Moslem creed. Gambling and the use of wine were strictly prohibited, and sacred war (*Jehad*) against the infidels was enjoined, while an end was put to infanticide, of which the Arabs had often been guilty. Women had no rights except that of inheritance of property. They could be divorced, re-married, or exchanged, at their husbands' slightest whim, and concubinage with slaves was permitted, but a Moslem might not have more than four wives at a time (as a matter of fact, from poverty or other causes, most Moslems are content with one).

To sum up, Islam is a creed that can found an empire, but not govern it. It cleverly humours the weak points of the Arab character, while repressing one or two of its glaring evils. Worst of all, it uses divine sanction to stereotype a faulty code of ethics, and thus leaves no room for progress either in morals or in civilization; while it demands no personal conviction of its truth, for it is propagated by means of the sword, and professed by means of a formula.

Here, perhaps, may be explained a few terms which commonly occur in writings about Muhammadans:—

The *Mosque* or temple contains (1) the hall of prayer, which marks the direction of Mecca (the Kibla); (2) the place for ablutions which must precede prayer; and (3) the place where the Koran is read and expounded. It is adorned with minarets, from which the Imam calls out the five hours of prayer; and the Moslem's constant reverence and recollectedness in worship would read a valuable lesson to many a Christian congregation. The *Ulema* (=wise) or upper class in Turkey comprises: (1) the *Imams*, ministers, whose chief duty is to offer prayer; (2) the *Muftis*, lawyers; and (3) the *Cadis* or *Qazis*, judges. *Sheikh*, or elder, is the title of the chieftain of a tribe. the Sheikh-ul-Islam being the Muhammadan primate of Turkey. The *Fakirs* (=poor) or *Dervishes* (=beggars from door to door: a Persian term) are an order of ascetic mendicants, claiming to have been founded by Abu-Bekr. Their practices include the *Zikr*, a physical exercise in voice-production which consists of repeating the ninety-nine names of Allah in various ways, rosaries being used for counting; and the *Muraqaba*, or meditation on the verses of the Koran. Some mendicants live in communities, others wander alone from place to place; the most famous order is that of the *Dancing Dervishes*, who are to be seen in Constantinople.

THE KORAN. The Koran (reading) consists of 114 *Suras* (chapters), which vary in length as much as do our Psalms. Each chapter commences "In the name of the most merciful God." Every word is of direct inspiration, and so the book has an infallibility to which Muhammad personally laid no claim, for with him a confession of sin was not infrequent. Texts from the Koran are, therefore, popular charms, and are often enclosed in amulets and worn on the person. The chapters were originally learnt by heart by the Prophet's disciples, and then committed to writing. Their present arrangement is not chronological, but is that of the collection made for the Caliph Omar shortly after the Prophet's death. Those of earlier date are mostly the shorter and more poetical, but their teaching is often superseded in later chapters which contain a revelation more suitable to the Prophet's exigencies. The earliest suras (of 610–613 A.D.) contain noble teaching on righteousness and judgment to come; but then there creep in denunciations of the infidels who "accuse the Prophet of imposture," or "charge the Koran with falsehood," and a lower moral tone both as to life here and hereafter. Gradually there is evolved the sensual Paradise that every believer is to enjoy, whilst the taking up arms to spread the faith is first allowed and then commanded. The later suras show a superficial acquaintance with parts of the Bible (or rather, with some of the Jewish rabbinical and apocryphal literature), and contain distorted legends of the patriarchs and of the birth, life, and miracles of our Lord. Muhammad acknowledged the authority of Moses and our Saviour as Prophets, and asserted that he came to complete their work.

SPREAD OF MUHAMMADANISM. On the death of Muhammad, the Saracen empire embraced little more than Arabia, but in a hundred years after the Hegira, the *Calipps*, as the successors of Muhammad were called, ruled from the Indus to the Pyrenees, and wherever their rule extended, there also their religion was of necessity accepted.

Abu-Bekr, the first caliph (632-34) began the conquest of Syria. **Omar**, the second caliph (634-44), completed the conquest of Syria and reduced Persia and Egypt to submission. The mosque of Omar, on the site of Solomon's temple, was founded by this monarch. In his reign "these Saracens reduced to his obedience 36,000 cities or castles, destroyed 4000 Churches or temples, and erected 1400 mosques." Then followed **Othman** (644-55) who spread *Islam* (the Muhammadan religion) along the north coast of Africa; and on his assassination **Ali** became caliph (655-61).

Ali was the cousin of the Prophet, and had married his daughter Fatima. One sect of Muhammadans, the *Shias*, who are especially numerous in Persia, regard Ali as the rightful successor of the prophet and the first three caliphs as usurpers. They also reject the *Sunnah*, or traditional law which had grown up to supplement the Koran, and was codified early in the ninth century. Taking Ali as their *Imam* (sacred leader), they trace from him twelve successors, the last being the Imam Mahdi, who will return to earth with Elijah to complete the establishment of Islam throughout the world.

At the end of the first century of the Hegira, the caliphs were the most potent monarchs of the globe, but then their empire had almost reached its furthest limits. On crossing the Pyrenees to conquer France, they were utterly defeated by *Charles Martel* (the hammer), grandfather of Charlemagne, at the decisive battle of Poitiers, in 732. The Saracen empire was now on the eve of partition, but

Egypt and the Moslem countries of Asia remained united, and constituted a powerful State under the government of the Abbassides, the descendants of Abbas, Muhammad's uncle. The capital of this new dynasty was Baghdad, and the most famous of the line was Haroun-al-Raschid (786–808), who with his spouse Zobeida, is celebrated in the "Arabian Nights."

The Turks (of Turkestan), who formed the body-guard of these caliphs at Baghdad, soon became strong enough to dictate to their nominal masters. One of their Emirs, Othman by name, subdued Asia Minor in 1299, and assumed the title of *Sultan* (i.e. victorious). From him the present Ottoman dynasty is sprung. These Ottoman Turks invaded Europe in 1355, and took Constantinople in 1453; but the battle of Vienna in 1529 did in the east of Europe what Poitiers had done in the west eight centuries earlier, and effectually set limits to Muhammadan power in Europe.

During the 11th and 12th centuries, the Moslems spread over India, across the Punjab, and into the Deccan; but early in the 18th century their power there began to decline, and the re-capture of Delhi in the Indian Mutiny (1857), put an end to all their pretensions to empire beyond the Indus. Muhammadanism is still the dominant religion in some parts of India. The Indian Muhammadans are concentrated chiefly in Bengal, the North-west Provinces, and the Punjab, and number about 60,000,000 people. Thus the Emperor of India rules over far more Mussulman subjects than any other sovereign.

PRIMITIVE RELIGIOUS IDEAS.

PRIMITIVE MAN. The religions which have been already described—Christianity, Judaism, and Muhammadanism—alike claim to be based on a direct revelation from God to man, and equally make monotheism the central point of their creeds. They are thus pre-eminently *positive* religions, for they appeal for authority to certain definite, positive facts, just as positive law finds its obligations in certain definite statutes; but their claim to convey a revelation does not at all imply that man was previously in utter ignorance of the One Supreme Being; rather would they say with Saint Paul, "Whom therefore ye ignorantly worship, Him declare I unto you"; they found their appeal on *natural* or *customary* religion, of which they assume every man to be more or less possessed. What then are these religious ideas which form in greater or less degree the common inheritance of the whole human race? Whence were they derived? What is their validity? These three questions perplex the wisest among us at the present day; even to suggest their answers taxes the resources of the philosopher who is well equipped with a knowledge of the facts discovered about human origins, early social customs in tribe or family, folk-lore, and mythology. The student of such matters will, of course, make resort to authorities like Max Muller, Tylor, F. B. Jevons, and Andrew Lang; here we can only faintly indicate the main features of the problems involved.

For instance, it is a moot point whether monotheism was the primitive form of religion, which degenerated into various kinds of polytheism, or whether the process was the reverse. The difficulty is enhanced when we notice that evolution includes both progress and retrogression—the former, in religious matters, being exceptional, the latter general. Nor are we warranted in expecting, still less in pre-supposing, a uniform course of development in all cases alike. Our ignorance of primitive man is profound, but there is no reason for identifying his condition—moral, intellectual, or social—with that of savage races with which we are acquainted to-day; for why should the latter be considered exempt from any process of evolution? And if not, how can their present state illustrate the early state of primitive man? Rather is it the case that in the savage can be detected signs of a deterioration, a degradation, which has already taken place; while researches, archæological and other, are tending to push back the beginning of civilisation to a much earlier date than used to be thought possible; and as we follow up the lines of history towards their source, they seem to converge, not in a state of barbarism, but in a state in which man was simply undeveloped.

In the simplicity of his experience, primitive man, we may assume, had not learned accurately to differentiate or distinguish; definitions were impossible, and he did not at first detect the contradictions in which his methods of thought plunged him; and the development of his religious, as of his scientific, ideas, was the result of the way in which he faced such contradictions as they emerged into distinct consciousness. So gradually his ideas cohered in a system, while new ideas would cause older ones to be rejected or re-modelled. Then came the prophet, the religious genius, to impress the touch of a master-hand, and thus would result faiths such as Buddhism and Confucianism. Nor need this humble origin of such (or any) religious systems be considered a defect. Whatever may have been the connection between early religion and magic (and a direct connection is stoutly denied by many), at least the former is no more discredited by the latter than are astronomy and chemistry by their early ancestors, astrology and alchemy.

Without then attempting to put these primitive religious ideas into either logical or historical order, we may analyse this substratum of early notions into its various ingredients, by observing the different developments which have been reached at different times and places in man's history, and the survivals of rudimentary conceptions and practices in more cultured stages of thought. So we shall briefly touch on Nature Worship and Animism, Totemism, and Idolatry, Fetishism and Magic, Taboo and Morality, Polytheism and Pantheism, and related subjects; but as whole libraries are insufficient for such topics, naturally nothing will be here attempted except an explanation of the terms themselves, and a few comments to show how these notions are the rough material out of which traditional systems of religion have been hewn.

ANIMISM. Through dreams, phantoms, ghosts, etc., man is driven to believe in spiritual existence, that is, to refuse to identify life with matter in all cases. Thus attributing vaguely his own life to spirit within himself, he proceeds by analogy to trace the changes and movements of the external world as being due to similar causes. He has not learned to differentiate conscious and unconscious existence, he cannot define personality, but he looks on all nature—rivers, mountains, winds, storms, rocks, stones, as well as plants and animals—as being the abode of spirits. The drama of nature around him, its successions of repose and strife, lead him to think of these spiritual beings as capable of assuming various forms—mineral, vegetable, animal; his instinct for a unity in nature makes such a continuity of life, a transmigration of soul, appear a likely process; and this stage of thought, in which soul or spirit is attributed to all natural objects, is called *Animism.*

But sometimes the phenomena of nature produce unexpected results; for instance, the cold water which has refreshed man times without number, one day gives him (when heated) erysipelas. So he learns in a tentative way to distinguish natural spirits from supernatural, malevolent from benevolent. Surrounded by such spirits, he is compelled in self-preservation to attempt to form friendly relations with them; partly in love, partly in fear, he makes his first experiments in worship, he seeks to establish communion with the unseen world; and then arise Nature Worship, Ancestor Worship, Animal Worship, etc.

ANCESTOR WORSHIP. As the existence of the soul is unbroken by death, so its characteristics in the unseen world are the same as during mortal life. Again, as primitive man finds his allies among the members of his own clan, so too, he learns to look for aid to the spirits of his ancestors. To win their favour or to propitiate other spirits, he must adopt the same methods as would have pleased them on earth—he must make funeral feasts and commemorative rites. This method of coming into communion with the spirits of the departed suggests a way of

entering on friendly relations with the supernatural as such. Love and fear which prompted the funeral feast, now give rise to the sacrificial meal offered to a supernatural or divine being; later perhaps are added ideas connected with the expiation of sin; but the fundamental notion in the sacrificial meal is communion with the deity, and the meal itself is the primitive rite of worship. Lastly, by association of ideas, the funeral feast also assumes a sacrificial aspect, and worship is paid to the departed ancestors. In races in which the imaginative faculty is weak, religion often does not rise above such ancestor worship; thus it seems all that is required by the Chinese at the present day, while the worship of the Manes, or spirits of the deceased, was one of the most marked religious characteristics of the ancient Romans.

TOTEMISM is the superstitious veneration which a savage pays to a certain class of material objects with which he believes his tribe has some peculiar relation and to which he gives the name of *totem*. Some tribes, indeed, actually believe themselves to be descended from their totem. It may be interesting to enquire how this strange notion arose. It seems that at first only the ties of the clan were recognised as binding or even as existent among men. To kill a member of another clan was not murder; moral obligations, even of the most rudimentary sort, only bound those who were of one blood, of one kin. If the blood relationship could be extended, the sphere of moral obligation was correspondingly enlarged; and this was commonly done by making a blood-covenant between different clans, which so became united—thus paving the way for the replacement of clans by nations. For the blood-covenant, it was sufficient if a few drops of blood were mutually exchanged between the members of the different clans—a ceremony which still is enacted among the natives in some parts of Africa.

Again, analogy played its part. The objects of the natural world were seen to fall into genera and species, much as the human race into clans and families. So was suggested the idea of forming a blood alliance with one or other of such species, which was deemed to possess supernatural power and therefore to be meet to be conciliated. First, the animal species would be chosen, and the animal thus selected would become the *totem* (family mark), or kith and kin to the human clan; afterwards the analogy would be extended to include plants and other natural objects. A moral obligation was thus established mutually; the life of the animal or plant must be cherished equally as the life of one's brother-clansman; and so developed the domestication of certain animals, and the preservation and cultivation of certain plants.

Then imagination came into play, and the relationship between the clan and its totem was explained as being not artificial, but natural. A myth would be invented to explain that the kinship was real, and either the totem would be taken as being the ancestor of the clan (as in the earlier myths), or it would be shown how the man had at one period or another assumed the totem form (as in later rationalizing myths). So arose the numerous myths of transformation into or from animals which have prevailed almost universally.

Essentially the totem was an object of worship, for it was the abode of supernatural power, and this was the reason why an alliance with it was sought. To procure the presence of this supernatural ally when needed, the blood-covenant must be renewed, the blood of the totem animal must be shed. This shedding of blood was next interpreted as the offering of the animal to the god. Finally, it was felt that the presence of the god, and communion with him, could best be ensured by the worshippers consuming the totem in whole or in part; and so the sacrifice to the god became a meal in which the worshipper symbolised and realized his unity with the god. But the blood must not be shed on the ground and so dissipated; that would be taboo; so a heap of stones was raised, or a simple stone pillar, on which the sacrifice was made. Thus an altar was originated; and again, by association of ideas, it became sufficient to procure the god's presence if the pillar was smeared with the blood. Then the pillar became the symbol and instrument of the god's presence, and was often carved into some resemblance of the god or of the totem; and so, whether marble monolith or wooden asherah (the "groves" of our Old Testament), the pillar became an idol, to which in turn sacrifices were often offered.

TABOO. This is a Polynesian term, denoting the sacredness of certain things, which must rigidly be avoided in touch, hearing, or sight. They are equally sacred and accursed, they communicate sanctity or impurity. Women, corpses, blood, new-born children, the totem, etc., were taboo; all that touched these or came into communication with them were equally taboo. One's "Sunday-best clothes" are historically taboo; hence, too, comes the inviolability of sanctuary in mediæval times. A sacred monarch of an African tribe can even communicate the contagion of taboo by infecting the daylight with his glance; wherefore he must needs always have an umbrella over his head when he goes out of doors. The distinction of certain things as taboo is by no means based on expediency or common sense, it is not derived from any experience of their harmfulness; rather it is an instinctive recognition of the categorical imperative "Thou shalt not" (as Professor Jevons points out); it is the acceptance of a moral law based on intuition, not on utility. It may issue in enactments of ceremonial purity such as are contained in the Mosaic Law, and reason and experience may subsequently add to, or take from, its enactments; but primarily it is the rudimentary distinction between what is essentially the morally right and the morally wrong—it contains the germ of morality.

FETISHISM. A fetish (or fetich) is a material object which is regarded as the vehicle of a supernatural presence, as containing a spirit which possesses supernatural powers. By a false identification of the sign and the thing signified (just as a person's name is sometimes considered to be identical with the person himself), races of low civilization often consider that the possession of such an object gives its possessor control over the supernatural power associated with it. Thus the fetish is not an idol, for it is not worshipped, but is treated as a means of compelling the deity to yield to man's desires, and to become his protector and even his slave. Then follows the notion that the spirit can, under certain circumstances, be compelled to adopt a certain object as its dwelling-place. Consequently there grows up a whole system of magic which is essentially hostile to the spirit of religion; for it replaces dependence on a higher power by a belief in the possibility of controlling the higher powers, and making them subservient to man's wishes. It may be remarked that a *fetish* is always some particular object, whereas a *totem* is never an isolated individual, but always a class of objects.

POLYTHEISM AND PANTHEISM. The notions expressed in animism, totemism, fetishism, etc., may lead to the separation of various deities from one another, and the regarding them as each having a distinct sphere of action and dominion, in which they are to be the supreme objects of worship. This is **Polytheism**, whose "many gods" are mostly in origin powers of nature, "nature gods," which gradually are personified, and by this process of **Anthropomorphism** are supposed to exist and act as men, only with less limited powers. Among these gods are often enrolled ghosts, the spirits of the departed, and especially departed heroes. Anthropomorphism is the inversion of the truth contained in Genesis i.; instead of viewing man as made in God's image, it makes God in man's image, and sees in Him some of the limits and many of the imperfections which exist in man.

A natural re-action from Polytheism and Anthropomorphism, is to **Pantheism**, which seeks to identify the universe with God, and, in its baser form, God with the universe. Thus it regains that unity in the world to which experience testifies, but which polytheism had lost; and it finds a sacredness in the universe which lower systems of thought miss. So far as it "sees God in all things, and all things in God," it is consistent with the teaching of Saint Paul

in Acts xvii., and Colossians i., ii.; it is only when it seeks wholly to identify God with the universe that its tendencies become un-Christian (as is the case with the Vedantic philosophy in Hinduism).

The term itself is a modern one, and is in contrast to the **Deism** of the 18th century, which entirely separated God from His creation, and denied the necessity or possibility of any revelation from God to His creatures. At the present day, Pantheism is rather known as **Monism**, a term which strictly denotes the unity of all substance, of all existence. Unfortunately it is often used as the equivalent of **Materialism**, which would make mind merely a function of matter, and thereby deny all spiritual existence; while **Spiritualism** would either reverse this relationship, or else maintain an ultimate dualism between mind and matter.

Having thus outlined some of the fundamental religious conceptions of man, when unenlightened by revelation, we now proceed to deal in detail with those great world-religions which do not claim for themselves the authority of a special revelation.

HINDUISM.

RACE AND LANGUAGE. Asia has been the birthplace of all the great religious systems of the world, and therefore, to understand these systems, we must have a clear notion of the varieties of race and language which have originated in that continent. These varieties group themselves in the three well-known families of the Semitic, Turanian, and Aryan races. The SEMITIC languages include Arabic, Syrian, Phœnician, Hebrew, Babylonian, and Assyrian; and though the area in which they have been spoken has been comparatively limited, yet the religious genius of these nations has had the profoundest and widest influence.

The original home of the TURANIAN race seems to have been the belt of mountain-land in central Asia, which stretches from the north of the Sea of Aral into Mongolia; in the west, this people was identified with the Scythians (whose representatives in modern Europe are the Turks, Hungarians, and Finns), in the east, with the Mongolians (who very early settled along the Yellow River, and peopled China). In pre-historic times this race had penetrated into India, partly through the Punjab, partly by the eastern passes of the Himalayas; the aborigines whom they dispossessed, but who probably were of kindred blood, were the Kolarians, whose descendants are the lowly-civilised inhabitants of Chota-Nagpur of the present day; while the immigrants became known as Dravidians, whose modern dialects comprise Tamil, Telugu, Malabar, etc.

The cradle of the ARYAN peoples was the source of the Oxus, nestling between the Pamir steppes and the Hindoo Koosh mountains; thence originated two waves of migration, one north-west into Europe, the other south-west over Persia and India, from which circumstance Indo-European or Indo-Germanic is often used as an equivalent term to Aryan. In Europe, offshoot after offshoot was thrown off from the parent stock to settle in the lands which were successively mastered, and so there developed such families of languages as the Celtic, Hellenic, Italic, Slavonic, and Teutonic; while the invasion of Persia and India gave rise to the Iranian and Indic tongues respectively. The ancient Iranian language became afterwards known as *Zand* or *Zend*, because in it was written the Zend-Avesta (i.e., commentary and text), the sacred scripture of the Zoroastrians, the modern Parsees. In India, the Aryans spread in successive incursions first over the Punjab, then along the valley of the Ganges, and at last southwards into the Deccan; their early speech is preserved for us in *Sanskrit* (=refined), the language of the Vedas and other sacred literature of the Brahmans, which is now recognised as being only one remove from the primitive Aryan tongue.

> As centuries passed, there evolved from the original Sanskrit numerous vernacular dialects, and before our era Sanskrit ceased to be spoken except in the Brahman schools, where it is still studied, and occupies much the position that Latin does in the Roman Church. These various dialects are called *Prakrit* (=natural, unrefined), and of them there are some hundreds, one of the most notable being *Pali*, the language of the Buddha himself, and of the early Buddhist scriptures; all these dialects stand related to Sanskrit as Spanish or Italian does to Latin.

Thus in the population of India three distinct strains are to be traced—Kolarian, Dravidian, Aryan; but there are comprised at least a dozen different nationalities, whose varieties of language number between five and six hundred. Nor is this wonderful if one bears in mind the constant foreign influence to which the country has been subjected, not only through the various European settlements of the last three centuries, but also in earlier ages through Persian, Greek, and Muhammadan invasions; and though native princes at various times won for themselves wide power, there never seems to have existed a unified native Indian empire—we must regard India rather as a continent than as a country. Of its 300 million inhabitants, about one-fifth profess Muhammadanism; the religion of the great mass of the remainder can best be denominated Hinduism, a convenient term to denote an agglomeration of every conceivable form or negation of philosophy and faith, which knows only one heresy—the denial of caste and Brahmanic supremacy. It is in the acceptance of caste, and not in any variety of belief or unbelief, that the unity of Hinduism lies; within its pale all inconsistencies of thought can be tolerated, even if they cannot be reconciled, and the law of contradictories may become a dead letter; it is ready to humour any idiosyncrasy, and to show indulgence to any prejudice; but for the distinctions of caste it imperatively demands a universal assent.

CASTE. Doubtless the system of caste originated in the contempt which the Aryan (=noble) conquerors had for the Turanian natives, and in the necessity which they felt for protecting their purity of race from intermixture with that of their conquered foes. By about 1500 B.C., Aryan incursions into India had ceased, and the invaders were losing their nomadic character, and settling down in village communities to the pursuits of agriculture and commerce. Their three chief occupations in life—religious worship, war, trade—had already given rise to the three classes of priests, warriors, and merchants, which in course of time became stereotyped into the three strictly hereditary castes of *Brahmans*, *Kshatriyas*, and *Vaisyas* respectively, and these were afterwards honourably distinguished by the appellation "Dvi-ja" (the twice-born). The Turanian lowlanders, who still lived among their Aryan conquerors, and performed for them the more menial tasks in life, were added as a fourth caste of *Sudras*, artisans and labourers; but the other aborigines, many of whom were driven southwards, were of no caste at all, *Pariahs*, men outside organised society.

Members of different castes could not inter-marry, nor eat food in common, nor even touch one another; and gradually there grew up an elaborate system of domestic ceremonial, whose observance was of vital importance. As civilization became more complex, and new occupations in life arose, the four castes subdivided again and again; further, for some centuries the prohibition against inter-marriage seems to have been so far relaxed that the children born of an unequal union, say of a Brahman father and a Vaisya mother, constituted a new caste, neither Brahman nor Vaisya. But while the castes thus multiplied till they became several hundreds in number, the rigidity of their demarcation continued as severe as ever. The system was in some degree justified by its practical utility, for many castes served the same purpose as guilds, trades-unions, and professional societies among ourselves. When the custom of caste had grown inveterate, it was traced back to divine appointment, and a myth explained how, as animals had been created in various classes, so, too, God had made the Brahmans from His mouth to teach men, the Kshatriyas from His arms to defend them, the Vaisyas from His stomach to feed them, and the Sudras from His feet to serve them.

GENERAL CHARACTERISTICS OF HINDUISM. The easiest way to analyse Hinduism into its constituent, and often contradictory, elements, is to trace historically the growth of its sacred literature—only remembering that there is no process of discrimination or rejection between its different strata, but simply one of accumulation; a Hindu's belief is rather within than in his religion. The whole of this literature is in Sanskrit, and falls into two divisions:—

(1) The VEDA, whose composition occupied roughly the thousand years from 1500 to 500 B.C.; this is entirely *Sruti*, "revealed," attributable to no human agency, but divinely communicated to a succession of Brahman sages (*Rishis*), who handed it on orally, and at length committed it to writing.

(2) The POST-VEDIC LITERATURE, which is *Smriti*, "tradition," which has gradually been formed by human, yet inspired, authors to supplement and illustrate the original revelation.

As we dissect these scriptures, we may detect how a positive monotheism passed into nature worship and pantheism. Then side by side there developed an exoteric ritualism and an esoteric rationalism. Scepticism followed and the ethics of society found their basis in convention and law rather than in religion. Last appeared polytheism and idolatry, superstition and magic, unbridled immorality, and unlimited credulity. But it is open to the Hindu of to-day, without incurring the disapprobation of his co-religionists, to select and combine the characteristic features of all or of any of these stages of religious belief and practice, according to his personal judgment. One thing, and one thing only, is obligatory—the observance of *caste*; for *caste* is the single thread which runs through the whole complex tissue of Hindu belief and practice, and pervades a Hindu's entire existence.

In the study of the Hindu religion, we may conveniently distinguish three main periods—Brahmanism proper, down to the 5th century B.C., the Buddhist reformation on to the 7th century A.D., and their complex product, Hinduism, which exists in India to-day. To learn the nature of Brahmanism we must study the Veda or Brahmanic scriptures. The earliest hymns in the Veda suggest to us what was the primitive faith of our Aryan forefathers, they speak to us of the one reality of the universe—self-existent force, all-embracing self, universal spirit (*Brahman*). They tell us that the way of eternal life, the path of salvation, lies through knowledge (*Veda*). In the most ancient hymns *Brahman* is all in all; the whole of existence represents his successive emanations, the whole of sense-experience is due to his illusory appearances.

VEDIC LITERATURE. The Veda falls into three divisions: the text (*Mantras*) and its two sets of commentaries (*Brahmanas* and *Upanishads*).

1. The MANTRAS (charms to communicate thought) consist of five collections of hymns and texts of praise and prayer, probably compiled from 1500 to 1200 B.C., which contain no references to images, temples, the system of caste, or the doctrine of the transmigration of souls. The chief of these collections is the *Rig-Veda*, containing 1,017 hymns, in praise of the deified powers of nature.

2. The BRAHMANAS are prose-works, the result of priestly activity between 800 and 500 B.C., and are appended to the Mantras as a manual of ceremonial, arranging them for sacrificial use. The Brahmanas exhibit a belief in a future state with rewards and punishments, and hint at the transmigration of souls; but their main theme is sacrifice, which can alone avail for propitiation and for impetration of benefits, but which is only effective when duly performed by priestly mediators. Their sacrifices are of horses, oxen, sheep, and goats, which are regarded as substitutes for men.

3. The UPANISHADS are chiefly in prose, and belong to the same period as the Brahmanas, which was also the age of Pythagoras, Zoroaster, and Confucius. These treatises convey mystic doctrines respecting the everlasting problems of psychology and ontology. Each individual soul is like Brahman, and has neither beginning nor ending; its conscious life can only be when linked to a body, and here is the source of all suffering and sorrow; for thus is initiated a chain of cause and effect, of action and result—all summed up in the word *Karma*. At death, the soul, according to the karma (or the nature of the life spent on earth), is led through one of the temporary heavens or hells to another birth, to a second existence as mineral, vegetable, animal, man, or god, in all possible gradations. Again and again does such transmigration take place, until the soul, freed from all taint of individuality (*atman*, self), and released from all activity or suffering, finds its eternal bliss in its entire re-absorption into Brahman.

POST-VEDIC LITERATURE. The most important of this branch of Hindu literature is the LAW-BOOK OF MANU (a mythical sage), which consists of twelve books, a moiety of which deals with the life of the Brahmans, first as students, and secondly as married householders. These two stages are compulsory, but not every Brahman passes through the two remaining stages of hermit and mendicant. The other books treat of the principles of government, of the status of women, of various religious observances, etc. The whole twelve books have gradually won a general acceptance, and form the basis of modern Hindu jurisprudence, while they are the authority on all social customs, such as those concerned with the ceremonial purity of food, its preparation and consumption.

The remaining portion of Post-Vedic literature is known as the BHAKTI-SASTRAS. These writings inculcate *bhakti*, love or devotion to the gods, as a third way of salvation, the two others being *veda* (knowledge), and *karma* (good works). Of these writings, two claim our especial attention, namely, the *Puranas* and the *Tantras*. Lack of space prevents any consideration in detail of the later and baser forms of religion that are inculcated in the Puranas and Tantras; yet, as they are what constitute the popular Hinduism of to-day, a brief survey of them must be attempted.

In both these sets of writings, soul (*purusha*) is distinguished from primordial matter (*prakriti*). This distinction was identified in popular fancy with that between male and female, purusha being regarded as the male principle, and prakriti as the female; for, to the Hindu, activity is ever a sign of inferiority, and the quiescent purusha is deemed far nobler than the active energizing prakriti. Hence BRAHMAN, the one essence or germ of all being, was regarded as dividing into Brahma and Prakriti; and thus was evolved a scale of being, which reached from inanimate nature, through vegetable life, animals, men, heroes, and gods, up to its highest manifestation in the so-called trinity (or *Tri-murti*) of Hinduism: (1) BRAHMA, the Creator whose special quality (*guna*) is activity; (2) VISHNU, the Preserver, whose guna is goodness; and (3) SIVA, the Destroyer, whose guna is darkness.

Of the eighteen Puranas, one-third is devoted to the glorification of each of these three deities, with their corresponding gunas; yet, while six Puranas specially celebrate Vishnu, the other twelve commonly regard Brahma and Siva as being only manifestations of that god. Thus the Tri-murti is a triad rather than a trinity, the functions and attributes of the deities being interchangeable; indeed, the worship of Brahma soon fell into the background, thus leaving the cults of Vishnu and Siva, each of which male deities was associated with a consort (*Sakti*), who represented the female or more active element.

POPULAR HINDUISM. The worship of Vishnu (*Vaishnavism*) is the more popular cult, for Vishnu has more sympathy with man, and is thus the object of more loving devotion. It is Vishnu that pervades the heavens and all creation, and that is specially manifest in certain trees and animals—such as the tortoise, boar, or fish—in the sacred Ganges, and in man; and of his many incarnations (*avataras*) the most complete were in the heroes, Rama and Krishna, with their consorts, Sita and Radha. On the other hand, the cult of Siva (*Saivism*) is too cold and severe for ordinary Hindus, and is chiefly honoured by the ascetic mendicants, called *Yogis*.

Indirectly, however, Siva's worship has become most popular, for his "Sakti" (energy, female principle) is

commonly regarded as including all other Saktis, and to this deification of force and energy the most general reverence is paid. This form of Hinduism is known as *Saktism* or *Tantrism*, because it is inculcated by the "Tantras" (dialogues between Siva and his consort) just as the cult of Vishnu is by the "Puranas." Those who follow the Puranas are the "right hand worshippers," those who follow the Tantras are the "left hand worshippers." The orgiastic worship of the latter is most immoral and superstitious, its license being so great that even the distinctions of caste are for the time suspended, while magic is cultivated unrestrainedly.

While the popular worship may be analysed into the three (not mutually exclusive) phases of Vaishnavism, Saivism, and Tantrism, there are countless other deities in whose honour temples are erected and images made. The sun is adored daily, Ganesa (son of Siva and Durga) is propitiated as prince of the devils, vermilion-stained images of the monkey-god Hanuman are to be seen on all sides, and early fetishism still lives in the reverence paid to all things in nature—inanimate as well as animate. Among the most sacred objects are various trees, all rivers (especially the Ganges), their banks and towns upon them (Benares, Allahabad, etc.), and numerous animals (cows, monkeys, serpents, etc.).

Though the Hindu worships countless gods, he is earnest and devoted in their service. Every detail of his life is regulated by his religion. Each morning, before he can break his fast, he must go through a certain form of worship, and this always involves a bath. It is interesting to watch a Hindu at his devotions by the river-side; let us give one typical example:

> First he was seen to cast on the river his offering of flowers and then to rinse his mouth with water from the river. This done, he prayed, while standing first on one leg, then on another. Rising, he next bowed to the four points of the compass, and then poured out a libation of water in honour of the sun. Finally he washed his turban and loin-cloth and was then ready to begin the labours of the day. Sometimes the Hindu places a little image before him as an aid to his devotions, and sometimes the worshipper fashions, out of mud from the river's bank, a little god for himself, which he chucks into the river when his prayer is ended.

Hinduism has always had its reformers, who have sought to return to the purer pantheism or even monotheism of the early Veda. The most famous of these was Rammohun Roy, the founder of the *Brahma Somaj* (Society of God), a Brahman who, early in the 19th century, recognised the value of Christ's moral teaching, and vigorously promoted the abolition of *Suttee* (the burning of wives on the death of their husbands); and his efforts have been continued in various societies whose belief hovers between Pantheism and Unitarianism.

BUDDHISM.

LIFE OF BUDDHA (pronounced Boódha). Round the figure of the Buddha, as has happened with Confucius, Muhammad, and many other of the world's great heroes, there has accumulated a mass of myth and miracle; but when this has been cleared away, we come upon episodes which can safely be regarded as historical, and which we now proceed to relate.

In the 6th century B.C., as one result of the Aryan invasion of India (see the commencement of the section on Hinduism), there dwelt in the N.E. of India an Aryan tribe, the Sakyas, who had secured to themselves a home in the eastern part of the valley of the Ganges, on the borders of Nepaul, stretching between the modern towns of Allahabad and Patna. The chieftain or rajah of the tribe was Suddhodana, to whose wife Maya, about the year 564 B.C., was born a son, Siddhartha, or, to give him the family name by which he is better known, Gautama or Gotama (pronounced Gów-tama)—the former being the form in Sanskrit, the latter in Pali. Pali, we may remark, is the dialect of Sanskrit in which the Buddha always taught, and which thus is the sacred language of the Buddhists as Sanskrit is of the Brahmans. This child afterwards became the *Buddha* of history, "the Perfectly Enlightened One," whose nominal followers now number more than a third of the world's population.

To Gotama, engrossed from youth in the problems of the vanity of life, and the universality of suffering, there came at last a crisis in spiritual experience. He had married his cousin Yasodhara, the daughter of Suprabuddha, rajah of the neighbouring tribe of Koli, and by her, in the twenty-ninth year of his age, he had a son, Rahula. "There is one more tie I shall have to break," said Gotama, when the news was told him, and straightway he made the "GREAT RENUNCIATION."

Abandoning the privileges of his caste, and leaving his home and kindred, he wandered into the neighbouring kingdom of Magadha or Behar (which occupies the valley of the Sone, a tributary on the right bank of the Ganges). In the hills round its capital Rajagriha (Rajgir), he practised the ascetic life, and became the pupil of the Brahman recluses, Alara and Udraka. When he had learnt what they could tell him of the mysteries of life, there remained yet one avenue for further knowledge—that of the severest self-mortification and penance, until the soul, unsoiled by the allurements of sense, was free and able to penetrate the secret of existence. For six years he resolutely pursued this stern course of training, living in the jungles, and associating only with five faithful disciples. Then in despair he abandoned asceticism as profitless, and returned to a more ordinary way of life, thus sacrificing the allegiance of his disciples and dissipating the halo of superhuman sanctity which had gathered round his name. But light was at last to shine in upon his darkness. One day, as he was sitting beneath the Bodhi Tree (the tree of wisdom, thenceforward known as "the sacred Bo-Tree," *ficus religiosa*) near the Gaya (30 miles S.W. of Rajagriha), the conflict with the powers of evil came to an end. He had won the victory, he had attained *Buddhahood* (perfect illumination).

> Two truths seemed to him the solution of all his doubts: (1) "not that which goeth into a man can defile him"—the path of freedom is the middle path between asceticism and sensuality, the way of rational self-control; and (2) "he that will seek his soul shall lose it"—the restless cravings of self disappear in a life of love, of devotion to the service of others. Thus he had attained *Nirvana*, perfect peace, unruffled calm; but in pity and love for humanity, the Buddha consented to remain among men that he might be their Saviour.

Straightway he returned to Benares to preach his gospel to all who would hear, without regard to distinctions of caste or culture. In the Migadaya wood, now called Dhamek, a few miles north of that city, there gradually gathered round him an Order of Monks who were ready to give up all in order to learn, practise, and teach the "WAY OF LIFE." Year by year, during the four months of the rainy season, he imparted to them the knowledge which he had attained, and which he had already formulated into a definite system; the remaining eight months of each year were spent in missionary work, that all might have an opportunity of pressing into the kingdom of righteousness; for he had a message, too, for the laymen whom ties of family and household might prevent from joining the Order. Later he found himself driven, though reluctantly, to found an Order of Nuns, among whom the first was his wife Yasodhara. In such efforts he spent forty-five years, and then in the eightieth year of his age (probably 484 B.C.), the Buddha passed away, leaving behind an example and a teaching which have proved the sole consolation in life to millions upon millions, and a system of thought which has won for itself more nominal adherents than any of the world's great faiths.

SPREAD OF BUDDHISM. After steady propagation for two centuries by the monks, Buddhism received a tremendous impetus from the conversion of Asoka, the "Buddhist Constantine." Asoka was the grandson of Chandragupta, the robber chieftain, who, some ten or twelve years after Alexander the Great's visit to India, had made himself rajah of Magadha and, after effectually defending the Indus valley from Greek aggression, had

spread his empire over the greater part of Hindustan. When Asoka succeeded to the throne in 272 B.C., he at once recognised Buddhism as the established faith within his dominions; his son Mahinda became a missionary to Ceylon, whither in 245 B.C. his daughter Sanghamitta brought over a body of nuns, with a branch of the sacred Bo-Tree, which was planted at Anuradha-pura, where it is still pointed out as the oldest historic tree in the world. Asoka died in 232 B.C., but the state-recognition of Buddhism preluded its downfall. True, Brahmanism learnt from it to emphasise the value of virtue and of meditation, to hold all animal life in high respect, and to ameliorate in some respects the hardships of caste, and it recognised Buddha as an incarnation of Vishnu; but Buddhism began to grow corrupt at least as early as the second century in our era, while from 600–800 A.D. its adherents were bitterly persecuted by the Brahmans. When the Moslems overran India, in the 12th century, but few avowed Buddhists were to be found; and now, with the exception of Ceylon and semi-Mongolian Nepaul, Buddhism is as rare in India as Christianity is in Palestine.

But while the faith was dying out in its native land, missionary effort was spreading it vigorously abroad. Missionaries entered China in the first century of our era, and in the 4th century Buddhism was established there, and emissaries from China converted Corea. In the middle of the 5th century Burma was evangelised from Ceylon; a century later Japan received the faith from Corea; yet another century, and Siam also gave in its allegiance. Now, Buddhism is professed throughout China (including Manchuria, Corea, Mongolia, and Thibet), Japan, Further India, and among the Kalmuck Tartars north of the Caspian, and the number of its adherents is reckoned as being not far short of 500 millions.

Just as Christendom has been divided into Eastern and Western (Greek and Roman), so Buddhism has experienced a schism between what may roughly be called Southern and Northern. The former predominates in Ceylon, Siam, and Burma, and is known as the *Hinayana* or "Lesser Vehicle" (for conveyance to Nirvana); it adheres strictly to the simplicity and morality of Gotama, and limits its canon of scripture to the *Tri-pitaka* (see below). The Northern School prevails in Kashmir, Tibet, China, and Japan, and is called the *Mahayana* or "Greater Vehicle"; it allows an elaborate ceremonial and a laxity of morals such as Gotama strenuously denounced, and its canon of scripture is more extensive.

THE BUDDHIST SCRIPTURES. Gotama himself left behind no written works, but a body of oral teaching which had been during his lifetime committed to memory by his disciples in full and precise detail. The death of their founder made it necessary for the monks to crystallize his teaching, and so was held the first Council of the Order near Rajagriha in 483 B.C. A century later, a second Council was held at Vaisali (Besahr), when the majority who were laxer in discipline were ruled out as heretic by the orthodox minority. About the year 250 B.C., under king Asoka, a third Council was held at Pataliputra (Patna), when certain books were recognised as containing the orthodox teaching; and there is little reason to doubt that these were substantially identical with the *Tri-pitaka* (three baskets, or three collections), the canonical books of the Ceylon Buddhists.

These consist of (1) the *Vinaya Pitaka*, the book of discipline for the Order; (2) the *Sutta* or *Sutra Pitaka*, the book of aphorisms, precepts, and discourses for the laity, teaching them how to attain *Dharma* (righteousness, the Law, virtue and benevolence), and including the *Jataka*, a collection of folk-lore which regarded the heroes of old as previous incarnations of the Buddha; and (3) the *Abhidharma*, or supplementary philosophical dissertations.

The text of these is in Pali, and it is interesting to notice that the Brahman Sanskrit literature entirely ignores Buddhism (while the Pali Buddhist literature ignores all Sanskrit literature subsequent to the Vedas), just as Josephus or the pagan writers of the 3rd century A.D. studiously ignore Christianity. Besides the Three Pitakas (the length of which, excluding the numerous repetitions, Professor Rhys Davids estimates to be less than that of our Bible), there are various Sanskrit Commentaries which contain many legends of the life of Gotama, while in addition there are the sacred books of Chinese and other Buddhists, which bear to the original history much the same relation that Milton's Paradise Lost and Paradise Regained bear to our Bible.

TENETS OF BUDDHISM. Naturally a system which has been in existence for over two thousand years, and has won adherents from among races that are almost savage, as well as from among those that are highly civilised and profoundly thoughtful, must present varying and even inconsistent features at different times in its history, and at different points in its empire. The very capacity for development, the very adaptability, which enable such a system to prevail, must also tend to obscure its origin. Here, however, we shall endeavour to recover its primitive form, and to deal with the salient points of the Buddha's own teaching.

Strictly, Buddhism is not a religion: it has no theology, it claims no knowledge of God, it teaches no duty to Him; its gods (*devas*) are finite beings, subject to the same laws of change and decay as man himself; it recognises no soul, in our sense of the word; it finds no place for prayer, sacrifice or priest. Rather is it a philosophy of life, a scheme of morality, with "work out your own salvation" for its motto. So it is possible in China for a Buddhist to worship in a Taoist temple, or in Japan in a Shintoist. Again, it is misleading to regard Buddhism as the opponent of Brahmanism; many of the early Buddhists were Brahmans (nearly all were drawn from the higher castes), and Gotama regarded himself simply as a restorer of that inner truth which Brahman ritual had obscured; indeed, the relation of Buddhism to Brahmanism is not unlike that of Christianity to Judaism. The Brahmans, accordingly, welcomed its teaching among their other philosophies, and were only led to exclude it as a system from Hinduism, because of its rejection of caste and its apparent atheism. Further, we must notice that underlying the Buddha's thought is a profound pessimism, such as has found a Western exponent for later days in Schopenhauer; the very constitution of man's nature necessitates its dissolution, and all that is in the world, and the lust of life itself, do but serve to lure man from true bliss. Here we can only trace in outline the main doctrines which the Buddha taught.

SUFFERING is ever co-extensive with conscious life, for life, as man knows it, is not mere unqualified existence, but a constant passage from one stage to another; in other words, human life consists not in being but in becoming. It is made up of potentialities, whose realisations do but serve as the potentialities of something further. The only release from suffering comes, not by the gratification, but by the extinction of desire; but since desire is inseparable from life, what then remains? The extinction of life, *such as we can know or can imagine*, the calm of *Nirvana*, perhaps not strictly annihilation, but an existence from which the baleful consciousness of self has been eliminated —existence, apparently, without personality. So Gotama enunciated his "Four Noble Truths"—(1) that suffering is co-extensive with life, (2) that the cause of suffering is desire, (3) that release from suffering depends upon the extinction of desire and the attainment of Nirvana, and (4) that Nirvana can only be obtained by following the "Noble Eightfold Path."

This path is the *via media* between licentiousness and asceticism, and it contains eight principles, the first four being applicable to all men, the last four only to monks. These principles concern right vision or belief, right aims or thoughts, right words, right actions, right mode of living as a monk, right endeavour in the study of the law, right mindfulness in remembering the law, and right meditation.

The doctrine of the *transmigration of souls* found a place in Gotama's system. He taught that the soul on resuming its earthly course (which had been interrupted by death), enters upon a form of existence which is conditioned by the net result of the previous life, i.e., by its *Karma*, (its doing, desert, merit). According to the quality of the

Karma, the new being will be in one of the different grades of plants, animals, men, or gods; yet whatever bliss may thus be attained is transient; all sentient being is finite, imperfect, the prey of change, of desire and sorrow; the "ocean of transmigration" has again and again to be crossed by all except the blessed few who have found the safe haven of Nirvana.

The distinction of caste in Gotama's code of ethics becomes insignificant, when compared with the reality of "Karma." Love and benevolence must characterise the man who has gained a glimpse of the universality of suffering, none of which is vicarious; kindness to animals becomes the plainest of natural duties; actions must issue in their rightful consequences, and so sacrifices are vain—"to obey is better than sacrifice"; only by the way of self-denial and contemplation can men hope to shake off the infirmities of their nature.

On the "Eightfold Path" already mentioned, are four stages: (1) the stage of those who are converted, (2) the stage of those who will return but once to this world, (3) the stage of those who will never return, and (4) the stage of the *Arahats*, who have attained perfection of insight. As progress is made along these stages, the ten "fetters of error" are struck off men's minds: these fetters are delusion of self, doubt of the Buddha, reliance on ceremonies, sensual passion, hatred, lust of material existence on earth, and of immaterial in heaven, pride, self-righteousness, and ignorance.

> For laymen there are five prohibitions—not to kill, steal, lie, drink intoxicants, or be unchaste. For monks there are five more—not to eat except at stated times, to abstain from dancing, singing, music, and theatres; to use no garlands or perfumes; to use no bed except a mat spread on the ground; and not to receive gold or silver. The monks are also enjoined to dress in rags, to have only one meal a day, which must be on food begged from door to door, to have no furniture but a carpet, to live part of the year in the open air, etc. A weekly Sabbath, or fast, is to be observed by everybody at the four quarters of the moon. The Buddha gives definite instructions concerning mutual duties between parents and children, teachers and pupils, husbands and wives, friends, masters and servants, etc. Much of this moral teaching is contained in aphorisms like those of the Book of Proverbs, or in parables and similes, which remind us of the parables of the New Testament.

So for all men the Buddha "came to turn the wheel of the excellent law," that is, to found the kingdom of righteousness, and to all men he seemed to think, was possible the religion he taught—"To cease from all wrong-doing, to get virtue, and to cleanse one's own heart." Yet the Buddha felt that *practically* it was almost impossible for men living in the world to escape its allurements, and for this reason he founded his order of monks. Very early, however, the vow of poverty was regarded as applying only to individuals, not to the communities. The latter soon acquired houses, lands, and other wealth, and their monasteries sprang up on all sides, liberally endowed by the alms of the faithful; still more frequently did this happen from the time of Asoka onwards; and so within the monasteries were to be encountered the very dangers to escape which the monks had left the world.

CORRUPTION OF BUDDHISM. It was this inner corruption of spirit that mainly led to the disappearance of Buddhism from India. Nor elsewhere could Buddhism remain pure; it had one fatal deficiency—*it knew no God.* The blank was sometimes filled, as has been said, by superadding a definite religious belief to the Buddhist morality and metaphysics; but often a theology has been developed within the system, and so there have reappeared in monstrous forms the superstition and externalism which Gotama had sought to destroy. Southern Buddhism (in Ceylon and Further India) has retained much of its pristine purity; but the taint has spread wide and deep through the Northern Buddhism of China, Japan, Tibet, and Nepaul. Endless genealogies and fables were invented according to the merest whim of fancy; the world as we know it had to have a First Cause, and links had to be devised, by which the material universe might be brought into touch with the Eternal and Infinite. Buddhism was assailed by the same Gnostic heresy as had tried to lodge itself within Christianity; and then followed idolatry, incantations, magic, and the belief in ritual as efficacious *per se*. Buddhism, then, has taken very different forms in different lands, and is often mixed with much idolatry and many superstitious observances.

> Tibet, for instance, has invented its praying-wheels, or praying-flags, on which the winds spread to the heavens the magic word *Anritaya Om!* In Tibet too has arisen the weird phenomenon of *Lamaism*, whose worship—with its altars, incense, holy water, images, and rosaries—outwardly seems a travesty of High Mass. For nearly five centuries the *Dalai Lama* (abbot of a monastery near Lhasa) has been recognised as head of the Buddhist Church throughout China—the head of a Church which contradicts almost every tenet of its reputed founder.
>
> In Burma, to take another example, the Buddhist religion is seen in a more favourable aspect. The number of temples or shrines to be seen there erected in honour of Buddha is extraordinary. Still more numerous, perhaps, are the monasteries, which also serve as the schools of the country. In the Burmese capital there are said to be thirty thousand Buddhist monks. They must eat, wear, and use nothing that is not given to them in charity. They may be seen each morning, dressed in their shabby yellow robe, going round from door to door, with bowl in hand, to receive any present of rice, fruit, or fish which the charitable may be disposed to offer.

We may add, in conclusion, that modern *Theosophy*, as known in the West through the efforts of Madame Blavatsky, Mr. Sinnett, and others, whatever else may be said of it, is not typical of ordinary Buddhism. Its professors avow it to be an esoteric Buddhism, and admit that it is only known in Tibet, and there but very scantily.

PARSEEISM (Modern Zoroastrianism).

ITS HISTORY. Modern Parseeism is a survival of ancient Zoroastrianism, the religion of the Medes and Persians in days long past. These Aryan races were closely akin. The Medes broke away first from their early home in the Oxus valley and overran modern Persia, subduing the aboriginal Accadians, who were of Mongolian extraction. Later, the Persians occupied the province of Farsistan (*Farsees*=Parsees=Persians), and in 558 B.C., under Cyrus, overthrew the Median empire. Centuries earlier than this, while they were passing from the nomadic life to the agricultural, must be dated their *Gathas*, the hymns contained in their sacred writings—the *Avesta*. In the obscurity of pre-historic times seems also to have occurred a religious schism between them and the Brahmans of North India, with the result that the Hindu devas (gods) became the Persian demons, the Vedic *Indra* became the Persian devil, and the Hindu enemies of the gods became the Persian beneficent powers, the *Ahuras*.

The Persian modification of the original Aryan religion took the name of *Zoroastrianism* from its great reformer Zoroaster, the date of whose life is most doubtful. Perhaps two or more reformers became identified in later times, but while Pliny would put Zoroaster centuries before Moses, Persian tradition places him in the 6th century B.C.; the probable duration of his life seems to have been from 589–539 B.C., and he is said to have perished in the siege of Balkh by the Turanians. He may have been one of the Magi, or hereditary priests of the Medes, and in his reformation may have enlisted the aid of the Persian conquerors against his fellow-priests who withstood him.

The *Zend-avesta* (=commentary and text) is attributed to his authorship. It comprises four divisions: the hymns and prayers for worship, the sacrificial ritual, and a code of laws, both religious and civil; and so the Zend-avesta in pure *Zend* (or early Persian) ranks with the Veda in Sanskrit, and the Buddhist Tri-pitaka in Pali.

ITS DOCTRINE. The Zoroastrian religion is essentially dualistic. *Ahura-Mazda*, "Lord Wisdom" (=Ormuzd), the god of the sky—who is symbolised by the sun, or the fire, or light—is eternal justice and righteousness, and with him are the *Amshaspands*, the immortal saints, personifications of the virtues which Ormuzd has created in man.

Over against him is *Ahriman*, the prince of darkness, who was sprung from the Spirit of Evil, *Angro-Mainyu*, who in turn had been driven from heaven by the victorious angel *Mithra*, and whose agent and legate is *Indra*. But this dualism is not to be everlasting; light is to overcome darkness, good is to exterminate evil; the wicked will perish in hell, but the just will rise again in their bodies, and experience the eternal bliss of heaven. Meanwhile purity in thought, word, and deed (not ceremonial purity alone), with honesty and truth, are the chief virtues to be cultivated by man.

This noble religion was almost exterminated from Persia during the Muhammadan invasions of the 7th century A.D. Some few Zoroastrians are left at Kirman and Yazd, but the majority took refuge in India around Bombay. These form the *Parsees*, or Fire-worshippers, a rich merchant-class that is eminently susceptible and responsive to British influence. In no wise are they idolaters, they reverence the sun or fire only as a symbol of the Divine majesty. They have kept entirely aloof from the natives around them, preserving their race and religion alike intact from all extraneous influences. They still retain their ancient custom of exposing the corpses of their relatives to be devoured by vultures.

CONFUCIANISM.

LIFE OF CONFUCIUS. The life of Confucius was singularly destitute of striking events. He was born in the State of Lu (part of the province of Shang-Tung) in the year 551 B.C., his father being a famous soldier, Shu-lang Heh, and his mother's name Yen Ching-tsai. The name Confucius is a Latinized form of Kung Futze (i.e. Kung, the master or philosopher). His married life seems to have been unhappy, and after the birth of a son and two daughters he divorced his wife. But his chief aim was the reformation of the State; so, not unlike the Sophists or Socrates in Greece during the following century, he wandered from court to court, seeking to instil into the minds of princes his maxims of wisdom and virtue, while round him there gathered a band of devoted disciples, anxious to imbibe and promulgate his teaching. His meeting with Lao-tsze (see section on Taoism) was almost as famous as that of Alexander with Diogenes, and his discomfiture in the presence of that austere philosopher seems to have been complete. In 501 Confucius was appointed magistrate of Chung-tu, where for three years his political theories met with practical success in reducing crime and increasing general happiness; but this aroused the jealousy of neighbouring States; the Duke Ting's patronage was cunningly alienated from him, and Confucius felt obliged to resign office and return to his travels. After some fourteen years he returned to Lu, but though honoured by all, he held no office. He died in the year 478 B.C.

While in his lifetime Confucius met with scant success, his memory has been honoured most highly, and his precepts reverenced far and wide. Every town or country district in China has its temple for the worship of the Sage and of his most distinguished followers in various ages, their canonisation being effected by imperial decree; emperors have vied with one another in devising titles that may express the Master's worth; his tomb at Shang-tung has been the object of many a pilgrimage, and at his temple in Peking the emperor solemnly worships twice a year; while his descendants are honoured and enriched, his lineal successor being entitled Kung (duke), and ranking next to the imperial family.

THE CONFUCIAN SCRIPTURES. The books which are considered to contain the teaching of Confucius in its purity are, (1) the *Lun Yu*, or "Confucian Analects," which was compiled by his immediate disciples, and, somewhat like Xenophon's Memorabilia of Socrates, records the Master's maxims and conversations, and gives a detailed picture of his personal life; and (2) the *Ta Heo* (Great Learning), and (3) the *Chung Yung* (Doctrine of the Mean), which are supposed to have been written by the Sage's grandson, Tsze-sze.

Confucius himself edited the *Yih King* (Book of Changes), the *She King* (Book of Odes), and the *Shu King* (Book of History). The last-named gives a record of the "Golden Age" under Yaou (c. 2356 B.C.), and his successor Shun, and tells how their dynasty degenerated until it was replaced by that of T'ang (1765 B.C.), whose line again had to give way before the reformer Wu (1122 B.C.). Confucius also composed the *Ch'un ts'ew*, a continuation of the Shu King, which relates how the evil example and misgovernment of the kings had produced the oppression and disorder which were so rife in his own day.

These books, with the *Mang-tsze* or works of Mencius (born 371 B.C.), the reforming enthusiast who tried to revive Confucius' teaching in its purity, form the Chinese classics, on which are based all education and all the competitive examinations, by which promotion in public life has been regulated for the last thirteen centuries.

TENETS OF CONFUCIANISM. The dissimilarity of the Mongolian and Aryan races is clearly reflected in the contrast that Confucianism presents to Hinduism. The Brahmans have no regard for history, and no aptitude for natural science; their speculations are never submitted to the test of facts. The Mongolian temperament is deficient in imagination, it does not nourish ideals that might help towards progress, it has no mystical side, but self-contained and self-contented it limits its speculations to questions of practical utility; and it was as the exponent of the national character at its best that Confucius won and has retained among his countrymen his unique position as Sage and Master.

As has been said of Buddhism, Confucianism (which may aptly be termed Chinese Positivism) is not strictly a religion at all. It leaves the worship of *Shang-te*, the One God, as the peculiar duty of the sovereign, who is both father and priest to his people; it recommends wise men to be reverently minded towards, but to hold aloof from, the members of the spirit world; and it recognises no need for either prayer or confession of sin. Really, Confucius did not interfere with the native religion of China, which is often called *Sinism* (*Sin*=faith); as it was the emperor's province to sacrifice to Shang-te, so it behoved the various provincial dignitaries to worship the "hosts of spirits," the gods of hills, and rivers, and winds, while on all alike were incumbent the duties of filial piety, as expressed in orderly ancestor-worship.

The chief aim of Confucianism is to promote the welfare of the state, here and now. The weakness and discontent, ignorance and poverty, such as characterised the petty states of China in the Sage's lifetime, it seeks to remove by returning to the methods of government of the "good old days" of Yaou and Shun and Wu. Thus it avoids any claim to originality, and seeks only to transmit the wisdom and virtue of the past, not in a coherent system, but by means of moral maxims. All men are born good, but are liable to contamination, even as river water, which rises pure from its source; yet it is admitted that men "are prone to err, and their affinity for the right way is small." All the greater, therefore, is the need for a good example, specially from those in authority; rulers must seek the "welfare of the people," and the loyalty of the subjects is conditioned by the ruler's devotion to their interests. A similar reciprocity must prevail in conduct between man and man; and "what you do not want done to yourself, do not do to others." If mutual duties are thus observed in a state, "those who are near will be made happy, and those who are far off will be attracted"; but if the government neglects the welfare of the governed, it may be superseded. To this teaching no doubt Confucianism owes much of its popularity; the rulers find in it a sufficient title to their position, while the ruled feel that the means of redress of grievances is in their hands; and it is to be noticed that dynastic revolutions in China have been both numerous and peaceful.

But while all men are born good, occasionally there appears a man so richly endowed by nature with knowledge and virtue, that he is "the equal of Heaven (T'ien)"; he is the ideal man, the *sage*, of whom there are now officially

recognised thirteen (who lived between 2850 and 1100 B.C.), in addition to Confucius himself; but the latter never deemed himself a sage, nor even a "superior man." This is the name for the man, who, by learning, has gained knowledge (specially knowledge of the right way of life), and by resolution of will has preserved his native virtue uncorrupt. To this height all can reach, and the superior man is the pillar equally of family and state; he, and he alone, unless a sage appears, can ensure tranquillity and happiness. His virtue is founded on sincerity, where words and acts, names and things, correspond; benevolence is his characteristic, in which are exhibited loyalty to duty (tempered by the principle of reciprocity), and reverence in all the relationships of private or public life.

Reverence is the seed of filial piety, whether displayed in obedience to parents, in ancestor worship, or in good citizenship; and piety finds its expression chiefly in the five duties towards prince, father, brother, husband, and friend respectively. Here woman finds no place; her only title to regard lies in motherhood; polygamy and divorce are common; "men being firm by nature are virtuous, and women being soft are useful." But all virtue is to be regulated by propriety, and propriety is mostly outward. Ceremonial and etiquette are of the highest importance, but rather in order to train the disposition than to express it. It is this somewhat Pharisaic externalism, this lack of any counsel of perfection, that evoked the scornful contempt of such a man as Lao-tsze; but it rendered possible the adhesion of multitudes to a system which makes no exorbitant demands on either their intellectual or their moral capacity.

TAOISM.

LAO-TSZE. While considerable doubt has been entertained as to whether Lao-tsze is the name of a historical person, it seems probable on the whole that such a man did live and teach in China during the 6th century B.C. The records tell us that he was born in the district K'u (part of the modern Honan), to an aged peasant father by a young wife; and if, as is said, he was fifty years older than Confucius, the year of his birth must have been about 600 B.C. We are told that he held office, apparently the superintendence of the Record Office, at the imperial court; and there seems reason to accept the story of Confucius' visit to him as historically true, especially as it exhibits so natural a contrast between the scorn for all activity of the aged philosopher, and the reforming zeal of the younger one. In his closing years, Lao-tsze abandoned public life, and disappeared into the west, having first entrusted to his disciple Yin He the *Tao Tih King*, or book which contained his teaching on *Tao* (the way), and *Tih* (virtue). We hear of his descendants to the fifth generation but no further—a marked contrast again with Confucius, whose family is still identified, and whose daily life in the minutest details is fully recorded.

TAO. It is difficult to decide how much of Lao-tsze's philosophy was due to Brahman sources; but his ethical teaching is clearly original, and in many respects approaches most nearly the teaching of the New Testament. In philosophy, Lao-tsze's "Tao" is closely akin to the Hindu's Brahma. *Tao* is "the way," the law of existence, the potentially existent, from which "nothingness" have issued heaven and earth, and all creation, and into which they will return. Thus in Tao lies the unity of the universe, and its "form" in the technical sense of the word; and so nothingness, non-existence, is demonstrated to be superior to existence, for it is both source and goal to existence.

But it is in the application of these ideas to the sphere of ethics that Lao-tsze's originality is so striking. Tao then becomes the moral law, man's moral nature; self-effacement is far nobler than self-seeking, for it is Tao on the ethical side; and thus we reach not so much the Buddhist's Nirvana as the Christian's humility, and are face to face with a "Quietism" which wholly penetrates the secret springs of action. On the political side, Lao-tsze is a philosophic anarchist. The troubles of the State he puts down to an accumulation of laws and of all the paraphernalia of government both in peace and war, and their cure can only be found in self-abnegation and a return to primitive simplicity. To be simple of heart according to nature's pattern, not to be learned in the corrupting wisdom of this world, is the path of bliss; legal enactments may foster the profession of virtue, but they are fatal to its possession; the good ruler will seek peace not war, defence not aggression, and will prefer the humility of apparent inactivity to any display of power, however imposing; indeed, "he who bears the calamities of his country shall be called the king of the world."

LAO-TSZE AND CONFUCIUS COMPARED. Neither sage gave the world a religion, or sought to be a prophet of God. Both confined their attention to the spheres of politics and ethics; both looked back to the reign of virtue in early days, and sought to restore it in their own times; both believed that man was by nature inclined to goodness, and could be by example stimulated to it. But the elder philosopher was a recluse, who felt that social and moral evils were due to activity, and that programmes of reform (especially by way of learning and knowledge) were only attempts "to cast out Beelzebub by the power of Beelzebub"; while the younger philosopher was a courtier, who was in danger of mistaking the appearance for the reality, the name for the thing, and who sought a ceremonious observance of duty and convention rather than a heartfelt devotion to virtue and goodness. Nor can the superiority of Lao-tsze be better marked than in three of his maxims—(1) "Judge not your fellow-men," (2) "Be content to know yourself," and (3) "Recompense evil with good," to which Confucius deliberately demurred.

DEVELOPMENT OF TAOISM. The teaching of Confucius would naturally enlist patriotism in its support, but Lao-tsze's doctrine has found nationalism its foe rather than its ally. That all existence issues from Tao, and returns to it, is a tenet capable of varied application; and speedily the self-abnegation so nobly inculcated by the "aged philosopher" dropped out of the Taoist system.

Early in the 5th century B.C., Lieh-tsze used the dogma of Tao to justify licentiousness of conduct, and to authorise the practice of magic; for on the one hand with ignoble men Tao can give rise to moral indifference, a subordination of right and wrong to the pleasure of the immediate moment (such as later Epicureanism witnessed); and on the other hand, the ultimate return of all to Tao can instil the hope that here and now (the limits of the Mongolian mind) man can become superhuman and attain unlimited longevity, if not absolute immortality. In the 4th century B.C., Chwang-tsze expounded something more like the original teaching of Lao-tsze. He maintained that all human effort is merely an interference with nature, and decried all activity as vanity. The fussiness of the legislator in the State, the noisy profession of benevolence and propriety in the individual, were equally destructive of the life according to nature that man was destined to lead. But popular Taoism soon became reduced to a fond following of astrology and alchemy, a search for the herb of immortality in the Isles of the Blest, and for the philosopher's stone, in order to escape the two great evils of death and poverty. The Taoist priests easily enlisted the sympathies of the emperors in support of their superstitions, their most notable patrons being Che Hwang-te, who had ordered all the Chinese classics (except the Taoist) to be burnt in 220 B.C., and Wu (c. 100 B.C.).

In the 2nd century A.D., as Buddhism was spreading in China, a re-action set in, and the philosophy of Lao-tsze was reinstated along with the ethics of Confucius, while the emperor Hwan offered sacrifices to Lao-tsze in his temple at K'u (c. 150 A.D.). In the 5th century A.D., Taoism and Buddhism were formally recognised by the emperor. Taoist temples and monasteries sprang up everywhere to rival the Buddhist ones, and the indigenous system became impregnated with ideas from the foreign. After being alternately patronised and persecuted under various dynasties, Taoism made one more effort at reform. In

the 16th century, its ethical side was restored in the wide publication of the *Kan-ying-peen* (Book of Rewards and Punishments), and the *Yin-chih-wan* (Book of Secret Blessings), which consist of moral maxims enforced by sanctions drawn from the present life.

Meanwhile Taoism had yielded to necessity (even as Chinese Buddhism had to do), and had devised a pantheon for its adherents. Lao-tsze, like the Buddha, was deified in triple form. The supreme god is *Yuh-hwang Shang-te*, whose representative on earth dwells in Kiang-se, and is the hierarch of the faith, just as the Dalai Lama in Tibet heads the Buddhist Church. But the most popular divinities are undoubtedly *Kwan-te*, the god of battles, and *Wan Ch'ang*, the god of literature and examinations. This is the Taoism that prevails so widely in China at the present day, and especially among the lower classes.

SHINTOISM.

ITS CHARACTERISTICS. When Buddhism was introduced into Japan from Corea in the middle of the 6th century A.D., the Chinese name *Shinto* (the way of the Spirits or Genii) was bestowed on the original Japanese religion. Shintoism contains two main elements—nature-worship and ancestor-worship. It recognises one supreme, benevolent God, existent from all eternity; next to Him, and as His manifestations, it worships the personified powers of nature; and it has a vague belief in a future state of existence, with rewards or punishments according to the life that has been lived on earth. But its characteristic feature is its ancestor-worship, which is the expression of national patriotism and filial piety.

From the left eye of Izanagi, the creator of Japan, was born the sun-goddess Ama-terasu, to whose temple at Ise pilgrimages are still made; for thousands of years demi-gods and heroes, sprung from her in descending scale of divinity, ruled the land, till the first human emperor of the line, Jimmu Tenno, appeared in 660 B.C. It is the Spirits or *Kami* of these mythological rulers who are the special objects of Shinto veneration. With them are associated the national heroes of every subsequent age, as well as the *Mikado*, whose divine descent is unquestioned, and who till recently lived in sacred seclusion from his subjects. Evidently Shintoism leaves plenty of room for another religion to co-exist with it; and as a matter of fact, most of the Japanese have combined Buddhism with Shintoism, the same temples and altars having been used in turn by the priests of each system.

RECENT RELIGIOUS CHANGES. Everyone knows what a rapid development Japan has undergone in the last half-century, but few realise that it was only in 1853 that her interdict of foreigners was grudgingly and partially removed. Then came the great Revolution of 1868; the *Shogun*, or commander-in-chief, who had assumed the title of *Tycoon* or *Taikun* (great sovereign), had for eight centuries ousted the Mikado from all temporal power; against his tyranny and that of the *Daimios* (feudal lords) a successful rebellion was made, and the Mikado was installed as sole, but constitutional, ruler of his country. Shintoism was then recognised as the established religion of the land, the more so as the Shogun and Daimios had always been zealous Buddhists. Temples and shrines had now to be clearly differentiated as Shintoist or Buddhist, the former being subsidised from the imperial revenues (this subsidy has since been discontinued). Most of the Japanese, however, continued to combine the two systems, worshipping in two temples instead of as before in one. Since 1892 Shintoism may be said to have ceased to claim to be a religion at all, an edict having then been issued that its observances were to be regarded merely as patriotic and political, but not as religious.

SHINTOISM TO-DAY. The *Kojiki*, or Records of Antiquity, which contain Japanese mythology and traditions, are the sacred books, but the Shinto doctrine and rites mentioned therein are of the simplest. Shintoism inculcates love of country and obedience to the Mikado, but otherwise it leaves will and conscience untrained. There is no preaching, nor any public worship. Twice a day the priests present unbloody offerings on the altars, and recite invocations of praise; the private worshipper approaches the sanctuary, rings a bell to summon his deity, makes his offering, prostrates himself, claps his hands to signify that the interview is ended, and then withdraws. Occasionally he makes his pilgrimage to Ise, returning with sacred charms which he places in his miniature temple at home, by the side of the names of his patron Kami, and the tablets of his ancestors.

Thus Shintoism makes its appeal to the conservatism of the upper classes and to the superstition of the lower; but it makes no provision for devotion of heart and soul, for training of character, or for producing intellectual conviction; and the ground it is constantly losing as a religion seems at present to be gained by neither Christianity nor Buddhism, but is rapidly being occupied by agnosticism.

Religion.	Adherents.	
	Estimated Number.	Countries in which principally located.
Christianity.	410 millions	
1. Church of England . .	30 millions	British Empire and U.S.A.
2. Roman Catholics . . .	185 millions	Italy (30), France (30), Belgium (6), Spain (18), Portugal (5), British Isles (6), Germany (16), Austria (26), Russia (9), U.S.A. (7), South America (30).
3. Greek Church	80 millions	Russia (60), Austria, Servia, Roumania, Bulgaria, Turkish Empire, Greece, Abyssinia.
4. Lutheranism	45 millions	Germany, Denmark, Holland, Norway, Sweden, Russia (Baltic Provinces), U.S.A.
5. Various Denominations	70 millions	
Judaism	12 millions	Russia (5), and Europe generally.
Muhammadanism	175 millions	India (60), Turkish Empire, Arabia, Persia, North and Central Africa.
Hinduism	215 millions	India.
Buddhism (so called) . . .	325 millions	China (270). Japan (26), Further India (20), Nepaul, Bhootan and Ceylon (9).
Parseeism	⅛ million	India (chiefly Bombay), Persia.
Confucianism } held with	80 millions	China.
Taoism } Buddhism.	50 millions	China.
Shintoism }	14 millions	Japan.
Primitive Religions . . .	?	The native races in Africa, Polynesia, New Zealand, Australia and America.

THE WORLD'S FAMOUS EXPLORERS.

The only parts of the world known to Europeans before the discovery of America were all situated in the northern half of the Eastern Hemisphere. A large part even of Russia, or Muscovy as it was then called, was completely unknown to the rest of Europe. In Asia, our countrymen were acquainted with the lands mentioned in the Bible, and had heard vague accounts of Tartary, Mongolia, India, and Cathay, or China. In Africa, Egypt and the countries along the north coast were well known; but except Ethiopia or Abyssinia, and a strip of country on the west coast reaching to the Gulf of Guinea, all the rest lay in darkness.

EARLY PORTUGUESE EXPLORERS.

The Portuguese have the glory of leading the way in discovering new lands. By the middle of the 15th century the Portuguese had reached Cape Verd, and seen men with skins as black as ebony. It now occurred to the sagacious mind of Prince Henry of Portugal that India could be reached by following the African coast.

BARTHOLOMEW DIAZ. In 1486 Prince Henry sent out Diaz on a voyage which took him almost to the mouth of the Orange River, where he landed. On resuming his voyage a storm arose which drove him past the Cape of Good Hope, and he anchored in Algoa Bay. His men would go no further, and he had the vexation of seeing the command of the next expedition given to Da Gama.

VASCO DA GAMA. The greatest of the Portuguese navigators, Da Gama, set out in July, 1497. Despite adverse weather and a mutinous crew, he rounded the Cape by the end of the year. Hugging the coast as far as Melinda, he then sailed straight across the Indian Ocean, landing at Calicut in May, 1498. He was subsequently employed several times by the King of Portugal to establish colonies on the coast of Africa and India.

EARLY SPANISH EXPLORERS.

CHRISTOPHER COLUMBUS. This extraordinary man, a native of Genoa, had gone to sea at fifteen, and for thirty years had sailed about every part of the known world. He had had also much experience in drawing maps and charts, and had convinced himself on reflection that India could be reached by sailing westward. After many years of effort, he at length found patrons in Ferdinand and Isabella of Spain, who gave him three small ships in which to make the attempt.

Setting out from Palos in August, 1492, he sailed to the Canary Isles, and then started on his voyage to the unknown west. The trade-winds carried them along smoothly enough for thirty days, and then just as the quest began to seem hopeless, land was sighted. Columbus thought the islands he found himself among were near India, so he called them the Indies, a name they retain to this day, with the addition of "West," to distinguish them from those islands which are really near India. It was not till his third voyage, in 1498, that he discovered the mainland, which Cabot had reached before him.

AMERIGO VESPUCCI. In 1499, and succeeding years, Vespucci, a Portuguese in the service of Spain, explored a good deal of the South American coast, and after him the continent was named.

FERDINAND MAGELLAN continued the work of Amerigo, and was directed by Charles V. of Spain to find, if possible, a way from the Atlantic to the Pacific, which had been sighted from the Isthmus of Panama in 1513 by Balboa. Sailing southwards then along the east coast of America, he made his way, in 1519, through the Strait that now bears his name. Then striking boldly westwards, he held on till he came to the Ladrone Islands. Magellan himself was killed soon afterwards in a fight on one of the Philippine Islands, but his crew continued the voyage westward, and made their way back to Cadiz in 1521, their ship being the first to circumnavigate the globe.

ENGLISH NAVIGATORS IN THE TUDOR PERIOD.

Till the reign of Elizabeth, Englishmen took little part in exploration. It is true that in Henry VII.'s reign, Sebastian Cabot, sailing under the English flag, landed on the coast of Labrador in 1497, and took possession of the country in the name of Henry VII. But the expedition was not followed up.

WILLOUGHBY AND CHANCELLOR. In 1553 Sir Hugh Willoughby and Hugh Chancellor set out to explore northern regions and find out ways to reach new and unknown kingdoms. The result of this voyage was to open up English trade with Archangel, and to encourage exploration in that direction. Willoughby and his ship's company perished of starvation and cold in Lapland, after discovering Nova Zembla, but Chancellor reached Archangel and penetrated to Moscow. For several years after this, attempts were made to get through the Arctic Ocean eastwards, and the strait leading into the Kara Sea was discovered.

FROBISHER. In 1576 Sir Martin Frobisher made a gallant attempt to reach India by the north-west, round the north of America. Harassed by storms, and deserted by one of his two ships, Frobisher held on, and reached what is now called Frobisher Bay, naming the land round it "Meta Incognita."

DAVIS. John Davis took up the work in 1585. He made his way to Greenland, which had been lost to Europeans for about 200 years, and then, crossing the strait now known by his name, he explored some of the opposite coast. He went again in 1586 and 1587, reaching in the latter year nearly to the 73rd degree of latitude.

EARLY FRENCH EXPLORERS.

CARTIER. A French navigator, Jacques Cartier, was sent out by Francis I., 1534, with two ships, to explore the mainland of America. He crossed the Atlantic to Newfoundland, then sailed through Belle Isle Strait, and landing near Cape Gaspé took possession in the name of the King of France. He went again the next year and ascended the St. Lawrence as far as the present Montreal. A third expedition in 1541 had little results, and French enterprise in America halted for some time.

DE CHAMPLAIN. In 1603–1608, three voyages to America were made by Samuel de Champlain, and much of the Canadian coast was surveyed. Champlain founded Quebec, and busied himself in extending French influence to the west and south. He explored the beautiful lake which bears his name, as well as Lake Ontario, and sailed round the coast of Acadia (Nova Scotia). He died in Canada.

EARLY EXPLORERS IN THE ARCTIC REGIONS.

BARENTZ. In 1594 William Barentz sailed in a 100 ton ship to search for the north-east passage. He spent the summer in exploring the western side of Nova Zembla. His second voyage was unproductive, but the third, in 1596, had two important results; he discovered Spitzbergen, and spent the winter at Ice Haven, on the eastern side of Nova Zembla, being thus the first European to brave the winter cold of the Arctic region. He died, however, on his way back. The Barentz Sea, between Spitzbergen and Nova Zembla, commemorates his daring and enterprise.

HUDSON. One of the most daring navigators of this time was Henry Hudson. Starting in 1607 in a small ship carrying ten men and a boy besides himself, he made

his way northward along the coast of Greenland, and then skirted the ice pack across to Spitzbergen, getting beyond the 80th parallel northward. On his way home he discovered Jan Mayen Island. A fourth voyage, in 1610, resulted in his being abandoned in Hudson Bay by his mutinous crew. He was never afterwards heard of.

BAFFIN. In 1615 William Baffin, who had had experience in the Spitzbergen whale-fishery, made a careful examination of the coasts of Hudson Strait, and in the following year sailed up Davis Strait, went beyond Davis's farthest north, and entered Baffin's Bay. The northernmost channel leading from it he named Smith Sound, after Sir Thomas Smith, who had promoted the expedition. Many other names in this region were bestowed by Baffin.

OTHER EXPLORERS. The merchants of London had so far borne the major part of the expense involved in these exploring expeditions, but in 1670 the Hudson Bay Company was formed, and many interesting and important details were brought home by their officers. Thus the courses of the Coppermine and Mackenzie Rivers were traced to the Polar Seas. The Dutch, too, in the prosecution of their Spitzbergen whale-fisheries, found time to aid the great work. The book of Frederick Martens on Spitzbergen is an exceedingly interesting account of that land. Meanwhile the Russians, on their side, had taken up the work, and in the course of the 17th and 18th centuries they traced out the whole coast of Siberia. Cape Chelyuskin, the Liakof Islands, Behring's Strait, and many other places bear witness by their names to Russian enterprise. The Liakof Islands became the seat of an important Russian whale-fishery, as well as the source of much ivory, the fossilized remains of the mammoth, rhinoceros, and buffalo being here found in great abundance.

CAPTAIN COOK'S VOYAGES.

Modern scientific exploration may well be said to have commenced with Captain Cook. From his time few years have passed without one or more expeditions being at work investigating and mapping out land and sea, and noting scientific facts with a view to forwarding the progress of knowledge rather than individual, or even national, gain. The regions then unknown to men, either wholly or in great part, were Africa, Australia, and the North and South Polar Regions. We propose to mention the chief explorers of these parts, after relating the fruitful labours of Captain Cook.

CAPTAIN COOK. This famous explorer, a native of Yorkshire, began his exploring voyages in 1768. He had previously gained much credit by surveying the channel of the St. Lawrence so accurately that Wolfe's expedition against Quebec sailed up without a single mishap. Cook sailed from Deptford in August, 1768, and reached Tahiti the following April. He made this island for some time his headquarters. On leaving it he circumnavigated New Zealand and surveyed its coasts. He then sailed to Australia, and mapped out the east coast. He became aware of the existence of the Great Barrier Reef by striking on it. The damage done to his vessel was repaired at a spot where now stands Cooktown. The captain afterwards completed the survey of the east coast, gave the name of New South Wales to the whole country, and took possession in the name of King George. Cook then passed round Cape York, between Australia and New Guinea, thus proving that the two were separate, and reached home by the Cape of Good Hope in June, 1771.

Cook's second voyage, 1772-1775, was undertaken to determine the limits of the Antarctic Continent. He skirted the edge of the ice, making excursions southwards when opportunity offered, on one occasion getting to 71° 10′ south latitude. During this voyage Cook explored the New Hebrides, and discovered many other of the Pacific Islands. His success in warding off scurvy from his men in this voyage deserves mention.

Cook's third voyage was arranged primarily to discover, if possible, a passage from the Pacific to the Atlantic by the north coast of America. He set sail in July, 1776, discovered the Sandwich Islands, traced the north-western coast of America, and advanced into the Arctic Ocean, until his progress was blocked by impenetrable ice. Returning therefore to the Pacific, he reached the Sandwich Islands, where he was slain in a sudden dispute that arose with the islanders, February, 1779.

BRITISH EXPLORERS IN AFRICA.

BRUCE. In 1768 James Bruce, who enjoyed the confidence of the English Government, and had already travelled extensively in the East, made his way up the Nile to Syene, near the modern Assouan, then crossed the desert to Kasseir, and got to Jeddah. He subsequently visited Gondar, the capital of Abyssinia, whence he made his way to the sources of the Abai, or Blue River (Bahr-el-Azrek), then considered the chief branch of the Nile, to discover whose source had been his main aim. The narration of his travels on his return to England caused much scoffing and scepticism, but we now know that his accuracy and truthfulness are unimpeachable.

MUNGO PARK. This great traveller undertook two expeditions to Africa, the first at the instance of the African Association of London. His object was the exploration of the Niger. In 1795 he sailed up the Gambia to Pisania, where he spent some months learning as much as possible of the language, habits, etc., of the tribes he would have to encounter. Then, setting out eastwards, he struck the River Niger at Sego, and made his way down it to Silla. Here, however, he was compelled to turn back, and had much difficulty in getting to the Gambia, from which he had set out nineteen months before. In 1805 Park was prevailed upon by the British Government to resume his task. He set out from Pisania in April, with forty-five companions, of whom seven only survived to reach the Niger in August, the fevers and other diseases incident to the wet season having carried off the rest. At Sansanding, Park remained for two months, trading with the natives. Meanwhile he constructed a large, flat-bottomed boat in which to sail down the river, hoping to follow its course and to find out where it entered the sea. But he perished in the attempt. It was afterwards learnt that he and four of his companions reached Boussa, and were intercepted in the rapids there by the natives, and drowned in the struggle that ensued.

RICHARD LANDER. The publication of Park's Journals, which he had sent home from Sansanding before setting out, led many to take part in exploring that part of Africa. Richard Lander, the servant of Captain Clapperton, who had done much to make known the country between Lake Chad and the Niger, is generally held to have settled all doubts about the Niger's course. Accompanied by his brother John, he went out in 1830, commissioned by the British Government, landed at Badagry, on the Slave Coast, and proceeded by land to Boussa. From that town they made their way, after many difficulties, to the sea by the channel called the Brass River, and thus settled the river's course. Lander took part in many journeys after this, and died at last of wounds received in conflict with the natives, 1834.

DAVID LIVINGSTONE. This great missionary and explorer was fired to take part in forwarding Christianity and civilization in Africa by Robert Moffat's account of his work in Bechuanaland. After working for some years as a missionary, he set out on the exploring journey that ended in the discovery of Lake Ngami, 1849. In 1851 he set out again, following his old track, but passed Ngami, and travelled on to Linyanti on the Chobe River whence he made his way down to the Zambesi.

Livingstone now determined to devote himself wholly to exploration, and after sending his wife and children to England, he set out, in 1853, to Linyanti. From Linyanti he started on a voyage up the Zambesi to Lake Dilolo, and thence north-west to St. Paul de Loanda, the capital of Angola. After some rest he returned to Linyanti, and now sailed down the Zambesi to its mouth, discovering the famous Victoria Falls on his way, and reached Quilimane in May, 1856, being thus the first white man to cross the continent.

His next journey commenced from Quilimane in March, 1858. He went up the Shiré river to Lake Nyassa, visited Lake Shirwa, and explored the river Rovuma for some distance. In 1866 he sailed up the river Rovuma to Lake Nyassa, rounded its southern shores, and then struck out a course north west to Lake Tanganyika, which he reached after much privation and illness, April 1st, 1867.

In July, 1868, we find him at Lake Bangweolo. Having explored the lake carefully, he made for Ujiji, on the eastern side of Tanganyika, to which place he had ordered supplies and medicines to be sent. Here Livingstone arrived in March, 1869, and made a long stay to recruit after his fatigues and sufferings. From July, 1869, to October, 1871, he travelled about the region westward of Tanganyika, tracing the course of the Lualaba, to find out whether it joined the Nile or not. It was on his return to Ujiji that the dramatic meeting with Henry M. Stanley took place.

Stanley had been sent out by the "New York Herald" to find Livingstone, alive or dead. His cheerful company, and the large stock of comforts he had brought, made a new man of Livingstone, and he resolved to start again and find out, if possible, where the Lualaba went. Stanley left in March, 1872, promising to send up carriers, and in August, when these arrived, Livingstone set out on his last journey.

For months he explored the swampy district between Lakes Bangweolo, Moero, Tanganyika, and Nyassa. At last, carried in a litter, the famous explorer reached Chitambo's village, south of Tanganyika, April 30th, 1873, and died next morning. His body was brought to England and buried in Westminster Abbey.

SIR RICHARD FRANCIS BURTON. Together with Speke, Sir R. Burton has the honour of having discovered Lake Tanganyika, in 1858. But Burton's title to fame lies in the journeys he made in known regions, and the accurate, as well as entertaining descriptions he gives of them, rather than in the actual discovery of unknown places. He travelled in India, Arabia, the land of Midian, West Africa, and Somaliland, and his works on these lands are authorities.

JOHN HANNING SPEKE. Speke, the discoverer of the source of the Nile, accompanied Sir Richard (then Lieutenant) Burton in his unsuccessful expedition into Somaliland in 1854. In 1856 the Royal Geographical Society arranged for Burton and Speke to lead an exploring expedition into central Africa from the East Coast. They made Zanzibar their headquarters, from whence they had not much difficulty in making their way westward to Tanganyika, which they reached in January, 1858. Burton being ill, Speke crossed the lake alone, but did not attempt to sail round it. Hearing of another and larger lake to the north, Speke set off to visit it, leaving Burton at Kazé to recruit. He reached its most southern point on July 30th, and on August 3rd had the satisfaction of getting a full view of its broad expanse. He named the lake Victoria Nyanza, but left to rejoin Burton without exploring it much.

Speke felt convinced that the latter lake would prove to be the source of the Nile, and immediately after his return to England an expedition was arranged for him to test his belief. Setting out again in April, 1860, by way of Zanzibar, Speke, accompanied by Captain Grant, made his way again to Kazé, a convenient station south of Victoria Nyanza, and east of Lake Tanganyika. From Kazé they proceeded by the west of the Nyanza to Karague, and thence to Uganda, which they reached in February, 1862. Marching through Uganda, they struck the Nile near Urondogani, some way below the Nyanza, and from this point Speke marched up the river to the lake. Then coming down again, he followed the left bank of the river to the Karuma Falls. From this point, leaving the river, he struck north by land until he met the river again above Dufile. Thus he missed the sight of Lake Albert Nyanza, although he knew of its existence from native reports. Speke then proceeded to Gondokoro, and thence by Khartoum and Alexandria home, having solved the Nile problem.

SIR SAMUEL BAKER. While Speke was descending the Nile, Sir Samuel Baker was ascending it with a view to exploration. They met at Gondokoro, February 15th, 1863, and Speke related what he had done, advising Baker to investigate the great lake he had heard of. Baker, accompanied by his wife, had great difficulty in getting forward, but reached the Karuma Falls on January 23rd, 1864. From thence he made his way south-westward through Unyoro, and reached the lake, which he named Albert Nyanza, at Mbakovia. From this point he proceeded in boats to Magungo, where the Nile flows into it from Victoria Nyanza, and after exploring the part, from Magungo to Karuma, which Speke had not touched, he turned his face homewards in November, 1864. In 1869 Baker was appointed Governor-General of the Soudan, and in this capacity he did much to clear up doubtful points in the Nile geography.

GRANT. Speke's companion in the Victoria Nyanza expedition was James Augustus Grant. By the loyal and unselfish support he gave his chief, and the importance of his scientific notes during the expedition, he deserves emphatic mention as an African explorer, though he never held independent command.

SIR HENRY M. STANLEY. The first journey Stanley made in Africa was as correspondent of the "New York Herald" with Lord Napier's expedition into Abyssinia. His journey to Ujiji and meeting with Livingstone in 1871, no doubt aroused a longing to examine the still vast unknown territory in Africa.

Leaving Bagamoyo, on the east coast, in November, 1874, he crossed the Ugogo country to the southern shore of Victoria Nyanza. Having circumnavigated the lake, and fixed its main outlines, he proceeded to Uganda, where he made a great friend of King Mtesa. From Uganda he went to Tanganyika, and thence to Nyangwe, on the Lualaba, where he arrived in October, 1876. Was this another affluent of the Nile, or did it bend round and form the Congo, the mystery of the West Coast? He resolved to follow its course as the only reliable means of answering the question, a task which took him till August, 1877, and turned his hair from black to white. But the Congo mystery was solved. Lualaba, Luapula, and Congo were all one. The Chambezi, rising near Tanganyika and Nyassa, flows into Lake Bangweolo; the Luapula flows into Lake Moero; and from Moero the Lualaba, afterwards called the Congo, flows with a semi-circular sweep into the sea on the west coast. The foundation of the Congo Free State by the Belgian King was the immediate result of this journey.

In 1887 Stanley set out on his famous journey to relieve Emin Pasha. He ascended the Congo to its confluence with the Aruwimi, then sailed up the latter river as far as Yambuya. From Yambuya the route lay through an almost impenetrable forest, tenanted by malicious and implacable tribes. But he went on, and in April, 1888, met Emin on the shores of the Albert Nyanza. One result of this journey was the clearing up of the geography of the northern part of the Congo Basin, and the discovery of Mount Ruwenzori. After meeting Emin, Stanley pushed on to Bagamoyo, which he reached in December, 1889, thus crossing the continent from west to east.

EMIN PASHA. Edward Schnitzer, a German Jew by birth, took the name of Emin, the better to ingratiate himself with the Turks, whose service he had entered as medical officer. He entered the Egyptian service in 1876, and in 1878 was appointed governor of the Egyptian Equatorial Province, where he remained till the coming of Stanley in 1889. He did inestimable services to the cause of civilization and knowledge; for he accurately surveyed vast tracts of Central Africa, and made besides constant meteorological observations, in addition to securing specimens of new plants, birds, animals, and insects. He also made numerous experiments in agriculture, and mastered the chief local African dialects, so that the light he shed upon Central Africa is in its way as important as that produced by any other explorer.

CAMERON. Livingstone, as we have mentioned, was the first to cross Africa from west to east, but the honour

of being the first to cross Africa from east to west belongs to Vernon Lovett Cameron, who was chosen in 1872 to take aid to Livingstone after Stanley left him at Ujiji. Having made due preparations at Zanzibar, Cameron and his companions proceeded by Bagamoyo to Unanyembe, in August, 1873, and there heard of Livingstone's death. Having made arrangements for the body to be conveyed to the coast, Cameron set out for Lake Tanganyika, which he surveyed. Thence he went to Nyangwe, on the Lualaba, intending to sail down that stream in the hope of proving its identity with the Congo. Had he done so he would have anticipated Stanley's great discovery made four years later. But the natives' opposition proved too strong, and he was forced to strike south-west, reaching Bihé, 240 miles from the sea, in October, 1875. The last stage of his journey proved by far the most arduous, and he barely reached Katumbela alive on November 28th. He was afterwards engaged in surveying expeditions in Asiatic Turkey and Persia, and on the West Coast of Africa.

FOREIGN EXPLORERS IN AFRICA.

Among eminent foreign travellers who have assisted in making Africa known, besides Emin Pasha, should be mentioned:—

BARTH. One of the greatest of German travellers, Heinrich Barth, began his explorations in 1845 from Tangier, visiting and traversing Tunis, Tripoli, and Barca. In 1850 he started from Tripoli at the instance of the British Government to explore Central Africa. His companions, Dr. Overweg and Mr. Richardson, died of fatigue and privation, but Barth continued his work until 1855, when he returned with a rich store of knowledge of Central Africa, comprising almost the whole of the Sahara, its chief oases and routes.

DU CHAILLU. An American of French descent, Paul du Chaillu, spent four years, 1855–59, in the neighbourhood of the Ogoway river, which falls into the Gulf of Guinea just south of the Equator. He made great additions to our knowledge of the ethnology and zoology of the district; indeed many of his statements were at first utterly discredited, especially those about the gorilla tribe.

ROHLFS. Friedrich Gerhard Rohlfs, a German explorer, began his work in Africa in 1861. He travelled over the Western Soudan, and made his way to Tafilet in Morocco, on the southern side of the Atlas Mountains, René Caillié having been the only European that preceded him there. Leaving Tafilet he was robbed and left for dead, but recovered through the good-natured attention of two marabouts. He then went to Tuat, some distance to the south-east, which he was the first European to visit. In 1865 he proceeded to Tripoli with the intention of exploring the Ahaggar, or Hogar, a mountainous region south of Algeria, but was prevented by tribal wars. He therefore turned his face to Bornu, exploring the oases on his line of route. He then directed his march to the Benue, and sailed down that river to Lokoja. Making his way to Lagos, he set sail for Europe, 1867, bringing with him much valuable information. He took part in several subsequent expeditions.

SCHWEINFURTH. This German traveller spent three years, 1869–71, in exploring the sources of the Bahr-el-Ghazal. Starting from Khartoum, he traversed the country of the Dinka, Bongo, and Niam-Niam. He also discovered the Welle river, a tributary of the Congo. Having settled in Cairo, he afterwards took part in expeditions to explore the Libyan and Arabian deserts.

DE BRAZZA. A Frenchman of Italian extraction, Pierre Paul de Brazza, was sent by the French Government in 1875 to explore the upper part of the Ogoway river. He was absent three years, but in this time he thoroughly explored not only the upper Ogoway, but also some of the northern affluents of the Niger, and paved the way for the foundation of the important colony of French Congo.

AUSTRALIAN EXPLORERS.

The first explorers in Australia naturally devoted their attention to the coast. Then, as the coast districts got settled and crowded, efforts were made to reach the interior an effort rendered difficult, and sometimes even dangerous, by the perennial scarcity of water in some parts and long-continued droughts in others.

BASS AND FLINDERS. In 1798 George Bass, a surgeon, examined the coast from Botany Bay to Western Port, a distance of 600 miles, sailing through the strait that bears his name, and thus proving that Tasmania was detached from Australia. He afterwards sailed round the island and surveyed a considerable part of the coast. Bass was accompanied in his explorations by Matthew Flinders, who subsequently was appointed captain of many expeditions fitted out to survey the Australian coasts. Between 1801 and 1803 Flinders mapped out nearly the whole coast of Australia except the west and north-west.

OXLEY. In 1817, accompanied by Allan Cunningham and others, Lieutenant Oxley crossed the Blue Mountains, followed the Lachlan river downward for 300 miles to the point where still a little settlement bears his name. Here it seemed to end in a limitless marsh. Returning, he struck north-east and reached the Macquarie at Wellington, and followed this river up to Bathurst. In a second journey he traced the course of the Macquarie till it also led into marsh, near Mount Harris. Thus arose the idea of a vast inland sea in Australia. Oxley now turned eastwards, crossed the Arbuthnot Range, the Liverpool Plains, and the Blue Mountains, and struck the sea at Port Macquarie. A sea expedition under Oxley in 1823 led to the discovery of the Brisbane River, and the foundation of Brisbane itself.

HAMILTON HUME. In 1824 Hamilton Hume, a native of Paramatta, accompanied by Mr. Hovell, started from Lake George, near Sydney, to try and reach the south coast. They had no difficulty in getting to the Murrumbidgee, but after crossing it they had to abandon their carts and pack the loads on their oxen. They followed the Murrumbidgee only a short way, then struck south-west, sighted the snow-clad Australian Alps, crossed the Murray, Ovens, and Goulburn, reaching at last the sea near where Geelong now stands, on Port Philip. The importance of this journey lies in the fact that a vast district of great fertility was laid open to colonization.

STURT AND HUME. Captain Charles Sturt, in 1828, was sent out with Hamilton Hume to follow the Macquarie river, and ascertain the limits of the reedy marsh in which Oxley had lost it. The drought of the previous two years had wiped out the greater part of the water, and the party had difficulty in getting enough to drink. To advance northward proved impossible, so Sturt turned west, and after some hard work, struck a fine stream flowing south-west, which he named the Darling, after Sir Ralph Darling, who had sent him out. An attempt to explore the country to the north-west proved unsuccessful, and the party retreated.

CAPTAIN STURT. In 1829 Sturt started to trace the course of the Murrumbidgee, taking with him a boat in sections. He found that the river led, as did the Lachlan and Macquarie, into a region of swamp and weeds. But the channel had enough water to float his boat, and he held on until he reached the Murray, and thus solved one of the great problems of Australian topography. Down the Murray they continued, until a broad river flowed into it from the north. Sturt felt sure that this must be the Darling. His next object was to discover the Murray's outlet on the southern coast. Near the sea he found that it widened into a shallow lagoon, which he named Lake Alexandrina, and that its course thence to the sea was by shallow channels of shifting sand difficult to navigate.

In 1843 Sturt made an attempt to cross the continent northwards. Starting from the Lachlan river above its junction with the Murray, he made his way to the "Stony Desert," near the centre of the continent. The heat was intense, and the drought severe, and the sufferings he underwent resulted in blindness, but by making known Eyre's Creek and Cooper's Creek, Sturt opened the way to a knowledge of the inland water system centred in Lake Eyre.

MAJOR MITCHELL. In 1831 Major Mitchell, afterwards Sir Thomas Mitchell, commenced by clearing up the geography of the Darling's upper tributaries. In 1833 he travelled down the Bogan river to the Darling river, and then for 300 miles down the latter until he was sure it was the one that Sturt had seen join the Murray. In 1836 he followed the course of the Lachlan from Bathurst. Arrived at Oxley's farthest point, he found that the marshes which had turned the latter back had dried up into grassy plains, and these furthered his advance to the Lachlan's junction with the Murrumbidgee. Proceeding down the latter to the Murray, he ascended it to survey the unknown country on its left bank. Swan Hill, the rivers Loddon, Avoca, Wimmera, and Glenelg were surveyed; then the party made its way down the latter to the coast, between Cape Northumberland and Portland Bay, having thus opened up the finest country in Australia.

Mitchell's last expedition set out in 1845. His object was to open up the country between Moreton Bay and the head of the Gulf of Carpentaria. As a matter of fact he was preceded by Dr. Ludwig Leichardt, who had started in 1844, but had not returned when Mitchell set out. Between the two, however, the geography of North Queensland was made clear. Leichardt kept near the coast in a northward direction till he came to the river Burdekin, when he turned westward and struck the shores of the Gulf, round which he travelled, making many valuable discoveries by the way, to Arnheim Land. Mitchell kept more to the north-west, and got as far as the Barcoo, or Victoria river, which belongs to the Eyre system of drainage. But Mitchell, thinking it flowed into the Gulf, concluded he had accomplished his object, and returned southwards, exploring the Maranoa river on his way.

EDWARD JOHN EYRE. This daring adventurer, afterwards Governor of Jamaica, began his exploring experiences by driving cattle in 1838 from Port Philip to Adelaide. In this journey he discovered Lake Hindmarsh, which receives the river Wimmera, but has no outlet. In 1839, after a journey up the east side of Spencer Gulf, in which he reached Mount Arden and discovered Lake Torrens, he turned westward from Port Lincoln, and got to Streaky Bay, 300 miles away, without seeing a pond or a river. He continued westward till he passed the head of the Great Bight, and then, finding neither water nor grass, returned. In 1840 Eyre went north again, explored the east side of Lake Torrens, and the Flinders Range. After this he returned to Port Lincoln, resolved to make his way westward round the Bight or perish. He accomplished it after a terrible journey, but the practical results were nil.

JOHN McDOWALL STUART. In Sturt's last expedition of 1843 he was accompanied by J. McDowall Stuart as draughtsman, who began in 1858 to turn the experience he had thus gained to his own account. His first journey was in the district lying between Lake Torrens and Streaky Bay, and he surveyed a part of Lake Gairdner. His second and third journeys were rather reconnoitring expeditions with a view to his great aim of crossing the continent from south to north. In actually doing this, he was anticipated by Burke and Wills in 1861, who, however, lost their lives in the return journey, as well as by others. But the honour of finding a practicable route belongs to Stuart, and the overland telegraph, which follows his route, is a proof of this. In 1860 he advanced past Lake Eyre, and made known the Finke river, the Albert river, McDowall Range, Central Mount Stuart, and Ashburton Range. His journey of 1861 took him but little farther, but in 1862 he managed to strike the Chambers river, a tributary of the Roper, up which he advanced to the head waters of the Adelaide, then down the latter to the sea opposite Melville Island.

JOHN McKINLAY. The non-return of the Burke and Wills expedition of 1860-61 caused several expeditions in search of them. Of these, that of John McKinlay in 1861-2, was most fruitful in results. He went by way of Lake Torrens and Cooper's Creek, kept on the high ground to the west of the Diamantina till he reached the ridge now bearing his name. From this point he made for the Leichard River, and hoped to make the Gulf of Carpentaria. But marsh and bog stopped his progress, and he turned eastwards, crossed the Leichard Range, and made his way down the Burdekin, having proved that the westward portion of Queensland was a habitable country.

ARCTIC EXPLORERS.

Captain Cook had made an attempt to pass from the Pacific Ocean to the Atlantic by way of the Arctic Ocean, but the idea was not pursued for some time.

SIR ALEXANDER MACKENZIE. Although not strictly an Arctic explorer, Sir A. Mackenzie well deserves a place among those who have devoted themselves to geographical investigation and discovery. An officer in the employ of the Hudson Bay Company at Fort Chippewayan, on Lake Athabasca, he offered to make his way from thence to the frozen northern ocean, which he did in 1789, by way of the Mackenzie river, which has since borne his name. A still more notable achievement was his journey across the Rocky Mountains to the Pacific coast, which he reached near Cape Menzies. He was thus the first white man to cross the continent in these latitudes, and the journey took him nearly a year, July, 1792, to June, 1793.

CAPTAIN SCORESBY. The work of William Scoresby deserves especial mention, as his investigations and observations were all additional to his nautical work. The son of an expert whaler, he early attended his father on his voyages, keeping a most exact account of their observations. In 1806 their ship, the *Resolution*, reached 81° 30′ North. For years after this Scoresby continued his voyages, and his "Account of the Arctic Regions," in which he records the results of his observations, is still a standard work on the subject.

ROSS AND PARRY. The impulse given by Scoresby to Polar exploration found an ardent backer in Sir John Barrow. In 1818 he caused an expedition to be prepared to make explorations by way of Baffin's Bay. Captain John Ross and Lieutenant William Parry took the command, and some valuable discoveries were made.

The next year Parry was sent out in command of the *Hecla*, to make his way, if possible, through Lancaster Sound. This he did, naming its continuation westward Barrow Strait, in honour of his patron. Leaving Wellington Channel on his right, he entered Melville Sound, and wintered on Melville Island. The precautions he had taken for the health of the ship's company had excellent results, and his return to England in 1820 excited great interest and admiration. Next year Parry again went out to pursue his investigations in these regions. He rounded Baffinland, came down the Gulf of Boothia, and discovered a narrow strait leading into Hudson Bay, which he called "Fury and Hecla" Strait, after the two vessels under his command.

In 1827 Parry made a determined attempt to reach the North Pole, starting from the northernmost point of Spitzbergen. He had conceived the idea that by utilising boats that could be fitted on sledges, he would be able to travel on either water or ice, and thus go always forward. He had, however, left out of his calculations the drift of the ice, and was obliged to give up after reaching latitude 82° 45′.

JOHN AND JAMES ROSS. John Ross's expedition of 1818, though attended with valuable results, had rather served to enhance Parry's credit than his own. But in 1829 he was again, through the liberality of Sir Felix Booth, enabled to fit out an expedition to go northwards. His nephew, James Ross, who had served under Parry in the expeditions named above, accompanied him. They made their way down the Gulf of Boothia, and wintered on the tongue of land named "Boothia," after their patron, which they thoroughly explored. Here they spent three winters, making long sledge journeys in the intervening summers, in one of which James Ross found the North Magnetic Pole (97° W. Long.; 70½ N. Lat.). In May, 1832, they abandoned their ship and began their homeward

journey. After enduring great hardships, they had the good fortune to come across a whaler in Lancaster Strait, which enabled them to arrive in England, October, 1833, after more than four years' absence. A knighthood rewarded John Ross for his successes and endeavours.

For some years after this great expedition, the chief work in Arctic Exploration was left to the Hudson Bay officers, who finished the work so well begun by John Franklin and others, of tracing out the shores of the continent, and established the fact that Boothia was a peninsula.

RUSSIAN EXPLORERS. During the first half of the 19th century, the Russians were as busily engaged in marking out the north coast of Asia as we were in North America, and by 1843, through the agency of Anjou, Wrangel, and Middendorf, the work had been done. It was now, therefore, known that, except from ice, no barrier existed to the passage of a ship from Europe to India, either by a North-West or a North-East Passage, and once more men's minds reverted to the idea of making the passage.

SIR JOHN FRANKLIN. In 1845, therefore, an expedition was fitted out with the object of making the North-West Passage. Sir John Franklin, who had distinguished himself in 1819–22 and in 1825–27, by tracing out the northern coast, was chosen to make the attempt. He was instructed to make his way from somewhere about the mouth of the Fish River, to and through Behring's Strait. With a picked body of men he sailed in the *Erebus* and the *Terror*, on May 19th, 1845, was spoken in Melville Bay by a whaler on the 25th of July in that year, and from that time disappeared. Until 1859 no certain news of his fate could be gained. From information supplied by the Esquimos, and from articles in their possession, it appeared that the ship had been abandoned, but nothing further was certain. It was the determined devotion of Lady Franklin that made all clear.

With her own money and that of sympathising friends, Lady Franklin had the *Fox* fitted out in 1857, and gave the command to Captain McClintock, who was to proceed to King William Island, and search there and in the neighbourhood. The search proved successful. A cairn was found containing documents that gave the history of the expedition. From this we learn that the winter of 1845–6 was spent on Beechey Island, near North Devon. In the spring they made their way, by Peel Strait and Franklin Strait, towards the mouth of the Fish River. But on nearing King William Island they met the full force of the polar ice coming down McClintock Channel, which drove them against King William Island, and cut off all chance of getting out again. Franklin died on the 11th June, 1847. By April, 1848, it had become clear that the ships were never to get away, and the survivors, under the command of Captains Fitzjames and Crozier, resolved to abandon them and try to make their way by land to the Fish River, and thus get in touch with the Hudson Bay hunters. From that time our knowledge of their doings is fragmentary. The Esquimos told of white men going southward, and dropping dead as they marched, and skeletons have been found, together with clothes and other relics, which prove that these white men belonged to Franklin's crew.

CAPTAINS AUSTIN AND PENNY. The experience of Parry and Ross had prepared people to hear nothing of Franklin's party for some time. But when 1848 came, and still no tidings, alarm began to be felt, and for some years expeditions were sent out to search for him. These expeditions caused great additions to be made to our knowledge of the Arctic regions.

In 1850, after Sir James Ross had returned from a two years' search without any results, it was resolved to make a grand combined search both from Behring Strait eastwards and by the route Franklin was expected to follow. Captains Austin and Penny took the latter route, and were ably assisted in the work by Lieutenant McClintock. The result of this expedition was to clear up much of the geography of the region north of Lancaster Sound, Barrow Strait, and Melville Sound. They discovered Franklin's first winter quarters on Beechey Island; they made their way up Wellington Channel, over a good part of Melville Island, and as far south as Prince of Wales Island.

McCLURE AND COLLINSON. Meanwhile Captain Collinson in the *Enterprise*, and Captain McClure in the *Investigator*, had set sail to attempt the passage through Behring Strait into the Arctic Ocean. The latter ship passed Behring Strait a fortnight ahead of the *Enterprise*, and thus just escaped the grip of the ice, fast closing in on the land. Following the coast to Cape Bathurst, McClure sailed through Prince of Wales Strait till he came to Melville Sound. Here he wintered, having achieved the honour of being the first to make the NORTH-WEST PASSAGE.

The summer of 1851 he spent in trying to pass through or across Banks Strait, but it was not till 1852 that he managed to get across to Melville Island. After another winter among the ice it was high time to get away somehow, and McClure had just made up his mind to abandon his ship and try to get to Hudson Bay Territory, when a sledge party from the *Resolute*, anchored off Melville Island, took them off, and they got safely to England on September 20th, 1854. The officers and crew of the *Investigator* received £10,000 for their services, and McClure the honour of knighthood.

Collinson, in the *Enterprise*, lost his chance for a year, for by the time he got to Point Barrow the ice, which had let McClure through a fortnight before, now barred his passage altogether. He therefore returned to Hong Kong for the winter, and came again in 1851. Then he spent three years exploring Prince Albert Land and Victoria Land, and in 1854 he brought his ship safe back to England.

CAPTAIN KELLETT. The next expedition in search of Franklin had a curious ending, to which there was a still more curious sequel. Sir Edward Belcher was put in command of four ships to try the Lancaster Sound route once more. One of the four was the *Resolute*, commanded by Captain Kellett, and officered by many who had been in Captain Austin's fruitful expedition. The *Resolute* rescued the *Investigator's* crew as related above, and then by means of sledge parties examined the shores of Melville and Prince Patrick's Islands. But in 1854 Sir Edward Belcher, becoming alarmed lest the expedition should be compelled to winter again among the ice, ordered the ships to be abandoned, and the crews to be taken to England, Kellett and his able helpers, McClintock, Mecham, and Hamilton, vainly protesting. The *Resolute* was thus abandoned in Lat. 74° 41′ North, Long. 101° 11′ W., on May 14th, 1854. She was sighted near Cape Mercy, in Davis Strait, on September 10th, 1855, having drifted a thousand miles, and being in good condition then, thus proving that the abandonment was, to say the least, premature.

McCLINTOCK AND THE "FOX." In 1854 Dr. Rae, employed by the Hudson Bay Company to clear up some doubtful points about the extent of King William Island, heard from the Esquimos that they had seen white men in 1850 dragging a boat over the ice near King William's Land, and that later they had seen their dead bodies. They also handed over to Dr. Rae various articles that had undoubtedly belonged to the expedition. This news enabled Dr. Rae to claim the reward of £10,000 the Government had offered for certain tidings of the expedition. It also inspired Lady Franklin to make a supreme effort to make certain of her husband's fate. So Captain McClintock, who had gained great distinction under Austin and Kellett, was asked to command the *Fox*, and make a thorough search about King William's Land. He set out in July, 1857, and returned in 1859, having ascertained the particulars of Franklin's end, as related above, and the probable fate of the others.

HALL. Perhaps the most striking character among the many who sought Franklin is Charles Francis Hall. With no nautical training, he volunteered in 1860 to undertake the quest. He sailed to the Arctic regions on a whaler, landed, and lived for two years among the Esquimos, learning their language, and diligently pursuing his search,

He then came home, but set out again in 1864, this time remaining five years. He succeeded in finding some relics of Franklin's party, and brought back the bones of one of the men. In a third expedition, which started in 1871, he commanded the United States Government ship *Polaris*. He sailed up Smith Sound, and continued for 250 miles along its continuation, styled Kane Basin and Kennedy Channel, reaching Lat. 82° 16′—the farthest north up to date. Then turning southward, he fixed his winter quarters in Thank God Harbour, on the coast of Greenland, Lat. 81° 38′. Here he fell suddenly ill, and died on November 8th, 1871. His companions had great difficulty in getting away.

NORWEGIAN AND SWEDISH EXPLORATION. The Arctic Regions northward of America seeming almost the special province of Englishmen, the part northward of Europe seemed almost as naturally to fall to the northern nations, and the valuable fisheries of Spitzbergen aided in attracting their attention. Between 1860 and 1870 Spitzbergen was circumnavigated, and much of its surface surveyed. Professor Nordenskiold and Lieutenant Payer commenced their exploring experiences at this time, the one the future explorer of the interior of Greenland, the other the discoverer of Franz Joseph Land.

NORDENSKIOLD, Nils Adolf Erik, created a baron in 1880, had a long and successful career in Arctic Exploration. He took part in the surveys of Spitzbergen in 1861 and 1864. In 1870 he did valuable work in exploring the interior of Greenland. But in 1878 he started on the voyage which was to crown his life. Leaving Karlskrona in June, 1878, in the *Vega*, he passed Cape Chelyuskin in August, and in another month had nearly reached Behring Strait. Now, however, they were frozen in. Getting free in July of 1879, they passed Behring Strait on the 20th, and thus made the NORTH-EAST PASSAGE. As a route to Eastern Asia, the north-east passage will probably never be valuable, but this voyage, together with Nordenskiold's other enterprises along Asia's northern coast, proves that maritime intercourse with Siberia is more practicable than was thought. See also under *Antarctic Ocean*, p. 41.

LIEUTENANT PAYER. An Austrian army officer, Lieutenant Julius Payer, from experience gained in exploring Greenland, Nova Zembla, and Spitzbergen, had conceived the idea that the north-east passage must be sought by passing to the north of Nova Zembla, rather than by hugging the coast. His opinion was wrong, but his attempt led to most important results. Setting out in the *Tegethoff* from Tromsö, in July, 1872, he passed the winter near the north of Nova Zembla. When summer came, the ice, still holding the ship, started drifting northward under the influence of the wind, and soon they came in sight of land till then unknown. They wintered on a small island near the main mass of land, and spent the early spring in sledging expeditions, discovering that the new land consisted of two large islands, Wilczek Land and Zichy Land, with many others. In one expedition the adventurers reached Lat. 82° 5′, which remained the "farthest north" in the Eastern Hemisphere for about twenty years. In May, finding their ship still icebound, they left it, and set out southwards, placing their boats on sledges. They reached open water on August 14th, and had the good fortune to meet with a Russian ship, which conveyed them to Vardo, after a highly successful expedition.

SIR GEORGE NARES. English zeal for Arctic exploration, which had waned after Franklin's fate was determined, increased again after the exploits of Payer and Nordenskiold. In 1875 the *Alert* and *Discovery*, under Captain Nares and Lieutenant Markham, set out by way of Smith Sound to ascertain whether the much talked of open Polar Sea had any existence. The *Alert*, passing through Robeson Channel, wintered between the land and the edge of the Palæocrystic Sea, facing the cliffs of ice, in Lat. 80° 27′ N., the highest a ship had so far reached. Then with sledge-parties under Lieutenant Markham, a further advance was made to Lat. 83° 20′ North, but no open Polar Sea was found.

DR. NANSEN. The failure of an American expedition in the *Jeannette*, under Lieutenant De Long, led to Nansen's great attempt on the North Pole. The *Jeannette* had been crushed in the ice north of Siberia in Long. 155° E., in 1881. In 1884 some articles from this ship made their appearance on the coast of Greenland, on the exact opposite shore of the Arctic Sea. Therefore, argued Dr. Nansen, the same agency, namely drifting ice, should drift a ship across, and in the journey it must go pretty near the Pole. His reasoning was justified, for after getting his ship, the *Fram*, fixed in the ice near the new Siberian Islands in September, 1893, she started on her slow journey across the Arctic Ocean, and came out near Spitzbergen. The *Fram* got as near the Pole as 84° North Lat. in March, 1895, and here Nansen and his trusted comrade, Johansen, left her, and made their way northward. In 24 days they made 150 miles, thus reaching Lat. 86° 14′ North, and Long. 95° E. Turning back, they made for Franz Josef Land, and had to winter there. Resuming their retreat in May, 1896, they met Mr. Jackson, of the Harmsworth Exploring Party, who conveyed them to Norway in his ship, the *Windward*, the *Fram* arriving from Spitzbergen not long after.

THE DUKE OF ABRUZZI. It seems hard on Nansen that his record stood but a year or two, but so it is. The Duke of Abruzzi, an Italian prince and naval officer, took an expedition to Franz Josef Land in 1899, and wintered on Rudolf Land. Sledge parties were sent out, one of which, commanded by Captain Cagni, reached Lat. 86° 33′, in Long, 56° E., beating Nansen by 20 miles. The party did good work in surveying the neighbouring islands.

COMMANDER PEARY, of the American Navy, who had devoted many years to successful Arctic exploration, reached the North Pole April 6th, 1909, the first to achieve that remarkable feat. See p. 232.

ANTARCTIC EXPLORERS.

CAPTAIN COOK, as mentioned on p. 854 in his second voyage (1772–1775) circumnavigated the Southern Ocean, and established the fact that no great expanse of land stretched northward from the Antarctic Circle. He got as far south as Lat. 71° 10′ on the meridian of 107° W. Longitude.

CAPTAIN WILKES, of the U.S. Navy, made a survey, 1838-42, in S. Lat. 65° to 67°, and from E. Long. 154° to 97°, and proved the existence of an Antarctic Continent, everywhere confronting him with an impassable barrier of ice.

SIR JAMES ROSS. The great English Antarctic expedition of 1839–1843 was under the command of James Clark Ross, nephew of Sir John Ross. He sailed in the *Erebus*, with Captain Crozier commanding the *Terror*. After passing through an advance guard of ice in Lat. 70° S. and Long. 172° E., early in January, 1841, they had a fairly clear course straight south for some weeks, with land all along on their right hand, which Ross named Victoria Land. Two volcanic mountains here, the active one "Erebus," and the extinct one "Terror," were named after the ships. Beyond these mountains the coast turns to the east, and is fringed by a barrier of ice from 100 to 200 feet high. Both in this and the next year Ross failed to find a break in this ice barrier, though he reached the high latitude of 78° 11′. The early part of 1843 was spent in surveying the southern part of the South Shetland Islands, and in the autumn of that year the expedition returned home.

C. E. BORCHGREVINK. No great or sustained expedition was made in Antarctic Regions for some years after Sir James Ross's great success, although little points were settled by different parties. In 1894, however, a young Norwegian named Borchgrevink, in default of other means, shipped as ordinary seaman on a whaler bound for Victoria Land, and had the honour, together with his captain, of first setting foot on the great Antarctic continent. See p. 72.

CAPTAIN SCOTT AND LIEUTENANT SHACKLETON. A British Antarctic Expedition was sent out under the former officer in 1901, and under the latter in 1908. See under *Antarctic Ocean*, pp. 41-42.

THE BRITISH EMPIRE

INCLUDING PROTECTED STATES AND TERRITORIES.

Component Parts.	Form of Government.
UNITED KINGDOM.	Constitutional Monarchy.
BRITISH INDIA.	
Ceylon	Crown Colony.
BRITISH AMERICA.	
Canada	Self-governed.
Newfoundland	Self-governed.
British Honduras	Crown Colony.
British Guiana	Representative Government
WEST INDIES.	
Bahamas, Jamaica, Windward Islands, Leeward Islands, Barbados, Trinidad and Tobago	Crown Colonies.*
BRITISH AUSTRALASIA.	
New South Wales, Victoria, Queensland, South Australia, Western Australia, Tasmania	Forming the Australian Commonwealth, a federation of self-governed states.
British New Guinea	Administered by the Commonwealth Government.
New Zealand	Self-governed.
BRITISH AFRICA.	
(1) South Africa.	
Cape of Good Hope, Natal, Orange Free State, Transvaal	Forming the Union of South Africa, a federation of self-governed provinces.
Basutoland	Crown Colony.
Rhodesia	Administered by Chartered Company.
Bechuanaland	Protectorate.
(2) West Africa.	
Gambia	Crown Colony.
Sierra Leone	Crown Colony.
Gold Coast	Crown Colony.
Northern Nigeria	Protectorate.
Southern Nigeria	Crown Colony and Protectorate.
(3) East Africa.	
East Africa Protectorate	Protectorate.
Uganda	Protectorate.
Zanzibar	Protectorate.
East Africa (*continued*):—	
Nyassaland Protectorate	Protectorate.
Somali Coast Protectorate	Protectorate.
SMALLER POSSESSIONS.	
(1) In the Mediterranean.	
Gibraltar	Crown Colony.*
Maltese Islands	Crown Colony.*
Cyprus	Crown Colony.*
(2) In the Atlantic Ocean.	
Bermuda Islands	Representative Government
Ascension	Board of Admiralty.
St. Helena	Crown Colony.
Tristan D'Acuna	
Falkland Islands, South Georgia	Crown Colony.
(3) In the Indian Ocean.	
Aden, Perim, Kuria Muria Isles	Dependencies of Bombay.
Socotra	
Mauritius	Crown Colony.*
Rodriguez, Chagos Isles	Dependencies of Mauritius.
The Seychelles	Crown Colony.
Laccadive Isles	Dependency of Madras.
Maldive Isles	Dependency of Ceylon.
Andaman Isles, Nicobar Isles	Administered by the Government of India.
Straits Settlements	Crown Colony.
Federated Malay States	Protectorate.
(4) In the Pacific Ocean.	
British Borneo	Protectorate.
Hong Kong	Crown Colony.
Wei-hai-wei	Protectorate.
Fiji Islands	Crown Colony.
B. Solomon Isles, Tonga Islands, Gilbert Island, Ellice Islands, Phœnix Group, Union Group, Pitcairn Island, Fanning Island	Protectorate administered by the Governor of Fiji as High Commissioner of the Western Pacific.

The **Self-governed Colonies** possess legislative assemblies, the members of which are elected by the colonists. The Governor is appointed by the Crown, and is the only official controlled by the home government. **Crown Colonies** are under the direct control of the Imperial Government, and the administration is carried on by governors and officials appointed by the home authorities. In those **Crown Colonies** marked with an asterisk the legislative powers are in the hands of a council, consisting partly of officials appointed by the Crown and partly of members elected by the people. **Dependencies** are subject to the government of the colony to which they are subordinate and are administered by officials appointed by such government. **Protectorates** retain a considerable measure of internal independence, under the general influence and direction of British officers, but in their external relations they are completely under British control.

THE UNITED KINGDOM.

SITUATION AND EXTENT. The United Kingdom includes the two large islands of Great Britain and Ireland, and a number of smaller islands, and is situated to the north-west of the continent of Europe, from which it is separated by the North Sea and the English Channel, the shortest passage being that across the Strait of Dover, viz., 21 miles. The total area is 121,089 square miles, of which Great Britain covers 88,729 square miles and Ireland 32,360.

The most important of the smaller islands are:—

The Isle of Wight, in the English Channel, off the coast of Hampshire.
The Scilly Islands to the south-west of Land's End.
Anglesey to the north-west of Wales.
The Isle of Man in the Irish Sea.
Arran and Bute in the Firth of Clyde.
The Hebrides off the west coast of Scotland.
The Orkneys and Shetland Islands to the north of Scotland.

The Channel Islands—Jersey, Guernsey, Alderney, and Sark—situated from 15 to 30 miles from the coast of France, 90 miles from Weymouth and 150 miles from Southampton, have been attached to the realm of England since 1066.

INHABITANTS. The bulk of the people are of Teutonic origin, and are the descendants of the tribes of Jutes, Angles, and Saxons, who settled in England during the 5th and 6th centuries. People of Keltic origin occupy the Highlands and islands of Scotland, the greater part of Ireland, and most of Wales, and Keltic words are still employed as names of places, rivers, and mountains. Thus *dun* (a fortified height) appears in London and Dunedin; *Afon* and *Uisge* (water) in Avon, Ouse, Usk, Esk, and Exe. The English language is spoken almost everywhere in the United Kingdom, less than five per cent. of the people making use of various Keltic dialects—Gaelic in the Scottish Highlands, Cymric in Wales, Erse in Ireland, and Manx in the Isle of Man.

There is complete religious freedom. In Great Britain the great majority belong to the Established Churches of England and Scotland and to other Protestant bodies; but in Ireland, three-fourths of the people are Roman Catholics. The Established Churches of England and Scotland are episcopal and presbyterian respectively. The branch of the Anglican Church in Ireland was disestablished by the Act of 1869, but it is reorganized and numbers more than 500,000 members. Of the various Nonconformist bodies, the Methodists, Baptists, and Congregationalists have the greatest number of adherents.

PHYSICAL CHARACTERISTICS. The islands that form the United Kingdom rise out of shallow seas, the bed of which is a submarine plateau forming a continuation of the Central Plain of Europe. Geological evidence proves that, in past ages, Ireland was connected to Great Britain, and that the whole formed part of the continent of Europe.

In Great Britain a backbone of high land extends, with but few interruptions, from north to south. In Scotland this backbone is formed by the Northern Highlands and the Grampians, and, with a short break at the plain of the Forth and Clyde, is continued through the Lowther Hills to the Cheviots and Pennine Range. The latter chain runs southward to the centre of England, and the line is completed by means of the detached ranges of the Clent, Cotswold, Mendip, and Quantock Hills, which link it with the granite ridges of the Devonian System in the south-west. This lofty belt gives a short, steep slope to the Atlantic, and a longer and more gradual one to the North Sea, and ensures good drainage for the greater part of the country. The worst drained district is that of the Fens, lying round the Wash. The Eastern plain is broken here and there by ranges of hills of no great elevation. The greater part of Wales is mountainous.

The middle of Ireland is occupied by a plain broken by a single low range, and bordered near the coast by detached mountain masses. As a result, much of the interior is badly drained, and bogs cover more than one-third of the country.

No part of the United Kingdom is above the snowline. The highest peak is Ben Nevis in the Grampians, which reaches a height of 4,400 feet.

RIVERS. The United Kingdom is well watered. Most of the longer English rivers have a slow current, and their depth, but little varied by seasons of drought or flood, and the absence of impeding rocks and other obstacles in their course, render them of great service for water carriage, and their wide estuaries give access from the sea to important ports and industrial centres. The Scottish rivers are shorter and swifter, while those of Ireland are so sluggish as often to expand into lakes or to give rise to swamps.

The following table gives the great commercial rivers, with the ports and industrial centres connected with them:

Rivers.	Towns.
England.	
Thames, 215 miles	London, Woolwich, Chatham (Medway).
Trent	Gainsborough, Nottingham, Burton, Stoke, Stafford (Sow), Derby, (Derwent), Leicester (Soar).
Yorkshire Ouse. .	York, Sheffield (Sheaf), Leeds (Aire), Rotherham, Doncaster (Don), Halifax, Wakefield (Calder), Hull, Grimsby (Humber).
Tyne	Newcastle, Gateshead, Shields, Tynemouth.
Severn, 240 miles .	Bristol (Avon), Newport (Usk), Cardiff (on the estuary).
Scotland.	
Forth	Leith, Grangemouth, Stirling.
Tay	Dundee, Perth.
Clyde	Glasgow, Greenock, Dumbarton.
Ireland.	
Shannon, 254 miles	Limerick.

In Ireland, the important ports of Dublin, Belfast, Cork, and Waterford stand at the mouths of the rivers Liffey, Lagan, Lee, and Suir respectively.

CLIMATE. The islands lie between the parallels of 50° and 60° of north latitude, and thus receive as much of the sun's direct heat as the centre of Russia or Labrador; but the prevailing winds are from the south-west and blow strongest during the winter months, and these bring with them the warmth and moisture of the Atlantic, and render the winters everywhere mild and equable, particularly on the south-west coasts. The myrtle and arbutus grow out of doors in the counties of Devonshire and Kerry, and frost is almost unknown in the Scilly Islands. Cold east winds are common in late autumn and early spring. The summer heat is modified by the surrounding ocean, so that there is seldom a day when labour is attended with discomfort on account of the temperature. The average annual temperature for the whole of the United Kingdom is about 48° F.

In Ireland, since there is no continuous belt of high land to stop the moisture-laden clouds from the Atlantic, the rainfall is fairly uniform in all parts of the island, with a slight preponderance in the west and south-west, and averages about 40 inches per annum. In Great Britain, the amount decreases from west to east. On the western slopes of the Scottish Highlands the annual fall reaches 80 inches, and in Cumberland, Westmoreland, Wales, Devonshire and Cornwall it exceeds 60 inches. The eastern counties receive less than 30 inches, and in Lincolnshire, Cambridgeshire, Norfolk, Suffolk, and Essex the average is less than 25 inches.

FERTILITY. The moist and mild climate produce a natural freshness in the vegetation at all seasons of the year, and the vivid green of its pastures has gained for Ireland the appellation of the "Emerald Isle." Scotland is the least fertile part of the United Kingdom, only about one-fourth of that country being fit for cultivation, while 80 per cent. of the surface of England is productive, and rich pasture is abundant in nearly every part of Ireland. The water-worn summits and steep western declivities of the mountains are bare of soil. Where the slope is more gentle, the bracken and heather that characterise the high moorlands of Scotland, Ireland, and Wales are able to establish themselves. In most other parts good pasture for sheep and cattle is obtainable, and the plains and river valleys are generally very fertile. The excessive moisture of Ireland and the west of Great Britain militates against the growth of cereals, and favours dairy-farming and cattle raising.

MINERALS. Great Britain is particularly rich in useful minerals. There is abundance of coal and iron, and these have been the principal source of the nation's wealth. The coal-fields cover an area of 12,350 square miles, and the output exceeds 230,000,000 tons annually. The Royal Commission on the Coal Supplies of the United Kingdom reported, in January, 1905, that at the present rate of consumption, the proved supply of coal is sufficient to last more than 400 years. Iron is found in close proximity to the coal-beds, and the limestone necessary for smelting at no great distance. Ireland suffers from a scarcity of both coal and iron. Other products of the mines and quarries include lead, tin, copper, zinc, salt, building-stone, slate, granite, and marble. Clay for the manufacture of the coarser kinds of pottery is abundant in North Staffordshire; that for the finer kinds of porcelain is obtained from Devon and Cornwall. The extensive importation of copper from Spain and South America, and of tin from the Straits Settlements, has so reduced their price as to cause the shutting down of most of the mines formerly worked for those minerals in Great Britain.

ENGLAND AND WALES.

England, together with Wales, forms the southern part of the island of Great Britain, and occupies rather more than two-thirds of its surface—England, 50,823 square miles, Wales, 7,363. It has the sea on all sides except for a distance of 70 miles towards the north, where Solway Firth, the Cheviot Hills, and the river Tweed separate it from Scotland. On the west, the Irish Sea and St. George's Channel divide it from Ireland. England contains 74.3 per cent., and Wales 4.1 per cent. of the total population of the United Kingdom. The former returns 465 and the latter 30 members to the House of Commons.

COAST LINE. Few countries in the world have so long a coast-line in proportion to their area. The numerous bays and river estuaries provide excellent harbours, and penetrate so deeply into the land that no part of the country is more than 80 miles from a seaport. The west coast is generally bold and rocky, and broken by wide openings which give easy access to the important industrial centres. The east is, for the most part, low, and contains but few indentations. The south presents the characteristics of both, being generally bold and broken up into excellent harbours to the west of the Isle of Wight, and east of the island, low and flat, or ending in chalk cliffs.

INDUSTRIES.

AGRICULTURE. Though for many years agriculture has been in a depressed condition, 96 per 1,000 of the male population of England and Wales are still employed on the land, and farms and pastures occupy three-fourths of the surface. The acreage under grain crops is decreasing. The soil and climate of the Eastern Counties favour the growth of wheat, but the average price—twenty-seven shillings per quarter during the last decennial period—allows of little or no margin of profit. In the west and north barley and oats are the principal grain crops. Large vegetable and fruit gardens are found near most of the large towns. Dairy-farming is of importance, but poultry-farming is comparatively neglected.

MINING. England is one of the greatest mining countries in the world. More than 640,000 men are employed in or about the mines and quarries, by far the larger proportion in coal-mining. The coal-fields are the seats of the staple manufactures of the country, and, as a result, they are the most densely populated. The table gives the principal coal-fields, with the leading industries connected with each:—

Coal-field.	Industries.
Northumberland and Durham	Iron and steel, ship-building, engineering.
Yorkshire and Derby	Woollen manufactures, iron, steel, and cutlery.
North Staffordshire	The Potteries.
South Staffordshire	Iron-smelting and hardware.
South Wales	Metal-smelting, tin-plate working.
South Lancashire	Cotton goods.
Cumberland	Iron smelting.

MANUFACTURES. England is pre-eminent as a manufacturing country, the pre-eminence being due to her mineral wealth, especially in coal and iron. Her staple manufactures are cotton goods, iron, and wool.

Cotton. Most of the towns on the South Lancashire coal-field are engaged in cotton spinning and weaving. Manchester is the centre of the trade, and Liverpool the great cotton port. Nottingham is famous for cotton hosiery and lace.

Iron. The chief iron-smelting districts are:—(1) The Cleveland District of North Yorkshire. (2) The Furness District of North Lancashire. (3) South Staffordshire. (4) South Wales.

There are extensive steel works at Sheffield, Middlesborough, Elswick, and Barrow. Sheffield is the headquarters of the cutlery trade, and also manufactures armour-plates, guns, and steel rails.

Wool. The woollen manufacture is the oldest in the kingdom. It is carried on chiefly in the West Riding of Yorkshire, Leeds and Bradford being the principal centres. Leicester manufactures woollen hosiery, and Bradford and Trowbridge (in Wiltshire) are celebrated for cloths of fine texture.

Minor manufactures are numerous and include pottery silk, glass, linen, chemicals, and leather.

FISHERIES. The most valuable fisheries are those of the North Sea, and the Dogger Bank is the most prolific fishing ground. Herrings, haddock, cod, and various species of flat fish yield the greatest harvest. Shoals of pilchards frequent the south-west coasts. The introduction of steam power into the fishing boats tends to transfer the industry from numerous fishing villages all along the coast to a few large ports in railway communication with the great centres of population. The chief fishing ports are Grimsby, Hull, Yarmouth, Plymouth, and Penzance.

COMMERCE.

England is as pre-eminent as a commercial nation as she is in manufactures. The *imports* are mainly food and raw materials for manufacture, the chief items being grain and flour, cattle and sheep, dairy produce, sugar, raw cotton, wool, metals, and timber. The principal sources of supply are the United States, the British Colonies, France, Holland, Germany, Russia, Belgium, Denmark, Scandinavia, Spain, and Egypt. The *exports* consist of manufactured or partly manufactured goods—cottons, woollens, iron in all forms, machinery—and coal. The British Colonies and Dependencies purchase nearly one-third of the total amount, India, South Africa, Australia, Canada, and New Zealand, in order, being the best colonial customers. The United

States, Germany, France, Russia, Holland, and Belgium provide the greatest foreign markets.

The following table gives the principal ports, arranged in order of the tonnage of vessels entered and cleared annually, together with the characteristic trade of each :—

Port.	Trade.
London	Colonial and Coasting.
Liverpool	North and South American, Irish.
Cardiff	Exports coal. Imports metals for smelting.
Newcastle	Exports coal, machinery, and chemicals.
Hull	Trades with Dutch, Norwegian, and Baltic ports.
Southampton	Passenger traffic to South Africa and America.
Bristol	Import trade with United States and West Indies.

The principal ports for passengers for the continent are :—

Dover, connecting with Calais.
Folkestone, connecting with Boulogne.
Newhaven, connecting with Dieppe.
Harwich, connecting with Hamburg, Rotterdam, and Antwerp.

COUNTIES AND COUNTY TOWNS.

England is divided into 40 counties and Wales into 12. Of the English counties 20 border the sea and 20 are inland. The largest are Yorkshire, Lincolnshire, Devon, and Norfolk; the smallest Rutland, Middlesex, Huntingdon, and Bedford.

SIX NORTHERN COUNTIES.

County.	Capital.	Situation.
Northumberland	Newcastle	River Tyne.
Durham	Durham	River Wear.
Yorkshire	York	River Ouse.
Cumberland	Carlisle	River Eden.
Westmoreland	Appleby	River Eden.
Lancashire	Lancaster	River Lune.

These counties are the seats of the iron, cotton, and woollen industries, and are generally densely populated. Yorkshire is divided into three parts called Ridings. The North and East Ridings are agricultural, the West Riding mining and manufacturing. South Lancashire, the West Riding of Yorkshire, and the Tyne District of Northumberland and Durham are among the busiest and most populous districts of England. Cumberland and Westmoreland are chiefly pastoral, but a small coal-field runs along the Cumberland coast, and iron-mining and smelting are also engaged in.

SIX EASTERN COUNTIES.

County.	Capital.	Situation.
Lincolnshire	Lincoln	River Witham.
Norfolk	Norwich	River Wensum.
Suffolk	Ipswich	River Orwell.
Essex	Chelmsford	River Chelmer.
Cambridgeshire	Cambridge	River Cam.
Huntingdonshire	Huntingdon	The Great Ouse.

The principal industries in these counties are agriculture and fishing. The land is generally low and flat, or crossed by ranges of chalk hills of no great elevation. The Fens occupy portions of Lincolnshire, Cambridgeshire, and Norfolk. Most of the marshes have been reclaimed by drainage, and now bear good crops of corn or grass. Numerous turkeys and geese are reared on the Norfolk farms, and crowds of wild fowl haunt the "Broads."

COUNTIES ADJACENT TO LONDON.

County.	Capital.	Situation.
Middlesex	Brentford	River Thames.
Kent	Maidstone	River Medway.
Surrey	Guildford	River Wey.
Berkshire	Reading	River Thames.
Buckinghamshire	Aylesbury	——
Hertfordshire	Hertford	River Lea.

These counties are agricultural, and the districts round London, which occupies portions of Middlesex, Surrey, Kent, and Essex are engaged in market-gardening. Kent is known as the "Garden of England," and is famous for its hop-gardens, apple, cherry, and filbert orchards. Surrey contains much heath and woodland in the north, but the south is very fertile. Bucks is a dairy county, and Hertfordshire has paper-making and straw-plaiting industries.

SEVEN SOUTHERN COUNTIES.

County.	Capital.	Situation.
Sussex	Lewes	River Ouse.
Hampshire	Winchester.	River Itchen.
Wiltshire	Salisbury	River Avon.
Dorset	Dorchester	River Frome.
Somerset	Taunton	River Tone.
Devonshire	Exeter	River Exe.
Cornwall	Bodmin	——

Agriculture is the principal occupation of the people. The various chalk downs provide rich pasturage for sheep, while the rich soil of the lowlands and the moist climate of the south-west are favourable for dairy-farming. A few tin mines are still worked in Cornwall; the clay-pits of that county and Devonshire furnish excellent clay for the manufacture of the finest porcelain; and sandstone for building purposes is quarried in Somerset and Dorset. Wiltshire, an inland county, and Somerset have manufactures of "West of England Cloth." The Scilly Islands now grow flowers and early vegetables for the London market.

FIVE NORTH-MIDLAND COUNTIES.

County.	Capital.	Situation.
Derbyshire	Derby	River Derwent.
Nottinghamshire	Nottingham	River Trent.
Staffordshire	Stafford	River Sow.
Leicestershire	Leicester	River Soar.
Rutland	Oakham	——

Rutland is purely agricultural, and Leicestershire is to a large extent a pastoral county. There are, however, important manufactures of woollen hosiery and boots and shoes. The majority of the inhabitants of the other counties are engaged in mining or manufactures. A number of small towns in North Staffordshire are known collectively as the "Potteries." South Staffordshire is the "Black Country." The people are engaged in some branch of iron manufacture, each town specialising in a particular branch of the trade.

SIX SOUTH-MIDLAND COUNTIES.

County.	Capital.	Situation.
Warwickshire	Warwick	River Avon.
Worcestershire	Worcester	River Severn.
Northamptonshire	Northampton	River Nen.
Bedfordshire	Bedford	The Great Ouse.
Oxfordshire	Oxford	River Thames.
Gloucestershire	Gloucester	River Severn.

With the exception of the Northern portions of Warwickshire and Worcestershire, which form a part of the "Black Country," and are engaged in the iron industry, the counties are mainly agricultural. Northamptonshire has extensive manufactures of boots and shoes. Bedfordshire is a county of market-gardens. Gloucestershire contains two small coal-fields—those of the Forest of Dean in the west and Bristol in the south.

FOUR COUNTIES BORDERING ON WALES.

County.	Capital.	Situation.
Cheshire	Chester	River Dee.
Shropshire	Shrewsbury	River Severn.
Herefordshire	Hereford	River Wye.
Monmouthshire	Monmouth	River Wye.

These counties are mainly agricultural, with much rich grazing land. Cheshire produces excellent cheese and butter; salt is extensively worked in the southern part of the county, and the South Lancashire coal-field penetrates into the northern portion. Herefordshire is famed for its hop-gardens and apple orchards. Monmouth contains a part of the South Wales coal-field.

COUNTIES OF NORTH WALES.

County.	Capital.	Situation.
Flintshire	Flint	River Dee.
Denbighshire	Denbigh	——
Carnarvonshire	Carnarvon	Menai Strait.
Anglesey	Beaumaris	Menai Strait.
Merionethshire	Dolgelly	——
Montgomeryshire	Montgomery	——

Much of the surface is mountainous, Carnarvonshire containing the highest ranges. The lower slopes afford pasturage for sheep and cattle. There are small coal-fields in Anglesey, Denbighshire, and Flintshire; lead, copper, and zinc are mined in various parts; and excellent slate is quarried. Merionethshire and Montgomeryshire manufacture Welsh flannels.

COUNTIES OF SOUTH WALES.

County.	Capital.	Situation.
Cardiganshire	Cardigan	River Teify.
Pembrokeshire	Pembroke	Milford Haven.
Carmarthenshire	Carmarthen	River Towy.
Glamorganshire	Cardiff	River Taff.
Brecknockshire	Brecon	River Usk.
Radnorshire	Radnor	——

The great feature is the South Wales Coal-field, which is the most extensive in Great Britain, having an area of 1,000 square miles. The smelting of metals is a leading industry. Copper is imported from all parts of the world, and tin from Singapore. The tin-plate trade employs a large number of people in the towns, and is also carried on in the villages in all the valleys on the coal-field. Glamorganshire is the wealthiest and most thickly peopled of the Welsh counties.

SCOTLAND.

Scotland forms the northern part of Great Britain, and, including the numerous islands off the west and north coasts, has a total area of 29,820 square miles. At the North Channel it approaches within 13½ miles of the Irish coast. The country contains 10.8 per cent. of the total population of the United Kingdom. In the Highlands 28,100 of the people speak only Gaelic. Scotland is represented in the House of Commons by 72 members, and in the House of Lords by 16 representative peers.

GENERAL CHARACTERISTICS. Scotland is much more mountainous than England. It is divided naturally into three regions:—

(1) **The Southern Uplands**—a tableland of broad moors crossed by ranges of hills covered with thin pasture.

(2) **The Central Plain,** gently undulating in character, and forming the richest part of Scotland, both in mineral wealth and fertility of soil. It is also the most densely populated portion.

(3) **The Highlands** of the north and west, consisting of wide stretches of wild moorland, crossed from west to east by bold mountain masses. Much of the land is preserved as deer forests or grouse moors. Parts of this region are famed for the picturesque beauty of their scenery.

The rivers of Scotland, except where they open out into large estuaries or firths, are of little use for navigation, but many of them have valuable salmon fisheries. The coast is so deeply indented by firths and lochs that no part of the country is more than 40 miles from the sea.

INDUSTRIES.

Of the total male population, 64 per cent., and of the female population, 25 per cent., have some employment.

AGRICULTURE. Less than one-fourth of the surface of the whole country admits of cultivation. Cattle and sheep are pastured. Barley and oats are the characteristic cereals.

MINING. Coal and iron abound in the Central Plain; lead is mined in the Lowther Hills; and granite is quarried in the Grampians.

FISHERIES. The fisheries are valuable all round the coast, herrings providing the greatest catch. Many vessels are engaged in the Greenland Whale fishery. Salmon are taken in nearly all the rivers. The chief fishing ports are Dundee, Arbroath, Stonehaven, Wick, Thurso, and Stornoway.

MANUFACTURES. The principal manufactures are linen, cotton, and woollen goods, machinery, iron, and shipbuilding.

Linen and **Jute** are manufactured in the counties of Forfar and Fife, Dundee and Dumfermline being the chief centres.

Cotton goods are made at Glasgow and Paisley.

The Woollen manufacture is carried on in the valley of the Tweed, and also in the counties of Stirling and Ayrshire.

Machinery is produced chiefly in and around Glasgow.

Iron is smelted on all the coal-fields, but especially on those of Lanarkshire and Stirlingshire.

The banks of the Clyde from Glasgow to Greenock are lined with ship-building yards, some of which are capable of turning out the largest liners or the most powerful battle ships.

COMMERCE.

The commerce is steadily increasing. There is a considerable trade with England and the north of Ireland, the former taking cattle and agricultural produce generally, while the latter receives large shipments of coal. Glasgow and Greenock, in addition to a large coasting trade, do a considerable business with America. The principal ports on the east, Dundee, Aberdeen, and Leith, trade extensively with the Baltic, India, and the East.

The principal *exports* are manufactured goods and coal, cattle, sheep, oats, and fish. The *imports* are raw materials for manufactures, food-stuffs, and colonial produce.

COUNTIES AND COUNTY TOWNS.

Scotland is divided into 33 counties, the largest of which are Inverness, Argyllshire, Ross and Cromarty, and Perthshire, and the smallest Clackmannan, Kinross, Linlithgow, and Nairn.

HIGHLAND COUNTIES.

County.	Capital.	Situation.
Shetland	Lerwick	Isle of Mainland.
Orkney	Kirkwall	Isle of Pomona.
Caithness	Wick	Wick Harbour.
Sutherland	Dornoch	Dornoch Firth.
Ross & Cromarty	Dingwall	Cromarty Firth.
Inverness	Inverness	Beauly Firth.
Argyll	Inverary	Loch Fyne.
Bute	Rothesay	Firth of Clyde.
Nairn	Nairn	River Nairn.
Elgin	Elgin	River Lassie.
Banff	Banff	River Deveron.
Aberdeen	Aberdeen	River Dee.
Kincardine	Stonehaven	East Coast.

These counties are but sparsely peopled and Aberdeen is the only large town. There are some fertile spots in the narrow, low-lying plains bordering the east coast, but generally the land yields but a scanty livelihood to the crofters. The principal occupations are the rearing of cattle and sheep, fishing, quarrying, and game-preserving.

CENTRAL LOWLAND COUNTIES.

County.	Capital.	Situation.
Perth	Perth	River Tay.
Forfar	Forfar	——
Fife	Cupar	——
Kinross	Kinross	Loch Leven.
Clackmannan	Clackmannan	Near River Forth.
Stirling	Stirling	River Forth.
Dumbarton	Dumbarton	River Clyde.
Renfrew	Renfrew	Near River Clyde.
Ayr	Ayr	River Ayr.
Lanark	Lanark	River Clyde.
Linlithgow	Linlithgow	——
Mid-Lothian	Edinburgh	Near Firth of Forth.
Haddington	Haddington	——

The northern portions of Perth and Forfar belong to the Highland region. The remainder of the Central District embraces the most fertile parts of Scotland, and also contains the principal industrial centres. In several of the counties coal and iron are abundant, and Lanarkshire, which is especially rich in those minerals, is the wealthiest and most densely populated of the Scotch counties. An oil-shale bearing district covers the eastern part of Linlithgow and the west of Mid-Lothian. These two counties and Haddington are also noted for their excellent farms. Ayrshire is known as the Dairy County. Other extremely fertile districts are the Carse of Gowrie, in Perthshire, and the Carse of Stirling.

SOUTHERN LOWLAND COUNTIES.

County.	Capital.	Situation.
Berwick	Greenlaw	River Blackadder.
Peebles	Peebles	River Tweed.
Selkirk	Selkirk	River Ettrick.
Roxburgh	Jedburgh	River Jed.
Dumfries	Dumfries	River Nith.
Kirkcudbright	Kirkcudbright	River Dee.
Wigtown	Wigtown	Wigtown Bay.

This district is mainly pastoral, with a few fertile regions suitable for tillage, such as Nithsdale and Annandale, in Dumfries, and the central plain of Berwickshire known as the Merse. Towns in the Tweed basin manufacture the cloth called tweed, from the home-grown wool.

IRELAND.

Ireland lies about 60 miles to the west of England, and in the north-east approaches to within 13½ miles of the nearest point of Scotland. The island has an area of about 31,760 square miles, and now contains 10.8 per cent. of the total population of the United Kingdom. Since 1845 emigration has caused a steady diminution in the number of the inhabitants. The country is represented in the Imperial Parliament by 103 members of the House of Commons, and by 28 representative peers in the House of Lords.

INDUSTRIES.

AGRICULTURE is the leading industry, and, under the fostering care and direction of the Board of Agriculture, is making great advances. The climate and soil are suitable for dairy-farming, and the rearing of cattle and sheep. Good crops of oats, barley, potatoes, and roots are raised, and in the north there is a considerable acreage under flax.

MANUFACTURES. The dearth of coal is a depressing factor, and, as a consequence, the principal manufactures have their seat in the north-east of the country, within easy reach of the Scotch coal-fields, Belfast being the greatest industrial centre. Linen and ship-building are the principal manufactures. Brewing and the distillation of whisky are carried on in several towns, and lace, frieze, and poplins are produced in many localities, chiefly in the north and east.

FISHING is carried on all round the coast, though the sea-fisheries are not so well developed as those of England and Scotland. Salmon and trout are taken from most of the rivers and lakes.

COMMERCE.

The trade of Ireland is chiefly with Great Britain. Lines of coasting steamers trade regularly between Belfast, Dublin, Waterford, or Cork, and Glasgow, Liverpool, Bristol, the south of England ports, and London. Other important Irish ports are Limerick and Galway on the west, and Londonderry in the north. The *exports*, of which more than 90 per cent. is taken by Great Britain, consist of agricultural and dairy produce, linen, whisky, and malt liquors. The principal *imports* are coal, manufactured goods, clothing, tea and sugar. Queenstown, in Cork Harbour, is a calling place for the Atlantic liners sailing between Liverpool and New York, and Moville, on Lough Foyle, for those sailing between Liverpool or Glasgow and the Canadian ports.

COUNTIES AND CHIEF TOWNS.

Ireland is divided into four provinces, Ulster in the north, Leinster in the east, Munster in the south-west, and Connaught in the west; and these are sub-divided into 32 counties.

COUNTIES OF ULSTER.

County.	Capital.	Situation.
Donegal	Lifford	River Foyle.
Londonderry	Londonderry	River Foyle.
Antrim	Belfast	River Lagan.
Tyrone	Omagh	River Foyle.
Armagh	Armagh	Ulster Canal.
Down	Downpatrick	Near Strangford Lough.
Fermanagh	Enniskillen	River Erne.
Monaghan	Monaghan	River Blackwater.
Cavan	Cavan	——

Ulster is the most densely peopled and the most enterprising of the provinces. A large proportion of the inhabi-

tants are descendants of immigrants from England and Scotland who settled here in the 17th century. Donegal is the most mountainous of the Irish counties, and contains extensive bogs. Antrim is also mountainous, and Tyrone has much bogland. The remainder of the province is generally well cultivated. Coal and iron are worked to a small extent in Fermanagh and Tyrone, and marble, limestone, slate, and freestone are quarried in various parts. The linen manufacture and the distillation of whisky flourish in Belfast, Londonderry, and other towns, and the ship-building yards of Belfast are world famous.

COUNTIES OF LEINSTER.

County.	Capital.	Situation.
Longford	Longford	River Camlin.
Westmeath	Mullingar	River Brosna.
Meath	Trim	River Boyne.
Louth	Dundalk	Dundalk Bay.
King's County	Tullamore	Grand Canal.
Queen's County	Maryborough	—
Kildare	Naas	River Liffey.
Dublin	Dublin	River Liffey.
Kilkenny	Kilkenny	River Nore.
Carlow	Carlow	River Barrow.
Wicklow	Wicklow	River Vartry.
Wexford	Wexford	Wexford Harbour.

With the exception of County Wicklow, which is mountainous and contains some of the beauty spots of Ireland, Leinster is generally flat, with a considerable proportion of bogland in Kildare, King's County, and Queen's County. Rich pasture is abundant, and agriculture, cattle rearing, and dairy-farming are the leading industries. Anthracite coal is worked in Kilkenny and Queen's County, and the former has also valuable quarries of black marble.

COUNTIES OF MUNSTER.

County.	Capital.	Situation.
Clare	Ennis	River Fergus.
Tipperary	Clonmel	River Suir.
Kerry	Tralee	Tralee Bay.
Limerick	Limerick	River Shannon.
Cork	Cork	River Lee.
Waterford	Waterford	River Suir.

The maritime counties possess many excellent harbours, and the sea fisheries are of importance. The lakes and rivers yield salmon, and there are valuable oyster beds round the coast of Clare. The leading industries inland are cattle raising and dairy-farming. The "Golden Vale," which occupies portions of the counties of Tipperary and Limerick, is one of the most fertile parts of Ireland. Limerick has small manufactures of woollens, paper, and lace.

COUNTIES OF CONNAUGHT.

County.	Capital.	Situation.
Mayo	Castlebar	—
Sligo	Sligo	River Garvogue.
Leitrim	Leitrim	River Shannon.
Galway	Galway	River Corrib.
Roscommon	Roscommon	—

Connaught is the poorest and most sparsely peopled of the provinces. Mountains, bogs, and lakes cover a large part of the surface. The sea and fresh-water fisheries are valuable, and slate is quarried in Mayo. Attempts are being made, by the construction of light railways, to develop other industries.

THE BRITISH DOMINIONS BEYOND THE SEAS.

INDIA.

SITUATION AND EXTENT. India consists mainly of an immense peninsula, triangular in shape, lying to the south of Asia, and washed on the south-west, south, and south-east by the Indian Ocean. The length of the country from Kashmir to Cape Comorin is 2,000 miles, the breadth from Baluchistan to China exceeds 2,600 miles, and each side of the triangle is about 1,900 miles. The total area is about 1,766,000 square miles, that is, nearly fourteen times the size of the British Islands. On the north-west, north, and east the territory borders on Persia, Afghanistan, the Russian Empire on the Pamirs, the Chinese Empire along the summits of the Himalayas and on the Burmese eastern frontier, French Colonial territory along the upper Mekong, and Siam.

Afghanistan acts the part of a buffer state between India and Russian territory. The Suliman mountains, which separate it from India, are crossed by the Khaiber, Kuram, Gomul, and Bolan Passes, through one or other of which the various conquerors of India from the land side have passed. These passes are now strongly fortified and occupied by British troops. Troops are also stationed in the Malakand Pass in order to keep open the road from Peshawar through the Swat Valley and the Lowari Pass to Chitral, lying north-east of Afghanistan. The roads across the Himalayas are at a great elevation, and are considered impassable for a modern army.

INHABITANTS. According to the census of 1901, the total population, including that of the native states, exceeds 294¼ millions, an increase of more than 7 millions during the preceding decade. This gives a density of 166 per square mile. The population of the British Provinces is nearly 232 millions, an increase of more than 10 millions, and a density of 213 to the square mile. The increase is below the normal rate, owing to the ravages of famine and plague. The greatest density is in the Ganges Valley, where it amounts to 1,828 per square mile. In Baluchistan the density is only eleven.

The inhabitants vary greatly in race, language, religion, and the degree of civilization attained. About three-fourths of the people are Hindus, but these represent many distinct tribes, each speaking a language unintelligible to the others. The one thing they have in common is the social organization known as "caste." (See *Caste*, p. 845.) The Hindus inhabit the north-west, the northern plain, the river deltas, and the west coast plain. In all 145 distinct languages are spoken in India, the two chief being Hindi and Bengali. The South is inhabited by peoples speaking various dialects of Tamil and Telugu. Hindustani, a dialect of Hindi, has become the literary language and is the *uniqua franca* of India. In religion, the majority of the people profess some form of Brahmanism. Muhammadanism claims about 62½ million followers, chiefly in the north. Buddhism has almost died out except in the Himalayan valleys and in Burma. Native Christians number nearly three millions, an increase of 28 per cent. during the ten years. The Parsees, who are of Persian origin, are found in small numbers all over the country, but their chief settlements are in and around Bombay. They number less than 100,000.

COMPONENT PARTS. The Indian Empire comprises a vast peninsula, a large continental portion stretching northward to Kashmir, and extending beyond the base of the peninsula westward into Baluchistan, and eastward into Burma, together with the following oversea territories:

(1) Andaman and Nicobar Islands in the Bay of Bengal.
(2) Laccadive and Maldive Islands in the Arabian Sea.

(3) Aden and its hinterland.

(4) Perim.

(5) Protectorates over Socotra, Bahrein, and the Arabian coast from Aden to the Persian Gulf.

Of this vast territory nearly two-thirds is under direct British rule. The remainder consists of native states, Portuguese territory, French territory, and two independent native kingdoms.

(1) The Feudatory states are scattered all over India and number several hundreds. The most important groups are Rajputana, including an area greater than the British Isles; and Haidrabad, Kashmir, and Central India, each nearly as large as Great Britain. These states are governed by their native princes, but acknowledge the suzerainty of Britain. They are controlled by political residents, who act as advisers to the native rulers, who may not declare war, nor send ambassadors to other states. Some pay an annual tribute to the Indian Government.

(2) The Portuguese possess Goa, a territory of 1,400 square miles on the south-west coast; Daman, about 100 miles north of Bombay; and Diu, a small island and fortress in the Gulf of Cambay.

(3) The French retain territory about 200 square miles in extent, including a small town and factory north of Calicut, three on the south-east coast, the chief of which is Pondicherry, and another on the Hugli, north of Calcutta.

(4) Nepal and Bhutan, are two independent states on the slopes of the Himalayas. Nepal is inhabited by the Gurkhas, many of whom volunteer for the Indian army. East of Nepal is the feudatory state of Sikkim, through which trade is carried on with Tibet.

GOVERNMENT OF BRITISH INDIA. In England, Indian affairs are in charge of the Secretary of State for India, and he alone is responsible to the British parliament. He is aided by the Council of India, the members of which are appointed for a period of ten years, and are selected on account of their long experience as civil or military officers, merchants, or lawyers in that country. The King, as Emperor of India, is represented there by the Governor-General or Viceroy, who is appointed by the Crown, usually for a period of five years. This executive council consists of six members, one of whom is now an Indian, all being appointed by the Crown. This legislative council will, from 1910, consist of 68 members, nearly one-half of them to be elected. Calcutta is the seat of government except, during the hot season, when it is removed to Simla, situated on the lower Himalayas, north of Delhi.

All the great provinces enjoy a certain amount of administrative independence. They are subdivided into a number of districts, 267 in all, each administered by an officer called a "collector," or deputy commisioner. The districts, which vary in area from 100 square miles to 19,000 square miles, are combined into Divisions under commissioners. The more responsible posts are filled by British officials, but natives take an important part in administrative work and form 97 per cent. of the official staff.

BRITISH PROVINCES. The following are the principal provinces under direct British rule:—

(1) **Bengal** includes the delta and lower valleys of the Ganges and Brahmaputra. It is one of the most prosperous provinces. The soil is exceedingly fertile and produces rice, jute, indigo, tea, and the opium poppy. In the hills bordering the great plains, are coal-mines, yielding the greater part of India's coal output. Area, 116,000 square miles; population about 51 millions.

(2) **Eastern Bengal and Assam** includes the portion of the basin of the Brahmaputra and the adjacent hills and valleys lying east of Bengal. Rice, jute, and all kinds of useful vegetable products are cultivated. In Assam the principal industry is the growth and manufacture of tea. Area 106 000 square miles; population 31 millions.

(3) **The United Provinces of Agra and Oudh**, comprise the upper basins of the Ganges and Jamna. The naturally fertile soil is improved by artificial irrigation, and it is one of the richest corn-growing districts in India. Other products include millet, rice, indigo, sugar, cotton, and tobacco. Area, 107,000 square miles; population about 48 millions.

(4) **The Punjab** occupies the basins of the tributaries of the Indus, and also includes Delhi. It is the home of the Sikhs. Artificial irrigation is everywhere employed. The chief crops are wheat and other grains, and cotton, and there are rich deposits of rock-salt. Area 97,200 square miles; population about 20½ millions.

(5) **North-Western Frontier Province**, the district lying between the Punjab and Afghanistan, was created a province in 1901. Area 16,500 square miles; population 2¼ millions.

(6) **British Baluchistan** lies to the south of Afghanistan, from which country part of the territory was acquired. A considerable portion is entirely desert, and the country is but sparsely peopled, the density being but 11 to the square mile.

(7) **Bombay**, including Sind, occupies the western part of India from Baluchistan to Mysore. It contains large fertile tracts that produce millet, rice, wheat, and various pulses. Other districts are subject to periodical droughts and comparatively frequent agricultural distress. Manufactures of cotton, silk, pottery, and brass ware are important. Area 123,000 square miles; population 19 millions.

(8) **Madras** comprises the whole of the south of the peninsula with the exception of the territory of certain native states. Portions are subject to drought and famine. Other parts produce grains, tea, coffee, cotton, and oil-seeds. Area 141,700 square miles; population 38¼ millions.

(9) **The Central Provinces**, including Berar, occupy the northern part of the Deccan. Berar is very fertile and exports wheat, oil-seeds, and cotton. There are extensive wastes and jungle in the other parts of the province. Coal is mined at Warora. Area 104,200 square miles; population 12¾ millions.

(10) **Burma** extends eastward from the Bay of Bengal to Chinese territory, and southwards to Siam and the Malay Peninsula. The coast region produces rice, the hill country wheat, millet, cotton, and oil-seeds. Forests are extensive, and rubies, gold, silver, iron, lead, tin, and coal are mined. Area 236,700 square miles; population 10½ millions.

Bombay and Madras are still styled presidencies. Each has its own civil service, and each is ruled by a governor and council of four appointed by the Crown. Each has a legislative council of 48 members, the majority of whom are elected. They will, in future, have greatly enlarged powers, with the right to criticise and initiate, and to take a real active part in financial matters. The Viceroy, with the approval of the Crown, appoints Lieutenant-Governors for Bengal, Eastern Bengal and Assam, the United Provinces, the Punjab, and Burma. In each case the Lieutenant-Governor is assisted in making laws by a legislative council, the majority being elected members, with powers similar to those already stated. The Central Provinces, the North-Western Frontier Province, and Baluchistan are placed under Chief-commissioners appointed by the Governor-General in council.

BUILD OF THE COUNTRY. The whole of northern India consists of a vast plain extending from Baluchistan and the Suliman Mountains in the west, eastward for a distance of 1,500 miles to the hills of Assam, and from the Himalayas in the north to the Vindhya Range. This plain is watered and fertilised by three great rivers and their tributaries, the Indus, the Ganges, and the Brahmaputra. The triangular plateau of the Deccan occupies the south. This tableland is flanked by the Western and Eastern Ghats, by the Vindhya Mountains in the north, and by the Nilgiri, or Blue Mountains in the south, leaving a narrow coast plain on the west, and a broader strip on the east. The Deccan has a gentle slope from west to east, and its most important rivers, the Mahanadi, Godavari, Krishna, and the Kavari flow in that direction. The Nerbudda and Tapti enter the Gulf of Cambay from the north of the tableland. Burma is covered with forest clad hills and mountains, and is watered by the Irawadi, which is navigable for 700 miles from its mouth.

Practically the whole of the rainfall on both sides of the Himalayas finds its way to the Indo-Gangetic Plain by means of the great rivers. The silt carried by these streams is spread out over their lower reaches at the seasons of flood, and the cultivator of the soil is thus enabled to dispense with manure of any kind. Thus, Sind is fertilised by the silt of the lower Indus, and Bengal owes its extreme fertility—the land produces three crops a year—

to the flooding of the Ganges and Brahmaputra. These rivers unite to form the Bengal delta which is larger than Scotland. Moreover, in their middle courses the rivers are tapped by canals for irrigation purposes. Where the Ganges enters the plain more than half its waters are drawn off to feed a canal which sends out a network of smaller streams, and finally rejoins the river at Cawnpore.

The *Ganges* is navigable to the North-West Provinces, and the *Brahmaputra* right through Assam, almost to the shoulder of the Himalayas. Numerous shifting sandbanks impede the course of the *Indus* so that it is navigable only at certain seasons, and owing to the shifting character of its banks, no important towns are found on the main stream. The deltas of the *Mahanadi*, *Godavari*, and *Kavari* are also very fertile, and produce abundant crops of rice; and the many canals that have been constructed in their basins in recent years, are not only serviceable for navigation, but have considerably reduced the risks of famine. The rapidity of their streams renders the Nerbudda, Tapti, and Krishna useless for navigation.

CLIMATE. Since the whole of the peninsular portion of India lies within the Tropics, while the continental portion extends well into the North Temperate Zone, the temperature is exceedingly varied. Other influences modifying the heat of particular localities are the nearness of the ocean, and the land elevation. There are, speaking generally, three seasons in the year—the hot season from March to June, the wet season from June to October, and the temperate season from October to March.

TEMPERATURE. Over portions of the Indo-Gangetic Plain the average summer temperature exceeds 90° F., while the neighbouring slopes of the Himalayas enjoy a temperate climate, and on the hill stations in the Nilgherries the thermometer rarely rises above 60° F. During the hot season the temperature of the Deccan is higher than that of the west coast plain, but owing to the comparative dryness of the atmosphere it is less oppressive. The heat is greatest on the south-east coast.

RAINFALL. The period of the rainy season varies with different parts, the rainfall being dependent on the periodical winds called "monsoons," which prevail at different times in different regions. From May to September the moisture-laden south-west monsoon blows. The Western Ghats and the Himalayas act as condensers, and there is an abundant rainfall on the west coast strip, and over the plains extending from the foot of the Himalayas. The same air current also carries a heavy rainfall to the Bengal delta and the Burmese plains, and on the mountains of Assam an annual fall of 805 inches has been registered, while the average approaches 500 inches. Later in the year sets in the north-east monsoon, bringing rain to the country on the East coast, but since this air-current has traversed a comparatively small stretch of ocean, it accumulates less moisture than the south-west monsoon, and consequently the rainfall is less abundant than on the west. The central portions of the Deccan and of the northern plain receive too little rain when the strength of the winds falls below the average, and are known as "zones of uncertain rainfall." The north-west lies outside the direct influence of the monsoons, and the rainfall is small, averaging less than ten inches annually over portions of Rajputana, while parts of the Punjab are almost rainless.

PRODUCTIONS. The vegetation is as varied as the climate. The valuable forest tracts of the hill regions of central India, of the various mountain slopes, and the river valleys of Burma, are under the care of a government department, and produce teak, sandalwood, blackwood, sal, cedar, and pine. The bamboo and the cocoa-nut palm are widely distributed, and furnish the natives of some districts with almost all they require. The mango is the favourite fruit tree, and other species of palm supply fruit, fibre, and matting. The chief cultivated crops are millet, which forms the principal article of diet for a large majority of the people, rice, wheat, and other grains, cotton, jute, indigo, tea, sugar, opium, pepper, and cinnamon. The forests and jungle abound with wild animals. Tigers and panthers are responsible for the death of more than 1,000 persons and 6,000 cattle, and 20,000 persons fall victims to various species of snakes annually. The lion is almost extinct. The elephant is found in the north-east, and in the forests of Burma and the southern portion of the Western Ghats, and the crocodile in the Ganges. Vultures, jackals, and termites act the part of scavengers.

COMMERCE. Under British rule commercial activity has increased enormously. The Blue Book, reviewing the trade of India in 1909, places the value (including bullion and specie) of the exports for that period at £110,430,888, and the imports at £105,844,166. Trade is done principally with the United Kingdom—which supplies over 60 per cent. of the imports, and receives more than 25 per cent. of the exports—Germany, China, United States, Belgium, France and Japan. The *exports* consist of grain, including wheat and rice, raw cotton, oil-seeds, jute, tea, opium, coffee, indigo, hides, and skins. The *imports* are chiefly manufactured goods and treasure. Cotton goods constitute 37 per cent. of the merchandise imported. Specie and bullion come next. The silver is manufactured into ornaments and the gold is hoarded. Other imports include woollen goods, hardware, machinery, railway metals and other plant, iron and steel, silk, sugar, petroleum, and coal. There are few good natural harbours. The principal ports are found a few miles up the estuaries of the large rivers. The great centres for collecting and distributing merchandise and produce are Bombay, Calcutta, and Rangoon. Other ports are Karachi, Goa, and Calicut, on the west coast; Negapatam, Madras, and Masulipatam on the east coast; and Maulmain in Burma. Most goods imported pay a duty of 5 per cent. *ad valorem*. The government of India are opposed to a preferential tariff in favour of the United Kingdom. The exports, they say, are mostly such commodities as are untaxed or lightly taxed in foreign countries, and that if retaliatory duties were placed on these exports Indian trade would decline.

RAILWAYS. More than 30,000 miles of railway are now open for traffic. The chief lines are:—

(1) The North-Western from Calcutta through Patna, Allahabad, Cawnpore, Delhi, and Lahore to Peshawar, with branches to Benares, Lucknow, Meerut, Umballa, and Simla, and Amritsar.

(2) The Indus Valley Line from Karachi through Haidrabad, Multan, and Rawal Pindi to Peshawar, with a branch to Quetta and Nashki on the extreme border of British Baluchistan fronting Persia.

(3) From Bombay through Jabalpur to Allahabad, and through Nagpur to Calcutta.

(4) From Bombay through Poona to Madras, with a branch to Haidrabad.

(5) The South Indian Railways, joining the chief places on the coast south of Madras, and also connecting Madras with Calicut.

(6) The Burmese Railway from Rangoon to Mandalay, whence two lines are continued to points close to the Chinese frontier.

Provinces.	Chief Towns.
Bengal	Calcutta, Patna, Cuttack.
Eastern Bengal and Assam	Dacca, Shillong.
United Provinces of Agra and Oudh . .	Allahabad, Benares, Cawnpore, Lucknow, Agra, Meerut, Oudh.
Punjab	Lahore, Delhi, Multan, Simla, Amritsar, Ambala, Rawalpindi.
North-Western Frontier Province	Peshawar.
British Baluchistan	Quetta, Khalat.
Bombay	Bombay, Karachi, Surat, Poona, Haidrabad.
Madras	Madras, Calicut, Masulipatam, Negapatam.
Central Provinces .	Nagpur, Jabalpur.
Burma	Mandalay, Rangoon, Maulmain, Bhamo.

Nearly all the railways are owned by the State. Annual net gain on their working over £2,000,000.

Agra, on the Jamna, is celebrated for its magnificent mausoleum, the Taj-Mahal; population 188,000.

Allahabad, at the confluence of the Jamna with the Ganges, is a great railway and commercial centre. It is a place of pilgrimage for the Hindus, who bathe in the waters of the united streams; population about 172,000.

Amritsar possesses important textile manufactures, and is the commercial capital of the Punjab. It is the headquarters of the Sikh religion; population 162,500.

Benares, on the Ganges, is the most holy city of the Hindus, and is crowded with palaces and temples; population exceeds 209,000.

Bombay possesses the largest and safest harbour in India. During the past few years the town has suffered considerable ravages from bubonic plague, and its trade and population have declined in consequence; population 978,000.

Calcutta, 30 miles from the mouth of the Hugli, is the capital of British India. There are jute and paper mills in the neighbourhood; population, including that of the suburbs, exceeds one million.

Calicut, the principal port on the south-west coast, gave its name to calico, though none of it is now manufactured there. The exports of teak and coffee are increasing in quantity.

Cawnpore was the scene of the massacre of English women and children in 1857. It now possesses important manufactures of cotton and leather; population 197,000.

Delhi, on the Jamna, is a great industrial centre, and trades largely in wheat and other agricultural produce; population about 209,000.

Haidrabad, at the apex of the Indus delta, has a considerable trade and increasing manufactures.

Haidrabad, the capital of the Nizam's territories, is the largest town in the Deccan, with a population exceeding 448,000.

Karachi is the outlet for the produce of the north-west. Its trade and population have increased enormously since the opening of its harbour; population 117,000.

Lucknow, on the Gumti, is famous for the defence of its residency by Lawrence in 1857, and its relief, first by General Havelock and afterwards by Sir Colin Campbell; population exceeds 264,000.

Meerut was the scene of the outbreak of the Mutiny in 1857. It is now rising into prominence as a railway and manufacturing centre; population 118,000.

Madras ranks third among the Indian ports. Its roadstead is exposed to the north-east monsoon during half the year, and an artificial harbour and piers have been constructed. During the summer the government is removed to *Utakamund* in the Nilgherries; population exceeds 509,000.

Negapatam, on the south-east coast, does an improving trade with Ceylon, Burma, and Singapore.

Patna is in the centre of a rich agricultural district, and is a great emporium for rice, indigo, and sugar. Near it is *Gaya*, the birthplace of Buddha; population 135,000.

Peshawar is a great military station at the mouth of the Khaibar Pass.

Poona is a health station in the Western Ghats and the headquarters of the government of the Bombay Presidency during the wet season; population 153,000.

Rangoon, in the delta of the Irawadi, is the capital of Lower Burma, and the outlet for the products of the Irawadi basin; population 235,000.

Simla is a health station on the lower Himalayas, and the seat of the Indian government during the hot season.

CEYLON.

SITUATION AND EXTENT. Ceylon is a pear-shaped island, 266 miles in length, 140 miles in breadth, with an area of 25,480 square miles, lying south-east of India, from which it is separated by the Gulf of Manaar and Palk's Strait. Between the two extends the chain of islands and coral reefs known as Adam's Bridge. The water over the reef is too shallow to allow the passage of vessels of deep draught. The South Indian Railways have put forward a scheme for constructing a ship canal across one of the islands, carrying their line to a dock constructed in the middle of the canal, and eventually continuing it across the reef to loop up the Indian Railways with the Ceylon system.

INHABITANTS. The population exceeds four millions. The bulk of the people are Sinhalese, descendants of a race from northern India that conquered the island in the 6th century B.C. There are many Tamil coolies from Southern India, Arabs, Eurasians, and Malays. About 2,000 of the aborigines, Veddas, exist in the interior. The Europeans number about 6,000. The majority of the natives are Buddhists in religion. The Hindus number 827,000, the Christians 350,000, and the Mohammedans 250,000.

GOVERNMENT. Ceylon is a British Crown Colony. The governor, who is appointed by the Colonial Office, is assisted in administrative work by a council of five, and for legislative purposes by a council of eighteen, eight of whom are not officials, but are selected by the governor as representing the different classes and interests of the island. No law becomes operative until it has received the approval of the Secretary for the Colonies. There are nine provinces, each of which is administered by a government agent. The larger towns enjoy municipal government, and in the country districts minor matters are managed by village councils.

CLIMATE. Since the island is everywhere less than 10° from the Equator, the climate is necessarily tropical, but the heat is modified by the surrounding ocean and by the prevailing winds, and the temperature is lower than on the adjacent parts of India. The south-west monsoon blows from June to September, and the north-east from October to January. The heat is most oppressive from February to May, that is the period between the two monsoons. The rainfall varies greatly in different parts, the driest districts having an average fall of 30 to 40 inches, and the wettest as many as 150 inches.

PRODUCTIONS. The soil is everywhere fertile and the vegetation luxuriant. The extensive forests yield ebony, satin wood, and other timber suitable for cabinet work. Cocoa-nut, palmyra, and other palms are abundant, and the bread-fruit tree flourishes. The plantations produce tea, rubber, cinnamon, and other spices. Rice is the principal grain crop. Coffee used to be the staple product, but the trees have been almost entirely destroyed by disease. The island is deficient in metals, but remarkably rich in gems, that known as cat's eyes being the finest in the world. There is a valuable pearl fishery in the Gulf of Manaar, and its plumbago is excellent. The principal trade is with the United Kingdom, United States, and India. Its principal exports are tea, plumbago, rubber, cocoa-nuts, and cocoa.

TOWNS.

Colombo, the capital, on the south-west coast, is the calling place for vessels bound for Australia and the Far East, and monopolises nearly the whole of the foreign trade; population 155,000.

Kandy, the ancient capital, is now a small town of no importance.

Trincomali on the north-east coast, has a fine harbour, strongly fortified, once the headquarters of the East India Squadron of the British navy, now transferred to Singapore.

DOMINION OF CANADA.

SITUATION AND EXTENT. The Dominion of Canada occupies the whole of the North American continent lying to the north of the United States, with the exception of the peninsula of Alaska in the extreme north-west, and a part of Labrador, which belongs to Newfoundland. It stretches northward to the Arctic Ocean, and from the Atlantic to the Pacific. The area approaches3,620,000 square miles, or more than thirty times that of the British Isles. Its only land boundaries march with the United States territory. The southern boundary follows the 49th parallel of latitude from the Pacific to the Lake of the Woods, passes through the middle of Lakes Superior, Huron, Erie, and Ontario, along the river St. Lawrence to Montreal, and then follows a line of hills which lie to the south of that river, and which separate British territory from the states of Vermont, New Hampshire, and Maine, and finally takes a southern line to the entrance to the Bay of Fundy. The north-western boundary follows the 141st meridian of west longitude from the Arctic to the mountains near the Pacific coast, and thence continues in an irregular line

as demarcated by the Alaska Boundary Commission, in 1903, to the head of the Portland Canal.

DIVISIONS. The country naturally falls into the following districts:—

(1) **The Atlantic Region,** comprising the basin of the St. Lawrence. The surface consists largely of plains and undulating lowlands, still covered to a great extent with forests, and providing, where the timber has been cleared, rich pastures, and corn and fruit producing land.

(2) **The Central Region,** extending from the Lake of the Woods to the Rocky Mountains, and consisting principally of prairie land. It comprises an immense wheat belt, said to produce the finest wheat in the world, which extends through Manitoba, and Saskatchewan; a district stretching through the south of Alberta to the foot hills of the Rockies, especially fitted for cattle ranching; and throughout the whole region many districts suitable for mixed farming.

(3) **The Pacific Region,** a country of thickly wooded mountains and valleys with much mineral wealth.

(4) **The Northern Region,** including the Yukon Territory and the districts of Mackenzie, Ungava and Franklin. The climate is too severe to allow of cultivation, and the extreme north is a frozen wilderness. South of these "Barren Lands," a belt of forests of spruce and larch of from 200 to 300 miles in width, stretches right across the Dominion. Fur-bearing animals abound, and the Hudson's Bay Company has its trading posts scattered throughout the district, from the coast of Labrador to the frontier of Alaska. The Yukon Territory is rich in gold.

Politically these several regions embrace the following provinces:—

Atlantic Region.	Central Region.	Pacific Region.
Nova Scotia. New Brunswick. Prince Edward Island. Quebec. Ontario.	Manitoba. Saskatchewan. Alberta.	British Columbia, including Vancouver Island.

INHABITANTS. The population in 1909 was estimated at 7 millions. The bulk of the people are of British descent. The majority of the descendants of the early French settlers, who number over 1½ millions, reside in the province of Quebec, and still make use of the French language. More than 300,000 Germans have settled in various parts of the Dominion. The Indians numbered 108,000 at the last census. They are looked after by the government on reservations set apart for their use, but are gradually disappearing. Some have been trained to work at civilized occupations, but in the more remote regions they live by hunting and fishing. Tribes of Eskimo inhabit the Hudson Bay and northern shores.

GOVERNMENT. The government of Canada is Federal The king is represented by the governor-general, who is assisted by a privy council chosen by himself. The Federal Parliament consists of the *Senate* and a *House of Commons.* and sits at Ottawa. The *House of Commons* is composed of 221 members, elected by ballot for five years on what is almost manhood suffrage. The basis of representation is that Quebec shall always return 65 members, and the other provinces (including Yukon) a proportional number according to their population at the preceding decennial census. The *Senate* consists of 87 members chosen for life. Vacancies are filled by the Viceroy appointing the nominees of the cabinet, but the principle of proportional representation holds to some extent. All members of both houses are paid. Every bill must receive the assent of the Viceroy before becoming law. The Federal Parliament (unlike that of Australia) has jurisdiction in all matters not expressly reserved for each Province to settle.

The exclusively local affairs of each province are managed by a provincial parliament, modelled on the lines of the Federal parliament, and the governor-general is represented by a lieutenant-governor. The lieutenant-governor of Manitoba administers Keewatin, and, since 1898, Yukon has been placed under a Commissioner. Ungava, Mackenzie, and Franklin, which are more sparsely peopled, are directly administered by the Federal minister of the Interior, who also exercises a general control over the affairs of the other territories.

BUILD. Parallel to the west coast, at a distance of from 300 to 350 miles, extends the range of the Rocky Mountains, with an average height of 10,000 feet. From their western slope a lofty plateau extends to ranges of less elevation near the coast. East of the Rocky Mountains is a lower plateau which merges into the great plain sloping gently northward to the Arctic Ocean, and north-east to Hudson's Bay, and including the great prairie region of the west and middle, the sub-Arctic forest region, and a broad belt of low land round Hudson's Bay. In the north-east is the Labrador Plateau from which to Lake Superior extends the height of land which forms the watershed of numerous streams flowing south to the St. Lawrence, and north to Hudson's Bay. Parallel to the right bank of the St. Lawrence stretches the northern end of the Appalachian Highlands.

The following table gives the rivers draining the great natural divisions with the lakes in their basins:—

Western Tableland.	Central Plain.	Eastern Plain.
Columbia. Fraser. Yukon.	Mackenzie. L. Athabasca. Great Slave L. Great Bear L. Saskatchewan—Nelson. L. Winnipegos. L. Winnipeg.	St. Lawrence. L. Superior. L. Michigan. L. Huron. L. Erie. L. Ontario.

INLAND NAVIGATION. Canada possesses a magnificent system of internal navigation. Vessels drawing 14 feet may proceed, by way of the St. Lawrence and its lakes, from the Atlantic to the head of Lake Superior, a distance of 2,000 miles, and a project is on foot for deepening the many canals that have been constructed to escape the various falls and rapids, so as to admit ocean-going steamers of large size. The Welland Canal, by means of which the Niagara falls and rapids between Lakes Erie and Ontario are avoided, is the chief of these canals.

More ships are said to pass up and down the Detroit River, between Lakes Erie and Huron, than at any other point in the world; and though the navigation of the canals constructed to avoid the rapids in the St. Mary river, between Lakes Superior and Huron, is open for only eight months of the year, yet in that time a greater tonnage passes through these canals than through the Suez Canal in a whole year.

Hundreds of streams in the St. Lawrence basin supply energy that may be turned to account for driving the machinery of mills and factories, and the immense water-power of the Niagara Falls has been utilised for driving electric dynamos which produce the current for light and traction in neighbouring cities.

Numerous rocks and islands in its upper course, and rapids in the lower, render the navigation of the Nelson impossible, but the Saskatchewan is navigable almost to the foot of the Rockies, and the Mackenzie and its tributaries possess 2,500 miles of navigable water. The rivers draining the Pacific slope are generally too turbulent for water carriage, but they are the world's greatest salmon rivers.

The lakes are of the nature of fresh water inland seas. Ontario is as large as Wales, and Lake Erie, Lake Winnipeg, Great Slave Lake, and Great Bear Lake are somewhat larger. Huron is equal in area to Holland and Belgium, and Superior is of greater extent than Scotland.

CLIMATE. Over a territory of such vast extent the climate is necessarily varied. Speaking generally, it is more extreme than in the corresponding latitudes of Europe, but it is everywhere healthy. A belt of varying breadth along the north has a climate of Arctic severity.

The east is colder than the west, and the range of temperature greater, but Nova Scotia and Prince Edward Island are rendered less extreme by the proximity of the ocean, and the south of Ontario, where the snow fall is light, by the presence of the great lakes. Over the whole of this region the rainfall is abundant. Fogs are prevalent along the east coast during spring and autumn. In the central region the sub-Arctic climate does not penetrate so far south, and the air is dry and exhilarating, cold in winter, hot in summer, with a moderate rainfall. West of the Rocky Mountains, where the effects of the warm North Pacific Current are felt, the climate is mild and humid, and on the coast very mild. British Columbia has but little snow, and the *chinook*, a warm south-west wind from the Pacific, penetrates the various saddles of the mountain ranges, sweeps over the western portion of the great plain, and prevents the snow from lying long, so that cattle are kept in the open throughout the winter.

PRODUCTIONS. (1) FORESTS cover an area estimated at 1¼ million square miles. The sub-Arctic forest supplies unlimited quantities of spruce and poplar for the pulp and paper mills. Immense tracts in the eastern half of Canada are still clothed with pine, and this timber forms the most valuable lumber. Large areas are also covered with maple, beech, birch, ash, and oak. In the magnificent forests of British Columbia the trees are of larger growth, the Oregon pine frequently reaching a height of 250 feet. (2) CROPS. Along the valleys of the Red, Athabasca, Saskatchewan, and Peace rivers, immense quantities of wheat, barley, oats, and root crops are produced. Fruit growing is an important industry in eastern Canada and in British Columbia, and apples, pears, plums, strawberries, peaches, apricots, and grapes grow luxuriantly. (3) MINING. Gold is found extensively in the Klondike district of Yukon, in British Columbia, and in Nova Scotia. Coal-fields cover an area estimated at 100,000 square miles, and this mineral is mined in Nova Scotia and British Columbia. The steam coal from the Crow's Nest Pass district of British Columbia is largely used by steamers engaged in the Pacific trade. Other minerals include silver, nickel, lead, copper, iron, salt, and petroleum. (4) FISHERIES. The Gulf of St. Lawrence and the Bay of Fundy abound in cod, mackerel, halibut, haddock, hake, and herrings, and lobsters and oysters are plentiful along the northern shores of Prince Edward Island. The lakes produce fresh water fish of many kinds, and the salmon fisheries in the rivers of British Columbia are the finest in the world. (5) ANIMALS. Several species of deer are abundant, and the forests shelter numerous fur-bearing animals, the chief of which are the beaver, bear, marten, otter, fox (black, red, and white), mink, skunk, and wolverine.

COMMERCE. In 1907-8 the total exports amounted to 56 million pounds of which the United Kingdom received nearly 27 millions, and the United States 22¾ millions. In the same year the imports exceeded 74 millions, the United Kingdom sending over 19 millions and the United States over 44 millions. The principal *exports* are animals and animal products, timber, grain, and flour, minerals, fishery products, dairy produce and, fruits. The *imports* include textile fabrics, manufactured iron and steel, tea, coffee, and other colonial produce. There is a protective tariff on imports with a preferential treatment of 33⅓ per cent. to Great Britain and those British colonies that accord preferential treatment to Canada.

The principal ports are:—

(1) On the east coast—Halifax and St. John.
(2) On the St. Lawrence—Quebec, Three Rivers, and Montreal.
(3) On the great lakes—Kingston, Toronto, and Port Arthur.
(4) On the west coast—Vancouver, Victoria, Esquimalt.

Halifax, the capital of Nova Scotia, has a magnificent harbour covering ten square miles, with a dockyard and a dry dock capable of accommodating the largest vessels afloat. It is the principal naval station of British North America.

RAILWAYS. The total mileage of railways in Canada at the beginning of 1908 amounted to 22,500. The construction is now (1910) in progress of a new transcontinental railway from Moncton, New Brunswick, through Winnipeg, to Prince Rupert, about midway up the coast of British Columbia. Its total length will be 3,547 miles.

The principal lines now in operation are:—

(1) The Canadian Pacific, which stretches across the entire continent, a distance of 2,909 miles. It proceeds from Montreal, via Ottawa, Winnipeg, Regina, Calgary, and the Kicking Horse Pass, to Vancouver on the Pacific coast. It brings Liverpool within twelve days of the Pacific, and, by means of the company's line of steamers, within thirty days of Hong Kong. Branch lines have been constructed to the most populous districts, and to various mining centres.

(2) The Grand Trunk of Canada forms a network of lines throughout the provinces of Quebec and Ontario. It connects Quebec with Montreal, Toronto, and Sarnia, where it tunnels under the Detroit river, and proceeds thence through the United States territory to Chicago. Another line connects Montreal with Portland, a seaport on the coast of Maine.

(3) The Inter-Colonial, owned and operated by the Dominion government. It runs from Halifax to Montreal, with branches to the chief towns of Nova Scotia and New Brunswick.

(4) The Canadian Northern, running from Winnipeg in a north-westerly direction through the wheat-growing and lumbering districts of Manitoba, Saskatchewan, and Alberta.

PROVINCES.	TOWNS.
QUEBEC	**Montreal**, Quebec.
ONTARIO	**Toronto**, Ottawa, Hamilton.
NEW BRUNSWICK . . .	**Fredericton**, St. John.
NOVA SCOTIA	**Halifax**, Sydney.
PRINCE EDWARD I. . .	**Charlottetown.**
BRITISH COLUMBIA . . .	**Victoria**, Vancouver, Esquimalt.
MANITOBA	**Winnipeg**, Brandon.
ALBERTA	**Edmonton**, Calgary.
SASKATCHEWAN	**Regina.**

Dawson City, at the junction of the Klondike with the Yukon, was established in 1896 in consequence of extensive discoveries of gold in the neighbourhood.

Halifax is the chief winter port of the Dominion; population 41,000.

Hamilton, the Birmingham of Canada; pop. 70,000.

Montreal, on an island at the head of the ocean navigation of the St. Lawrence, is the largest city and greatest commercial town of Canada; population 430,000.

Ottawa is the capital of the Dominion, and has important industries connected with the lumber trade; population 70,000.

Quebec is a strongly fortified town, and an important port with large exports of timber; population 73,000.

St. John, the largest town and chief commercial centre of New Brunswick, is an important seaport, and the Atlantic terminus of the Canadian Pacific Railway; population about 41,000.

Toronto is the largest town and the greatest industrial centre of Ontario; population 300,000.

Vancouver, the Pacific terminus of the Canadian Pacific Railway, possesses a fine harbour, is the port of call for Australian and Oriental steamers, and the centre of the lumber trade of British Columbia; population over 60,000.

Victoria, capital of British Columbia, in Vancouver Island, chief port next to San Francisco on the western coast of North America; population over 32,000.

Winnipeg, in the midst of a great wheat growing district, is an important railway centre; population about 120,000.

NEWFOUNDLAND.

GENERAL VIEW. Newfoundland, the oldest British Colony, is an island, 42,734 square miles in area, lying north-east of the Gulf of St. Lawrence, and separated from Labrador by the Strait of Belle Isle, 12 miles across, and from Cape Breton Island by Cabot Strait, 60 miles wide. It is the nearest American land to Europe, Cape Race, the south-eastern point, being less than 1,700 miles from Cape Clear in Ireland. Included in the administration

of the colony is the coast region of Labrador, with an area of 120,000 square miles.

PEOPLE AND GOVERNMENT. The population, including that of Labrador, is about 220,000, the bulk of whom are settled on the peninsula of Avalon in the south-east. The colony is ruled by a governor appointed by the Crown, and by a legislative council and a legislative assembly. The fifteen members of the former are appointed for life by the Crown, and the thirty-six members of the latter are elected for four years on a manhood suffrage, voting being by ballot.

CLIMATE AND PRODUCTIONS. The Labrador Current tends to reduce the temperature of summer, but, though the cold of winter is extreme, the climate is healthy, and the heat of summer rarely exceeds 85° F. Dense fogs are frequent along the south-east coasts, but do not extend far into the interior.

The valleys are clothed with forests of pine, larch, and birch, and there is much fertile land which produces crops of barley and oats. The mining industry is rising into importance. Coal of good quality is abundant, and iron and copper are mined. Fishing is the principal industry, seal-fishing in the spring and cod throughout the summer and autumn. The Newfoundland banks, a marine plateau as large as the British Islands, lying south and south-east of the island, form the most prolific fishing grounds in the world, especially for cod, and the shores of the colony also provide a wealth of fish. Lobster fishing and canning are of importance, and the streams abound in salmon. The long-standing dispute between the English and French fishermen, the latter of whom claimed the exclusive fishing and curing rights along the whole of the north-west and part of the north-east coasts, was settled in 1904, the treaty, signed in April, placing both nations on a footing of equality in that region.

COMMERCE. The *exports* consist of the products of the fisheries, mines, and forests, the *imports* of manufactured articles, wheat, flour, and colonial produce. Nearly one-third of the trade is with Great Britain. *St. John's*, the capital, stands at the head of a land-locked harbour on the east coast of the peninsula of Avalon, and is the chief port and the centre of the fishing industries: population about 30,000. From it a railway crosses the south of the island to *Port Aux Basques*, from which there is a regular service of steamers to Cape Breton Island.

AUSTRALIAN COMMONWEALTH.

The Australian Commonwealth includes the island continent of Australia, lying to the south-east of Asia, and the island of Tasmania on the south-east of Australia. It also includes as a dependency British New Guinea. But New Zealand prefers to stand apart, and to have the full control of its own affairs and to work out its destiny independently of others. Australia contains five colonies, and these, with Tasmania, combined to form a federal commonwealth from 1st January, 1901. These six colonies are now in reality federated *States*:—

States.	Area.	Population, 1907.
New South Wales	310,400	1,569,000
Victoria	87,900	1,248,000
Queensland	670,500	542,000
South Australia	903,690	393,000
Western Australia	975,920	262,000
Tasmania	26,215	184,000
Total	2,974,625	4,198,000

British New Guinea, comprising the south-eastern portion of the island and several adjacent islands, has an area exceeding 90,000 square miles, and a population estimated at 350,000, of whom 500 are Europeans.

PEOPLE AND GOVERNMENT. Of the total population of the Commonwealth, 77 per cent. were born in Australia, and 18 per cent. in the United Kingdom. The aborigines, estimated to number 40,000, are not included in the population given above.

The Federal Parliament consists of a Governor-General, representing the King, a Senate, and a House of Representatives. The Senate is composed of thirty-six members, six of whom are elected by the people of each State for a term of six years, half retiring every three years. The House of Representatives, numbering in the first instance seventy-five members, is elected for a period of three years, the number chosen for each State being proportional to the population, unless otherwise determined by Parliament.

In the First Commonwealth Parliament New South Wales was represented by twenty-six members, Victoria by twenty-three, Queensland by nine, South Australia by seven, and Western Australia and Tasmania by five each. Under the new constitution each State manages its own affairs, whilst all matters of common interest to the whole community, such as Defence, Railways, Postal Service, and Tariff Questions come before the Federal Parliament. Each member of this Parliament receives an annual allowance of £400. All laws must receive the assent of the Governor-General, who may appoint the times for holding the sessions of Parliament, and dissolve the House of Representatives.

The internal affairs of each State are in the hands of a Governor appointed by the Crown and a State Parliament of two houses—the Legislative Council and the Legislative Assembly. The members of the *Legislative Council* are in New South Wales and Queensland appointed for life by the Governor, in the other States they are elected for six years, by those who possess a certain property and residential qualification. The members of the *Legislative Assembly* are elected triennially on an adult suffrage, the two sexes exercising the franchise on equal terms, and the same work applies to the franchise at elections to the Federal Parliament. The State Parliaments retain all rights not expressly delegated to the Federal Parliament.

BUILD. Nearly two-thirds of the interior of the Australian Continent is occupied by an immense plain which slopes gradually towards a central lake region, and, round its edges, merges into lofty tablelands or mountain ridges. The principal watershed is in the east, and, under the generic name of the Dividing Range, extends, with decreasing elevation and under various names in different parts, from south to north. This mountain mass gives birth to the Murray and its tributaries, the fertile basin of which occupies nearly a quarter of the continent. Much of the Central Plain is desert or covered with "salt-bush" or "scrub." Along the south coast, for a distance of 1,000 miles, not a single stream reaches the sea, and the continent generally is characterised by the scarcity of rivers and fresh-water lakes. The north-eastern shores of Queensland are protected by the Great Barrier Reef, which extends for more than 1,000 miles at an average distance of thirty miles from the shore. Tasmania is a mountainous island, the mountains rising from and around a central plateau, from which numerous streams find their way to the sea.

CLIMATE. The climate of Australia varies from temperate to tropical, but is everywhere characterised by dry heat. Among its drawbacks are the sudden great changes of temperature, the dust-laden winds from the interior, and the uncertain rainfall, which gives rise to long periods of drought followed by devastating floods. Within the Tropics the wet season occurs during the summer months, from November to April; in the temperate regions the winter—May to October—brings the greatest rainfall. On the Downs and western slopes of the Dividing Range scarcity of rainfall has been compensated for by numbers of deep borings, those in Queensland alone yielding upwards of 180 millions of gallons daily. The climate of Tasmania is warm, moist, and equable, resembling that of the Channel Islands.

PRODUCTIONS. The trees are evergreen, with tough, leathery foliage, the most characteristic being the various species of eucalypti or "gum" trees. They grow to an

immense height and furnish valuable timber. Various grain crops and European fruits have been introduced and thrive well. Much of the land is more suitable for grazing than for tillage, and millions of sheep are reared in all the States. The native animals are peculiar. Many of the mammals, the largest of which is the kangaroo, are marsupials. Two genera—the duckbill and the spiny echidna—are egg-laying. Among the remarkable birds are the emu, lyre-bird, black swan, and bower bird. Crocodiles are found in the northern rivers, and snakes, both venomous and harmless, are numerous. The mineral wealth is very great. Gold, copper, iron, tin, and coal are found in all the States. Silver is mined in New South Wales; the garnet, ruby, emerald, opal, and other gems are found; and there is a valuable pearl fishery off the north-west coast of Western Australia and the north coast of Queensland.

COMMERCE. In proportion to its population the foreign trade of the Commonwealth is equal to that of any country in the world. In 1907 the total exports amounted to 32 million pounds, and imports to 52 millions. Of these amounts the mother country imported 34 millions and exported 32 millions. There is free trade among the various States, but a protective tariff is imposed on foreign imports. The *exports* include wool, gold, hides, tallow, and frozen meat from all the States; copper, wheat, and wine from South Australia; coal, wine, and silver from New South Wales; sugar from Queensland, and fruit from Tasmania. The *imports* comprise textile manufactures, clothing, machinery, tea, and coffee.

RAILWAYS. About 14,500 miles of road have been laid down, and this is almost entirely owned and worked by the various State Governments. Lines connect Melbourne with Adelaide, Sydney, and Brisbane, and these towns with the principal mining and agricultural centres. In Queensland the principal railways proceed from the coast inland, but there is also a line connecting Brisbane with Rockhampton, *via* Gympie, Maryborough, and Gladstone. In Western Australia the Great Southern Line runs from Perth to Albany, and the Great Eastern connects Perth with Kalgoorlie and other gold districts. It is proposed to continue this line so as to link the colony with the Eastern States. A line, which will eventually connect Adelaide in the south with Palmerston in the north, is completed for one-third the distance, following the route of the existing overland telegraph. A railway crosses Tasmania from north to south, thus linking Launceston with Hobart.

States.	Towns. (With population exceeding 10,000).
New South Wales	Sydney, Newcastle, Broken Hill, Parramatta Maitland, Goulburn.
Victoria	Melbourne, Ballarat, Bendigo (Sandhurst), Geelong.
Queensland . . .	Brisbane, Rockhampton, Gympie, Maryborough, Toowoomba.
South Australia .	Adelaide, Port Pirie.
Western Australia	Perth, Freemantle, Kalgoorlie.
Tasmania	Hobart, Launceston.

NEW SOUTH WALES.

New South Wales, the oldest of the Australian Colonies, is quite 3½ times the size of Great Britain. Its surface is diversified by mountain, tableland, and plain. The mountains run through the country at a distance from the coast varying from 30 to 120 miles, and in the south rise above the snow line. The coast plain has an area of 50,000 square miles, and is remarkably fertile. Wheat, maize and other grains, tobacco, sugar-cane, grapes and other fruits are cultivated. Orange and lemon cultivation is greatly increasing. Much of the interior, which is subject to alternate periods of drought and flood, is covered with forests and mallee scrub. Portions are well adapted for sheep farming, and wool is the staple production of the colony. It is richer in coal than any other State of the Commonwealth. The other mineral wealth includes gold, silver, zinc, copper, tin, and iron.

Bathurst, centre of an agricultural and mining district and largest town west of the Blue Mountains.

Broken Hill, in the extreme south-west of the colony, is famous for its rich silver mines; population 31,000.

Goulburn, centre of a rich wheat district.

Maitland, on the Hunter River, in the midst of a most fertile district.

Newcastle, sixty-two miles north of the capital, is the greatest coal-mining centre of Australia, and is also the outlet for a rich agricultural district; population 63,000.

Parramatta, the second oldest town in the Colony, centre of a fruit-growing district.

Sydney, on the magnificent harbour of Port Jackson, is the oldest city in Australia, and, from its beautiful situation, fine buildings, and extensive public parks, has been called the "Queen City of the South"; population 577,000.

VICTORIA.

Victoria is nearly as large as Great Britain, and occupies the south-eastern portion of the continent. The country is crossed from west to east by mountain ranges, which attain an elevation of 6,000 feet. Forests are extensive and yield valuable hard wood suitable for piles, railway sleepers and girders, and also for cabinet work. The pasture lands rank with the finest in the world for sheep rearing. The dairy industry is improving. There is generally a surplus of wheat and flour for export. Raisins are largely exported, but the wine trade does not flourish. The principal mineral wealth is gold. The value of the gold produced since 1851 exceeds £275,000,000. Manufactures, chiefly for home consumption, employ upwards of 90,000 persons.

Ballarat stands in the midst of a district rich in gold and agricultural produce; population 48,000.

Bendigo, or Sandhurst, is now the greatest mining centre in the Colony; population 44,000.

Castlemaine, in a mineral district, where the culture of the vine is carried on.

Geelong, on Port Phillip Bay, is an important seaport and a seat of the manufacture of cloth; pop. 28,000.

Hamilton, chief town of the western district.

Maryborough, an important railway centre, with large workshops for making and repairing engines.

Melbourne, on the river Yarra, is a great railway centre, and enjoys a considerable trade, ninety per cent. of the imports and exports of the colony passing through it. It possesses a university and many handsome public buildings; population 538,000.

Warrnambool, a seaport town with a good trade in wool and wheat.

QUEENSLAND.

Queensland occupies the north-eastern portion of the continent, and is more than twice as large as New South Wales, about half the area being within the Tropics. The mountain ranges follow the coast and send out spurs towards the north-west and south-east. Much of the interior is occupied by tablelands, which afford rich grazing ground. The rainfall varies from upwards of 100 inches per annum in the tropical regions of the Pacific slope to 10 or 12 inches in the south-west, where also the heat is greatest. The forests, which cover nearly half the total area, produce cedar, pine, and other useful timbers. On the Darling Downs wheat, barley, and oats are cultivated. Maize is largely grown, and sugar is especially suitable for cultivation in this State. Cattle and sheep grazing are flourishing industries, and there are valuable fields of gold, copper, tin, and coal, but much of the mineral wealth still awaits development.

Brisbane, on the Brisbane River, is the natural outlet for the rich pastoral and agricultural Darling Downs district. The site of the city is low and is subject to floods: population 135,500.

Gympie and **Charters Towers** are gold-fields towns.

Ipswich, the oldest inland town.

Maryborough has factories for sugar, soap and iron.

Rockhampton, centre of a rich mineral district in which gold, silver and copper mines are worked.

Toowoomba, the principal town of the Darling Downs.

Townsville, the principal shipping port of North Queensland.

SOUTH AUSTRALIA.

South Australia, including the Northern Territory, extends across the central portion of the continent, of which it comprises nearly one-third. A portion of the interior is slightly below the sea-level, and is occupied by several extensive salt lakes, into which, during wet seasons, a number of streams find their way. During droughts, to which the colony is even more subject than the other States, the waters of these are absorbed or evaporated, and the whole district becomes a desert. There is a considerable variation in temperature and rainfall. The mean annual fall at Adelaide is 20 inches, while on the northern coast it exceeds 50 inches, and in the interior falls as low as 5 inches. Wheat, oats, barley, oranges, lemons, olives, and grapes, as well as English fruits, are grown. Wine making is a promising industry, and brandy and other spirits are produced. Copper is the principal mineral wealth, but gold, silver, iron, and coal are found.

Adelaide, on the Torrens is regarded as the "Model Australian City," including Port Adelaide and Glenelg within its suburbs. its population numbers 178.000.

Glenelg, a watering-place 7 miles from Adelaide.

Kooringa, 45 miles north of Adelaide, is near the famous Burra copper mine.

Mount Gambier, in the centre of a fine agricultural district, 300 miles by rail from Adelaide.

Port Pirie has recently grown rapidly as the seaport of the Broken Hill Mines in N.S.W.

Wallaroo, seaport of the copper-mining districts. It has a large smelting works.

WESTERN AUSTRALIA.

Western Australia occupies the whole of the continent west of the meridian of 129° east longitude. Deserts of sand, stones, or gravel cover a considerable portion of the interior. The climate is magnificent, hot, but dry and bracing. In the south-west there are extensive forests of karri, jarrah, and sandal-wood, the timber from which provides a valuable article of export. The gold fields are being rapidly developed, the output approaching £8,000,000 annually. East Coolgardie has been the most productive field. Tin and copper are also mined.

Albany, on King George's Sound, with a fine harbour but a poor neighbourhood.

Freemantle, situated at the mouth of the Swan river, has displaced Albany as the place of call for mail steamers from Europe.

Kalgoorlie, great gold-mining centre.

Perth, population 50,000, is situated on the estuary of the Swan River, twelve miles above Freemantle.

TASMANIA.

Tasmania is an island lying to the south of Victoria, and separated from it by Bass Strait, 140 miles across. The rainfall is moderate, being slightly less than that of London, but it is regular. There are forests of useful timber, but sheep farming and fruit growing form the principal industries. The country is rich in minerals, producing gold, silver, copper, tin, iron, and coal.

Hobart, on the river Derwent, possesses a spacious and well-sheltered harbour, and is famed for its fruits; population 35,000.

Launceston, the second town in Tasmania, with a fairly busy port; population 22,000

NEW ZEALAND.

The Dominion of New Zealand lies to the south-east of Australia, and about 1,000 miles from it. It consists of a group of two large islands, and a smaller one, together with several smaller groups, situated in the South Pacific. The total area is about 104,500 square miles, or slightly less than that of Great Britain and Ireland. North Island is 44,500 square miles, South Island, separated from the former by Cook Strait, 58,500 square miles, and Stewart Island 670 square miles. Of the other groups the chief are the Kermadecs and the Cook group to the north of the main islands, the Chathams to the east, and the Aucklands to the south.

PEOPLE AND GOVERNMENT. The population in 1908 was 1,020,000, including 47,000 Maoris, who are found chiefly in North Island. They are of Polynesian origin, and physically and in intelligence a fine race. They practise the various professions, sit in Parliament, and, in fact, enjoy all rights and privileges equally with the white settlers. Besides the Governor, who is appointed by the Crown, there are two Houses of Parliament, (1) the Legislative Council, the members of which are appointed by the Governor for seven years, and (2) the House of Representatives elected triennially on adult suffrage, the women exercising the franchise freely. The members of both houses receive an annual allowance. Foreign affairs are excluded from the consideration of the Dominion Parliament, and the Governor is empowered to reserve any law for the consideration of the Imperial Government.

BUILD. All the islands are mountainous and well watered by numerous rivers and lakes. A volcanic belt, containing two active volcanoes, crosses the North Island, and on both sides of this belt is a region of geysers and hot lakes, the waters of which possess medicinal properties. A mountain range runs through South Island from north to south, rising above the snow line, and leaving a narrow coast plain on the west, and a broader strip—the Canterbury Plains—on the east. Stewart Island is covered with forest-clad hills. The coast-line, especially that of North Island, is broken, and provides many good harbours.

CLIMATE. The climate is exceedingly healthy, and resembles that of England, but is warmer and more equable. The average temperature of North Island is 7° higher, and of South Island 4° higher than that of London. The prevailing north-west winds bring abundance of moisture, which is condensed by the mountain ridges and deposited as rain on their western slopes. Hence the rainfall in the west is greater than in the east. In the fiord region, to the south-west of South Island, it amounts to 120 inches annually, while at Christchurch, near the east coast, it is but 26 inches.

PRODUCTIONS. Forests are extensive, especially on the western slopes of the mountains. The most valuable timber is that of the kauri pine. Kauri gum, a resinous exudation from these trees, is dug from the soil on the sites of old forests and at the foot of the growing trees, and forms a valuable export. Another characteristic of the flora is the gigantic tree ferns, which reach a height of 60 feet. The more open parts of the country are grass-covered, and feed millions of sheep and cattle, or, where the ground is sufficiently swampy, produce abundance of native flax. All British grain crops and fruits flourish, and the orange and lemon are cultivated in North Island. The mines produce coal, gold, silver, iron, and copper.

COMMERCE. The foreign trade of the colony is considerable. Three-fourths of it is with Great Britain; Australia, India, and Fiji following next. The *export* include wool, frozen meat, dairy produce, gold, hemp, hides and pelts, kauri gum, grain, tallow, and timber, and in 1907 amounted to £20,000,000. The *imports*, chiefly, manufactured goods from Britain and Colonial produce, amounted in 1907 to £17,000,000. The principal ports are Auckland, Wellington, and Napier in North Island; Nelson, Dunedin, and Lyttelton in South Island.

Auckland (North Island), the former seat of government, possesses a magnificent harbour formed by an inlet of Hauraki Gulf, and is the largest town in the colony; population 75 000.

Christchurch (South Island), stands inland on the Canterbury Plain, and is a great railway centre; population 62 000.

Dunedin (South Island), on Otago Harbour, is the chief commercial city of the colony; population 61.000.

Invercargill, chief port on the south coast of South Island.

Lyttelton, port to Christchurch, in a land-locked basin.

Napier, chief town in the provincial district of Hawke's Bay, North Island.

Nelson, on the north-west of South Island has a charming, even climate.

New Plymouth, a small town at the foot of Mount Egmont (or Taranaki).

Wellington (North Island), on Cook Strait, 1,200 miles from Sydney, is the seat of government; pop. 73.000.

RAILWAYS. The government lines exceed 2,400 miles in length, and others are in course of construction.

There are 113 miles of privately owned railways. The principal lines proceed :—

(1) From Auckland southward to the hot spring region.
(2) From Wellington north-west to New Plymouth and north-east to Napier.
(3) From Christchurch northward to Culverden, westward to Greymouth on the west coast, and southward to Invercargill, *via* Timaru, Oamaru, and Dunedin.

BRITISH POSSESSIONS IN AFRICA.

The possessions of Britain in Africa are found in the west, south, and east of the Continent.

BRITISH WEST AFRICA.

POSSESSIONS.	AREA. (Including protected territories.)	POPULATION. (Estimated).
Gambia	3,600 sq. miles	90.000
Sierra Leone . .	30,000 „	1,100,000
Gold Coast . . .	119,260 „	1,500,000
Southern Nigeria .	77,200 „	4,400,000
Northern Nigeria (including Lagos)	256,400 „	9,500,000

PEOPLE AND GOVERNMENT. The natives, especially in the coast regions, belong to various negro and negroid tribes. Many are still pagans; some profess Muhammadanism, and others are nominally Christians. Northern Nigeria contains several Muhammadan States, the people of which, as the Hausas and Fulanis, belong to a higher type. Gambia, Sierra Leone and the Gold Coast are Crown Colonies, each governed by the Colonial Office through a Governor, assisted by small executive and legislative Councils. In the interior native chiefs still exercise authority over the various tribes, but are supervised by travelling Commissioners. Southern Nigeria now includes the colony of Lagos and the Protectorate of Southern Nigeria, both being placed under one administration, similar to that described above. Northern Nigeria is administered by a High Commissioner assisted by residents.

CLIMATE, COMMUNICATIONS, AND TRADE. The whole of the territory is situated within the tropics, and the climate is generally hot and unhealthy for Europeans. Gambia is less unhealthy than the other colonies. There are few roads, and the rivers form the principal means of internal communication. In Ashanti (Gold Coast Colony) a government railway has been constructed from the coast through the middle of a gold-bearing district to Kumasi, and there are 120 miles of railway laid down in Lagos Colony. The exports consist of the native productions of the various countries, ground-nuts, beeswax, rubber, ivory, copal, palm-oil and palm kernels, hides and skins, and in 1907 amounted to 8 millions. The imports consist principally of cotton, hardware, and tobacco, and these also in 1907 reached 8 millions.

1. **GAMBIA** consists of a narrow strip of territory on both banks of the river Gambia from its mouth as far as navigation extends, that is about 220 miles. The wet season, June to October, is the most unhealthy. Cotton is grown and manufactured by the natives. *Bathurst*, the principal town, has a population of 8,800.

2. **SIERRA LEONE** was formerly known as the "white man's grave." Parts of the coast are low and swampy, but the interior is hilly. The rainfall is heavy, and the vegetation luxuriant. There is little cultivation. The capital, *Freetown*, which enjoys municipal government, possesses the finest harbour on the west coast of Africa; population 35,000.

3. **THE GOLD COAST COLONY,** including Ashanti, is enclosed, except on the south, by French and German territory. Much of the country is low and marshy, and the rainfall is heavy except in the east. Agriculture is prosperous, and the mineral wealth is great, but the climate prevents the full development of the mines. The principal towns are Accra, Cape Coast, and Kumasi. *Castle* is also a good centre.

5 **NIGERIA** extends from the Bight of Benin to the borders of the Sahara. It is divided into the two protectorates of Northern Nigeria and Southern Nigeria by a line drawn from east to west. The great natural feature of the country is the Lower Niger and its delta. Proceeding inland, the mangrove swamps of the delta give place to an extensive forest region, producing enormous quantities of timber, rubber, and oil, and this is followed by open grass lands which merge into the sandy plains of the north. The principal towns are *Lagos, Calabar, Bonny, New Calabar,* and *Benin* in Southern Nigeria; and *Zungeru,* the administrative centre, *Sokoto,* and *Yakoba* in Northern Nigeria.

BRITISH SOUTH AFRICA.

British territory in South Africa occupies about two-thirds of that part of the continent lying south of the tenth parallel of south latitude. It includes the UNION OF SOUTH AFRICA, comprising the provinces now named Cape of Good Hope, Natal, Orange Free State, and Transvaal; the Crown Colony of Basutoland within the borders of the Union; the colonies of Southern Rhodesia and Northern Rhodesia, separated by the River Zambesi; and west of Transvaal and Southern Rhodesia the Bechuanaland Protectorate.

TERRITORIES.	AREA.	POPULATION, 1904.
Cape of Good Hope . . .	277,000	2,410.000
Natal	35,370	1,109,000
Orange Free State . . .	50,000	387,000
Transvaal	117,730	1,318,000
Basutoland	10,300	349,000
Southern Rhodesia . .	144.000	503,000
Northern Rhodesia . . .	287,000	746.000
Bechuanaland Protectorate	275,000	150,000

PEOPLE. The white population is chiefly of British or Dutch descent, and totals about 1,136,000, the Dutch element preponderating in the western portion of Cape of Good Hope and in the Orange Free State. The natives consist mainly of various Kaffir and Hottentot tribes, with a few Bushmen. The Kafirs, which include the Zulus, Basutos, Pondos, Swazis, and Bechuanas, are a warlike people of fine physique. They are mainly pastoral and possess large herds of cattle and horses, but they also cultivate their land carefully. The Hottentots are physically inferior to the Kafirs, and have a lighter complexion. They make good herdsmen, but do not practise tillage. The Bushmen are a race of yellowish-brown pigmies who are fast dying out. A number of Malays are found in the coast towns, and there are about 100,000 Indians in Natal.

GOVERNMENT. This varies considerably in the different territories comprising British South Africa both in form and substance. The self-governing colonies have now formed themselves into a Legislative Union known as the UNION OF SOUTH AFRICA. The colonies thus united form provinces of the Union under the names of Cape of Good Hope, Natal, Transvaal, and Orange Free State. The Union Parliament consists of a Governor-General representing the King, a Senate, and a House of Assembly. The Senate is composed of 40 members, holding their seats for 10 years, eight nominated by the Governor-General, and eight by each of the constituent provinces. The House of Assembly, numbering 121 members in the first instance, will have its membership gradually increased from time to time, proportional to the growth of the population in each province. Male adults of European descent are, as a rule, the only persons qualified to vote at Parliamentary elections. Every House of Assembly is elected for five years, but may be sooner dissolved by the Governor-General. The honour of being the seat of Government for the Union is divided between Pretoria and Cape Town, the former being the seat of the Executive Government, and the latter the seat of the Legislature. In each province is a chief executive officer, styled the administrator of the province, who is appointed by the Governor-General, and a Provincial Council with power to make ordinances, having the force of law, in

certain specified matters and in all others of a merely local or private nature in the province. The seats of provincial Government are as follows: (For the Cape of Good Hope, Cape Town; for Natal, Pietermaritzburg; for the Transvaal, Pretoria; for the Orange Free State, Bloemfontein. There is free trade throughout the Union. Both the English and Dutch languages are the official languages of the Union and are in every respect on an equal footing.

Lord Gladstone, son of the late W. E. Gladstone, is the first Governor-General of United South Africa, and General Botha the first Prime Minister.

Basutoland is a Crown Colony governed by a Resident Commissioner under the direction of the Governor-General, who alone has the power of promulgating laws. The administration of the *Bechuanaland Protectorate* is carried on by a Resident Commissioner action under the Governor-General, and assisted by two Assistant Commissioners. *Rhodesia* is administered by the British South Africa Company, which received its powers by a Royal Charter granted in 1889. The Crown appoints a Resident Commissioner, and there is an Executive Council of six members and a Legislative Council of sixteen. The Company appoints four members of the former and seven of the latter, but the members must be approved by the Colonial Secretary. Seven members of the Legislative Council are elected by registered voters. All laws must be confirmed by the Governor-General, and may be disallowed by the Colonial Office.

BUILD. From the sea the country rises in terraces to the principal watershed, a chain of mountains which, at their eastern end, attain an elevation of 10,000 feet, and run almost parallel to the coast at an average distance of 150 miles. Between the main chain and the sea the country is crossed by minor ranges, which separate the various terraces. North of the principal watershed the territory consists almost entirely of elevated plateaux, the High Veldt, crossed by ridges of hills, and with many isolated eminences locally known as kopjes. Much of the Veldt is bare, or covered with thin grass or thorny trees and scrub. Other portions are well wooded. West of the Bechuanaland Protectorate lies the Kalahari Desert, an almost waterless waste inhabited by a few native hunters.

CLIMATE. Since the territory extends from the 8th to the 35th parallel of latitude, and presents such differences of elevation, there are many varieties of climate. Speaking generally, the summers are hot and the winters cool, except in the low-lying lands within the Tropics, where the heat is often oppressive, and malarial fevers are prevalent at certain seasons, while heavy falls of snow are not uncommon in the northern highlands of Natal. On the whole, the climate is healthy and suitable for Europeans, the air being usually dry and bracing. The upland plains of the Cape Province provide health resorts favourable for persons suffering from pulmonary diseases.

During the summer the prevailing winds bring rain to the eastern portions of the Cape Province and to Natal, but the mountains in the west are of insufficient elevation to arrest the rain clouds, and the moisture passes to the tropical regions beyond. The principal rainfall in the south-west is derived from the north-west winds of winter. A broad belt, extending from the north-west of the Cape Province through Bechuanaland, is practically rainless.

PRODUCTIONS. Vegetation is most luxuriant in the coast strip and in the low lying river valleys. There are several fertile tracts in the interior, but usually successful cultivation demands careful irrigation, and the sparseness of the population checks the necessary expenditure. In some districts wheat and other cereals, mealies, and tobacco do well. European fruits are being successfully introduced. The cultivation of the vine makes little headway from the difficulty of disposing of the wine produced. The coast strip of Natal yields sugar, rice, bananas, and pineapples, and tea is cultivated on the neighbouring hills with great success. The open plains of the interior are well suited for pasturage, and immense flocks of sheep and cattle are reared.

The elephant, rhinoceros, hippopotamus, zebra, and giraffe have disappeared from the settled portions, and in Rhodesia the herds of buffalo have been thinned almost to extinction by rinderpest. The lion and leopard are still met with in the north-east of the Transvaal, and more frequently in Rhodesia. Herds of springbok are common. Of the native birds the ostrich has been domesticated for the sake of its feathers, and the secretary bird is protected by law on account of the war it wages on snakes.

The mineral wealth is great. The diamond fields of Kimberley and the Witwatersrand gold fields are the most famous mining centres. Diamonds are also mined in the Orange Free State and Transvaal, and gold has been discovered in Rhodesia and Natal. There are extensive beds of coal, but the finest quality of African coal, that of Natal, is inferior to the best European varieties.

COMMERCE. The foreign trade is extensive and increasing. The special commissioner appointed by the Board of Trade reported in December, 1903, that South Africa promises to become, in the near future, Britain's best customer for manufactured goods, with Germany and the United States as her most dangerous rivals. The *imports* consist of manufactured goods, chiefly textiles, machinery, and railway plant, foodstuffs, and building materials. The *exports* include gold, diamonds, and other minerals, wool, mohair, feathers, hides, and skins. The principal ports are Cape Town, Port Elizabeth, East London, and Durban.

RAILWAYS. The railway system is being rapidly developed, the several governments having various extensions under construction. The principal lines are:—

(1) The Western, from Cape Town to Kimberley, *via* Beaufort West. The line has been continued through Bechuanaland and Rhodesia, *via* Vryburg, Mafeking, and Palapye to Bulawayo and Salisbury. From Bulawayo the railway is carried through the Wankie coal-fields to the Victoria Falls on the Zambezi, and beyond it, right through Northern Rhodesia, to the Congo frontier. Ultimately, it will link up with the railway from Cairo through Khartoum.

(2) The Central, from Port Elizabeth to Colesburg, with a loop to Graaf Reinet, and a continuation to Bloemfontein, Johannesburg, Pretoria and Pietersburg.

(3) The Eastern, from East London to Springfontein, in the Orange Free State, with a branch to Aliwal North.

By means of branches there is intercommunication between these main lines, the principal junctions being De Aar, Naauport, and Stormburg.

(4) The Natal Railway, from Durban through Pietermaritzburg, Ladysmith, and Newcastle to Pretoria, with branches to Bloemfontein and Vryheid.

Lines also connect Pretoria with Lorenzo Marquez, and Salisbury with Beira, ports in Portuguese East Africa; and a line to link Cape Colony with Natal is under construction.

1. CAPE OF GOOD HOPE.

This province occupies the extreme southern portion of the continent, and extends from the ocean to the Orange River and the Bechuanaland Protectorate. Rivers are numerous, but are of little use for purposes of navigation or irrigation. Wool, wine, and grain crops are produced in the south-west, and maize and tobacco along the south-east coast; cattle, sheep, and horses are raised, and ostrich farming is an important industry in the Great Karroo, the tableland lying to the south of the principal mountain chain. Valuable forests in the south central region produce yellow-wood and Cape mahogany. Diamonds are the most valuable mineral. Their export in 1908 exceeded in value £3,000,000. About three-fourths of the population of this province are Kafirs and other coloured races.

Cape Town, the capital, is situated on Table Bay, at the foot of Table Mountain, sixteen days from Southampton. Extensive harbour improvements have been carried out, and further works are in progress; population 78,000 (with suburbs 170,000). *Simon's Bay*, 22 miles to the south, is a naval station.

Port Elizabeth, on Algoa Bay, is the outlet for the central portion of the colony; population 33,000.

Kimberley contains the richest diamond fields in the world; population 34,500.

East London, where extensive harbour works are in

course of construction, is the principal port for the fertile Eastern Province; population 25,000.

Graham's Town, the metropolis of the Eastern districts; population 14,000.

2. NATAL.

The country is well watered, but none of the rivers are navigable. The coast strip, with an average breadth of about 15 miles, is extremely fertile, and good crops of sugar, maize, coffee, tobacco, arrowroot, and ginger are raised. The midland district is suitable for cereals and European fruits, and the highland district for pasturing cattle and sheep. The valleys and portions of the coast strip are well timbered. Gold, silver, copper, and lead are found, but the most important mineral is coal, which is extensively worked around Newcastle and Dundee. There are valuable deposits of iron in the same neighbourhood. The natives outnumber the whites by ten to one.

Pietermaritzburg, the capital, is situated in the midland district, about 60 miles from the sea; population (all races) 32,000; (whites) 15,000.

Durban, or Port Natal, is the largest town and the only important port on the south-east coast. The harbour may now be entered by large vessels at any time; population (all races) 70,000; (whites) 32,000.

3. ORANGE FREE STATE.

This province, which extends from the Orange River to the Vaal, is chiefly valuable as an agricultural and pastoral country. It consists principally of gently undulating grassy plains with an elevation of from 4,000 to 5,000 feet. The climate is healthy and bracing, with cold winters in the higher districts. The eastern portion, where the rainfall is comparatively good, contains the best corn land and produces good crops. The remainder of the country is admirably adapted for grazing and cattle breeding, and sheep farming forms the principal industry. There are no forests. Coal is abundant in the Kroonstad and Heilbron districts. The principal diamond mines are at Jagersfontein, near the western boundary of the colony. Garnets and other gems and gold are found. *Bloemfontein*, population 26,000; *Kroonstad*, 5,800; and *Harrismith*, 5,300, are the largest towns.

4. TRANSVAAL.

The Transvaal stretches from the Vaal in the south to the Limpopo in the north, and from Bechuanaland in the west to Portuguese East Africa and Natal, with about one-sixth of the total area within the tropics. The tableland has an average elevation of from 4,000 to 5,500 feet, but towards the north and along the eastern frontier it sinks in places to little more than 1,000 feet. This portion of the country is well wooded, and is known as the Bush Veldt; the heat of summer is oppressive, and malarial fever is prevalent during a portion of the year. The rainfall is greatest in the neighbourhood of the mountain range that crosses the eastern portion of the colony, exceeding 30 inches annually, while in the west the fall is under 15 inches. The country is capable of supporting large numbers of cattle and sheep, except in the lower portions of the Bush Veldt, where the tse-tse fly proves fatal to cattle. Minerals constitute the principal wealth of the country. There are extensive beds of coal, and iron, silver, copper, and lead are found. Diamonds are mined in three districts, and early in 1905 a stone of record size was discovered near Johannesburg. The gold industry is the most important, the output in 1908 being valued at nearly £30,000,000. The richest field is that of the Witwatersrand, a rocky ridge in the south of the colony commonly called "The Rand."

Pretoria is the capital and has a population of 38,500.

Johannesburg, the centre of the Witwatersrand gold-field, is the largest town; population 160,000.

5. BASUTOLAND.

Basutoland is a native province situated between Natal and the Orange Free State. It has been called the "Switzerland of South Africa." The country has a magnificent climate, is well watered and fertile, and is a great grain producing district. The natives possess large herds of cattle and horses. Its area is 10,000 square miles; its population numbers 350,000, of whom only 900 are Europeans.

6. RHODESIA.

1. Southern Rhodesia comprises Matabeleland and Mashonaland, and extends from the Transvaal boundary to the Zambezi, the whole of the territory being within the tropics. The higher regions consist of prairie land, where the climate is suitable for European colonists. In the north and west there are extensive forests. The mineral resources are great, and are being rapidly developed. Gold and coal are worked, and silver, copper, iron, tin, and plumbago are known to exist. Tobacco, cotton, and rubber are indigenous to the country, and European fruits and vegetables, and the cereals thrive. The white population in 1904 numbered 12,600. The chief towns are *Salisbury*, the political capital, and *Bulawayo*, the chief commercial centre.

2. Northern Rhodesia extends from the Zambezi to the Congo Free State and westward to Portuguese territory. The country is occupied by native tribes under their own chiefs. Forests are extensive, and there are large mineral deposits. The railway, which has now been carried right through the country from Victoria Falls to the Congo frontier, has opened up the mineral treasures of Broken Hill and the rich Katanga district in the extreme north of the colony.

7. BECHUANALAND PROTECTORATE.

The protectorate lies between the Molopo River and the Zambezi, and extends westward from the Transvaal and Rhodesia to German South-West Africa, occupying a portion of the western slope of the tableland. The country suffers from a deficiency of water, and in the west forms a part of the Kalahari Desert. Maize is the principal crop. The large herds of cattle formerly held by the natives have been greatly thinned by rinderpest. The population in 1904 included 120,000 natives and 1,000 whites.

BRITISH EAST AFRICA.

Protectorates.	Area (Estimated).	Population (Estimated).
East Africa Protectorate .	177,100	2,960,000
Uganda Protectorate . .	223,500	4,500,000
Zanzibar Protectorate . .	1,020	200,000
Nyassaland Protectorate .	40,980	706,000
Somaliland Protectorate .	68,000	153,000

1. The East Africa Protectorate extends for about 400 miles along the coast and inland to Uganda. It consists of a low, fertile, coastal plain of varying width, from which a steep slope leads to an inland plateau, comparatively waterless and barren. Beyond the plateau grass-covered plains slope gradually to the basin of the Victoria Nyanza. Portions of the country are considered suitable for European settlers. A railway extends from Mombasa on the coast to Port Florence, at the north-east corner of the lake, a distance of 584 miles. The chief productions are coffee, ivory, rubber, copra, and hides. Textiles, building materials, rice, grain, and flour are imported. *Mombasa* is the capital and chief port; population 27,000.

2. The Uganda Protectorate includes Uganda proper, lying along the north-western shores of Victoria Nyanza, and country extending westward to the Congo Free State, and northward to the Soudan. The climate is mild but unhealthy, and in recent years the natives have suffered much from "sleeping sickness." Cotton is now the most important industry. The chief mineral production is iron, in the working of which many of the natives excel. They are also clever in making a supple brown cloth from the bark of a certain tree. Several steamers trade on the lake, and ivory, cattle, skins, and rubber, together with small quantities of cotton and coffee are exported. Cotton goods form the principal import. The Government is administered by a Commissioner appointed by the Crown, and under his direction a native king, aided by a council of

chiefs bears rule. *Entebbe*, on the north-west shore of Victoria Nyanza, is the administrative centre, but the native capital is *Kampala*.

3. The Zanzibar Protectorate includes the islands of Zanzibar and Pemba, the latter lying 40 miles north of the former. The soil is fertile, and the islands are well cultivated, cloves and cocoa-nuts being the chief productions. The cloves form four-fifths of the world's production. Cloves, copra, chillies, and gum are exported. The imports comprise textile fabrics, rice, and coal. The capital, *Zanzibar*, has a fine harbour, and is the largest town and chief commercial centre of East Africa. It is used as a coaling station by the British navy.

4. Nyassaland Protectorate, formerly called Central Africa Protectorate, includes the territory lying round the shores of Lake Nyasa, together with the greater part of the Shire basin, and extends southward almost to the Zambesi. It consists principally of a well-watered plateau, but the climate is unhealthy. There are about 500 European settlers, chiefly Scotch, who have successfully established coffee, cotton, and tobacco plantations. Other exports include chillies, ivory, and rubber. The imports are textiles, hardware, and provisions. The chief towns are *Zomba*, the administrative centre, and *Blantyre*. The port is Chinde at the mouth of the Zambesi.

5. The Somaliland Protectorate extends for 400 miles along the coast opposite Aden, and inland to the eighth parallel of north latitude. British administration is confined to the coast. The Somalis are a nomadic, pastoral people, and possess herds of camels, cattle, horses, and sheep. The exports include cattle, skins, hides, ostrich feathers, ivory, and gum. *Berbera*, opposite to Aden, is the principal town; population 30,000. *Zaila* is the chief starting place of caravans for Abyssinia.

THE SMALLER BRITISH POSSESSIONS.

In addition to the larger territories, the British Empire includes a number of smaller possessions scattered throughout the world, which, though unimportant as markets for British goods, or as the producers of raw material for British manufactures, are of supreme importance in a world-wide empire, serving as links in the chain that binds the mother country to her most distant colonies. They enable the navy to keep the command of the sea by providing (1) fortified coaling stations, (2) dockyards where ships may be repaired or refitted, (3) victualling yards for replenishing depleted stores. They are of equal importance to our mercantile marine, for (1) they assist in protecting the great trade routes, (2) they provide harbours in which merchant vessels may shelter in time of war, (3) they supply coal and fresh provisions to passing ships. In some cases they serve as depôts whence British goods may be distributed to neighbouring countries.

1. IN THE MEDITERRANEAN.

The British possessions in the Mediterranean are Gibraltar at the western end, Malta in the middle, and Cyprus in the Levant.

GIBRALTAR, the "Key of the Mediterranean," is a rocky promontory situated at the southern extremity of Spain, to which it is connected by a low, flat isthmus of neutral ground. The rock is so strongly fortified as to be deemed impregnable. The town, with a population exceeding 20,000, lies on the north-west of the promontory fronting the bay. Extensive harbour works, enclosing an area of about 450 acres, have recently been completed, including docks capable of accommodating the largest battle ships. It is invaluable as a coaling station, both for the navy and merchant ships. The port is free, and serves as a depot for the collection and distribution of goods between Britain and North Africa.

MALTA is situated about 60 miles south of Sicily, and 200 miles from the African coast, and is midway between Gibraltar and Port Said. The administration includes the smaller islands of Gozo and Comino, with a total area of 117 square miles, and a civil population exceeding 200,000. The islands are fertile, and cotton, corn, oranges, and other fruits, and early potatoes are grown. Upwards of 5,500 persons are engaged in lace making, but the bulk of the inhabitants are employed in various branches of the shipping industry. *Valetta*, the capital, population 30,000, is strongly fortified, and possesses a magnificent deep-water harbour. It is an important calling place for vessels engaged in the Eastern trade, and its dockyard, arsenal, and splendid anchorage combine to make it the headquarters of our Mediterranean fleet.

CYPRUS is an island about 3,600 square miles in area, with a population of 237,000, situated 60 miles from the nearest point of Asia Minor, and 240 miles from the entrance to the Suez Canal. It is held on lease from the Sultan of Turkey for such a period as Russia may occupy Kars and Batoum. The inhabitants are mainly of Greek extraction. The soil is fertile and produces cotton, grains, grapes, olives, and other fruits. Other productions include wool, silk, hides, and sponges, and the manufacture of wine and spirit is an important industry. The island's main importance to Britain lies in its strategic position as a military base. *Nicosia*, near the centre of the island, is the capital. The other principal towns are *Larnaka*, *Limassol*, and *Farmagusta*. The inner harbour of Farmagusta has recently been made accessible to steamers, and is now connected by rail with the capital.

2. WEST INDIAN POSSESSIONS.

The following table shows the various West Indian Islands that form part of the British Colonial Empire:—

Colony.	Capital.	Area.
Bahama Islands .	Nassau . .	4,403 sq. miles
Jamaica	Kingston . .	4,207 ,,
Leeward Islands .	St. John . .	705 ,,
Windward Islands	St. George .	498 ,,
Barbados. . . .	Bridgetown .	166 ,,
Trinidad. . . .	Port of Spain	1,754 ,,
Tobago	Scarborough .	114 ,,

THE BAHAMA ISLANDS form the most northern group of the West Indian Islands, and consist of 20 inhabited islands and an immense number of coral islets and rocks, stretching from Florida to the south-eastern point of Cuba. The islands suffer from scantiness of soil, a deficiency of natural water supply, and the want of harbours capable of accommodating large vessels. The chief industries are sponge gathering, salt making, pine-apple and orange growing, and the planting of Bahama hemp, for which this colony has recently become famous.

JAMAICA, the largest and most important of the British West Indian possessions, is a mountainous island lying 90 miles south of Cuba. Bananas now form the leading product; next come sugar, coffee, and oranges. These together with rum and the productions of the forests —cabinet woods, dye stuffs, drugs, and allspice—form the principal exports. The population consists mainly of negroes and other coloured people. The administration includes Turks and Caicos Islands at the southern extremity of the Bahamas, and the Cayman Islands. *Kingston* possesses a good harbour, and with the naval station of *Port Royal* has a population of 46,500.

THE LEEWARD ISLANDS form the western section of the Lesser Antilles. The British possessions, including three of the Virgin Islands, Antigua, Dominica, Montserrat, and St. Kitts, are federated under one governor.

THE WINDWARD ISLANDS form the eastern portion of the Lesser Antilles. The British possessions comprise Grenada, the Grenadines, St. Vincent, and St. Lucia, and are administered as a single colony. St. Lucia is a capital coaling station. All the *Lesser Antilles* have a tropical climate, but the heat is modified by the sea breezes. Destructive hurricanes are common. The chief productions are sugar, coffee, cotton, cocoa, and fruits.

BARBADOS, the most eastern of the West Indian Islands, has a separate administration. The population is very dense, numbering 1,198 to the square mile. The

island is remarkably fertile, and is considered the most healthy of the West Indian Islands.

TRINIDAD, to which is attached the island of Tobago, approaches within 7 miles of the coast of S. America. The soil is fertile, and sugar, rum, molasses, timber, fruit, and cocoa are exported. The Pitch Lake, 110 acres in extent, produces upwards of 100,000 tons of asphalte annually. *Port of Spain*, its capital, possesses the best harbour in the West Indies; population 54,000.

3. IN THE ATLANTIC OCEAN.

The British possessions in the Atlantic comprise:—

Colony.	Capital.	Area.
Bermuda Islands	Hamilton . .	19 sq. miles
Ascension . .	Georgetown . .	35 ,,
St. Helena . .	Jamestown . .	47 ,,
Tristan D'Acuna	—	18 ,,
Falkland Islands	Stanley . . .	6,500 ,,
South Georgia .		1,000 ,,

THE BERMUDA ISLANDS consist of a group of small coral islets and reefs lying in the North Atlantic, 600 miles east of Cape Hatteras in the United States. They are becoming a favourite winter resort of Americans and Canadians. The group, from its position, is of high strategic value, and forms an important naval station, the fortified approaches to the channels and the strongly defended dockyard enabling ships to refit in safety.

ASCENSION and **ST. HELENA** lie on the route of vessels between England and the Cape. Since the opening of the Suez Canal the islands have declined in prosperity. Both are fortified and are of importance as coaling stations. Ascension Island is famous for its turtles, found in abundance between December and May.

THE FALKLAND ISLANDS are situated in the South Atlantic, 300 miles east of Magellan's Strait. Sheep farming is the principal industry, and wool and frozen mutton are the staple exports. The islands serve as a station for refitting and provisioning vessels engaged in the southern whale fishery, or proceeding round Cape Horn. The colony includes South Georgia, an inhospitable and frequently ice-bound island, without permanent inhabitants, lying 800 miles east-south-east of the Falklands. The whole colony contains only 360 inhabited houses.

4. IN THE INDIAN OCEAN.

The minor possessions in the Indian Ocean comprise:—

(1) Aden with its dependencies, Perim, Socotra, and the Kuria Muria Islands.
(2) Mauritius, together with Rodriguez and the Chagos groups.
(3) The Seychelles.
(4) The Laccadive and Maldive Archipelagos.
(5) The Andaman and Nicobar Islands.
(6) The Straits Settlements.

ADEN is a strongly fortified rocky peninsula in the south-west of Arabia, to which it is joined by a narrow, sandy isthmus. The town occupies the site of the crater of an extinct volcano. The harbour is good and affords shelter for vessels in all weathers. Lying in the steamer route to India, Australia, and the East generally, Aden has become one of the most important coaling stations in the world. The trade is considerable, reaching nearly £6,000,000 annually. The port is free for nearly all merchandise, and is the great entrepôt of the trade of Southern Arabia and North-East Africa. The population is over 40,000. Aden, which together with its dependencies, is included in the government of Bombay, is the centre of a British protectorate over the tribes occupying the coast region of Arabia, from Perim to Muscat.

Perim is a small rocky island situated in the Strait of Bab-el-Mandeb. It possesses a good harbour and a lighthouse, and serves as a coaling station for merchant vessels.

Socotra lies 150 miles off the north-east point of Africa, and has an area of 1,380 square miles, and a population of about 12,000 of Arab descent. Aloes, dates, and figs are produced.

The Kuria Muria Islands have valuable deposits of guano.

MAURITIUS, with an area of 700 square miles and a population exceeding 370,000, the majority of whom are of Indian descent, lies 500 miles east of Madagascar. The climate is tropical but generally healthy. Cyclones occasionally prove very destructive. The staple production is sugar, and nearly all the necessaries of life are imported from India, South Africa, Australia, and Great Britain. The capital and largest town, *Port Louis*, situated in the north-west of the island, has a good harbour, and enjoys most of the foreign trade; population 56,000.

Rodriguez lies about 345 miles east of Mauritius. The climate is good and the soil fertile. Maize, fruits, and vegetables are cultivated, and cattle, goats, and fish are exported.

The Chagos Archipelago is in the route of vessels from the Red Sea to Australia, and from South Africa to Ceylon or Calcutta. The staple production of the group and of the neighbouring islands is cocoa-nut oil, from which circumstance they are frequently named the Oil Islands. The principal island, Diego Garcia, is a coral atoll enclosing a fine harbour, which is of importance as a coaling station.

THE SEYCHELLES comprise two principal groups of volcanic islands surrounded by coral reefs, situated 930 miles north of Mauritius, of which island they were a dependency till 1903, when they were erected into a separate crown colony. The climate is tropical but very healthy. The chief productions are the products of the cocoa-nut palm and vanilla. *Victoria*, on the largest island, Mahé, and has a good harbour, and is constantly visited for coaling by men-of-war of all nations.

The Laccadive Archipelago, off the south-west coast of India, is attached to the government of Madras, and the **Maldive Islands**, lying farther south, are included in that of Ceylon.

The **Andamans**, with the little **Cocos** group at their northern extremity, and the **Nicobars** farther south, form the scattered links of a chain with a total area of 3,150 square miles, and are situated in the east of the Bay of Bengal, about 160 miles from the coast of Burma. They are administered by the government of India through a chief commissioner. The Andamans, which are used as a penal settlement, contain valuable forests. *Port Blair*, on South Andaman, the capital and principal convict settlement, possesses one of the finest harbours in the East. The Nicobars export cocoa-nut fibre and copra.

THE STRAITS SETTLEMENTS are so named from their situation on the Strait of Malacca. They include (1) Penang, together with the province of Wellesley and the Dindings, (2) Malacca, (3) Singapore, (4) a Protectorate of the Federated Malay States occupying the whole of the peninsula except Jahore in the south.

The total area of the colony is 1,526 square miles, and of the protectorate 25,000 square miles. The inhabitants number 572,000 and 697,000 respectively, and consist chiefly of Chinese, Malays, and Indians. A small number of Europeans are either government officials or are engaged in commercial pursuits. The climate is tropical, with little variation in temperature throughout the year. The rainfall in places exceeds 100 inches annually. The soil is fertile; the forests yield timber, rubber, gutta-percha, and gums; and rice, gambier, tapioca, pepper, spices, and coffee are cultivated. The tin mines produce nearly 50 per cent. of the world's total supply, and gold is found in places. The imports exceed £40,000 000 and the exports £35,000,000 annually.

Penang is an island at the northern end of the Strait, and two miles from the mainland. The capital, Georgetown, is the principal port and the centre of considerable local trade. Province Wellesley is the portion of the Malay Peninsula lying opposite to the island, and consists of an alluvial plain with forest-clad hills in the interior. The Dindings, a territory 80 miles south of Penang, has recently been taken up for rubber planting.

Malacca consists of a town of the same name and territory 660 square miles in area, situated on the Peninsula, 240 miles south of Penang.

Singapore is an island, 200 square miles in area, situated at the extreme south of the Malay Peninsula, from which it is separated by a strait less than a mile wide. *Singapore*, the seat of government of the Straits Settlements, is the head-quarters of the British navy in Eastern Seas, and a commercial port of first rate importance, with excellent dock accommodation. It is the junction for lines of

steamers from the west, east, and south. The port is almost free, custom duties being levied on opium and alcoholic liquors for consumption in the colony only. There are extensive smelting works, at which much of the Straits tin is smelted.

THE FEDERATED MALAY STATES—Perak, Selangor, Negri Sembilan, and Pahang—form part of the peninsula. They are governed by their native rulers, who are controlled by British residents acting under the governor of the Straits Settlements. The soil is fertile, and there are valuable forests. Rubber growing is now a large industry, but the chief source of wealth and revenue is tin. In 1909 (with the exception of Johore in the south) the remaining part of the peninsula, comprising the states of Kelantan, Trenganu, and Keda, were transferred from Siam to Great Britain.

5. IN THE PACIFIC OCEAN.

The smaller British possessions in the Pacific Ocean are (1) Hong Kong and Wei-hai-wei on the coast of China, (2) the Fiji Islands, and (3) a protectorate consisting of a number of groups and scattered islands in the Western Pacific.

HONG KONG is a crown colony situated in the south-east of China, and consists of the island of Hong Kong, 36 square miles in area, at the mouth of the Canton River, and the peninsula of Kowloon, the portion of the mainland opposite to the island, which has been leased from the Chinese government. Population of the whole colony exceeds 400,000, but less than 20,000 are Europeans. The climate is generally hot, but there are great variations in temperature during the year, and the colony has proved to be less unhealthy than it was once considered. The harbour, which extends between the north of the island and the southern shores of the peninsula, is one of the finest in the world, and there is splendid dock accommodation. The naval dockyard and workshops provide for the repairing and refitting of the largest battleships, and make Hong Kong the headquarters of the China squadron. The port is free and is the centre of an immense trade, being the great mart for the distribution of European goods to China and the Far East. The island is a military and naval station, with an imperial garrison of about 4,000 men.

WEI-HAI-WEI was leased from China in 1898 to provide the British with a naval station in North China, and "for the better protection of British commerce in the neighbouring seas." The territory is situated on the Shantung Peninsula, 40 miles east of Chefoo, and almost opposite to Port Arthur, and consists of a strip of land, 10 miles in width, extending along the whole front of the Bay of Wei-hai-wei, together with the islands in the bay, a total area of 285 square miles, but Great Britain exercises military rights over 1,500 square miles of the neighbouring country. The climate is good, with cold, dry, bracing winters. *Port Edward* is the seat of government and the chief port.

THE FIJI ISLANDS consist of two large islands, Viti Levu and Vanua Levu, and a number of smaller ones, situated in the South Pacific, about 2,000 miles east of Queensland, and 1,100 miles north of New Zealand, and having an area of 7,740 square miles. The islands are of volcanic origin, and the shores of most of them are protected by barrier reefs crossed by deep channels. The climate is remarkably healthy, but earthquakes are not uncommon. Forests of valuable timber clothe the hill sides, the bread-fruit tree, cocoanut, pineapple, and plantain flourish, and maize, sugar, tea, cotton, tobacco, and arrowroot are cultivated. The trade of the islands is principally with Great Britain and the Australian Colonies. The exports are sugar, fruits, copra, and rubber; the imports, cotton goods, machinery, and hardware. *Suva*, the capital, on Viti Levu, has a good harbour.

The Governor of Fiji, as High Commissioner of the Western Pacific, exercises jurisdiction over the various islands to which the British protectorate extends. The principal of these are:—The British Solomon Islands, The Tonga or Friendly Islands, The Gilbert, Ellice, Phœnix, and Union Groups, and Pitcairn Island.

6. REMAINING BRITISH POSSESSIONS.

BRITISH BORNEO. Borneo is the largest island of the Malay Archipelago. Formal protectorates have been declared by Britain over the northern and north-western portions, including British North Borneo, Brunei, and Sarawak. The interior of the territory is mountainous, but few of the peaks reach any great height. The climate is tropical and unhealthy on the plains. There are valuable forests, the soil is fertile, and well adapted for the cultivation of tropical products, and the mineral wealth is great, including gold, diamonds, coal in abundance, quick-silver, and iron. The inhabitants are principally Malays, Chinese, and Arabs.

British North Borneo occupies the extreme north of the island, and has an area of 31,000 square miles. The territory is administered by the British North Borneo Company after the manner of a Crown Colony. Lands have been leased to planters, railways are being constructed, and the mineral wealth developed. Timber, cocoa-nuts, gums, gutta-percha, tobacco, sago, and rice are exported.

Sarawak occupies the north-west of Borneo, and has an area of 50,000 square miles with a coast line of 400 miles. The country is ruled by the heir of Sir James Brooke, the first rajah, foreign relationships being under British control. The chief exports are rubber, gutta-percha, sago, coal, and gold.

Brunei, area 4,000 square miles, lies between Sarawak and British North Borneo. The internal affairs of the country are in the hands of the Sultan, but a British Resident directs him in the administration.

Labuan, an island 30 square miles in area, lying about 6 miles off the coast, has, since 1907, been administered by the governor of the Straits Settlements, although 725 miles from Singapore; chief products coal, sago, rubber.

BRITISH HONDURAS. British Honduras is a Crown Colony—area 7,562 square miles, population 42,000, forming the south-eastern portion of the Yucatan peninsula in Central America. The colony possesses about 170 miles of coast fronting the Caribbean Sea, but the navigation is rendered difficult by numbers of small islands and coral reefs. The river Belize flows through the middle of the country. North of this river the land is low and flat, and much of the surface is occupied by swamps and lagoons. The south and extreme west are hilly. The climate is tropical but healthy. Forests cover the greater part of the territory, but there is pasture-land of good quality in the interior, and sugar and tropical fruits do well under cultivation. The principal exports are mahogany, logwood, rubber, gum, bananas, and cocoa-nuts. *Belize*, the capital, has no harbour; vessels are loaded and discharged by the aid of lighters; population 10,400.

BRITISH GUIANA. A Crown Colony, is situated in the north of South America. The boundaries between the colony and Venezuela on the west, and Brazil in the south were settled by arbitration. The coast line is about 300 miles in length, and the country extends inland about 600 miles, and has a total area of 90,000 square miles, with a population of 300,000. Rich alluvial plains, varying in width from 40 to 70 miles, fringe the coast, and are in places below the sea-level, and crossed by dykes and canals. The interior is hilly or mountainous, and covered with forests, broken by grassy plains. The climate is hot and damp, the rainfall frequently reaching 140 inches per annum. Cultivation extends but a few miles from the coast or river banks. The staple crop is sugar, but cotton, coffee, cacao, rice, and tropical fruits promise well. Gold and diamonds are found, and the mining industry is being developed. The colony suffers from a scarcity of labour, and Indian and Chinese coolies have been introduced, and now form one-third of the inhabitants. The principal exports are sugar, gold, rum, and timber, sugar forming nearly 50 per cent. of the whole. *Georgetown* (Demerara), the capital and chief port, is situated near the mouth of the river Demerara; population 48,000. *New Amsterdam*, on the river Berbice, is the second town; population 9,000.

GROWTH OF THE BRITISH EMPIRE.

The reign of Queen Elizabeth was a preparation for planting Colonies and founding an Empire. The date of James I.'s accession (1603) may be fitly taken as a starting-point in tracing the growth of the Empire, and the three centuries between that time and ours may be conveniently divided into five periods:

First period ending with the Treaty of Utrecht, 1713.
Second period ending with the Treaty of Paris, 1763.
Third period ending with the Treaty of Versailles, 1783.
Fourth period ending with the Treaty of Vienna, 1815.
Fifth period coming down to the present day.

1. Period of Early Colonization (1603–1713). (1) First permanent settlement at Jamestown in 1607. Colonization of Virginia, New England, and all the remaining Colonies, except Georgia, which have since expanded into the United States. (2) Acquisition of Bermudas, Barbados, Jamaica, and St. Helena. (3) By the Treaty of Utrecht was admitted our claim to Newfoundland, Nova Scotia, and Hudson Bay Territory.

2. Period of Conquest (1713–1763). (1) Conquest of Canada from the French after the capture of Quebec by General Wolfe. (2) Foundation of our Indian Empire laid by Clive at the Battle of Plassy. (3) By the Treaty of Paris, France ceded to England all her former possessions in North America except New Orleans; and Spain yielded Florida in exchange for Havana, which the English had captured.

3. Period of Loss (1763–1783). (1) Loss of the Thirteen Colonies in the American War of Independence. (2) As a set-off we have the discovery of New Zealand and New South Wales by Captain Cook about the same time. (3) Consolidation of British rule in India by Warren Hastings.

4. Period of Trial and Triumph (1783–1815) 1) First settlers landed in Australia (1788); Sydney founded; Tasmania occupied. (2) During the Napoleonic Wars the British captured:—Trinidad from the Spaniards; Ceylon, Cape of Good Hope, and Guiana from the Dutch; Malta, Mauritius, Tobago, and St. Lucia from the French. All these gains were conceded to England by the Treaty of Vienna. (3) In India British rule was made paramount by Marquess Wellesley through the utter defeat of the Mahratta princes and Tippoo, Sultan of Mysore.

5. Period of Emigration and Expansion (1815–present day). Great impetus was given to emigration by the Peace of 1815, the Irish Famine of 1845–47, and the discovery of gold in Australia in 1851. In some years since then more than a quarter million of persons have emigrated from the United Kingdom. The expansion of the Empire has been equally remarkable. This has been effected in three ways—by peaceful settlement, by force of arms, and by friendly treaty with native princes. When Queen Victoria began her reign (1837) British India did not include Oudh, nor the Punjab, nor Burma; in Australia there was no Victoria or Queensland; New Zealand formed no part of the Empire; in Africa there was hardly any British territory except Cape Colony, which then was only about half its present size; in America British Columbia had not received its name, Manitoba had not yet been heard of; and of the numerous small dependencies, which are sometimes of great value, we had neither Aden nor Hong Kong.

DOMINION OF CANADA.

1. Canada was discovered by Sebastian Cabot in 1497, but its effective history commences from the landing of the French explorer Cartier in 1534. It was first colonized by the French under Champlain, who founded Quebec in 1608, and afterwards built a fort on the island of Montreal for the protection of the fur-traders.

2. Canada was conquered by the English in the "Seven Years' War." Quebec was captured by Wolfe in 1759, and in the following year Montreal surrendered to General Amherst, when all French troops in Canada laid down their arms and were shipped off to France. By the treaty of Paris in 1763 Canada became a British possession.

3. The French Colonists remained under British rule, and being left in the enjoyment of their own laws and customs, proved loyal to the British Crown in the war of American Independence. At the conclusion of this war thousands of "loyalists" left the United States and settled in Canada.

4. Before the end of the 18th century the colony was divided into two provinces, called Upper and Lower Canada, the former inhabited mainly by British settlers, the latter by French. All went well for some years, each province being governed separately. But by the year of the Queen's accession (1837) the colony had outgrown its mode of government, and rose in rebellion. This having been put down, goodwill was restored by the grant of self-government (1841).

5. The next great step onward was taken in 1867, when an Act was passed empowering all the British Colonies of North America to form a Federal Union under the name of the Dominion of Canada. By the end of six years the Dominion embraced all British North America except Newfoundland and Labrador. Whilst each province manages its own particular affairs, the Dominion Parliament, meeting at Ottawa, legislates for the whole country in matters that concern the whole, such as protection against invasion, means of communication (railroads, telegraphs, etc.), and the taxes to be paid on exports and imports.

6. As one important result of this federation the Canadian Pacific Railway was constructed right across the Continent, and opened in 1885. Already a similar railway, further north, is under construction. Canada has become one of the greatest wheat-growing countries, and its population through immigration is rapidly increasing. In March, 1909, the population of Canada was estimated at 7,185,000. The Political Capital of Canada is Ottawa.

AUSTRALASIA.

1. New South Wales was discovered by Captain Cook in 1769, and in 1788 a shipload of convicts was landed at Port Jackson, and Sydney founded. To Captain Phillip, the first governor, the colony owes its escape from famine and disaster. In 1813 the way across the Blue Mountains was discovered, and a fine agricultural country opened up around Bathurst. Sheep-farming now became the chief occupation, and free settlers began to arrive. After 1840 no more convicts were sent to this colony, and within a few years the system was abolished throughout Australia. Self-government with local Parliaments followed in due course.

2. Tasmania also began its existence as a convict colony. The first batch of convicts was landed in 1804 on the spot where Hobart was built. The colony suffered for many years from the hostility of the natives and from the depredations of "bush-rangers," as the escaped convicts were called. Both of these evils were effectually dealt with by Colonel Arthur, who ruled the colony from 1824 to 1836, and laid the foundation of Tasmania's prosperity.

3. Western Australia began its struggling existence in 1829. By the recent discovery of gold in this colony a brighter prospect opens for it. South Australia dates from 1836, when Adelaide was founded. Only free settlers were admitted. It passed through a period of great poverty and distress. A better day dawned with the discovery of the Burra Burra copper mines (1845). Victoria was formed into a separate colony in 1837, the year of Queen Victoria's accession, when Melbourne was founded. Queensland was separated from New South Wales in 1859.

4. The progress of Australia was greatly accelerated by the discovery of gold, in 1851, by which a great impetus was given to immigration. It was first found at Bathurst, in New South Wales, but Ballarat and Bendigo, in Victoria, proved to be the richest gold centres. The value of the gold obtained in Australia between 1851 and 1907 amounts to

£300,000,000. On January 1st, 1901, New South Wales, Victoria, Queensland, S. Australia, Tasmania and Western Australia combined to form the Australian Commonwealth as a result of the passing of the Commonwealth Act, July 9th, 1900. A naval and military defence force has been organised and its plan of organisation was approved by Lord Kitchener in 1910. Though gold is still one of Australia's chief products, wool greatly exceeds it in value.

NEW ZEALAND began to be colonized in 1840. By the Treaty of Waitangi the Maoris consented to take our Queen as their sovereign, and to permit her people to settle in their country on condition that they purchased the land they required. The colony made great progress under the administration of Sir George Grey, who held office from 1845 to 1853. On his return to New Zealand as Governor in 1861, he found the natives in arms, much discontent being felt at the alarming growth in the number of English settlers and the amount of land which had passed into their hands. The war continued until 1870, when the brave Maoris gave up the struggle as hopeless. During the ten years of the war, which was confined to the North Island, the colonists in the South Island made wonderful progress, especially after the discovery of gold in Otago. The natural resources of the country, and its splendid climate, have continued to attract numerous emigrants, and now there are eighteen colonists to one native, the whole population exceeding 800,000.

BRITISH SOUTH AFRICA.

1. Cape of Good Hope was discovered by a Portuguese Mariner named Diaz in 1483. The Dutch began to settle at the Cape in 1652. Cape Colony was captured by the English in 1806, but no step was taken by them to colonize it until 1820, when Port Elizabeth was founded.

2. The next thirty or forty years were marked by wars between British, Dutch, and Kaffirs for the mastery. There were three Kaffir wars, each ending in an extension of British territory, and by 1865 Cape Colony included all the native states south of the Orange River. Meanwhile the Boers, or Dutch farmers, emigrated from Cape Colony and founded two independent states, namely, the Transvaal or South African Republic, and the Orange Free State. Natal was annexed by the British Government in 1843.

3. The prosperity of Cape Colony dates from the discovery of diamonds at Kimberley in 1870. Since then the diamond mines have yielded an average revenue of between two and three millions per annum. This discovery of diamonds led to the annexation of Griqualand West, in which Kimberley is situated.

4. North of Natal, and separated from it by the river Tugela, is Zululand. In 1879 a British force crossed the Tugela to make war on Ketahwayo, the Zulu king, whose army was a constant source of danger to the peace and security of Natal. The war was marked by a massacre of our troops at Isandlana, and by the heroic defence of Rorke's Drift, a ford of the Tugela, by a small British force. A pitched battle fought at Ulundi brought the war to a successful close. Zululand is now annexed to Natal.

5. Our next extension of territory took place in 1885, when Bechuanaland to the south of the river Molopo was constituted a Crown Colony under the name of British Bechuanaland. The whole of Bechuanaland north of the Molopo has since been formed into a protectorate. In consequence of the discovery of rich gold-fields in the Transvaal, a great impetus was given to exploration and settlement in the country north of the Transvaal, and now called Rhodesia.

6. Rhodesia stretches from the Limpopo to the Zambezi. It includes the country of the Matabeles and Mashonas. The former, being a warlike tribe, fought bravely for their independence under their king, Lobengula. His army of 10,000 men, however, was no match for a British force of 800 men armed with modern weapons, and well led by Dr. Jameson. The capital, Bulawayo, was taken; the king escaped, but died soon afterwards (1893).

7. After the Boer War in 1902, the Transvaal and the Orange Free State became incorporated in the British Empire. The year 1909 saw the union of the self-governing Colonies into "United South Africa," by the passing, September 20th, of the South Africa Act. A national Convention at Bloemfontein approved a draft Constitution for this purpose, and this having been passed by the Imperial Parliament the political union of South Africa is accomplished. Lord Gladstone, son of the late W. E. Gladstone, is the first Governor-General and General Botha is the first Prime Minister of the New Parliament. The seat of the government of the Union is Pretoria, the seat of the Legislature is Cape Town. (See United South Africa, page 875.)

BRITISH INDIA.

1. The East India Company received its first charter from Queen Elizabeth in 1600. For 150 years it was merely a trading company, and during that time established factories, or trading stations, at Surat, Bombay, Madras, and Calcutta.

2. A new era opened with the year 1748, when Dupleix, the French Governor, interfered in disputes between rival princes for the throne. The English soon followed suit, and in every dispute between native princes the two nations took opposite sides. The first great success on the British side was made by CLIVE at Arcot.

3. In 1757 occurred the tragedy of "The Black Hole of Calcutta." Clive was sent with a small army to take vengeance on Surajah Dowlah, the Nabob of Bengal, and by his victory at Plassy laid the foundation of British rule in India. The new Nabob of Bengal was only a puppet in Clive's hands. This success was followed by the victory of Sir Eyre Coote, at Wandewash, in 1760—a victory which led to the extinction of French rule in India.

4. The next great builder of our Indian Empire was WARREN HASTINGS, who was appointed Governor-General in 1774. He consolidated our rule by his victories over the Mahratta princes, and by his energy and spirit raised an army that enabled Sir Eyre Coote to crush our great enemy, Hyder Ali, Sultan of Mysore, at Porto Novo.

5. Between 1798 and 1805 the office of Governor-General was held by MARQUESS WELLESLEY. He induced the Nizam of the Deccan and other native princes to accept British protection, on the condition that each should be absolute in his own state, but be guided by our representative at his court in all matters relating to other states. War was declared against Tippoo, Sultan of Mysore, the son and successor of Hyder Ali. The storming of Seringapatam, his capital, and his own death when fighting in the breach, put an end to the war, and led to the partition of his kingdom.

The Marquess next took in hand the Mahratta princes. He induced the Prince of Poona to accept British protection, and made war upon the Mahratta chiefs, Holkar and Scindia. He appointed General Lake to conduct the war against Holkar, and his brother, Arthur Wellesley, the future Duke of Wellington, to deal with Scindia. Wellesley won the hard-fought battle of Assaye, 1803, and brought Scindia to submission, whilst Lake was also successful.

6. LORD HASTINGS, who became Governor-General in 1813, reduced Nepal to submission without depriving it of independence. From Nepal we have since drawn those excellent little soldiers, the Ghoorkas. By this time the British were practically supreme over the whole peninsula south of a line drawn from the mouth of the Indus to that of the Ganges, and over the basin of the Ganges itself.

7. Between 1848 and 1856 India was ruled by the MARQUIS OF DALHOUSIE, who annexed more territory than any other Governor-General before or since. By the defeat of the Sikhs at Gugerat and elsewhere, their country, the Punjab, was brought under British rule. The Sikhs have ever since supplied our Indian army with brave and loyal soldiers. The southern part of Burma, including the Port of Rangoon, was next added to the Empire. Of the many other states drawn into the British net by Dalhousie, the most important was the Kingdom of Oudh, "the Garden of India." His high-handed proceedings in Oudh

had much to do with the Indian mutiny that occurred soon afterwards.

8. The Indian Mutiny broke out in 1857 at Meerut. The chief centres of the war that followed were Delhi, Cawnpore, and Lucknow. Lucknow is celebrated for its siege, and the relief brought to the distressed garrison by General Havelock. Cawnpore was the scene of the "Bloody Well." Delhi was the headquarters of the rebels, and there the neck of the rebellion was broken, when the city was captured by our troops. Before the close of 1858 the rebellion was at an end, and the governing-power transferred from the Company to the Crown.

9. In 1876 Queen Victoria was declared EMPRESS OF INDIA, and in 1885, as the result of another Burmese War, the rest of Burma was incorporated with our Indian Empire. This completed the conquest of India, but nearly two-fifths still remain under the "home-rule" of native princes.

OTHER BRITISH POSSESSIONS.

GIBRALTAR.—Taken by Sir George Rooke in 1704. Withstood a great siege (1779–83) under General Eliott.

MALTA.—Taken from the French in 1800. It is the headquarters of the British fleet in the Mediterranean.

CYPRUS.—Ceded by Turkey in 1878, on the promise of a certain annual payment.

ADEN.—"The Gibraltar of the East" was captured in 1839. It has an excellent harbour, and stands within easy distance of the entrance to the Red Sea. The little island of Perim, situated in the entrance itself, has also been seized and fortified by the British.

CEYLON.—The towns on the coast were captured from the Dutch in 1796, and the interior was afterwards ceded by the Sinhalese (1815), their King having been deposed and banished. Colombo is an important coaling-station.

THE STRAITS SETTLEMENTS.—These lie in the Straits of Malacca, and include Penang, Malacca, Singapore, and the Cocos or Keeling Islands. All of these have been acquired by purchase and treaty with the native princes between 1785 and 1824. Singapore is one of the great world centres of commerce. The Cocos Islands are valuable as a coaling-station.

HONG KONG.—It was first occupied by the British in 1841, in the course of a war with China. The peninsula of Kowloon, opposite the island, and the small adjacent Stonecutter's Island, now strongly fortified, has since been added.

MAURITIUS.—Seized in 1810 from the French. It is of much importance from a military point of view, being situated midway between the British possessions in India and South Africa.

ST. HELENA.—Ceded by the Dutch in 1673; Napoleon's place of exile from 1815 until his death in 1821. Valuable as a coaling-station.

SIERRA LEONE.—Ceded by a native chief in 1787 for the reception of freed negroes. Many then in England were sent out and settled at its capital, Freetown, which long remained a depôt for freed slaves.

NEWFOUNDLAND.—Taken possession of by Sir Humphrey Gilbert in 1583, but not occupied till long after, except in summer by the fishermen of many seafaring nations. The English claim to its possession was acknowledged in the Treaty of Utrecht (1713).

BERMUDAS.—These islands were first occupied in 1609 by Admiral Somers, who was wrecked on one of the islands when convoying eight emigrant ships to Virginia. As a naval station the importance of Bermuda can hardly be over-stated.

BRITISH WEST INDIES.—**Barbados** was the first of these islands to be occupied by the British, who took possession in 1605. It is still the headquarters for British troops in the West Indies. **Jamaica** was captured from the Spaniards by an expedition sent by Cromwell in 1655. Kingston, its chief town, has a splendid harbour, and forms our chief naval station in the Caribbean Sea. **St. Lucia**, after changing masters, English and French, several times, has remained in our possession since 1803. It is of some value to us as a naval and coaling station. **Trinidad** was taken from the Spaniards in 1797.

BRITISH HONDURAS.—The first English settlers (1638) were probably buccaneers. The British took formal possession in 1798, after defeating the Spaniards, who laid claim to it.

BRITISH GUIANA.—Raleigh went on a voyage up the Orinoco in 1595, but no actual settlement resulted. After many dissensions between Dutch, French, and English settlers, Great Britain, in 1814, finally secured the portion now known as British Guiana. Its exact boundary on the side of Venezuela has lately been settled by arbitration.

FIJI ISLANDS.—These islands, situated in the Pacific a little north of the Tropic of Capricorn, were ceded in 1874 by the native chief, who sent to the Queen his great war-club as a token of his allegiance.

Note.—There are in the British Empire many other smaller dependencies which might be mentioned, besides the protectorates in Borneo and Africa, which have not yet come under direct British rule.

LEADING EVENTS IN THE MAKING OF THE EMPIRE.

A.D.	
1588.	Defeat of the Spanish Armada.
1607.	First permanent settlement of the English in America.
1620.	Landing of the Pilgrim Fathers in America.
1655.	Capture of Jamaica from the Spaniards.
1688.	Landing of the Prince of Orange.
1692.	Victory off La Hogue.
1704.	Marlborough's victory at Blenheim.
1707.	Union of England and Scotland.
1713.	Treaty of Utrecht.
1757.	Battle of Plassy.
1758.	Capture of Louisbourg from the French.
1759.	Capture of Quebec by General Wolfe.
1760.	Battle of Wandewash, the death-blow of French rule in India.
1763.	Treaty of Paris.
1769.	Australia explored by Captain Cook.
1782.	Raising of the Siege of Gibraltar.
,,	Rodney's great victory in the West Indies.
1783.	Treaty of Versailles and loss of thirteen American Colonies.

A.D.	
1788.	First settlement of the English in Australia. Sydney founded.
1794.	Victory of Lord Howe off Brest.
1797.	Victory of Admiral Jervis off St. Vincent.
,,	Victory of Admiral Duncan off Camperdown.
1798.	Battle of the Nile.
1800.	The French driven out of Malta.
1801.	Union of Great Britain and Ireland.
1803.	Battle of Assaye.
1805.	Battle of Trafalgar.
1806.	Taking of Cape Town from the Dutch.
1807.	Abolition of the Slave Trade.
1813.	Battle of Vittoria.
,,	Crossing of the Blue Mountains.
1815.	Completion of Conquest of Ceylon.
,,	Battle of Waterloo.
1819.	Occupation of Singapore.
1820.	English immigration begun in Cape Colony.
1830.	Opening of the first railway for passenger traffic.
1838.	Emancipation of slaves in British Empire.
,,	Steamships first crossed the Atlantic.

A.D.
1839. Aden captured and annexed.
1840. Treaty of Waitangi with the Maoris, and first British settlement in New Zealand.
„ Penny Postage established.
1841. Self-government granted to Canada.
1842. Hong Kong taken.
1843. Natal annexed.
1849. Sikhs defeated and Punjab annexed.
1851. Gold discovered in Australia.
1852. Lower Burma annexed.
1856. Kingdom of Oudh annexed.
1857. Outbreak of Indian Mutiny.
1858. Indian Mutiny suppressed and Government of India placed under the British Crown.
1866. First Electric Cable laid across the Atlantic.
1867. Dominion of Canada constituted.
1870. Discovery of diamonds at Kimberley.
1874. Cession of Fiji Islands.
1876. The Queen proclaimed Empress of India.
1879. Defeat of Zulus at Ulundi.
1882. Battle of Tel-el-Kebir.

A.D.
1885. Upper Burma annexed.
1886. Gold discovered in the Transvaal.
1887. Zululand added to the Empire.
1890. Agreement with Germany respecting spheres of influence in Africa.
„ First Settlement in Rhodesia.
1893. Matabeles defeated; Bulawayo taken.
1898. Defeat of the Dervishes at Omdurman.
1900. British Protectorate established in Nigeria.
1901. Proclamation of the Australian Commonwealth.
1902. End of Boer War; Transvaal and Orange River Colony annexed.
1907. Colonial Conference, having for its great object the knitting of the Empire more firmly together.
1909. "The South Africa" Act establishes the "Union of South Africa."
„ First Imperial Press Conference held in London.
1910. Inauguration of the "Union of South Africa," with Lord Gladstone as Governor General and General Botha as Premier, May 31st.

ACQUISITIONS ACCORDING TO REIGNS.

(Exclusive of Protectorates.)

Sovereign.	Date.	Possessions Gained by		
		Occupation.	Conquest.	Cession.
Elizabeth . .	1588–1603	(Virginia), Newfoundland	—	—
James I. . .	1603–1625	Barbados, Bermudas (New England)	—	—
Charles I. . .	1625–1649	Bahamas, (Maryland)	—	—
Commonwealth	1649–1660	—	Jamaica	—
Charles II. . .	1660–1685	(Carolina), (Pennsylvania), Hudson Bay Territory	(New York), (New Jersey), St. Helena	Bombay
James II. . .	1685–1688	—	—	—
William III. .	1688–1702	—	—	—
Anne	1702–1714	—	Gibraltar, Nova Scotia	—
George I. . .	1714–1727	—	—	—
George II. . .	1727–1760	(Georgia)	Canada, New Brunswick, Cape Breton Island, Prince Edward Island, Bengal	—
George III. .	1760–1820	New South Wales, Tasmania, Red River Settlement [now grown into Manitoba]	(Florida,) British Honduras, Trinidad, Malta, Cape Colony, British Guiana, Mauritius, Ceylon, Centre and South of British India	Penang and Wellesley Province, Sierra Leone
George IV. . .	1820–1830	Western Australia	Assam	Singapore, Malacca
William IV. .	1830–1837	South Australia	—	—
Victoria . . .	1837–1901	Victoria, New Zealand, Natal, British Columbia, Queensland, Manitoba, &c.	Aden, Hong Kong, Scinde, Lagos, K. of Ashanti, Punjab, Oudh, Burma, Zululand, Rhodesia, Transvaal, Orange River Colony, &c.	Perim, West Griqualand, Basutoland, Bechuanaland, British Borneo, Fiji Islands, Cyprus, Wei-hai-wei, &c.

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THE WORLD AND THE EMPIRE.

COMPARATIVE SIZE AND POPULATION.

The World.			The Empire.		
—	Area in sq. miles.	Population in 1901.	—	Area in sq. miles.	Population in 1901.
Europe	3,750,000	392,350,000	United Kingdom	121,089	41,458,721
			Isle of Man and Channel Islands	303	150,370
			Colonies, Possessions and Protectorates.		
			In Europe	3,703	472,502
Asia	17,130,000	870,000,000	In Asia—		
			Indian Empire	1,766,597	294,361,056
			Other Possessions	148,000	6,208,808
Africa	11,980,000	140,000,000	In Africa—		
			West Africa	557,164	28,992,166
			South Africa	1,626,692	6,674,527
			Other Possessions	460,543	7,362,995
America	15,000,000	142,000,000	In America—		
			North America	3,908,327	5,613,260
			West Indies and Central America	19,578	1,614,406
			South America	111,500	298,149
Australasia	3,400,000	5,300,000	In Australasia—		
			Australian Commonwealth	2,972,918	3,836,154
			New Zealand	104,471	816,214
			Other Possessions	107,493	542,376
Total	51,260,000	1,549,650,000	Total	11,908,378	398,401,704

N.B.—The figures relating to the Empire are the result of a Census taken in 1901 except in the Protectorates, but those relating to the Continents are at best only approximate estimates in the case of Asia, Africa and South America. The next Census will be taken in 1911.

PRINCIPAL COUNTRIES OF THE WORLD.

AREA, POPULATION, RELIGION, AND FORM OF GOVERNMENT.

COUNTRY.	AREA IN SQUARE MILES	APPROXIMATE POPULATION IN 1901.	PREDOMINANT RELIGION.	FORM OF GOVERNMENT.
EUROPE—				
Austria-Hungary				
(*a*) Austria	115,800	26,204,000	Christian	Constitutional Monarchy
(*b*) Hungary	125,390	19,363,000	"	
Belgium	11,370	6,896,000	"	" " "
Bulgaria	37,200	3,917,000	"	" " "
Denmark	14,840	2,497,000	"	" " "
France	207,200	38,962,000	"	Republic
Germany	208,720	57,708,000	"	Constitutional Monarchy
Greece	24,400	2,431,000	"	" " "
Italy	110,660	32,961,000	"	" " "
Netherlands	12,560	5,347,000	"	" " "
Norway	124,090	2,253,000	"	" " "
Portugal	34,250	5,016,000	"	" " "
Roumania	50,700	6,152,000	"	" " "
Russia (in Europe)	2,052,490	105,397,000	"	Absolute Monarchy
Servia	18,640	2,537,000	"	Constitutional Monarchy
Spain	194,740	18,608,000	"	" " "
Sweden	172,880	5,199,000	"	" " "
Switzerland	15,470	3,356,000	"	Republic
Turkey (in Europe)	65,750	6,086,000	Mohammedan	Constitutional Monarchy
United Kingdom	121,089	41,459,000	Christian	" " "
ASIA—				
Afghanistan	215,400	4,000,000	Mohammedan	Absolute Monarchy
China	4,277,170	400,000,000	Confucian	" " "
Dutch Possessions	736,400	36,000,000	Various	Colonial
French Possessions	256,000	18,507,000	"	"
India (including Aden)	1,766,600	294,361,000	Hindu	Imperial
Japan	162,655	45,862,000	Buddhist, Shintoist	Constitutional Monarchy
Korea	71,000	10,000,000	Confucian	Japanese Protectorate
Persia	628,000	9,500,000	Mohammedan	Constitutional Monarchy
Russia (in Asia)	6,326,550	22,758,000	Christian	Absolute Monarchy
Siam	236,000	6,000,000	Buddhist	Constitutional Monarchy
Turkey (in Asia)	650,390	17,545,000	Mohammedan	Absolute Monarchy
AFRICA—				
Abyssinia	150,000	3,500,000	Christian	Feudal Monarchy
Algeria (French)	184,380	4,739,000	Mohammedan	Colonial
British South Africa (exclusive of Rhodesia and Bechuanaland)	490,783	5,390,000	Christian	Self-governed
British West Africa (excluding Protectorates)	152,860	2,690,000	Pagan	Colonial
Congo Free State	800,000	14,000,000	Fetich	"
Congo (French)	1,160,000	10,000,000	Pagan	"
Egypt (Nile Valley and Delta)	12,976	9,734,000	Mohammedan	Khedivial
German Possessions	931,460	12,600,000	Pagan	Colonial
Liberia	45,000	2,060,000	Christian	Republic
Madagascar (French)	227,750	2,500,000	"	Colonial
Morocco	219,000	5,000,000	Mohammedan	Despotic
Nigeria	333,600	13,900,000	Mohammedan, Pagan	Colonial and Protectorate
Tunis	51,000	1,900,000	Mohammedan	Colonial
Other French Colonies	2,151,730	13,000,000	Pagan	"
AMERICA—				
Argentina	1,117,060	4,625,000	Christian	Republic
Bolivia	570,000	1,816,000	"	"
Brazil	3,218,170	18,600,000	"	"
British Guiana	90,277	294,000	"	Colonial
Canada	3,620,000	5,371,000	"	Self-governed
Chile	307,683	3,147,000	"	Republic
Colombia	504,770	3,879,000	"	"
Ecuador	116,000	1,205,000	"	"
Guatemala	48,290	1,647,000	"	"
Mexico	767,060	13,607,000	"	"
Nicaragua	49,200	420,000	"	"
Paraguay	145,000	635,000	"	"
Peru	713,670	4,610,000	"	"
United States	3,025,600	79,003,000	"	"
Uruguay	72,153	965,000	"	"
Venezuela	599,360	2,500,000	"	"
AUSTRALASIA	3,400,000	5,300,000	"	Self-governed

POPULATION OF CHIEF CITIES OF THE WORLD (exclusive of U. K.)*.

The figures given in this Table are according to the latest returns, but in some cases they are uncertain, since in China and certain other countries no census is taken, and where it is taken the census year differs.

City.	Population.	City.	Population.	City.	Population.
New York	3,437,000	Brussels	184,000	Alexandria	356,000
Paris	2,763,000	Naples	564,000	Kioto	353,000
Berlin	2,040,000	Amsterdam	511,000	Buffalo	352,000
Chicago	1,699,000	Madrid	547,000	Mexico	369,000
Vienna	1,675,000	Baltimore	509,000	Santiago	336,000
Tokio	1,819,000	Barcelona	539,000	Turin	336,000
Canton	1,500,000	Munich	539,000	Pittsburg	322,000
Philadelphia	1,294,000	Milan	493,000	Cincinnati	326,000
St. Petersburg	1,370,000	Madras	509,000	New Orleans	287,000
Moscow	1,039,000	Sydney	508,000	Lodz	315,000
Peking	1,000,000	Melbourne	503,000	Frankfort-on-Maine	311,000
Buenos Ayres	1,026,000	Suchau	500,000	Palermo	310,000
Hankow	950,000	Rome	463,000	Stockholm	309,000
Calcutta	1,100,000	Dresden	517,000	Manila	302,000
Constantinople	1,125,000	Marseilles	518,000	Chung-King	300,000
Osaka	821,000	Leipzig	504,000	Bordeaux	290,000
Budapest	734,000	Lyons	472,000	Antwerp	273,000
Bombay	776,000	Haiderabad	446,000	Detroit	286,000
Hamburg	803,000	Breslau	441,000	Milwaukee	285,000
Warsaw	684,000	Copenhagen	427,000	Riga	283,000
Tientsin	700,000	Odessa	404,000	Bucharest	276,000
Hangchau	700,000	Bangkok	400,000	Havana	275,000
Fuchau	650,000	Cologne	429,000	Montreal	272,000
Cairo	636,000	Prague	202,000	Nuremberg	294,000
St. Louis	575,000	Cleveland	382,000	Lucknow	264,000
Shanghai	620,000	San Francisco	343,000	Ningpo	255,000
Boston	618,000	Rotterdam	319,000	Teherân	250,000
Rio de Janeiro	516,000	Lisbon	356,000		

* For population of Chief Towns in the United Kingdom see page 902.

COMPARATIVE BIRTH AND DEATH RATES OF CERTAIN COUNTRIES (1907).

Country.	Births per 1000.	Deaths per 1000.	Country.	Births per 1000.	Deaths per 1000.
England and Wales	26·3	15·0	Switzerland	26·8	16·8
Scotland	27·0	16·2	German Empire	35·1	19·5
Ireland	23·2	17·7	Holland	31·8	16·3
United Kingdom	26·0	15·4	Belgium	28·4	17·3
Russia in Europe	*—	—	France	19·7	20·2
Denmark	28·3	14·2	Spain	32.9	24·0
Norway	26·3	14·2	Portugal	*—	—
Sweden	25·5	14·6	Italy	31·5	20·7
Austria	34·0	22·7	United States	*—	—
Hungary	36·0	25·2	Uruguay	30·5	14·1
Servia	40·0	22·4	Australian Commonwealth	*—	—
Roumania	41·6	26·7	New Zealand	*—	—
Bulgaria	*—	—	Japan	32·6	20·6

* No recent statistics available.

DENSITY OF THE POPULATION OF CERTAIN COUNTRIES (Last Census.)

Country.	Population per sq. mile	Country.	Population per sq. mile	Country.	Population per sq. mile
Egypt Proper	939·0	Denmark	172·0	United States	21·4
Belgium	588·7	Hungary	153·6	Norway	18·1
Holland	399·7	Portugal	146·4	Costa Rica	15·7
United Kingdom	341·6	Servia	144·2	Uruguay	13·0
Japan	316·9	Roumania	117·5	Chile	9·3
Italy	293·5	Bulgaria	108·5	Argentina	4·6
German Empire	290·4	Greece	107·9	Brazil	5·3
Austria	225·8	Spain	95·5	Peru	3·9
Switzerland	215·0	Russia in Europe	50·3	Russia in Asia	3·6
France	189·6	Sweden	29·7	Venezuela	3·4

FOREIGN TRADE.

(IMPORTS AND EXPORTS.)

PRINCIPAL IMPORTS AND EXPORTS OF THE CHIEF FOREIGN COUNTRIES.

RUSSIA. **Imports.**—Books, Maps, etc.; Chemicals and Drugs; Coal and Coke; Coffee; Copper; Cotton; Dyes; Fish; Fruit, Oranges and Lemons, and dried; Hides and Skins; India-rubber and Gutta-percha; Indigo; Iron; Lead; Locomotives and Machinery; Oils, other than mineral; Plants and Seeds; Rice; Silk; Tea; Tobacco, Cigars, and Cigarettes; Watches and Clocks; Wine; Wool, raw, yarns and manufactures.

Exports.—Horses; Fowls and Game; Cattle, Sheep, and Pigs; Bristles; Butter; Caviare; Corn, Flour, and Meal, including Wheat, Rye, Barley, Oats, Maize, Peas, Wheat-flour, Rye-meal, Bran; Cotton, manufactures of; Eggs; Flax; Fur and Sheep Skins; Hemp; Leather and Hides; Oilcake; Oil, illuminating, Petroleum, etc.; Linseed, Rape Seed, and Kohl Rabi Seed; Sugar; Wood; Wool, raw, unspun.

NORWAY. **Imports.**—Bacon, Lard, etc.; Coal and Coke; Coffee; Cotton; Corn and Meal, including Wheat, Rye, Barley, Wheat Flour, Rye Meal; Flax, Hemp, and Jute; Hides and Skins; Iron and Iron and Steel Wares; Locomotives and other machinery; Petroleum; Spirits; Sugar; Tobacco; Wine; Wool.

Exports.—Fish, including Cod, Herrings, Anchovies, Lobsters, etc; Ice; Iron Nails; Lucifer Matches; Packing Paper; Skins; Sulphur; Train Oil; Wood and Wood Pulp.

SWEDEN. **Imports.**—Bacon and Hams; Coal, Coke, etc.; Coffee; Cotton; Fish; Grain, including Rye, Wheat, Rye-meal, and Wheat Flour; Iron and Steel; Machinery and Locomotives; Oil; Paper and manufactures thereof; Skins; Spirits; Sugar; Tobacco; Wearing Apparel; Wine; Wood; Wool.

Exports.—Cattle; Butter; Cotton manufactures; Fish; Glass and Glass Ware; Grain, including Barley, Oats, Wheat-meal; Iron and Steel; Lucifer Matches; Machinery; Paper; Spirits; Wood and Wood Pulp; Zinc Blende.

DENMARK. **Imports.**—Animals; Bran; Butter; Coal, Coke, etc.; Coffee; Cotton; Fish; Grain, including Wheat, Rye, Oats, Barley, Maize; Hides and Skins; Iron and Steel Wares; Lard and Fat; Meat, including Hams, Sausages, etc.; Metal Wares; Oil; Oilcake; Seeds; Silk manufactures; Sugar; Tobacco; Wood and manufactures thereof; Wool.

Exports—Animals; Beer; Butter; Eggs; Fish; Grain and Flour, including Barley, Wheat, and Wheat Flour; Hides and Skins; Iron and Steel manufactures; Lard and Fat; Meat, including Hams, Sausages, etc.; Seeds; Sugar; Wood and manufactures thereof; Wool.

GERMANY. **Imports.**—Animals; Bran, etc.; Coal; Caoutchouc and Gutta-percha, Crude; Cocoa and Coffee; Copper; Cotton, raw and manufactures; Eggs; Flax; Grain, including Wheat, Barley, and Maize; Grease, including Oleo Margarine; Herrings; Hides and Skins; Iron; Linseed; Locomotives and Machinery; Oil; Oil-cake; Palm Kernels; Saltpetre; Silk; Timber; Tobacco; Wine; Wool, raw, yarn, etc.

Exports.—Animals; Beer; Books, Maps, Engravings, etc.; Butter and Margarine; Coal and Coke; Cotton, raw, yarn, and manufactures; Dyes, aniline and other tar dyes; Glass and Glass Wares; Grain, Flour, and Meal; Hops; Musicol Instruments; Iron Wares, etc. Leather; Machinery, including Locomotives; Paper; Silk manufactures; Skins; Spirits; Sugar; Wearing Apparel; Wool, raw, yarn, cloths and stuffs.

HOLLAND. **Imports.**—Coal; Coffee; Copper, ore and unwrought; Cotton, raw, yarn, and manufactures; Drugs; Dye stuff; Flour and Meal; Grain, including Wheat, Barley, Rye, Maize, Oats; Hides and Skins; Iron; Locomotives and Machinery; Margarine, Oleo; Oil; Potash, Pearlash, Soda, etc.; Rice; Saltpetre; Seeds; Steel and manufactures; Stone for paving; Sugar; Tallow, Lard, and other fats; Tea; Timber; Tin; Tobacco; Wine; Wool, raw, yarn, and manufactures.

Exports.—Animals; Bran; Butter; Cheese; Coffee; Copper; Cotton; Drugs; Dye stuffs; Fish; Flax; Grain and Flour; Hair; Hides and Skins; Iron and Steel; Machinery; Margarine, Oleo; Paper and manufactures; Rice and Rice Flour; Saltpetre; Spirits, including liqueurs; Sugar; Tin, unwrought; Vegetables, fresh and preserved; Wool, raw, yarn, and manufactures.

BELGIUM. **Imports.**—Animals; Butter; Coal; Coffee; Copper and Nickel; Cotton; Dyes and Dye Stuffs; Fish; Flax; Grain; Hemp; Hides; Iron Ore, Pig Iron, Wrought Iron and Steel; Machinery; Manure; Meat; Minerals, raw, other than iron and coal; Resins and Bitumens; Seeds; Silk; Tallow and other fats; Tow; Wine; Wood; Wool, raw and manufactures.

Exports.—Animals, horses; Arms; Butter and Margarine; Candles; Coal and Coke; Cotton manufactures; Flax, raw; Glass and Glass Wares; Grain; Hides; Iron and Steel; Linen, Hemp, and Jute; Machinery and Locomotives; Meat; Paper; Resins and Bitumens; Salts of Soda; Stone, rough and hewn; Sugar; Tallow and other fats; Woollen Yarn and manufactures; Zinc, unwrought.

FRANCE. **Imports.**—Animals; Butter; Cheese; Coal and Coke; Coffee; Copper; Cotton, raw, yarn, and manufactures; Flax; Fruit and Seeds; Grain and Flour; Guano and other manures; Hides and Skins; Indigo; Jute; Machinery; Meat; Nitrate of Soda; Oil; Silk, raw, thrown, waste, and manufactures; Sugar (Foreign and French Colonial); Tallow, Lard, etc.; Timber; Wine; Wool, raw, waste, and manufactures.

Exports.—Animals; Apparel; Brandy and other spirits and liqueurs; Butter and Margarine; Cheese; Chemical products; Copper Wire; Cotton, raw and manufactures; Earthen and Glass Ware; Eggs; Fruit, fresh and preserved; Grain and Flour; Haberdashery, small Fancy Wares and Toys; Hides, raw and tanned or curried; Jewellery; Leather Wares; Machinery; Metal Wares and Tools; Millinery, including artificial flowers; Paper and manufactures thereof; Satin; Silk, raw, thrown, waste and manufactures; Sugar; Wine; Wood; Wool, raw, yarn, and manufactures.

SWITZERLAND. **Imports.**—Animals; Chemical products; Coal and Coke; Coffee; Cotton; Dye Stuffs; Eggs; Flax, Hemp, Jute, etc.; Flour of all kinds; Fruit and Vegetables; Grain, including Barley, Maize, Oats, Wheat; Iron and Steel; Leather; Locomotives and Machinery; Malt; Oil; Silk; Sugar; Wearing Apparel; Wine; Wood; Wool, raw, yarn, and manufactures.

Exports.—Animals; Books and Maps; Cheese; Chemical products: Cotton, Ribbons, Embroidery, and Lace; Dyes; Flour; Hides and Skins; Iron manufactures; Jewellery; Leather; Machinery and Locomotives; Meat; Milk, condensed; Musical boxes; Silk, raw, thrown, spun, and manufactures; Straw Plait; Watches and Clocks; Wearing Apparel; Wood; Wool.

PORTUGAL (including Azores and Madeira). **Imports.**—Animals; Coal; Codfish; Coffee; Cotton; Grain; Hides; Iron, wrought and cast; Linen, Hemp and

Jute; Machinery; Oil; Paper and manufactures; Rice; Silk; Sugar; Wool, raw and manufactures.

Exports.—Animals; Copper ore; Cork; Cotton, manufactures; Sardines and other fish in oil; Fruit, including Dried Figs, Oranges, and Pineapples; Hides and Skins; Iron manufactures; Olive Oil; Onions; Potatoes; Salt; Wine; Wool.

SPAIN. **Imports.**—Animals; Chemical products; Coal and Coke; Cocoa; Codfish and stock fish, salted; Coffee; Cotton; Wheat; Hides and Skins; Iron and Steel; Linen and Hemp; Machinery; Materials for Railways, Ships' Engines, etc.; Oil; Paper; Ships and Boats; Silk; Timber and Building Materials; Tobacco; Wool, raw, combed, carded, or manufactured.

Exports.—Animals; Boots and Shoes; Cork; Cotton manufactures; Esparto Grass; Fruit, including Almonds, Grapes, Oranges, Raisins, and Nuts; Hides and Skins; Iron and Steel; Copper, regulus; Lead in plates, bars, etc.; Copper, Iron, and other mineral ores; Olive Oil; Paper; Quicksilver; Rice; Salt; Soap; Wheat Flour; Wine; Wool.

ITALY. **Imports.**—Animals; Cheese; Coal and Coke; Coffee; Cotton; Fish; Wheat; Hides; Iron and Steel; Linen and Hemp Yarn; Machinery; Oil; Silk; Sugar; Timber; Tobacco; Wool and manufactures.

Exports.—Animals; Butter and Cheese; Coral, manufactured; Cotton; Dyeing and Tanning Stuffs; Eggs; Fruit, Oranges, Lemons, and Almonds; Grain; Hemp and Flax; Hides and Skins; Marble, Alabaster, and manufactures; Meat, including Poultry; Olive Oil; Rice; Silk; Straw Plait; Sulphur; Wine; Zinc ore.

AUSTRIA-HUNGARY. **Imports.**—Animals; Books, Charts, etc.; Coal and Coke; Coffee; Copper; Cotton; Dye Stuffs; Flax, Hemp, and Jute; Maize; Hides and Skins; Iron and Steel; Leather and Leather Wares; Machinery, Locomotives, etc.; Oil; Rice; Tobacco; Wood and Bone manufactures; Wool.

Exports.—Animals; Butter and Margarine; Clothing; Coal; Cotton; Eggs; Feathers; Glass Wares; Grain, including Wheat and Barley; Hides and Skins; Hops; Iron and Steel Wares; Jewellery and Fancy Wares; Leather; Linen; Malt; Paper; Pulse; Silk; Sugar and Molasses; Wood, Bone, etc.; Wool, raw and manufactures.

GREECE. **Imports.**—Animals; Coal; Coffee; Cotton; Fish; Glass and Earthenware; Grain; Hides and Skins; Iron and Steel; Paper; Petroleum and Mineral Oils; Potash, Soda, Caustic Soda, and Saltpetre; Silk manufactures; Sugar; Wire; Wood; Woollen manufactures.

Exports.—Currants; Figs; Hides; Mineral ores, including argentiferous lead, galena, and zinc (calamine); Olive Oil; Olives; Cognac; Sponges; Tobacco in the leaf; Valonia; Wine.

ROUMANIA. **Imports.**—Coal and Coke; Coffee; Cotton Yarns and goods; Gutta-percha Wares; Jute; Iron Wares; Machinery; Olive Oil; Oxide of Lead, Zinc, etc.; Soda; Silk Tissues; Sugar; Wool and Woollen Clothing.

Exports.—Cattle; Grain, including Wheat, Maize, Barley, Rye; Wheat Flour; Hides; Petroleum; Seeds, oleaginous; Wood; Wool.

EGYPT. **Imports.**—Butter; Cheese; Clothing; Coal; Coffee; Wheat and Flour; Cotton Yarn and goods; Maize Meal; Indigo; Linen manufactures, Hosiery, Drapery; Petroleum; Rice; Sacks; Silk; Soap; Wine; Wood; Woollen and Silk manufactures.

Exports.—Beans; Wheat; Maize; Cotton; Cotton-seed; Hides and Skins; Oil-cake; Onions; Rags; Sugar; Wool.

UNITED STATES. **Imports.**—Chemicals, Drugs, and Dyes; Coal, bituminous; Coffee; Cotton manufactures; Earthen, Stone, and China Ware; Flax, Hemp, and Jute; Fruits; Furs and manufactures of; Glass and Glass Ware; Hides and Skins; India-rubber and Gutta-percha; Iron and Steel manufactures; Silk, raw and manufactures; Sugar and Molasses; Tea; Tin; Tobacco; Wines; Wood and manufactures; Wool, raw and manufactures.

Exports.—Agricultural Implements; Animals; Wheat and Flour; Maize and other grain; Chemicals, Drugs, Dyes, and Medicines; Coal, anthracite and bituminous; Copper; Cotton, raw and manufactures; Cotton-seed Oil; Cycles and parts thereof; Fertilizers; Iron and Steel and manufactures; Wire; Leather and manufactures; Oilcake and Oilcake Meal; Oil, mineral; Paraffin and Paraffin Wax; Beef; Bacon; Hams; Pork; Lard; Oleo Margarine; Dairy products; Tobacco; Wood and manufactures.

MEXICO. **Imports.**—Boots and Shoes; Carriages, Carts, Wagons, etc.; Chemical and Pharmaceutical products; Coal and Coke; Copper manufactures; Cotton, raw, yarn, and manufactures; Dynamite and similar explosives; Fruit and Vegetables; Furniture; Grain, including Maize and Wheat; Iron and Steel; Lard; Machinery; Cotton-seed and Mineral Oil; Paper and manufactures; Silk manufactures; Spirits; Wine; Wood; Woollen manufactures.

Exports.—Animals; Beans; Broom Root Caoutchouc; Chicle; Coffee; Cotton-seed Meal and Cake; Dye Woods; Fruit; Henequen, raw and manufactures; Raw Ixtle; Hides and Skins; Copper, ore and unwrought; Gold; Lead; Silver; Peas; Tobacco; Vanilla; Wood.

CHILE. **Imports.**—Animals; Candles; Coal; Coffee; Cotton manufactures; Drugs; Hardware; Iron; Machinery; Mineral Oil; Paper; Railway Materials; Sacks; Steel; Sugar; Tea; Wire; Wood; Woollen manufactures; Yerba-Maté.

Exports.—Animals; Borate of Lime; Coal; Copper; Flour; Wheat; Barley; Guano; Hides and Skins; Iodine; Leather; Silver ore; Copper ore; Manganese ore; Nitrate of Soda; Wool.

ARGENTINA. **Imports.**—Animals; Clothing and Wearing Apparel; Coal and Coke; Cotton Tissues; Chemical products and Pharmaceutical preparations; Colours, Paints, and Dyes; Leather manufactures; Linen tissues; Iron and Steel; Machinery and Tools; Railway Materials; Tin Plates; Olive and Mineral Oil; Paper manufactures and Books; Sackcloth and Sailcloth; Silk tissues; Sugar; Wine; Wood manufactures; Woollen tissues.

Exports.—Animals; Bones and Bone Ash; Grain and Flour; Grease and Tallow; Hides; Linseed; Meat; Sugar; Wool.

CHINA. **Imports.**—Cigars and Cigarettes; Coal; Cotton, raw and manufactures; Dyes; Fish and Fishery products; Flour; Machinery; Matches; Metals, including Copper, Iron, Lead, Quicksilver, Tin and Tin Plates; Kerosene Oil; Opium; Rice; Sandalwood; Sugar; Timber; Wine, Beer, and Spirits; Wool, yarn and manufactures.

Exports.—Animals; Beans and Beancake; Bristles; Chinaware, Earthenware, and Pottery; Clothing, Boots and Shoes; Cotton, raw and manufactures; Firecrackers and Fireworks; Fish and Fishery products; Fruits; Hemp; Hides; Mats and Matting; Medicines; Oil; Paper and Books; Provisions and Vegetables; Silk manufactures; Skins; Straw Braid; Sugar; Tea; Tobacco; Wool.

JAPAN. **Imports.**—Beans, Peas, and Pulse; Chlorate of Potash; Caustic Soda; Cotton; Dye Stuffs; Salted Fish; Flour; Furs; Skins and Leather; Glass; Locomotives and Machinery; Iron, Steel, and other Metals; Oil and Oilcakes; Paper; Rice; Steamships; Spirits; Sugar; Tobacco; Watches and Clocks; Wool and Woollen Yarn and Tissues.

Exports.—Bamboo and other wood; Camphor; Coal; Copper; Cotton Yarn and Tissues; Earthenware and Porcelain; Fans; Fish; Lacquered Ware; Matches; Mats; Paper; Rice; Seaweed; Silk, raw and tissues; Straw Plait; Tea; Umbrellas (European).

BRITISH AND FOREIGN TRADE (compared).

COMPARATIVE GROWTH.

(1) SPECIAL IMPORTS.*

COUNTRIES.	1884.	1894.	1904.
	£	£	£
United Kingdom .	327,076,000	350.565,000	480,734,000
German Empire .	163,040,000	196,915,000	318,205,000
United States . .	139,078,000	132,628,000	204.546,000
Holland	92,720,000	120,598,000	200,188,000
France.	173.740,000	154,016,000	180,092,000
Belgium	57,030,000	62,982,000	111,289,000
Russia	53,797,000	55,957,000	71,954,000
Austria-Hungary .	51,052,000	58,333,000	85,329,000
Spain (Gen. Trade)†	29,379,000	31,185,000	37,753,000
Sweden (Gen. Trade)†	17,791,000	19,163,000	31,778,000
Denmark	13,656,000	17,056,000	25,894,000
Norway	8,672,000	11,001,000	15,014,000
Portugal	7,325,000	8,025,000	13,960,000

(2) SPECIAL EXPORTS.**

COUNTRIES.	1884.	1894.	1904.
	£	£	£
United Kingdom .	233,025,000	216,006,000	300,711,000
German Empire .	160,245,000	148,075,000	261,130,000
United States . .	151,034,000	181,084,000	298,996,000
Holland	69,847,000	92,708,000	165,255,000
France.	129,300,000	123,124,000	178,040,000
Belgium	53,499,000	52,147,000	87,330,000
Russia	58,990,000	66,875,000	105,680,000
Austria-Hungary .	57,625,000	66,290,000	87,028,000
Spain (Gen. Trade)†	24,672,000	26,772,000	37,208,000
Sweden (Gen. Trade)†	13,255,000	16,580,000	23,040,000
Denmark	8,333,000	12,317,000	19,924,000
Norway	6,088,000	6,891,000	9,495,000
Portugal	4,853,000	5,383,000	6,910,000

*"Special Imports" are imports for home consumption.
**"Special Exports" are exports of British or Irish produce or manufacture.
†"General Trade" includes the re-export of a certain quantity of merchandise previously imported.

COMPARATIVE VALUE

OF IMPORTS AND SPECIAL EXPORTS IN 1908.

COUNTRIES.	IMPORTS.	EXPORTS. (Special.)	TOTAL.
	£	£	£
United Kingdom .	513 330 000	377.104,000	890.434,000
German Empire .	376,814,000	314.606,000	691,420,000
United States . .	248,821,000	382.247.000	631,068,000
France.	225,620,000	202,028,000	427,648,000
*Holland	235,312,000	181,755,000	417,067,000
Belgium	133,097,000	100,258,000	233,355 000
Russia	89.444,000	111,151,000	200,595,000
*Austria-Hungary .	104,249,000	102,384,000	206.633,000
Italy	116,531,000	69.171,000	185,702.000
Switzerland . . .	61.359.000	42,392,000	103,751,000
China	54,687,000	36.888,000	91,575,000
Argentina . . .	54,955.000	73,201,000	121,888,000
*Spain	39,895,000	36,679,000	76,574,000
Brazil	35,491,000	44,155,000	79,646,000
Japan	51,622,000	45,137,000	96,759,000
Sweden	37,895,000	29,148,000	67,043,000
Denmark . . .	39,534,000	34,275,000	73,809,000
Egypt	25,754.000	21,871,000	47.625,000
Norway	21,428,000	14,061.000	45,489,000
Mexico	22,638,000	24.780.000	47,418,000
Roumania . . .	17,220,000	14,161,000	31,381,000
*Portugal	13,827,000	6,842,000	35,853,000
Chile	22.026,000	20,584,000	42,610,000
Uruguay	7,172,000	7,284,000	14,456,000
Bulgaria	5,206.000	4,494,000	9,700,000
Greece	5.963,000	4,705,000	10,668,000
Peru	5.520,000	5,744,000	11,264,000
Servia	3,025,000	3,110,000	6,135,000

*1907 Returns.

BRITISH AND FOREIGN SHIPPING (compared).

1.—WAR SHIPS, March, 1910.

CLASSIFICATION.	U.K.	JAPAN.	FRANCE.	RUSSIA.	GERMANY.	ITALY.	U.S.A.
Battleships	59	18	24	15	42	11	30
Coast Defence—Armoured . .	—	—	10	2	11	—	11
Cruisers—							
Armoured	39	13	22	6	12	10	15
Protected—1st Class . . .	18	2	5	7	—	—	3
,, 2nd ,, . . .	43	11	12	2	28	4	16
,, 3rd ,, . . .	16	8	11	2	12	12	2
Unprotected	2	7	—	2	11	—	10
Scouts	8	—	—	—	—	—	3
Torpedo Vessels	23	2	13	6	1	5	2
T.-B.-D.	171	58	72	97	97	17	35
Torpedo Boats	80	69	262	84	83	109	30
Submarines	68	11	98	35	8	7	28

2.—MERCHANT AND PASSENGER SHIPS, 1910.

THE WORLD AND THE EMPIRE.	STEAMSHIPS.		SAILING SHIPS. (Iron and Steel.)		TOTAL.	
	NO.	TONNAGE.	NO.	TONNAGE.	NO.	TONNAGE.
The British Empire	9,758	17,702,714	1,807	1,123,728	11,565	18,826,442
All other Countries	12,151	18,770,388	6,824	3,852,937	18,975	22.623,325
The World	21,909	36,473,102	8,631	4,976,665	30,540	41,449,767

THE BRITISH EMPIRE, 1908-09.

	Area. Sq. miles.	Population.	Revenue.	Imports.	Exports.
			£	£	£
UNITED KINGDOM	121,400	45,008,423	151,578,295	691,247,000	529,779,626
INDIA :					
British Feudatory States	1,773,083	294,317,082	73,349,100	105,844,000	110,400,000
Gibraltar and Malta	119	231,204	540,045	—	—
AUSTARLIA AND THE PACIFIC :					
N.S. Wales	310,372	1,591,673	16,211,147	—	—
Victoria	87,884	1,271,174	9,928,973	—	—
Queensland	670, 00	552,345	5,452,489	—	—
S. Australia and N Territory	903,690	407,179	4,285,155	—	—
Western Australia	975,920	267,111	3,893,863	—	—
Tasmania	26,215	185,824	1,255,457	—	—
Papua	90,540	350,000	26,019	—	—
Total Australia ..	3,065,121	4,625,306	41,053,103	49,800,000	64,311,058
New Zealand and Dependencies	104,751	1,029,417	9,109,341	17,470,000	16,317,000
Fiji	7,740	130,981	178,015	—	—
Tonga, Solomon, and Gilbert Islands ..	12,556	211,417	51,842	—	—
AFRICA :					
Ascension	34	120	—	—	—
St. Helena	47	3,558	7,432	—	—
W. Africa :					
N. Nigeria	256,400	7,614,751	230,000	—	—
S. Nigeria and Protectorate	77,260	6,500,000	1,387,975	—	—
Gold Coast and Protectorate	119,260	1,697,000	752,142	—	—
Sierre Leono and Protectorate	30,000	1,252,000	321,600	—	—
Gambia and Protectorates	3,619	154,330	57,898	—	—
Mauritius and Dependencies	835	380,144	581,515	—	—
Seychelles	156	21,932	31,589	—	—
Somaliland	68,000	348,086	30,326	—	—
East Africa Protectorate	175,518	4,000,000	485,668	—	—
Uganda Protectorate	223,500	2,764,086	102,572	—	—
Zanzibar	1,020	250,000	166,088	—	—
Nyasaland	43,608	997,217	80,533	—	—
Union of S. Africa :					
Cape of Good Hope	276,995	2,507,500	6,981,873	—	—
Natal	35,371	1,206,386	3,510,350	—	—
Transvaal	110,426	1,269,951	4,670,218	—	—
Orange Free State	50,392	466,380	740,452	—	—
Rhodesia	439,575	1,604,875	616,332	—	—
Swaziland	6,536	85,491	39,529	—	—
Basutoland	10,293	348,848	116,530	—	—
Bechuanaland	275,000	134,100	42,050	—	—
Total Africa ..	2,203,915	33,606,805	20,952,072	54,561,171	96,674,307
ASIA :					
Cyprus	3,584	258,997	303,477	—	—
Aden, Perim, Socotra	10,387	55,974	—	—	—
Ceylon	25,332	4,038,456	2,371,523	—	—
Straits Settlements	1,600	628,016	1,046,385	—	—
Fed. Malay States	26,380	965,850	2,872,270	—	—
Other Malay States	12,500	615,000	—	—	—
Labuan	30	8,245	—	—	—
Borneo and Sarawak	73,206	660,000	295,025	—	—
Hong Kong and Territory	39	421,499	527,760	—	—
Wei-hai-wei	285	130,792	9,716	—	—
Total Asia ..	153,694	7,782,829	7,426,156	56,000,000	53,000,000
AMERICA :					
Canada	3,745,574	6,945,000	17,491,422	63,672,192	53,755,277
Newfoundland and Labrador	162,734	233,012	614,496	2,367,201	2,428,797
British Honduras	7,562	43,270	74,188	—	—
British Guiana	90,500	297,172	540,054	1,778,295	2,043,525
Bermuda	19	17,535	67,538	—	—
W, Indies :					
Bahamas	4,404	60,309	81,861	—	—
Turks and Caicos Islands	169	5,322	7,404	—	—
Jamaica	4,207	845,798	1,075,389	2,420,335	2,268,253
Windward Islands	672	375,152	358,991	1,928,460	1,486,851
Leeward Islands	701	172,110	155,528	—	—
Trinidad and Tobago	1,868	343,000	834,745	2,682,702	2,500,195
Falkland Islands	6,500	3,610	17,775	73,062	263,034
Total America ..	4,024,910	9,341,290	21,319,391	76,854,567	68,083,471
Grand Total	11,467,294	396,294,752	325,558,060	1,052,946,398	937,736,402

NOTE.—The totals only of the principal sections of exports and imports are given, but details are supplied as to some of the statistics relating to the more important of the Countries.

TRADE OF THE UNITED KINGDOM (1).

COMPARATIVE GROWTH DURING FIFTY YEARS, IN QUINQUENNIAL PERIODS, FROM 1859.

Years.	† Imports.		Re-Exports.		Net Imports Imports less re-Exports.		Exports of British and Irish Produce.		† Total Gross Imports & Exports.	
	Amount.	Amount per Head.	Amount.	Amount per Head.	Amount.	Amount per Head.	Amount.	Amount per Head.	Amount.	Amount per Head.
Annual Average 1855–9 . .	Million £ 169	£ s. d. 6 0 3	Million £ 23	£ s. d. 0 16 7	Million £ 146	£ s. d. 5 3 7	Million £ 116	£ s. d. 4 2 1	Million £ 308	£ s. d. 10 19 8
Annual Average 1860–4 . .	Million £ 235	£ s. d. 8 1 2	Million £ 42	£ s. d. 1 8 5	Million £ 193	£ s. d. 6 12 9	Million £ 138	£ s. d. 4 14 8	Million £ 415	£ s. d. 14 1 3
1865	271		53		218		166		490	
1866	295		50		245		189		534	
1867	275		45		230		181		501	
1868	295		48		247		179		522	
1869	295		47		248		190		532	
Annual Average 1865–9 . .	Million £ 286	£ s. d. 9 8 2	Million £ 49	£ s. d. 1 1 11	Million £ 237	£ s. d. 7 16 3	Million £ 181	£ s. d. 5 19 0	Million £ 516	£ s. d. 16 19 1
1870	303		44		259		200		547	
1871	331		61		270		223		615	
1872	355		58		297		256		669	
1873	371		56		315		255		682	
1874	370		58		312		240		668	
Annual Average 1870–4 . .	Million £ 346	£ s. d. 10 17 2	Million £ 55	£ s. d. 1 14 10	Million £ 291	£ s. d. 9 2 4	Million £ 235	£ s. d. 7 7 3	Million £ 636	£ s. d. 19 19 3
1875	374		58		316		222		655	
1876	375		56		319		201		632	
1877	394		54		340		199		647	
1878	369		52		317		193		614	
1879	363		57		306		192		612	
Annual Average 1875–9 . .	Million £ 375	£ s. d. 11 3 5	Million £ 55	£ s. d. 1 13 1	Million £ 320	£ s. d. 9 10 4	Million £ 202	£ s. d. 6 0 0	Million £ 632	£ s. d. 18 16 6
1880	411		63		348		223		697	
1881	397		63		334		234		694	
1882	413		65		348		242		720	
1883	427		65		362		240		732	
1884	390		63		327		233		686	
Annual Average 1880–4 . .	Million £ 408	£ s. d. 11 11 8	Million £ 64	£ s. d. 1 16 5	Million £ 344	£ s. d. 9 15 4	Million £ 234	£ s. d. 6 13 2	Million £ 706	£ s. d. 20 1 3
1885	371		58		313		213		642	
1886	350		56		294		213		619	
1887	362		59		303		222		643	
1888	388		64		324		234		686	
1889	427		67		360		249		743	
Annual Average 1885–9 . .	Million £ 379	£ s. d. 10 7 6	Million £ 61	£ s. d. 1 13 4	Million £ 318	£ s. d. 8 14 2	Million £ 226	£ s. d. 6 3 8	Million £ 666	£ s. d. 18 4 5
1890	421		65		356		263		749	
1891	435		62		373		247		744	
1892	424		64		360		227		715	
1893	405		59		346		218		682	
1894	408		58		350		216		682	
Annual Average 1890–4 . .	Million £ 419	£ s. d. 10 19 7	Million £ 62	£ s. d. 1 12 4	Million £ 357	£ s. d. 9 7 3	Million £ 234	£ s. d. 6 2 11	Million £ 715	£ s. d. 18 14 10
1895	417		60		357		226		703	
1896	442		56		386		240		738	
1897	451		60		391		234		745	
1898	471		61		410		233		765	
1899	485		65		420		255*		805*	
Annual Average 1895–9 . . .	Million £ 453	£ s. d. 11 6 6	Million £ 60	£ s. d. 1 10 0	Million £ 393	£ s. d. 9 16 6	Million £ 238	£ s. d. 5 19 0	Million £ 751	£ s. d. 18 15 6
1900	523		63		460		283*		869*	
1901	522		68		454		271*		861*	
1902	528		66		462		277*		871*	
1903	543		70		472		287*		899*	
1904	551		70		481		296*		928*	
Annual Average 1900–4 .	Million £ 553	£ s. d. 12 14 2	Million £ 67	£ s. d. 1 12 2	Million £ 466	£ s. d. 11 2 1	Million £ 283*	£ s. d. 6 14 8	Million £ 886*	£ s. d. 21 2 1
1905	565		77		488		329		972	
1906	607		85		512		375		1068	
1907	645		91		554		426		1163	
1908	592		79		513		377		1049	
1909	624		91		533		378		1094	
Annual Average 1905–9 . . .	Million £ 603	£ s. d. 13 14 1	Million £ 85	£ s. d. 1 17 9	Million £ 520	£ s. d. 11 11 0	Million £ 377	£ s. d. 8 19 5	Million £ 1069	£ s. d. 24 5 0

* Excluding the value of ships and boats (new), with their machinery, which was not included in the years prior to 1899. In 1904 their value was £4,460,000. † Exclusive of Bullion and Specie.

TRADE OF THE UNITED KINGDOM (2).

COMPARATIVE VALUE (WITHIN AND WITHOUT THE EMPIRE), AT INTERVALS, FROM 1894.

*[Value here given of Imports and Exports is exclusive of Bullion and Specie.]	Imports to U.K. *			Exports from U.K. *		
	1894.	1904.	1908.	1894.	1904.	1908.
Foreign Countries:—	£	£	£	£	£	£
Russia	23,598,748	31,402,838	28,176,982	11,537,057	15,285,157	20,505,208
Sweden and Norway	11,987,783	15,351,917	17,863,179	6,558,937	8,852,276	11,781,646
Denmark, Iceland and Greenland	9,543,766	16,101,808	19 666,956	3,038,055	4,031,248	5,302,320
Germany and its Possessions	26,874,470	34,032,001	38,189,335	29,217,328	36.557,073	46,582,491
Holland and its Possessions	28,112,625	36,046,795	36,348,327	15,919,468	16,389,381	15,801,178
Belgium	17,052,404	27,536,425	27,151,508	13,041,091	13,474,492	17,117,272
France and its Possessions	44,347,737	52,696,294	48,064,499	20,699,492	23,108,243	31,766,005
Portugal and its Possessions	2,608,445	3,155,328	2,956,171	2,791,900	5,226,717	2,973,795
Spain and Canary Isles	10,888,750	15,215,067	14,807,970	4,883 678	5,869,647	6,932,468
Italy	3,129,173	3,324,822	3,440,466	6,189,953	9,222,799	16,066,875
Austria-Hungary	1,385,762	1,817,054	1,301,752	1,918,127	2,567,453	5,075,2.4
Greece	1,288,175	1,263,843	1,934,282	952,895	1,560,063	1,948,069
Bulgaria	126,102	287,027	34,262	248,035	583,147	708,451
Roumania	3,992,134	3,136,567	3,434,330	1,406,085	1,152,184	2,033,254
Turkey	4,812,846	5,754,048	5,153,149	6,848,077	7,586,289	7,210,674
Egypt	9,284,801	14,302,290	17,590,930	4,065,814	8,431,624	9,821,892
Tripoli, Tunis and Morocco	729,979	1,132,634	1,405,885	931,350	1,311,888	1,816,968
China (ex Hong Kong and Macao)	3,543,362	2,761,841	3,039,613	4,592,140	8,889,950	9,292,287
Japan	958,541	2,349,477	2,922,515	3,918,743	5,043,674	10,128,084
Philippine and Ladrone Isles	1,633,224	2,337,893	1,675,892	675,261	1,534,148	1,085,122
United States	89,607,392	119,227,802	119,037,603	30,775,466	39,272,433	42,097,754
Cuba and Porto Rico	243,966	179,738	291,813	1,907,090	2,592,834	2,422,789
Mexico	554,746	594,993	1,911,734	1,324,664	2,075,910	2,386,620
Central American States	948,733	1,282,414	1,315,827	1,024,486	1,021,253	1,085,662
Colombia	569,412	670,028	296,352	1,020,284	974,554	963,018
Brazil	3,940,069	6,237,746	6,927,368	7,826,566	6,232,902	8,412,941
Uruguay	267,101	591,451	1,044,949	1,526,881	1,410,942	2,687,217
Argentina	6,168,624	23,035,202	35,727,547	4,633,315	11,574,580	16,956,467
Chile	3,711,544	5,422,941	7,381,156	2,389,532	3,532,277	4,183,152
Peru	1,070,949	2,371,692	2,887,438	609,826	1,287,174	1,525,916
Other Foreign Countries	1,364,312	1,400,246	580,277	2,661,633	3,479,513	1,354,801
Total Foreign Countries	314,345,675	431,020,222	463,125,429	195,133,239	250,231,825	321,060,854
British Possessions:—						
Channel Islands	1,212,158	1,586,243	1,599,596	1,091,569	1,320,912	1,521,912
Canada	12,506,642	22,621,164	26,827,668	6,528,239	12,248,342	14,212,447
Newfoundland	401,004	516,518	332,342	852,849	557,601	510,724
West Indies	1,938,022	1,895,212	2,123,315	2,503,452	2,333,945	2,606,623
British Guiana	853,564	487,874	638,770	869,139	638,894	754,277
Australia	23,546,368	23,568,918	29,074,112	14,518,339	19,841,230	25,661,023
New Zealand	8,285,662	12,741,510	14,664,331	3,411,345	6,897,420	9,513,174
India	27,648,857	36,472,636	29,615,570	30,114,943	41,544,494	50,844,283
Straits Settlements	4,584,783	6,283,820	7,942,940	2,398,922	3,183,329	3,445,607
Ceylon	4,101,275	4,135,027	5,127,398	988,875	1,466,143	1,852.685
Hong Kong	630,818	466,811	547,339	1,980,227	4,574,767	3,088,340
Mauritius	224,350	264,554	270,146	299,811	472,477	329,090
Aden	204,419	137,668	128,917	201,208	327,209	279,494
East Coast of Africa	235,818	195,831	275,219	80,427	317,727	500,969
Natal	688,055	524,005	1,273,678	1,526,534	5,965,434	4,314,693
Cape Colony	4,301,521	4,933,489	6,097,134	7,511,310	13,087,689	8,844,037
Niger Protectorate	396,345	1,429,781	—	629,179	1,002,210	—
Lagos	952,165	322,918	—	411,542	532,488	—
Gold Coast	379,261	524,665	665,550	472,187	1,035,333	1,148,554
Sierra Leone and Gambia	246,364	179,618	154,697	415,127	465,387	535,529
Cyprus	86,969	166,860	185,470	66,670	135,306	146,454
Other Possessions	574,715	563,284	415,344	1,780,684	2,835,159	198 123
Total British Colonies and Possessions	93,999,135	120,018,406	129,828,058	78,652,628	120,783,496	135,666,667
Total Trade of United Kingdom	408,344,810	551,038,628	592,953,487	273,785,867	371,015,321	456,727,521

	Years.	Imports.	Exports.	Total.
Total Trade of United Kingdom since 1905	1906	607,888,500	460,677,818	1,068,566,318
	1907	645,807,942	517,977,167	1,163,785,109
	1908	592,953,487	456,727,521	1,049,681 008
	1909	624,704,957	469,525,166	1,094,230,123

TOTAL VALUE OF THE IMPORT AND EXPORT TRADE OF THE UNITED KINGDOM.

The values of the Imports represent the cost, insurance, and freight; or, when goods are consigned for sale, the latest sale value of such goods. The values of the Exports represent the cost, and the charges of delivering the goods on board the Ship, and are known as the "free on board" values.

TABLE No. 1.—Value of the Total Imports of Merchandise from Foreign Countries and British Possessions (including Protectorates) respectively.

IMPORTS:	1905 £	1906 £	1907 £	1908 £	1909 £
Consigned from Foreign Countries ..	438,368,020	467,974,167	491,102,400	464,817,692	479,453,018
„ „ British Possessions (including Protectorates ..	126,651,897	139,914,333	154,705,542	128,135,795	145,251,939
TOTAL	565,019,917	607,888,500	645,807,942	592,953,487	624,704,957

TABLE No. 2.—Value of the Total Exports of Produce and Manufactures of the United Kingdom to Foreign Countries and British Possessions (including Protectorates) respectively.

EXPORTS (British): Consignments	1905 £	1906 £	1907 £	1908 £	1909 £
To Foreign Countries	215,599,171	253,565,853	287,891,317	250,338,797	250,942,263
„ British Possessions (including Protectorates	114,217,443	122,009,485	138,143,766	126,765,027	127,238,084
TOTAL	329,816,614	375,575,338	426,035,083	377,103,824	378,180,347

TABLE No. 3.—Value of the Total Exports of Foreign and Colonial Merchandise, to Foreign Countries and British Possessions (including Protectorates) respectively.

EXPORTS (Foreign and Colonial): Consignments—	1905 £	1906 £	1907 £	1908 £	1909 £
To Foreign Countries	68,450,853	75,723,703	81,758,702	69,639,634	80,711,271
„ British Possessions (including Protectorates	9,329,060	9,378,777	10,183,382	9,984,063	10,633,548
TOTAL	77,779,913	85,102,480	91,942,084	79,623,697	91,344,819

TABLE No. 4.—Value of the Total Exports of Produce and Manufactures of the United Kingdom, and of Foreign and Colonial Merchandise, to Foreign Countries and British Possessions (including Protectorates) respectively.

EXPORTS (Total): Consignments—	1905 £	1906 £	1907 £	1908 £	1909 £
To Foreign Countries	284,050,024	329,289,556	369,650,019	319,978,431	331,653,534
„ British Possessions (including Protectorates)..	123,546,503	131,388,262	148,327,148	136,749,090	137,871,632
TOTAL	407,596,527	460,677,818	517,977,167	456,727,521	469,525,166

TABLE No. 5.—Value of the Total Imports and Exports of Merchandise from and to Foreign Countries and British Possessions (including Protectorates) respectively.

IMPORTS and EXPORTS (Total):	1905 £	1906 £	1907 £	1908 £	1909 £
Consigned from and to Foreign Countries	722,418,044	797,263,723	860,752,419	784,796,123	811,106,552
„ „ „ British Possessions (including Protectorates)	250,198,400	271,302,595	303,032,690	264,884,885	283,123,571
TOTAL	972,616,444	1,068,566,318	1,163,785,109	1,049,681,008	1,094,230,123

TABLE No. 6.—Value of the Total Imports of Gold and Silver Bullion and Coin from Foreign Countries and British Possessions (including Protectorates) respectively.

IMPORTS:	1905 £	1906 £	1907 £	1908 £	1909 £
Consigned from Foreign Countries ..	17,436,555	24,751,090	32,387,376	15,414,571	25,349,621
„ „ British Possessions (including Protectorates)	34,123,354	38,579,563	40,685,063	41,057,632	41,157,097
TOTAL..	51,559,909	63,330,653	73,072,439	56,472,203	66,506,718

TABLE No. 7.—Value of the Total Exports of Gold and Silver Bullion and Coin to Foreign Countries and British Possessions (including Protectorates) respectively.

EXPORTS: Consignments—	1905 £	1906 £	1907 £	1908 £	1909 £
To Foreign Countries	32,580,403	39,536,914	47,235,854	49,452,289	47,038,958
„ British Possessions (including Protectorates	12,811,116	21,945,638	20,551,004	13,800,698	12,995,760
TOTAL	45,391,519	61,482,552	67,786,858	63,252,987	60,034,718

NOTE.—The above Tables Nos. 1 to 5 are exclusive of Foreign Merchandise Transhipped under Bond at Ports in the United Kingdom, and of Gold and Silver Bullion and Coin.

ALTERED PLAN OF COMPILING OFFICIAL STATISTICS.

It is possible to include here other general features of the trade of the United Kingdom with foreign countries and British possessions down to the end of 1909, utilising for the purpose the official figures of the Statistical Office of the Customs and Excise Department, a compilation of nearly 700 closely printed foolscap pages of tables. These are summarised in the next few pages, and, with the information on the page immediately preceding, constitute a concise record of British trade statistics as officially compiled to date.

Those who engage in controversial arguments regarding comparative statistics would do well to remember that there are not only two sides to statistical as to other arguments, but in regard to figures there are sometimes two sides to the argument on either side. For instance, the mere comparison of last year's trade statistics with those of certain previous years is not always possible, because the Government compilers of statistics frequently change their methods. In this work the very latest figures are given in the latest form adopted by the Government statisticians.

The figures that are given include under Imports goods in transit, whether on through Bill of Lading or otherwise, unless such goods are removed for the importing to the exporting ship, at the same or another port, under bond.

The following classes of goods arriving in this country are not included in the import statistics:

(1) Personal luggage, including parcels brought by passengers for private use, so long as such parcels do not contain dutiable goods. Dutiable goods contained in passengers' parcels are included in the statistics.
(2) Fresh fish and shell fish of British taking, landed from British ships arriving direct from the fishing grounds.
(3) Ships' stores, military and naval stores on board Government vessels, bunker coal and ballast of no commercial value.
(4) Mats, sacks, cases, etc., used as the packages of imported goods.
(5) Goods directly imported by Ambassadors and Ministers accredited to this Kingdom.
(6) Old vessels bought from foreigners.

The following classes of goods are not included in the export statistics:

(1) Personal luggage and effects.
(2) Ships' stores, military and naval stores on board Government vessels, goods exported by H. M. Government, and ballast of no commercial value.
(3) Mats, sacks, cases, etc., used as the packages of exported goods.
(4) Old vessels sold to foreigners.

"SPECIAL" IMPORTS AND "SPECIAL" EXPORTS DEFINED.

By the term "Special Imports" is meant all imports of Foreign and Colonial produce and manufactures which are used or consumed in the United Kingdom, or worked up in the United Kingdom into articles for export, as distinguished from imports of Foreign and Colonial merchandise which are afterwards exported without change of form. Although there are no means of ascertaining at the time of importation whether goods are imported for consumption or for re-export, and the special imports of any one year cannot thus be exactly stated, it is clear that these special imports are represented approximately, whenever they are given by the difference between the "Imports" and the "Exports of Foreign and Colonial Merchandise." In the latter half of the year 1910 the Government will publish a volume which will contain a table showing the result of this calculation applied to each principal article imported from each country, and will give (*a*) the value and (where recorded) quantity of the consignments received (*b*) the value and quantity after deduction of the re-exports of each principal article during the year. The latter figures, which may be briefly described as values and quantities retained in the United Kingdom, will therefore represent approximately the Special Imports of each principal commodity. By the term "Special Exports," is meant the exports of the produce of the United Kingdom, and of all goods manufactured in the United Kingdom whether from home or foreign produce, as distinguished from Foreign and Colonial merchandise exported in the same form in which it was imported, such exports of Foreign and Colonial merchandise are commonly known as "re-exports." Produce and manufactures of the United Kingdom are, in the Government returns, taken to include new ships and boats, built in the United Kingdom and sold to foreigners, if not registered as British, or so registered only for purposes of delivery or transfer abroad. Exports of Foreign and Colonial Merchandise include not only goods in transit through the United Kingdom (unless transhipped under bond), but also all goods which have not had their value sensibly modified by any process of refining or manufacture, although they may have remained for some time in the United Kingdom. Thus goods which have been merely sorted, repacked, or blended, are treated as Foreign or Colonial, but goods which have undergone any other process, however slight, are included under the head of Exports of the Produce or Manufacture of the United Kingdom, as are also all goods exported by Parcel Post.

COUNTRIES TO WHICH IMPORTS AND EXPORTS ARE CREDITED.

Imports are now classified as received from the countries whence they were *consigned* to the United Kingdom, instead of as in the corresponding returns for 1908 and earlier years, as received from the countries whence they were *shipped* direct to the United Kingdom. In this respect the figures are on the lines of those hitherto published in the supplementary Volumes of the Annual Statement of the Trade of the United Kingdom.

The substitution of countries of consignment for countries of shipment affects not only the imports from countries which have no seaboard (Switzerland, Abyssinia, Afghanistan, Bolivia; Rhodesia, Bechuanaland Protectorate, Basutoland, Orange River Colony, Transvaal, Swaziland, Uganda Protectorate, Nyasaland Protectorate), but also imports shipped to the United Kingdom from a country other than that possessing a seaboard or not from which the goods were consigned. The recorded imports from such countries as Belgium, the Netherlands and Germany are largely affected by this change of practice. The countries whence goods are consigned are not in all cases the countries of actual origin, since goods produced in one country may be purchased by a firm in another country and thence despatched, after a longer or shorter interval, to the United Kingdom. In such a case the second country would be the country of consignment, to which the goods would be officially credited. *Exports* are credited to the country of "final destination," *i.e.*, the country to which they are consigned, whether that country possesses a seaboard or not. As in the case of imports, this classification differs from that adopted in the official returns for 1908 and earlier years, the countries affected being those without a seaboard, which previously did not appear in the official returns at all, and those through which goods consigned to those countries were shipped, and to which such goods were formerly officially credited.

METHOD OF ASCERTAINING QUANTITIES AND VALUES OF IMPORTS AND EXPORTS.

The statements of both quantities and values are based on the declarations of importers and exporters as subsequently checked by the Customs officials. Quantities are not recorded in every case, but where recorded they are generally recorded by weight. Liquids are, however, in general, entered by bulk, as also are timber, onions, and certain seeds; a few articles are entered by number only; floorcloth, linoleum, etc., by square yards; piece goods, for the most part, by linear yards. Spirits are entered by proof gallons, *i.e.*, by the number of gallons of proof spirit

they contain. Where goods are entered by weight the quantities given represent the net weight exclusive of packages, sacks, casks, tins, bottles, etc., in which they may be contained, or of reels, etc., on which they may be wound. In the case of *Imports* the values given are intended to represent their cost, plus insurance and freight to the place of landing, or when consigned for sale the latest sale value of the goods. In the case of dutiable articles the values are given exclusive of the amount of the duty. In the case of *Exports* the values are intended to represent the cost of the goods including all charges thereon up to the time of their delivery on board ship.

IMPORT OF PRECIOUS STONES.

The following is the official return of the precious stones imported during the last five years—quantities and values.

UNSET DIAMONDS.

	1905	1906	1907	1908	1909
Carats	3,314	7,225	3,944	2,969	5,057
Value £	28,400	61,966	32,849	25,737	43,368

PRECIOUS STONES: OTHER DESCRIPTIONS.

	1905	1906	1907	1908	1909
Value £	68,404	27,413	48,622	27,393	8,544

But, in the Government returns, this Account of the Imports of Diamonds represents only such Diamonds as were declared to the Customs on Importation. The following particulars of the Exports of Diamonds from the Cape of Good Hope to the United Kingdom have been supplied by the Cape Government:—

	Carats.	Value £
1905	3,461,914	6,758,623
1906	3,912,457	9,179,333
1907	4,427,345	8,828,805
1908	4,375,472	4,607,427
1909	4,883,469	6,169,953

These Values are not included in the Total Value of the Imports.

GOLD AND SILVER BULLION AND COIN—REGISTERED IMPORTS.

The Total Value of the registered imports of gold and silver bullion and coin in 1908 and 1909 was as follows:—

	1908	1909
From Foreign Countries ..	£15,414,571	£25,349,621
,, British Possessions ..	41,057,632	41,157,097
	£56,472,203	£66,506,718

The largest foreign contributors to these imports were:

	1908	1909
Germany	£485,192	£1,059,373
France	589,763	4,872,705
Egypt	3,122,646	3,643,234
United States	8,420,607	12,921,931

British Possessions were responsible for the following:—

	1908	1909
Channel Islands	£65,154	£62,633
Gibraltar	34,864	22,146
Malta and Gozo	51,141	81,141
Cyprus	752	1,019
West Africa, British	1,307,872	1,017,101
Rhodesia	1,994,454	2,403,301
Cape of Good Hope	90,563	24,857
Natal	437,010	303,702
Transvaal	29,428,660	30,227,170
Aden and Dependencies ..	5,600	3,732
British India	2,408,083	2,186,433
Straits Settlements and Dependencies, including Labuan	531,229	186,219
Ceylon and Dependencies ..	—	1,000
Hong Kong	255,397	84,431
Australia:		
Western Australia	1,753,535	1,799,397
South Australia (including Northern Territory) ..	11,500	—
Victoria	400,026	162,833
New South Wales	431,496	473,329
Queensland	111,804	196,935
Tasmania	89,223	14,320
New Zealand	1,002,922	1,107,350
Canada	240,532	425,987
Newfoundland and Coast of Labrador	106	—
British West India Islands ..	41,109	29,102
British Guiana	330,258	298,767
Other British Possessions ..	34,342	44,192

The total registered export of gold and silver bullion and coin during the same years was:

	1908	1909
To Foreign Countries ..	£40,452,289	£47,038,958
,, British Possessions ..	13,800,698	12,995,760
Total Value ..	£63,252,987	£60,034,718

THE PRINCIPAL IMPORTS OF FOREIGN AND COLONIAL MERCHANDISE, FREE OF DUTY, WITH THE ARTICLES AND COUNTRIES WHENCE CONSIGNED, INCLUDE:—

ARTICLES AND COUNTRIES WHENCE CONSIGNED.	Quantities.			Value.		
	1907	1908	1909	1907	1908	1909
CORN AND GRAIN:						
,, **Wheat**	Cwts.	Cwts.	Cwts.	£	£	£
Russia	11,430,100	5,147,110	17,844,840	4,346,197	2,295,636	8,173,885
Germany	19,100	90,000	364,200	5,564	35,283	162,628
Netherlands	—	100	27,000	—	27	13,400
Belgium	4,700	100	88,100	1,860	21	41,919
Bulgaria	418,700	101,400	—	131 751	42,597	—
Roumania	2,542,400	1,280,000	527,200	897,859	572,973	250,481
Turkey, European	85,000	32,600	20,800	23,762	10,425	6,211
,, Asiatic	361,500	315,500	28,500	138,104	138,465	12,390
Egypt	—	—	—	—	—	—
Persia	191,500	112,400	—	70,653	50,393	—
United States of America	19,946,100	25,768,900	15,504,100	7,780,927	10,877,170	6,958,106
Chile	85,100	2,210,700	1,670,200	36,380	904,588	762,015
Uruguay	297,100	110,600	44,300	111,363	46,059	20,054
Argentine Republic	21,900,600	31,691,400	20,037,800	8,044,636	13,116,365	9,284,501
Other Foreign Countries	32,300	300	46,940	13,678	81	22,746
Total from Foreign Countries ..	57,314,200	66,861,110	56,203,980	21,602,734	28,090,083	25,708,336
Cyprus	36,200	6,300	—	14,405	2,421	—
British India	18,269,600	2,948,900	14,633,200	7,188,317	1,297,138	6,944,466
Australia	8,324,200	5,518,200	9,700,100	3,268,021	2,421,286	4,683,770
New Zealand	3,300	—	701, 400	1,067	—	331,297
Canada	13,220,500	15,796,695	16,615,745	5,272,004	6,484,399	7,604,262
Total from British Possessions ..	39,853,800	24,270,095	41,650,445	15,743,814	10,205,244	19,563,795
TOTAL	97,168,000	91,131,205	97,854,425	37,346,548	38,295,327	45,272,131

ARTICLES AND COUNTRIES WHENCE CONSIGNED.	Quantities.			Value.		
	1907	1908	1909	1907	1908	1909
CORN AND GRAIN—(*Continued*).						
„ **Barley**	Cwts.	Cwts.	Cwts.	£	£	£
Russia	6,719,700	8,544,600	9,766,400	2,177,381	2,624,280	2,896,163
Denmark including Faroe Islands)	79,200	58,000	52,100	31,354	22,708	19,634
Germany	26,700	61,800	226,670	12,456	27,092	97,217
Netherlands	5,300	3,100	4,400	1,361	1,204	1,560
Belgium	11,400	1,300	32,000	3,812	354	12,887
France	210,200	82,700	126,600	81,309	34,990	45,543
Algeria	400,900	187,700	149,900	151,810	71,925	53,209
Austria-Hungary	261,300	397,500	390,200	106,104	198,583	186,792
Bulgaria	80,600	—	45,300	23,734	—	14,276
Roumania	1,661,000	1,438,600	2,287,600	540,684	492,421	703,213
Turkey, European	151,800	62,800	349,900	46,356	22,093	121,349
„ Asiatic	2,502,200	2,578,300	1,686,000	833,697	925,467	637,868
Tripoli	1,056,800	206,800	178,200	403,680	76,481	69,719
Tunis	894,200	103,600	480,600	339,422	37,326	170,078
Morocco	372,100	1,064,700	1,386,200	126,885	339,405	418,091
Persia	358,300	134,700	—	99,789	40,525	—
United States of America	2,751,400	1,834,400	2,723,400	921,991	733,644	1,077,415
Chile	8,100	315,600	898,500	3,446	119,951	357,465
Argentine Republic	5,700	73,500	119,300	1,816	22,983	39,079
Other Foreign Countries	90,400	44,200	35,100	28,882	15,635	14,028
Total from foreign Countries	17,647,300	17,193,900	20,938,370	5,937,969	5,807,067	6,935,757
Cyprus	253,500	52,600	35,900	89,571	18,559	13,169
British India	1,226,720	242,000	168,400	385,597	82,101	53,907
Australia	14,500	600	96,300	5,012	210	36,963
New Zealand	—	—	66,800	—	—	23,409
Canada	484,200	647,200	250,700	145,973	205,699	80,824
Other British Possessions	1,400	900	—	548	309	—
Total from British Possessions	1,980,320	943,300	618,100	626,701	306,878	208,272
TOTAL	19,627,620	18,137,200	21,556,470	6,564,670	6,113,945	7,143,849
„ **Oats**	Cwts.	Cwts.	Cwts.	£	£	£
Russia	3,256,300	3,930,450	7,323,800	1,054,655	1,149,159	2,209,098
Germany	2,294,900	3,863,700	2,147,300	756,885	1,186,537	668,181
Netherlands	63,900	148,700	45,808	21,290	45,934	13,006
Bulgaria	121,900	—	—	36,227	—	—
Roumania	346,500	142,700	810,000	107,698	40,292	229,200
Turkey, European	193,000	19,100	117,300	57,544	5,385	33,540
„ Asiatic	365,800	343,500	305,200	111,659	97,987	90,516
United States of America	240,520	—	—	76,626	—	—
Chile	88,400	322,300	575,000	27,735	92,557	182,284
Argentine Republic	1,645,700	5,235,800	4,284,900	511,350	1,464,786	1,248,900
Other Foreign Countries	310,970	129,300	88,500	107,456	37,870	28,105
Total from Foreign Countries	8,927,890	14,135,550	15,697,808	2,869,125	4,120,507	4,702,830
British South Africa	85,500	63,300	242,300	27,247	18,561	76,403
Australia	100	200	171,490	34	75	57,844
New Zealand	17,100	50,200	1,587,000	6,618	16,695	554,551
Canada	1440,700	19,300	130,400	476,316	6,480	44,335
Other British Possessions	14,000	700	7,000	4,213	258	1,894
Total from British Possessions	1,557,400	133,700	2,138,190	514,428	42,069	735,027
TOTAL	10,485,290	14,269,250	17,835,998	3,383,553	4,162,576	5,437,857
„ **Rye**	Cwts.	Cwts.	Cwts.	£	£	£
Total from Foreign Countries	815,780	749,220	638,600	296,463	273,320	223,101
„ „ British Possessions	64,080	150,050	36,870	20,993	51,331	11,866
TOTAL	879,860	899,270	675,470	317,456	324,651	234,967
BUTTER	Cwts.	Cwts.	Cwts.	£	£	£
Total from Foreign Countries	3,261,148	3,535,955	3,363,537	17,629,488	20,287,000	18,819,831
„ „ British Possessions	949,008	674,866	699,275	4,788,438	3,793,912	3,605,131
TOTAL	4,210,156	4,210,821	4,062,812	22,417,926	24,080,912	22,424,962

ARTICLES AND COUNTRIES WHENCE CONSIGNED.	Quantities.			Value.		
	1907	1908	1909	1907	1908	1909
COTTON—						
„ Raw	Cwts.	Cwts.	Cwts.	£	£	£
Total from Foreign Countries	20,282,370	17,695,418	18,774,577	6,702,566	54,109,960	58,489,630
„ „ British Possessions	1,029,247	703,660	767,936	7,255,631	1,724,923	1,805,419
TOTAL	21,311,617	18,399,078	19,542,513	70,458,197	55,834,883	60,295,049
„ Yarn	Lbs.	Lbs.	Lbs.	£	£	£
Total from Foreign Countries	5,975,375	—	—	285,917	—	—
„ „ British Possessions	4,589,932	—	—	145,524	—	—
TOTAL	10,565,307	—	—	431,441	—	—
„ Yarn : Grey						
Total from Foreign Countries	—	2,547,023	2,414,446	—	115,941	92,865
„ „ British Possessions	—	2,628,109	1,051,289	—	77,434	28,262
TOTAL	—	5,175,132	3,465,735	—	193,375	121,127
„ Yarn : Bleached and Dyed						
Total from Foreign Countries	—	2,453,993	2,375,255	—	161,418	170,236
„ „ British Possessions (British India)	—	1,335,028	25,080	—	41,233	660
TOTAL	—	3,789,021	2,400,335	—	202,651	170,896
„ Waste from worked Cotton of every description						
Total from Foreign Countries	21,343,083	17,493,675	22,352,382	307,532	240,851	303,104
„ „ British Possessions	4,016,744	2,376,737	2,845,068	37,769	17,889	26,027
TOTAL	25,359,827	19,870,412	25,197,450	345,301	258,740	329,131
COTTON MANUFACTURES :						
„ Piece Goods :						
„ „ Grey, unbleached	Yards	Yards.	Yards.	£	£	£
Total from Foreign Countries	5,471,386	1,931,270	2,426,062	95,440	57,635	63,882
„ „ British Possessions	610,891	317,234	79,708	9,493	6,690	2,645
TOTAL	6,082,277	2,248,504	2,505,770	104,933	64,325	66,527
„ „ White, bleached						
Total from Foreign Countries ..	3,387,666	4,007,402	3,781,166	81,013	109,406	96,377
Canada	15,826	1,197	5,097	573	17	22
Other British Possessions	30,063	20,913	7,195	528	440	66
Total from British Possessions ..	45,889	22,110	12,292	1,101	457	286
TOTAL	3,433,555	4,029,512	3,793,458	82,114	109,863	96,663
„ „ Printed						
Total from Foreign Countries	16,037,909	14,063,988	18,641,880	395,951	372,335	498,791
„ „ British Possessions	78,203	134,600	39,228	2,127	2,449	986
TOTAL	16,116,112	14,198,588	18,681,108	398,078	374,784	499,777
„ „ Dyed, or manufactured of Dyed Yarn						
Total from Foreign Countries ..	48,185,367	—	—	1,199,121	—	—
British India	647,945	—	—	23,929	—	—
Ceylon and Dependencies	75,720	—	—	1,528	—	—
Other British Possessions	3,018	—	—	98	—	—
Total from British Possessions ..	726,683	—	..	25,555	—	—
TOTAL	48,912,050	—	—	1,224,676	—	—
„ „ Dyed in the Piece						
Total from Foreign Countries ..	—	48,857,742	61,732,353	—	1,269,135	1,623,967
British India	—	573,733	662,860	—	21,419	24,495
Other British Possessions	—	38,986	29,774	—	1,076	649
Total from British Possessions ..	—	612,719	692,634	—	22,495	25,144
TOTAL	—	49,470,461	62,424,987	—	1,291,630	1,649,111
„ „ Manufactured wholly or in part of Dyed Yarn commonly known as Coloured Cottons	Yards.	Yards.	Yards.	£	£	£
Total from Foreign Countries	—	1,030,003	1,244,688	—	43,588	60,237
„ „ British Possessions	—	1,016,338	943,183	—	34,701	35,162
TOTAL	—	2,046,341	2,187,871	—	78,289	95,399

ARTICLES AND COUNTRIES WHENCE CONSIGNED.	Quantities.	Value. 1907	1908	1909
COTTON MANUFACTURES—(*Continued.*)				
„ Gloves		£	£	£
Germany	Cotton Manufactures—Gloves are entered by value only.	—	765,683	572,425
Belgium		—	4,711	3,159
United States of America		—	2,399	3,833
Other Foreign Countries		—	451	937
TOTAL		—	773,244	580,354
„ Hosiery of all Sorts		£	£	£
Total from Foreign Countries	Cotton Manufactures—Hosiery is entered by value only.	1,293,651	1,443,257	1,518,797
„ „ British Possessions		44	277	116
TOTAL		1,293,695	1,443,534	1,518,913
„ Lace and Articles thereof		£	£	£
Total from Foreign Countries	Cotton Manufactures—Lace and Articles thereof are entered by value only.	3,535,918	2,913,088	2,903,013
„ „ British Possessions		16	152	132
TOTAL		3,535,934	2,913,240	2,903,145

Other interesting items included: Artificial flowers—From Foreign Countries, £1,166,890; from British Possessions, £432; Total, £1,167,322. The total value of Fruit imported was £10,855,200, of which only £1,772,466 came from British Possessions. Of Sugar the total value imported was £21,691,894, of which only £1,013, 957 came from British Possessions. The value of tea imported was £11,617,031. Of Tobacco in various forms the quantity imported in 1909 was 126,911,808 lbs., valued at £3,739,628. Of Wine 12,334,473 gallons worth £3,746,489 were imported in 1909. The total value of the imports into the United Kingdom in 1908 and 1909 was as follows:—

	1908	1909
Free of Duty	£539,354,672	£567,916,822
Subject to Duty	£592,953,487	£624,704,957

ARTICLES SUBJECT TO DUTY ENTERED FOR HOME CONSUMPTION.

Duties are payable on a considerable number of goods imported for home consumption. On Cocoa, for instance, the duty is 1d. per lb., and this duty was imposed on June 4th, 1883. In 1905 the quantity imported was 46,496,197, and the duty amounted to £193,734. In 1909 the quantity imported was 53,498,030, and the duty paid amounted to £222,918. Cocoa or chocolate, ground, prepared or in any way manufactured, is subject to a duty of 2d. per lb. as was imposed in April, 1879. In 1909 the quantity imported was 11,012,037 lbs., and the duty paid amounted to £91,774. On Coffee there is a duty of 14s. per cwt., imposed May 2nd, 1872. In 1909 the quantity brought in was 264,208 cwts., and the duty paid was £184,554. Of Tea, 283,547,798 lbs. were imported in 1909, the duty amounting to £5,907,052. There is a duty of 3s. 9d. per dozen packs on Playing Cards. In 1909 there were imported 48,550 dozens of packs, the duty amounting to £9,102. Of Brandy, 1,551,243 proof gallons were imported in 1909, the duty being £1,046,152. Of Rum, 3,193,553 proof gallons were imported and the duty was £2,044,459. On Sugar the duty varies from 2s. to 4s. 2d. the cwt. according to the polarization. Tobacco duties (on unmanufactured tobacco) amounted in 1909 to £14,691,384 or 85,654,211 lbs. On Wines the total duties paid in 1909 were £1,116,898 on 11,448,767 gallons.

SOME OF THE PRINCIPAL EXPORTS OF PRODUCE AND MANUFACTURES.

The Exports of Produce and Manufactures of the United Kingdom in 1907, 1908, and 1909 included:

	Quantities. 1907	1908	1909	Values. 1907	1908	1909
	Doz.Bots.	Doz.Bots.	Doz.Bots.	£	£	£
AERATED WATERS	1,414,971	1,138,806	1,284,267	225,077	181,054	207,062
BEER AND ALE	Barrels	Barrels	Barrels			
To Foreign Countries	239,067	224,875	248,565	733,406	661,798	725,953
To British Possessions	365,727	326,176	323,637	1,152,512	1,035,905	1,016,415
TOTAL	604,794	551,051	572,142	1,885,918	1,697,703	1,742,368
	Tons	Tons	Tons			
COAL AND COKE	63,600,947	62,547,175	63,076,799	40,170,296	39,546,169	35,319,070
COTTON:						
„ Waste from worked Cotton of every description	Lbs.	Lbs.	Lbs.	£	£	£
Total to Foreign Countries	—	64,258,600	80,022,200	—	782,541	924,478
„ British Possessions	—	6,937,800	10,172,100	—	77,997	119,783
TOTAL	—	71,196,400	90,194,300	—	860,538	1,044,216

COTTON, YARN:—	Quantities. 1907	1908	1909	Value. 1907	1908	1909
„ Grey	Lbs.	Lbs.	Lbs.	£	£	£
Total to Foreign Countries ..	189,384,100	154,276,600	156,131,100	12,099,936	9,163,408	8,707,621
„ British Possessions ..	19,696,500	24,239,800	25,838,700	1,151,459	1,437,809	1,219,695
TOTAL ..	209,080,600	178,516,400	181,969,800	13,251,395	10,601,217	9,927,316
„ Bleached and Dyed	Lbs.	Lbs.	Lbs.	£	£	£
Total to Foreign Countries ..	14,704,500	14,899,700	15,636,500	1,005,601	898,807	878,600
„ British Possessions ..	17,291,600	21,346,100	17,617,100	1,159,975	1,344,676	1,016,229
TOTAL ..	31,996,100	36,245,800	33,253,600	2,165,576	2,243,483	1,894,829

ARTICLES AND COUNTRIES WHENCE CONSIGNED.	Quantities.			Value.		
	1907	1908	1909	1907	1908	1909
COTTON MANUFACTURES—(*Cont.*)						
„ **Piece Goods, including Flags, Handkerchiefs, and Shawls in the Piece**						
„ „ **Wholly of Cotton, Unbleached Grey**	Yards	Yards	Yards	£	£	£
Total to Foreign Countries ..	744,585,900	726,082,200	750,009,400	8,732,810	8,163,753	7,945,399
„ British Possessions ..	1,388,669,400	1,184,607,800	1,341,920,400	13,689,949	11,806,841	12,242,130
TOTAL ..	2,133,255,300	1,910,690,000	2,091,929,800	22,422,759	19,970,594	20,187,529
„ **Wholly of Cotton, Bleached, White**	Yards	Yards	Yards	£	£	£
Total to Foreign Countries ..	888,468,000	811,954,800	885,726,200	11,271,874	10,082,528	10,548,826
„ British Possessions ..	880,778,700	743,347,800	699,261,800	10,024,624	8,755,817	7,855,923
TOTAL ..	1,769,246,700	1,555,302,600	1,584,988,000	21,296,498	18,838,345	18,404,749
THREAD, for Sewing	Lbs.	Lbs.	Lbs.	£	£	£
Total to Foreign Countries ..	27,066,000	23,733,500	25,050,100	4,189,257	3,670,260	3,974,316
„ British Possessions ..	4,660,700	4,077,400	4,674,200	755,242	672,232	752,507
TOTAL ..	31,726,700	27,810,900	29,724,300	4,944,499	4,342,492	4,726,823

SUMMARY OF CLASSIFIED IMPORTS AND EXPORTS 1907–9.

	Total Imports.			Special Exports.*		
	1907.	1908.	1909.	1907.	1908.	1909.
	£	£	£	£	£	£
I.—Food, Drink and Tobacco :—						
Grain and Flour	75,409,156	72,733,334	83,123,334	3,089,163	3,522,912	3,399,936
Meat (including animals for food)	51,888,213	49,448,334	47,624,228	1,309,218	1,052,701	1,970,928
Other food and drink: non-dutiable	67,460,229)	68,576,894	67,850,958	17,068,769	15,962,044	17,478,346
„ „ „ dutiable	48,317,166)	48,208,374	50,744,248			
Tobacco	4,215,832	5,167,153	4,991,080	1,262,498	1,399,994	1,678,248
Total, Class I.	247,290,596	244,134,153	254,333,628	22,729,648	21,937,651	23,627,458
II.—Raw Materials and articles mainly unmanufactured :—						
Coal, Coke, and patent fuel	20,845	4,689	8,482	42,118,994	41,615,923	37,129,978
Iron Ore, Scrap iron and steel	7,359,649	4,974,723	5,076,109	573,449	413,349	509,718
Other metallic ores	10,128,132	8,901,105	8,327,141	189,685	71,777	95,575
Wood and Timber	27,093,054	24,306,169	23,591,810	111,841	98,218	108,395
Cotton	70,803,498	55,834,883	60,295,201	—	—	—
Wool	36,459,820	30,746,990	35,044,943	3,207,904	2,662,151	4,259,619
Other textile materials	18,011,524	13,698,178	12,129,981	227,397	215,471	214,241
Oil Seeds, Nuts, Oils, etc.	30,697,416	28,514,967	31,043,087	3,429,748	3,091,825	3,399,697
Hides and Skins	10,752,733	9,422,965	11,618,180	1,817,217	1,424,760	1,925,684
Materials for paper-making	4,363,297	4,610,997	4,499,247	753,001	543,977	677,333
Miscellaneous	25,904,204	22,439,351	28,518,863	2,573,845	2,215,048	2,462,539
Total, Class II.	241,594,172	203,455,017	220,153,047	55,003,081	52,382,499	50,782,779
III.—Articles wholly or mainly manufactured :—						
Iron and steel articles	7,215,177	7,681,512	7,971,489	46,563,386	37,406,028	38,267,690
Other metals manufactured	28,932,812	24,659,602	24,346,326	11,674,131	8,856,472	8,725,048
Cutlery, Hardware, Implements and Instruments	4,072,372	3,750,177	3,719,509	6,434,002	5,492,463	5,413,640
Electrical Goods and Apparatus	1,247,650	1,263,762	1,321,709	2,469,927	1,903,104	2,240,586
Machinery	5,311,681	4,552,904	4,438,292	31,743,253	30,999,516	28,088,956
Ships (new)	27,015	18,199	23,926	10,018,113	10,567,475	5,914,684
Manufactures of Wood and Timber (including furniture)	1,920,716	1,970,917	2,054,269	1,407,932	1,256,805	1,450,623
Yarns and textile fabrics :—						
Cotton	9,525,775	9,475,795	9,837,871	110,437,092	95,055,513	93,435,627
Wool	10,789,739	9,500,056	9,727,740	34,158,857	28,391,922	30,922,366
Other materials	20,741,024	18,939,087	20,084,866	16,503,896	12,400,049	14,304,777
Apparel	3,616,971	4,200,819	5,072,211	7,177,764	8,852,775	9,829,014
Chemicals, Drugs, Dyes, etc.	11,629,978	10,185,617	10,605,181	17,052,755	16,271,089	16,807,223
Leather and manufactures thereof	11,530,663	11,562,700	11,618,619	6,599,591	3,826,258	4,246,150
Earthenware and Glass	4,052,424	3,685,330	3,757,504	4,048,893	3,700,037	3,689,277
Paper	5,673,887	5,798,665	5,647,580	2,344,230	2,314,967	2,558,135
Miscellaneous	28,271,097	25,840,455	27,457,019	33,391,451	29,610,943	31,409,916
Total, Class III.	154,558,991	143,085,597	147,684,111	342,025,273	296,955,416	297,303,812
IV.—Miscellaneous and unclassified :—						
(Including Parcel Post)	2,364,183	2,278,784	2,569,731	6,277,081	5,828,258	6,665,395
Total	645,807,942	592,953,487	624,740,517	426,035,083	377,103,824	378,379,444

* "Special Exports" are the exports of British and Irish produce or manufacture. Besides these exports a certain amount of Foreign and Colonial merchandise is re-exported.

VARIOUS STATISTICS RELATING TO COUNTIES OF UNITED KINGDOM.

County.	Total Area	Population 1901.	Rateable Value 1903.	Cultivated Area* 1904
ENGLAND:—	Acres		£	Acres
Bedford	302,948	174,972	990,530	257,006
Berkshire	462,367	283,531	1,780,461	359,954
Buckingham	479,358	173,061	1,022,884	398,525
Cambridge	553,241	200,680	1,263,161	490,323
Cheshire	654,346	792,913	4,534,641	535,235
Cornwall	868,220	318,591	1,433,523	606,548
Cumberland	973,086	266,933	1,686,801	579,499
Derby	650,370	491,032	2,472,786	490,734
Devon	1,671,168	664,697	3,640,375	1,211,046
Dorset	625,902	199,968	1,126,142	478,598
Durham	649,244	1,194,590	5,377,610	435,535
Essex	979,532	1,062,645	5,295,375	793,722
Gloucester	805,804	648,627	3,492,198	658,489
Hampshire	1,052,810	768,608	4,197,206	704,208
Hereford	538,921	112,549	879,137	449,715
Hertford	404,518	239,760	1,525,501	330,156
Huntingdon	233,985	46,750	354,585	209,427
Kent	976,881	935,144	5,593,206	742,946
Lancashire	1,197,232	4,437,518	23,498,677	818,402
Leicester	532,788	440,932	2,551,595	474,404
Lincoln	1,696,332	492,994	3,107,689	1,520,392
London	74,817	4,536,541	41,110,517	9,793
Middlesex	148,700	810,306	5,301,664	95,806
Monmouth	349,552	316,864	1,552,278	242,436
Norfolk	1,314,612	467,754	2,305,627	1,068,107
Northampton	638,612	348,947	1,972,208	559,919
Northumberland	1,291,515	603,119	3,639,974	706,416
Nottingham	540,123	596,705	2,972,741	445,173
Oxford	480,687	186,698	1,167,742	411,425
Rutland	97,273	20,743	204,242	86,510
Salop	861,800	259,088	1,851,641	717,569
Somerset	1,038,017	466,193	3,094,574	854,105
Stafford	744,986	1,251,910	5,394,329	595,329
Suffolk	948,768	361,900	1,684,660	756,070
Surrey	461,829	718,549	5,432,021	268,451
Sussex	932,409	605,785	4,266,518	665,842
Warwick	579,885	906,601	5,035,217	495,980
Westmoreland	505,330	64,409	565,450	246,773
Wilts	864,101	263,944	1,488,632	729,972
Worcester	480,128	500,819	2,473,616	400,138
York (E. Riding)	753,769	453,936	2,623,507	672,428
„ (N. Riding)	1,362,378	375,918	2,514,733	866,745
„ (W. Riding)	1,773,464	2,766,471	13,353,391	1,190,241
Total England	32,551,808	30,829,695	185,829,365	24,630,092
WALES:—				
Anglesey	176,630	34 808	135,469	151,821
Brecon	469,301	53,951	315,292	204,270
Cardigan	443,071	82,707	345,955	260,341
Carmarthen	587,816	123,570	568,603	442,018
Carnarvon	365,986	137,236	667,713	175,861
Denbigh	426,084	126,458	642,957	266,393
Flint	163,025	42,261	396,193	126,215
Glamorgan	518,864	866,250	4,617,165	270,417
Merioneth	422,372	64,248	300,225	152,588
Montgomery	510,110	63,994	438,647	274,516
Pembroke	392,710	82,424	400,477	311,641
Radnor	301,164	20,241	111,708	162,799
Total Wales	4,777,133	1,698,148	8,940,404	2,798,880

County.	Total Area	Populatn 1901.	Rateable Value 1903	Cultivatd Area* 1904.
SCOTLAND:—	Acres		£	Acres
Aberdeen	1,268,652	304,439	1,824,542	630,530
Argyll	2,025,783	73,642	538,165	136,018
Ayr	730,928	254,468	1,610,338	320,914
Banff	405,431	61,488	265,950	160,021
Berwick	293,900	30,824	305,415	192,053
Bute	140,452	18,787	153,608	25,928
Caithness	446,017	33,870	140,127	112,064
Clackmannan	35,214	32,029	164,153	15,281
Dumbarton	170,922	113,865	676,598	51,283
Dumfries	690,294	72,571	604,661	259,901
Edinburgh	236,538	488,796	4,172,979	129,807
Elgin (or Moray)	308,500	44,800	248,276	101,048
Fife	324,468	218,840	1,354,132	254,634
Forfar	562,331	284,082	1,718,154	249,940
Haddington	171,371	38,665	349,330	112,026
Inverness	2,784,884	90,104	474,630	148 892
Kincardine	245,238	40,923	244,551	119,969
Kinross	55,849	6,981	66,082	35,354
Kirkcudbright	582,251	39,383	346,290	192,081
Lanark	566,991	1,339,327	8,073,182	255,786
Linlithgow	77,310	65,708	429,516	58,392
Nairn	104,245	9,291	51,826	25,762
Orkney	249,493	28,699	79,848	107,665
Peebles	223,289	15,066	137,530	49,877
Perth	1,632,838	123,283	1,106,842	336,251
Renfrew	156,126	268,980	1,701,437	91,251
Ross & Cromarty	2,049,681	76,450	293,784	141,315
Roxburgh	428,497	48,804	427,416	182,855
Selkirk	172,550	23,356	152,526	29,877
Shetland	361,955	28,166	50,484	58,152
Stirling	296,845	142,291	839,238	116,284
Sutherland	1,345,480	21,440	95,253	32,574
Wigtown	314,405	32,685	242,436	154,853
Total Scotland	19,458,728	4,472,103	28,939,281	4,888,638
IRELAND:—				
Antrim	711,666	461,684	1,966,762	222,691
Armagh	312,659	125,392	434,322	134,356
Carlow	221,421	37,748	169,593	72,014
Cavan	467,025	97,541	278,887	155,154
Clare	788,332	112,334	326,515	146,406
Cork	1,838,921	404,611	1,279,571	417,806
Donegal	1,190,269	173,722	308,548	215,894
Down	612,113	289,525	809,276	244,695
Dublin	226,784	448,206	1,700,755	65,524
Fermanagh	417,665	65,430	241,876	99,811
Galway	1,467,850	192,549	477,043	198,093
Kerry	1,161,752	165,726	307,266	163,036
Kildare	418,497	63,566	336,990	98,770
Kilkenny	509,249	79,159	362,255	141,254
King's County	493,263	60,187	246,969	110,250
Leitrim	376,510	69,343	138,506	78,233
Limerick	662,973	146,098	541,394	159,139
Londonderry	513,388	144,404	424,994	173,370
Longford	257,770	46,672	152,975	64,121
Louth	202,181	65,820	246,452	77,912
Mayo	1,333,340	199,166	320,099	162,734
Meath	577,735	67,497	550,691	109,531
Monaghan	318,806	74,611	275,445	108,632
Queen's County	424,723	57,417	256,958	129,015
Roscommon	608,290	101,791	301,388	124,628
Sligo	442,205	84,083	213,922	75,104
Tipperary	1,050,137	160,232	686,908	244,875
Tyrone	778,943	150,567	461,572	228,742
Waterford	452,912	87,187	315,553	76,328
Westmeath	434,665	61,629	325,730	79,791
Wexford	578,720	104,104	386,595	185,072
Wicklow	499,958	60,824	291,480	89,852
Total Ireland	20,350,725	4,458,775	15,137,290	4,632,833

* In Great Britain the term "cultivated area" includes all land under crops or permanent grass; in Ireland permanent grass is not included unless it is cut for hay.

NOTE.—The average number of inhabitants per square mile is in England 437, in Wales 196, in Scotland 150, in Ireland 137. London has about 40,000 persons per square mile and Middlesex 3,411. The next most densely populated county is Lancashire with 1,070, and the least densely populated Sutherland with 10. Glamorgan, with 758 to the square mile, is the most densely populated county in Wales; Lanark, with 1,524, in Scotland; and Dublin county, with 461, in Ireland.

VITAL STATISTICS—UNITED KINGDOM.

1. BIRTHS, DEATHS AND MARRIAGES.

(Rates per Thousand of the Population).

Years.	Births.				Deaths.				Marriages. *			
	England and Wales.	Scotland.	Ireland.	United Kingdom.	England and Wales.	Scotland.	Ireland.	United Kingdom.	England and Wales.	Scotland.	Ireland.	United Kingdom.
1893	30·7	30·8	23·0	29·8	19·2	19·3	18·0	19·0	14·7	13·2	9·4	13·9
1894	29·6	29·9	23·0	28·8	16·6	17·1	18·2	16·8	15·0	13·3	9·4	14·2
1895	30·3	30·0	23·3	29·4	18·7	19·4	18·5	18·7	15·0	13·5	10·1	14·3
1896	29·6	30·4	23·7	29·0	17·1	16·6	16·7	16·9	15·7	14·2	10·2	15·0
1897	29·6	30·0	23·5	28·9	17·4	18·4	18·5	17·6	16·0	14·4	10·1	15·2
1898	29·3	30·1	23·3	28·7	17·5	18·0	18·2	17·7	16·2	14·8	10·0	15·4
1899	29·1	29·8	23·1	28·5	18·2	18·1	17·7	18·2	16·5	15·0	9·9	15·6
1900	28·7	29·6	22·7	28·2	18·2	18·5	19·6	18·4	16·0	14·6	9·5	15·1
1901	28·5	29·5	22·7	28·0	16·9	17·9	17·8	17·1	15·9	14·0	10·2	15·1
1902	28·5	29·2	23·0	28·0	16·2	17·2	17·5	16·5	15·9	14·1	10·4	15·1
1903	28·4	29·2	23·1	27·9	15·4	16·6	17·5	15·8	15·6	14·1	10·4	14·9
1904	27·9	28·6	23·6	27·6	16·2	16·8	18·1	16·5	15·2	13·9	10·4	14·6
1905	27·2	28·1	23·4	26·9	15·2	15·9	17·1	15·5	15·3	13·4	10·4	14·6
1906	27·1	27·9	23·6	26·8	15·4	16·0	17·0	15·6	15·6	14·0	10·3	14·9
1907	26·2	27·0	23·2	26·0	15·0	16·2	17·7	15·4	15·8	13·9	10·1	15·0
1908	26·5	27·2	23·4	26·4	14·7	16·1	17·6	15·2	14·9	13·1	10·4	14·3

* The figures in these columns represent the number of *persons* married, per 1000 of the population, not the number of *marriages*.

2. POPULATION OF THE LARGER TOWNS WITH BIRTH AND DEATH RATES.

Towns of more than 65,000 inhabitants.	Population Official Estimate June, 1908.	Mean Annual Rate per 1000		Towns of more than 65,000 inhabitants.	Population Official Estimate June, 1908.	Mean Annual Rate per 1000.	
		Births.	Deaths.			Births.	Deaths.
London	4,795,757	25·2	13·8	Leyton	125,815	25·8	10·4
Glasgow	859,715	27·8	17·8	Plymouth	122,113	22·2	15·0
Liverpool	753,203	31·7	19·2	Southampton	122,196	23·9	12·9
Manchester	649,251	29·1	18·2	South Shields	115,5 5	30·1	15·5
Birmingham	558,357	28·4	15·9	Halifax	111,018	19·0	14·1
Leeds	447,107	24·8	15·3	Burnley	105,100	28 2	17·9
Sheffield	463,222	30·7	15·8	Wolverhampton	103.318	25·8	14·3
Dublin	394,525	28·7	21·5	Middlesborough	100,669	35·6	20·4
Belfast	380,344	29·7	19·5	Stockport	102,339	27·7	18·2
Bristol	372,785	23·1	13·6	Swansea	97,810	33·1	18·5
Edinburgh	350,524	21·4	15·3	Huddersfield	94,776	24·4	17·1
West Ham	315,000	28·8	13·9	Walsall	97,778	29·6	14·9
Bradford	292,136	20·2	15·5	Northampton	96,405	20·9	11·6
Newcastle	227,257	29·7	16·0	St. Helens	93,812	34·7	15·7
Hull	271,137	30.2	16·2	Wigan	89,636	32·8	18·0
Nottingham	260,449	26·6	15·2	Rochdale	88,821	24·6	18·4
Salford	239,294	29·6	17·8	Hornsey	92,713	16·1	8·3
Leicester.	240,172	23·4	13·0	Paisley	90,305	26·2	15·4
Portsmouth	211,493	28·4	13·8	York	85,861	25·1	12·6
Cardiff	191,446	26·6	13·0	Aston Manor	84,256	26·1	12·5
Bolton	185,358	24·5	15·4	Leith	84,689	28·3	15·4
Aberdeen	178,210	25·0	14·0	Reading	81,647	22·6	11·8
Dundee	168,616	27·4	18·6	Devonport	81,825	25·4	13·3
Sunderland	157,693	33·0	17·7	Coventry	78,889	32·8	15·4
Croydon	157,698	25·4	12·8	Cork	76,122	26·9	22·0
Willesden	154,792	26·1	10·5	Merthyr Tydfil	77,219	35·6	19·1
Oldham	142,507	28·0	19·8	Newport (Mon.)	76,955	32·6	16·1
Blackburn	135,961	25·0	15·7	West Hartlepool	77,573	26·4	12·0
East Ham	142,936	24·8	10·3	Kings Norton	78,608	24·7	10·4
Brighton	129,967	21·3	14·7	Ipswich	73,852	24·5	14·3
Rhondda.	133,137	40·3	18·4	Greenock	71,783	30·3	17·0
Derby	127,583	25·9	13·1	Grimsby	71,800	31·7	14·4
Gateshead	128,393	30·9	14·9	Warrington	71,268	32·7	17·0
Walthamstow	131,486	26·2	10·5	West Bromwich	69,786	32·4	16·2
Norwich	122,841	25·2	14·1	Bournemouth	70,801	17·1	12·9
Birkenhead	119,830	31·4	15·8	Hastings	67,817	15·5	11·7
Preston	117,799	27·7	18·0	Hanley	67,990	33·0	18·4
Tottenham	126,146	30·2	12·5	Bootle	68,248	31·3	18·2

3. POPULATION OF THE UNITED KINGDOM.

(Its Growth in the course of a Century.)

Year.	England and Wales.			Scotland.			Ireland.			United Kingdom.		
	Population.	No. of persons		Population.	No. of persons		Population.	No. of persons		Population.	No. of persons	
		Per family.	Per house.		Per family.	Per house.		Per family.	Per house.		Per family.	Per house.
1811	10,164,256	4·74	5·65	1,805,864	4·49	5·93	—	—	—	—	—	—
1821	12,000,236	4·81	5·75	2,091,521	4·66	6·12	6,801,827	5·18	5·95	20,893,584	4·91	5·88
1831	13,896,797	4·77	5·60	2,364,386	4·70	6·40	7,767,401	5·61	6·21	24,028,584	5·01	5·85
1841	15,914,148	—	5·41	2,620,184	4·76	5·21	8,175,124	5·55	6.15	26,709,456	—	5·59
1851	17,927,609	4·83	5·47	2,888,742	4·81	7·80	6,552,385	5·44	6·28	27,368,736	4·96	5·83
1861	20,066,224	4·47	5·37	3,062,294	4·51	7·78	5,798,967	5·14	5·83	28,927,485	4·59	5·64
1871	22,712,266	4·50	5·33	3,360,018	4·52	8·02	5,412,377	5·04	5·63	31,484,661	4·59	5·59
1881	25,974,439	4·61	5·38	3,735,573	4·60	5·05	5,174,836	5·20	5·66	34,884,848	4·69	5·38
1891	29,002,525	4·73	5·32	4,025,647	4·59	4·92	4,704,750	5·05	5·40	37,732,922	4·75	5·28
1901	32,527,843	4·62	5·20	4,472,103	4·62	4·82	4,458,775	4·90	5·20	41,458,721	4·65	5·15
1902	32,997,626	—	—	4,531,299	—	—	4,432,274	—	—	41,961,199	—	—
1903	33,378,338	—	—	4,579,223	—	—	4,413,658	—	—	42,371,219	—	—
1904	33,763,434	—	—	4,627,656	—	—	4,402,168	—	—	42,793,258	—	—
1905	34,152,977	—	—	4,676,603	—	—	4,388,107	—	—	43,217,687	—	—
1906	34,547,016	—	—	4,726,070	—	—	4,386,035	—	—	43,659,121	—	—
1907	34,945,600	—	—	4,776,063	—	—	4,377,056	—	—	44,098,719	—	—
1908	35,348,780	—	—	4,826,587	—	—	4,363,351	—	—	44,538,718	—	—
1909	35,756,615	—	—	4,877,648	—	—	4,374,158	—	—	45,008,421	—	—

The population as given in this table does not include the islands in the British seas, which account for about 150,000 more, or for the Army and Navy serving abroad which would average about 200,000. The proportion of the sexes in the total population of the United Kingdom is rather more than 48 males out of every 100 persons of all ages.

The Census of 1821 was the first in which the figures for Ireland were comparable with those of subsequent years. In 1841 the figures of the number of families in England and Wales were not correctly taken. Statistics of the number of families and of inhabited houses are only available for census years; the population in intercensal years is estimated by the Registrar General from the records of births and deaths. During the 19th century, i.e. from the Census of 1801 to that of 1901—the population of England and Wales increased by 267 per cent., and that of Scotland by 178 per cent. In Ireland during the 80 years 1821–1901 the population decreased by 34 per cent.

The population of the United Kingdom in the middle of 1909, was estimated at 45,008,421 persons; that of England and Wales at 35,756,615, that of Scotland at 4,877,608, and that of Ireland at 4,374,158.

4. RATE OF INCREASE OR DECREASE OF POPULATION.

in each Division of the United Kingdom.

	1801–11	1811–21	1821–31	1831–41	1841–51	1851–61	1861–71	1871–81	1881–91	1891–1901
England & Wales	Inc. % 14·00	Inc. % 18·06	Inc. % 15·80	Inc. % 14·48	Inc. % 12·70	Inc. % 11·90	Inc. % 13·21	Inc. % 14·36	Inc. % 11·65	Inc. % 12·17
Scotland	12·27	15·82	13·04	10·82	10·25	6·00	9·72	11·18	7·77	11·09
Ireland	—	—	14·19	5·25	Dec. % 19·85	Dec. % 11·50	Dec. % 6·67	Dec. % 4·39	Dec. % 9·08	Dec. % 5.23

5. POPULATION OF THE METROPOLIS OR "INNER LONDON."

(Comparative Growth during Fifty Years.)

1854	2,504,000	1869	3,176,000	1884	3,940,000	1899	4,494,000
1859	2,725,000	1874	3,427,000	1889	4,140,000	1904	4,649,000
1864	2,950,000	1879	3,712,000	1894	4,352,000		

6. POPULATION OF "GREATER LONDON," 1908.

The above figures relate to Registration London or "Inner London," which is coterminous with the administrative County of London, and which, in addition to the City, comprises twenty-eight Metropolitan Boroughs. But "Greater London," includes the whole of the City and Metropolitan police districts and extends over a radius of 15 miles from Charing Cross. The estimated population in June 1908, was as follows:—(1) Inner London, 4,795,757, being about 40,000 persons to the square mile; (2) Outer Ring, 2,527,570; (3) Greater London (including Inner and Outer) 7,323,327.

OCCUPATIONS OF THE PEOPLE—UNITED KINGDOM.

Class of Occupation.	1881.				1901.			
	England & Wales.	Scotland.	Ireland.	United Kingdom.	England & Wales.	Scotland.	Ireland.	United Kingdom.
Services.								
General or Local Government (including Police)	103,978	13,216	28,366	145,500	198,187	21,397	34,281	253,865
Army (at home)	78,596	5,620	29,089	113,305	112,822	6,401	25,321	144,544
Navy and Marines (ashore and in port)	28,452	1,286	3,134	32,872	55,416	1,656	2,377	59,499
Professional.								
Clergy and Ministers	33,486	4,370	6,255	44,111	39,895	5,333	6,437	51,665
Barristers and Solicitors	17,386	2,442	2,123	21,951	20,998	3,970	2,216	27,184
Law Clerks	24,602	3,922	2,544	31,068	34,433	5,660	2,246	42,339
Physicians and Surgeons	15,116	1,878	2,470	19,464	22,698	2,965	2,221	27,884
Nurses, Invalid Attendants, etc.	45,849	5,101	2,635	53,585	73,079	8,557	3,387	85,023
Schoolmasters and Teachers	168,920	17,415	21,218	207,553	230,345	24,768	20,478	275,591
Literary and Scientific	8,394	849	513	9,756	16,379	1,350	969	18,698
Civil Engineers, and Surveyors	14,809	1,411	1,430	17,650	17,466	2,197	1,387	21,050
Art, Music, Drama	61,164	6,189	3,571	70,924	115,769	12,134	4,641	132,544
Other professional occupations	28,714	3,059	7,634	39,407	35,198	4,673	11,733	51,604
Total Professional	418,440	46,636	50,393	515,469	606,260	71,607	55,715	733,582
General.								
Domestic Service	1,593,685	154,812	273,605	2,022,102	1,814,949	182,330	202,238	2,199,517
Merchants, Salesmen, Buyers (commodity undefined)	14,954	3,278	3,599	21,831	7,613	1,032	3,435	12,080
Agents, Commercial Travellers, Accountants, Auctioneers	88,727	10,100	5,254	104,081	131,627	16,954	9,239	157,820
Commercial Clerks	181,457	26,659	11,700	219,816	363,673	53,910	22,389	439,972
Dealers in Money	16,659	3,999	2,369	23,027	31,328	5,053	2,697	39,078
Insurance	15,068	1,818	460	17,346	56,388	5,564	1,563	63,515
Conveyance (Rail, Road, Canal, etc.)	793,249	97,176	60,854	951,279	1,266,758	159,616	71,255	1,497,629
Agriculture	1,352,544	240,131	981,356	2,574,031	1,197,922	205,007	859,525	2,262,454
Fishing	29,696	31,334	10,926	71,956	23,891	27,600	10,434	61,925
Mines and Quarries	528,474	82,134	8,021	618,629	805,185	132,183	6,512	943,880
Metals, Machines, Implements	679,407	105,347	27,938	812,692	988,919	157,716	29,080	1,175,715
Shipbuilding, etc.	54,080	18,492	2,786	75,358	86,637	34,656	6,234	127,527
Cycle and Motor manufactures	1,072	13	1	1,086	31,466	1,151	739	33,356
Coach makers, Wheelwrights, etc.	62,236	3,633	2,718	68,587	87,012	6,128	6,128	3,148
Dealers in Machines, etc.	16,120	2,777	1,482	20,379	34,470	6,076	1,978	42,524
Jewelry, Watches, Electric Supply, etc.	77,320	5,537	1,888	84,745	152,353	12,843	3,148	168,344
Building	764,911	107,359	53,865	926,135	1,128,680	146,163	60,977	1,335,820
Furniture, Woodwork	180,042	26,060	12,543	218,645	257,592	39,000	11,040	307,632
Brick, Cement, Pottery and Glass	128,162	9,130	1,483	138,775	175,513	12,962	1,381	189,856
Chemicals, Oil, Soap, etc.	70,055	9,848	2,157	82,060	128,640	18,139	2,896	149,675
Skins, Leather, Hair, etc.	81,667	7,118	5,303	94,088	105,341	8,258	4,267	117,866
Paper, Books, Stationery	158,194	28,824	8,965	195,983	278,957	43,741	11,563	334,261
Textile fabrics	1,094,636	206,005	130,144	1,430,785	1,155,397	196,396	110,208	1,462,001
Workers and Dealers in Dress	952,822	111,899	163,676	1,228,397	1,126,423	127,784	141,588	1,395,795
Workers and Dealers in Food	449,102	69,934	53,560	572,596	701,606	113,438	50,733	865,777
Tobacco	19,734	2,059	1,249	23,042	44,366	5,234	1,767	51,367
Publicans, Wine and Spirit Merchants, etc.	128,676	13,174	12,226	154,076	146,973	14,226	14,945	176,144
Hotel Servants, Cellarmen, etc.	68,354	3,790	2,163	74,307	111,681	12,505	5,352	129,538
Coffee, Lodging, Boarding House Keepers	45,549	5,995	2,262	53,806	69,183	6,716	2,351	78,250
Gas and Water Supply	25,291	3,286	1,102	29,679	68,510	8,461	1,715	78,686
General Shopkeepers	63,819	11,201	29,145	104,165	64,106	10,260	31,452	105,818
Costermongers, Hawkers	47,111	6,202	2,393	55,706	61,339	6,200	2,370	69,909
General Labourers	559,769	67,909	143,823	771,501	410,078	55,424	117,863	583,365
Engine Drivers, etc.*	66,137	10,214	1,734	78,085	106,320	17,238	3,114	126,672
Other Workers and Dealers	123,471	22,893	25,538	171,902	135,146	31,787	22,717	189,650
Total Engaged in Occupations †	11,161,716	1,576,898	2,159,270	14,897,884	14,328,727	1,982,812	1,949,607	18,261,146
Retired or Unoccupied †	8,144,463	1,198,060	1,817,946	11,160,469	10 995,117	1,463,511	1,615,576	14,074,204
Total Occupied and Unoccupied †	19,306,179	2,774,958	3,977,216	26,058,353	25,323,844	3,446,323	3,565,183	32,335,350

* Excluding Railway, Marine and Agricultural.

† Aged ten years and upwards.

The "Retired or Unoccupied" include all females over ten years of age who have no occupation.

PAUPERS AND POOR RELIEF.

NUMBER OF PAUPERS AND EXPENDITURE ON POOR RELIEF IN THE UNITED KINGDOM.

Year.	No. of Paupers.*				* * Expenditure on Relief of the Poor.			
	England & Wales.	Scotland.	Ireland.	United Kingdom.	England & Wales.	Scotland.	Ireland.	United Kingdom.
					£	£	£	£
1881	803,126	102,306	109,655	1,015,087	8,102,136	906,255	1,096,840	10,105,231
1882	797,614	99,341	112,829	1,009,784	8,353,486	881,513	1,137,359	10,372,358
1883	799,296	97,097	115,684	1,012,077	8,408,979	880,857	1,141,510	10,431,346
1884	774,310	94,642	108,831	977,783	8,350,283	873,095	1,216,557	10,439,935
1885	784,155	95,516	106,717	986,388	8,491,600	861,875	1,118,238	10,471,713
1886	807,633	97,504	108,516	1,013,653	8,296,230	874,574	1,087,400	10,258,204
1887	817,289	96,536	113,241	1,027,066	8,176,768	890,623	1,102,735	10,170,126
1888	825,509	96,226	113,947	1,035,682	8,440,821	878,374	1,030,534	10,349,429
1889	810,132	94,836	109,957	1,014,925	8,366,477	881,937	1,023,363	10,271,767
1890	793,246	95,040	107,774	996,060	8,434,345	886,543	1,026,292	10,347,180
1891	780,457	93,422	107,129	981,008	8,643,318	889,507	1,031,981	10,564,806
1892	761,473	93,284	103,839	958,596	8,847,678	918,178	1,052,262	10,818,118
1893	783,597	93,496	102,865	979,958	9,217,514	939,435	1,050,643	11,207,592
1894	821,921	95,196	104,211	1,021,328	9,673,505	956,815	1,039,519	11,669,839
1895	827,593	96,918	101,071	1,025,582	9,866,605	994,014	1,042,809	11,903,428
1896	840,456	99,621	98,627	1,038,704	10,215,974	1,013,376	1,053,391	12,282,741
1897	836,674	100,914	98,882	1,036,470	10,432,189	1,054,668	1,045,715	12,532,572
1898	836,913	101,408	100,346	1,038,667	10,828,276	1,085,728	1,069,822	12,983,826
1899	821,096	101,510	102,760	1,025,366	11,286,973	1,090,733	1,135,334	13,513,040
1900	807,471	99,932	103,866	1,011,269	11,567,649	1,109,619	1,118,484	13,795,752
1901	801,347	100,896	101,090	1,003,333	11,548,885	1,155,363	1,159,843	13,864,091
1902	824,627	102,499	102,771	1,029,897	12,261,192	1,193,651	1,185,204	14,640,047
1903	847,480	104,675	103,228	1,055,383	12,848,323	1,235,000	1,146,963	15 230,291
1904	869,128	106,850	101,849	1,077,827	13,369,494	1,300,743	1,221,111	15,881,348
1905	932,267	110,595	103,240	1,146,102	13,851,981	1,402,354	1,253,355	16,507,690
1906	909,918	111,201	103,302	1,124,421	14.035,888	1,406,489	1,299,286	16,741,663
1907	905,881	111,145	102,895	1,119,921	13,957,224	1,422,375	1,288,713	16,668,312
1908	911,588	111,476	102,530	1,125,594	14,308,426	1,481,725	1,312,456	16,802,607
1909	943,996	116,393	101,013	1,161,402	—	—	—	—

* These numbers represent the total in receipt of indoor and outdoor Relief (including Vagrants), on one day in winter. When the numbers are taken on one day in summer, the total for the United Kingdom is on an average about one-eighth less. The proportion of paupers per 10,000 of the population usually varies from 250 to 260. * * The amounts under expenditure are for the years ended Lady-day.

CHIEF NATURAL PRODUCTS OF THE UNITED KINGDOM.

Year.	Coal.	Pig Iron (from British ores).	Metals from British ores.		Corn (Wheat, Barley, Oats.)†	Potatoes.	Hay.	Fish. Exclusive of salmon and shell fish.
			Silver from lead.	Other Metals.				
	Tons.	Tons.	Ozs.	Tons.	Bushels.	Tons.	Tons.	Tons.
1891	185,479,126	4,528,312	279,792	51,169	320,770,000	6,090,000	12,671,000	601,083
1892	181,786,871	4,041,178	271,259	48,654	305,896,000	5,634,000	11,516,000	626,413
1893	164,325,795	3,978,694	274,100	48,244	285,247,000	6,541,000	9,082,000	678,380
1894	188,277,525	4,347,472	275,696	46,591	330,168,000	4,662,000	15,699,000	702,432
1895	189,661,362	4,394,987	280,434	42,881	287,790,000	7,065,000	12,238,000	703,432
1896	195,361,260	4,759,446	283,826	43,322	298,931,000	6,263,000	11,416,000	735,555
1897	202,129,931	4,736,667	249,156	38,582	292,465,000	4,107,000	14,043,000	694,898
1898	202,054,516	4,850,508	211,403	39,217	322,194,000	6,225,000	15,916,000	791,825
1899	220,094,781	4,913,846	191,927	36,900	307,933,000	5,837,000	12,898,000	747,980
1900	225,181,300	4,666,942	190,850	38,463	288,005,000	4,577,000	13,742,000	733,553
1901	219,046,945	4,091,908	174,466	33,544	282,745,000	7,043,000	11,358,000	792,549
1902	227,095,042	4,399,814	146,606	31,707	316,902,000	5,920,000	15,246,000	898,972
1903	230,334,469	4,500,972	174,891	34,057	287,069,000	5,277,000	14,955,000	927,773
1904	232,428,272	4,524,412	159,680	34,726	277,128,000	6,230,000	14,860,000	1,011,363
1905	236,128,936	4,760,187	167,569	34,710	291,623,000	7,186,000	13,554,000	1,007,151
1906	251,067,628	5,040,360	148,341	36,245	302,971,000	6,089,000	13,512,000	1,027,068
1907	267,830,962	5,126,949	153,684	37,133	307,312,000	5,224,000	15,603,000	1,188,513
1908	261,528,795	4,847,448	135,268	33,377	230,977,000*	3,920,000		1,129,376

† Generally wheat, barley, and oats are approximately in the proportion of 5, 6, and 17.

* Exclusive of Ireland, for which the returns are not complete.

NATIONAL REVENUE (1893-1909).

1. CUSTOMS RECEIPTS.

Years.	Coffee.	Dried Fruits.	Spirits.	Sugar.	Tea.	Tobacco.	Wine.	Total.*
	£	£	£	£	£	£	£	
1893-1894	165,985	365,093	4,130,685	—	3,493,094	10,119,952	1,210,142	19,903,888
1894-1895	170,024	396,602	4,197,260	—	3,587,632	10,415,139	1,143,698	20,310,675
1895-1896	167,673	395,186	4,216,921	—	3,746,194	10,748,522	1,254,994	20,959,490
1896-1897	172,333	401,244	4,318,192	—	3,799,372	11,018,048	1,296,181	21,462,571
1897-1898	170,049	389,573	4,299,961	—	3,868,207	11,433,909	1,325,372	22,005,302
1898-1899	173,590	382,005	4,236,160	—	4,023,504	10,993,727	1,399,100	21,054,011
1899-1900	191,509	424,210	4,898,930	—	4,628,946	10,885,922	1,729,540	24,028,348
1900-1901	189,783	349,264	4,769,763	—	6,264,515	12,838,578	1,488,452	26,489,196
1901-1902	174,342	379,889	4,581,520	6,399,228	5,792,967	10,567,705	1,449,687	31,203,090
1902-1903	178,628	416,721	4,739,781	4,478,707	5,975,483	12,451,473	1,523,856	34,649,937
1903-1904	188,065	449,742	4,458,182	5,725,913	6,559,705	12,627,059	1,335,792	34,053,105
1904-1905	179,485	442,062	3,822,196	6,106,387	8,271,866	13,184,767	1,185,508	35,907,746
1905-1906	181,167	475,186	3,724,357	6,177,953	6,814,908	13,380,878	1,175,789	34,644,650
1906-1907	175,216	467,319	4,216,342	6,250,834	5,588,288	13,295,803	1,238,172	33,114,706
1907-1908	183,624	456,492	4,133,024	6,707,809	5,807,947	13,739,378	1,177,494	32,490,000
1908-1909	184,991	358,500	3,961,142	3,672,013	6,046,211	13,823,685	1,120,780	29,200,000

* This total represents the actual Exchequer Receipts for each year ended 31st March, and includes coal export duty (1901-7) which yielded annually about two millions; corn in 1902-3 yielding £2,347,000; and various other articles yielding from £180,000 to £380,000.

2. INLAND REVENUE.

Years.	Excise.			Death Duties.	Stamps.	Land Tax and House Duty.	Income Tax.	Total.*
	Beer.	Spirits.	Licences.					
1893-1894	9,934,321	15,950,638	3,731,506	9,979,692	5,167,001	2,443,739	15,342,363	62,687,064
1894-1895	10,494,329	16,001,699	3,750,187	10,894,384	5,833,341	2,484,078	15,649,362	65,357,867
1895-1896	11,130,854	16,380,134	3,818,420	14,088,608	7,339,231	2,507,749	15,982,940	71,522,627
1896-1897	11,320,358	16,816,484	3,876,656	13,878,274	7,311,446	2,429,879	16,901,341	72,760,091
1897-1898	11,826,129	17,218,906	3,937,582	15,449,189	7,598,245	2,489,618	17,171,377	75,945,008
1898-1899	12,085,822	17,967,142	4,045,966	15,732,578	7,704,920	2,382,338	18,042,311	77,917,149
1899-1900	12,345,150	20,303,147	4,089,839	18,409,293	8,429,471	2,438,016	18,867,336	85,566,313
1900-1901	13,940,536	20,124,003	4,136,526	16,721,130	7,886,857	2,466,954	27,561,161	92,812,430
1901-1902	13,718,438	18,490,799	4,224,739	18,513,714	7,772,423	2,501,895	35,378,700	100,404,000
1902-1903	13,706,012	19,033,296	4,259,480	17,913,177	8,218,603	2,594,424	38,659,846	105,050,436
1903-1904	13,461,281	18,667,818	4,283,076	17,326,136	7,394,039	2,638,867	30,500,450	95,091,968
1904-1905	13,101,459	18,135,931	4,327,565	17,258,431	7,803,513	2,781,911	31,263,654	94,434,632
1905-1906	12,982,876	17,765,352	4,364,813	17,344,925	8,152,992	2,608,960	31,294,751	95,131,640
1906-1907	13,070,933	17,745,125	4,418,778	18,958,762	7,963,728	2,617,938	31,891,949	96,937,707
1907-1908	13,116,965	17,705,793	4,412,578	19,108,256	7,930,584	2,649,867	31,860,380	97,830,000
1908-1909	12,691,332	17,456,366	3,113,669	18,310,280	7,827,386	2,650,817	33,708,541	129,415,600

* This Total represents the actual Exchequer Receipts for each year ended 31st March and includes Railways paying about £350,000 and other receipts about £145,000.

3. POSTAL AND OTHER SOURCES OF REVENUE.

Years.	Total net Receipts from Post Office.	Post Office Services (gross receipts).			Crown Lands (net receipts)	Suez Canal Shares and Sundry Loans.	Total † (gross receipts).
		Postal.	Telegraph.	Total.			
1893-1894	2,908,000	10,470,000	2,540,000	13,010,000	420,000	218,630	15,706,410
1894-1895	3,091,000	10,760,000	2,580,000	13,340,000	410,000	412,976	16,028,762
1895-1896	3,767,000	11,380,000	2,840,000	14,220,000	415,000	689,525	16,857,829
1896-1897	4,010,000	11,860,000	2,910,000	14,770,000	415,000	708,251	17,975,885
1897-1898	3,694,000	12,170,000	3,010,000	15,180,000	415,000	733,897	18,066,004
1898-1899	3,743,000	12,710,000	3,150,000	15,860,000	430,000	713,544	18,886,193
1899-1900	3,905,000	13,300,000	3,350,000	16,650,000	450,000	834,003	20,209,905
1900-1901	3,898,000	13,800,000	3,450,000	17,250,000	500,000	830,075	20,822,684
1901-1902	3,957,000	14,300,000	3,490,000	17,790,000	455,000	869,634	21,104,999
1902-1903	4,051,000	14,750,000	3,630,000	18,380,000	455,000	957,999	21,618,698
1903-1904	4,369,000	15,450,000	3,700,000	19,150,000	460,000	982,475	22,195,579
1904-1905	4,675,000	16,100,000	3,830,000	19,930,000	470,000	1,014,303	22,840,404
1905-1906	5,462,000	16,880,000	4,130,000	21,010,000	480,000	1,098,594	24,102,575
1906-1907	5,319,000	17,170,000	4,255,000	21,425,000	520,000	1,097,978	24,984,073
1907-1908	5,349,000	17,880,000	4,420,000	22,300,000	520,000	1,189,412	26,217,690
1908-1909	5,222,653	17,770,000	4,536,000	22,300,000	530,000	1,171,466	26,028,295

† This Total includes receipts from Miscellaneous sources ranging from £1,426,000 to £2,276,000.

NATIONAL EXPENDITURE (1893-1909).

1. NATIONAL DEBT, ARMY AND NAVY.

Years.	National Debt Services.					Naval and Military Expenditure.		
	Interest on Funded Debt.	Terminable Annuities.	Unfunded Debt.	Sinking Fund.	Total.†	Army.	Navy,	Total.*
	£	£	£	£	£	£	£	£
1893-1894	16,132,688	6,393,504	668,305	1,826,592	25,200,000	17,939,700	14,048,000	33,566,571
1894-1895	16,220,544	6,422,410	461,830	1,718,263	25,000,000	17,899,800	17,545,000	35,595,000
1895-1896	16,110,274	6,442,138	118,367	2,152,774	25,000,000	18,459,800	19,724,900	38,334,000
1896-1897	16,108,037	7,149,743	112,534	1,453,994	25,000,000	18,269,800	22,170,000	40,655,000
1897-1898	16,063,925	7,261,159	139,300	1,361,307	25,000,000	19,329,900	20,850,000	40,395,000
1898-1899	16,009,557	7,281,703	139,254	1,394,459	25,000,000	19,999,700	24,068,000	44,283,000
1899-1900	15,242,192	7,290,491	489,234	19,876	23,216,657	43,552,900	26,000,000	69,815,000
1900-1901	15,106,532	2,756,613	1,798,034	—	19,835,489	91,505,900	29,520,000	121,445,000
1901-1902	15,076,023	2,754,425	3,681,467	—	21,685,532	92,262,000	31,030,000	123,787,000
1902-1903	15,033,212	7,327,439	4,667,719	73,544	27,282,058	69,055,262	31,170,000	100,825,000
1903-1904	16,390,445	6,538,014	2,422,435	1,464,087	27,000,000	36,499,057	35,476,000	72,368,000
1904-1905	15,938,911	6,518,738	2,116,447	2,237,679	27,000,000	29,163,838	36,830,000	66,270,000
1905-1906	15,899,397	6,548,668	1,943,848	3,449,338	28,025,027	28,848,900	33,300,000	62,365,000
1906-1907	15,849,862	4,739,306	1,745,781	5,982,622	28,500,000	27,765,000	31,434,000	59,199,000
1907-1908	15,773,533	3,596,992	1,584,074	8,365,294	29,500,000	27,115,000	31,141,000	58,256,000
1908-1909	15,652,807	3,550,707	1,341,359	7,455,126	28,000,000	26,840,000	32,188,000	59,028,000

† This Total includes the expense of managing the Debt.
* This Total includes sundry expenses for Ordnance Factories, Barrack Construction, etc.

2. CIVIL, POSTAL AND OTHER SERVICES.

Years.	Civil Administration.	Elementary Education.	Collection of Taxes.	Local Purposes.	Postal Services.	Total.*
	£	£	£	£	£	£
1893-1894	7,937,481	8,594,656	2,670,989	10,343,890	10,108,000	39,700,000
1894-1895	8,151,137	8,944,576	2,646,000	10,273,784	10,270,000	42,337,000
1895-1896	8,450,083	9,357,269	2,702,000	10,754,213	10,477,000	41,796,000
1896-1897	8,248,301	9,797,383	2,716,000	11,589,490	10,834,000	44,060,000
1897-1898	8,854,907	10,612,115	2,745,000	12,737,134	11,565,000	46,943,000
1898-1899	8,963,752	11,004,210	2,816,000	13,316,407	12,197,000	48,388,000
1899-1900	9,465,411	11,195,254	2,800,000	14,251,359	12,841,000	50,655,000
1900-1901	9,803,219	11,585,224	2,834,000	14,111,790	13,471,000	52,052,000
1901-1902	9,927,389	11,830,227	2,955,000	14,173,477	14,012,000	59,764,000
1902-1903	10,909,679	12,159,224	3,040,000	14,258,711	14,563,000	66,144,000
1903-1904	10,872,824	13,333,916	3,085,000	14,350,619	15,072,000	57,388,000
1904-1905	10,763,436	14,235,887	3,093,000	14,382,701	15,593,000	58,499,000
1905-1906	10,834,385	14,965,461	3,148,000	14,499,300	15,978,000	60,023,000
1906-1907	11,085,522	15,427,517	3,179,000	14,821,840	16,583,000	61,939,000
1907-1908	11,845,381	15,673,334	3,222,000	14,626,515	17,527,000	64,056,000

* This Total includes various charges not included in the foregoing amounts.

SUMMARY OF NATIONAL REVENUE AND EXPENDITURE.

Years.	National Revenue.	National Expenditure.	Surplus (+) or Deficit (−).	National Debt (Funded and Unfunded.)	Other Capital Liabilities.	Gross Capital Liabilities of the State.
	£	£	£	£	£	£
1893-1894	98,297,362	98,466,798	− 169,436	664,795,000	2,496,000	667,291,000
1894-1895	101,697,304	100,931,963	+ 765,341	655,909,000	3,093,000	659,002,000
1895-1896	109,339,946	105,130,474	+ 4,209,472	648,306,000	3,980,000	652,286,000
1896-1897	112,198,547	109,725,331	+ 2,473,216	641,124,000	4,048,000	645,172,000
1897-1898	116,016,314	112,338,304	+ 3,678,010	635,071,000	3,747,000	638,818,000
1898-1899	117,857,353	117,671,396	+ 185,957	628,022,000	7,372,000	635,394,000
1899-1900	129,804,566	143,687,068	−13,882,502	628,931,000	9,989,000	638,920,000
1900-1901	140,124,310	193,331,890	−53,207,580	689,470,000	14,464,000	703,934,000
1901-1902	152,712,089	205,236,305	−52,524,216	745,016,000	20,200,000	765,216,000
1902-1903	161,319,071	194,251,081	−32,932,010	770,779,000	27,570,000	798,349,000
1903-1904	151,340,652	156,756,209	− 5,415,557	762,630,000	31,868,000	794,498,000
1904-1905	153,182,782	151,768,875	+ 1,413,907	755,072,000	41,664,000	796,736,000
1905-1906	153,878,865	150,413,245	+ 3,465,620	743,220,000	45,770,000	788,990,000
1906-1907	155,036,486	149,637,664	+ 5,398,822	729,506,000	49,659,000	779,165,000
1907-1908	156,537,690	151,812,094	+ 4,725,596	711,476,000	50,850,000	762,326,000

LOCAL RECEIPTS AND EXPENDITURE OF UNITED KINGDOM.

Local Revenue.

Receipts from	England and Wales (1905-06)	Scotland (1906-07)	Ireland (1906-07)
	£	£	£
Rates	58,255,544	5,884,099	3,158,888
Water, Gas, and Electric Light	14,356,564*	3,351,288	—
Repayments	1,751,570	34,844	—
Tramways	5,942,127	1,187,436	182,859
Tolls, Dues, &c.	4,377,724	1,214,382	377,139
Rents, interest, &c.	2,925,964	256,749	277,812
Sales	414,311	128,122	—
Government contributions	19,849,983	2,558,248	1,440,825
Loans	24,485,932*	3,053,172	942,165
Miscellaneous	5,844,189	669,210	599,826
Total Receipts	138,203,908*	18,337,550	6,979,514

Local Expenditure.

Expenditure by	England and Wales (1905-06)	Scotland (1906-07)	Ireland (1906-07)
	£	£	£
Town and Municipal Authorities for Police, &c.	92,152,201	9,864,829	2,406,688
Unions and Parishes	17,337,282	1,634,292	1,329,690
County Authorities for Police, &c.	15,885,804	1,848,660	2,013,308†
Rural District and Parish Councils, &c.	4,347,289	15,640*	582,732‡
School Boards	—	3,264,369	—
Harbour Authorities	5,422,852	1,588,719	506,246
Other Authorities	1,334,270	87,619	163,943
Total	136,479,698	18,304,128	7,002,607

* By Parish Councils only.
† By Rural District Councils only.
‡ Irish Police and Education is mainly provided for from Imperial funds.

EMIGRATION AND IMMIGRATION.

Year.	Countries to which Emigrants proceeded.								
	British Empire.					Foreign Countries.			Grand Total.
	British N. America.	Australasia.	British S. Africa.	Other B. Colonies.	Total.	United States.	Other F. Countries.	Total.	
1893	24,732	11,203	13,097	—	—	148,949	—	—	208,814
1894	17,459	10,917	13,177	6,083	47,636	104,001	4,393	108,394	156,030
1895	16,622	10,567	20,234	6,223	53,646	126,502	5,033	131,535	185,181
1896	15,267	10,354	24,594	7,332	57,547	98,921	5,457	104,378	161,925
1897	15,571	12,061	21,109	7,602	56,343	85,324	4,793	90,117	146,460
1898	17,640	10,693	19,756	7,211	55,300	80,494	4,850	85,344	140,644
1899	16,410	11,467	14,432	6,695	49,004	92,482	4,876	97,358	146,362
1900	18,443	14,922	20,815	6,935	61,115	102,797	4,913	107,710	168,825
1901	15,757	15,350	23,143	7,880	62,130	104,195	5,390	109,585	171,715
1902	26,293	14,345	43,206	8,379	92,223	108,498	4,941	113,439	205,662
1903	59,652	12,375	50,206	8,719	130,952	123,663	5,335	128,998	259,950
1904	69,681	13,910	26,818	9,095	119,504	146,445	5,486	151,931	271,435
1905	82,437	15,139	26,307	9,079	132,962	122,370	6,745	129,115	262,077
1906	114 859	19,331	22,804	13,177	170,171	144,817	10,149	154,966	325,137
1907	151,216	24,767	20,925	15,764	212,672	170,264	12,744	183,008	395,680
1908	81,321	33,569	19,568	17,436	151,894	96,869	14,436	111,305	263,199
1909	85,943	37,658	22,026	—	—	109,654	—	—	288,865

The following table shows the recorded numbers of British and Irish emigrants and immigrants, to and from places outside Europe in intercensal periods since 1851.

Intercensal Period.	Emigrants.				Immigrants.	Excess of Emigrants.
	English.	Scotch.	Irish.	Total.		
1851-61	640,316	182,954	1,231,308	2,054,578	—	—
1861-71	649,742	158,226	866,626	1,674,594	—	—
1871-81	996,038	170,757	530,924	1,697,719	—	—
1881-91	1,572,717	278,626	741,883	2,593,226	846,049	1,747,177
1891-1901	1,109,556	187,905	465,273	1,762,734	1,028,017	734,717

RAILWAYS OF THE UNITED KINGDOM.

(*a*) Length of Line and Number of Passengers and Weight of Goods and Minerals Conveyed.

Year.	Length of line open at end of each year.				Number of Millions of Passengers conveyed (exclusive of Season-ticket Holders).				Weight of Goods and Minerals conveyed.			
	England and Wales.	Scotland.	Ireland	United Kngdom	England and Wales.	Scotland.	Ireland	United Kingdom	England and Wales.	Scotland.	Ireland.	United Kingdom.
	miles.	miles.	miles.	miles.	millions.	millions	million	millions.	tons.	tons.	tons.	tons.
1879	12,547	2,864	2,285	17,696	504	43	16	563	179,676,687	28,875,111	3,636,357	212,188,155
1880	12,656	2,907	2,370	17,933	541	46	17	604	200,393,357	31,315,939	3,596,333	235,305,629
1881	12,807	2,927	2,441	18,175	561	47	18	626	209,532,870	33,939,472	3,572,658	247,045,000
1882	13,052	2,940	2,465	18,457	587	49	19	655	217,495,012	34,882,965	3,837,856	256,215,833
1883	13,215	2,964	2,502	18,681	612	52	19	683	225,909,383	36,459,528	4,014,057	266,382,968
1884	13,340	2,999	2,525	18.864	621	54	20	695	219,975,155	35,526,921	3,825,810	259,327,886
1885	13,612	2,982	2,575	19,169	622	56	19	697	218,748,094	34.812,344	3,727,516	257,288,454
1886	13,678	3,022	2,632	19,332	641	65	19	725	216,311,997	34,669,389	3,645,257	254,626,643
1887	13,825	3,079	2,674	19,578	648	66	19	733	229,052,478	36,102,520	3,771,886	268,926,884
1888	13,982	3,097	2,733	19,812	654	68	20	742	239,282,927	38,691,030	3,774,482	281,748,439
1889	14,034	3,118	2,791	19,943	683	71	21	775	252,479,121	40,863,033	4,164,343	297,506,497
1890	14,119	3,162	2,792	20,073	721	75	21	817	259,150,162	39,672,307	4,296,958	303,119,427
1891	14,156	3,172	2,863	20,191	747	77	22	846	263,826,597	42,087,279	4,410,731	310,324,607
1892	14,242	3,188	2,895	20,325	763	79	23	865	260,490,183	44,814,736	4,321,459	309,626,378
1893	14,440	3,215	2,991	20,646	769	80	24	873	245,114,243	44,032,540	4,194,464	293,341,247
1894	14,536	3,328	3,044	20,908	804	83	25	912	279,236,660	40,583,958	4,637,015	324,457,633
1895	14,651	3,350	3,173	21,174	817	87	26	930	280,324,042	49,147,492	4,759,457	334,230,991
1896	14,708	3,391	3,178	21,277	860	94	27	981	300,163,796	51,591,506	4,712,707	356,468,009
1897	14,818	3,447	3,168	21,433	898	106	26	1030	315,876,495	53,466,221	5,046,530	374,389,246
1898	15,007	3,476	3,176	21,659	922	114	27	1063	316,385,474	57,065,392	5,113,419	378,564,285
1899	15,044	3,480	3,176	21,700	960	120	27	1107	350,070,663	58,344,583	5,207,779	413,623,025
1900	15,187	3,485	3,183	21,855	992	122	28	1142	359,524,742	60,253,461	5,151,310	424,929,513
1901	15,308	3,562	3,208	22,078	1021	124	27	1172	351,116,884	59,699,933	5,136,624	415,953,441
1902	15,358	3,580	3,214	22,152	1041	119	28	1188	368,290,573	62,048,440	5,273,622	436,612,635
1903	15,501	3,664	3,270	22,435	1047	119	29	1195	374,688,318	63,441,920	5,567,709	443,697,947
1904	15,626	3,712	3,296	22,634	1052	117	29	1198	379,444,000	64,715,000	5,678,000	449,837,000
1905	15,731	3,804	3,312	22,847	1054	116	29	1199	388,457,000	66,965,000	5,717,000	461,139,000
1906	15,859	3,841	3,363	23,063	1093	117	29	1240	413,321,000	69,629,000	5,840,000	488,790,000
1907	15,897	3,849	3,362	23,108	1110	119	29	1259	439,787,000	70,013,000	6,087,000	515,887,000
1908	15,999	3,843	3,363	23,205	1139	109	29	1278	419,633,000	65,957,000	6,006,000	491,596,000

(*b*) Capital Gross and Average Receipts and Proportion of Working Expenditure to Receipts.

Year.	Paid-up Capital at the end of each year.	Gross Receipts.				Average Receipts from Passenger and Goods Traffic per mile of line.				Proportion of Working Expenditure to Gross Receipts.			
	United Kingdom.	England and Wales.	Scotland.	Ireland.	United Kingdom.	England and Wales.	Scotland	Ireland.	United Kngdom	England and Wales.	Scotland	Ireland.	United Kngdom
	£	£	£	£	£	£	£	£	£	%	%	%	%
1879	717,003,469	52,479,379	6,688,886	2,608,438	61,776,703	4072	2236	1132	3391	52	52	56	52
1880	728.316,848	55,795,186	7,001,167	2,695,272	65,491,625	4253	2322	1144	3534	51	51	54	51
1881	745.528,162	57,240,132	7,278,591	2,636,277	67,155,000	4314	2388	1081	3572	52	51	56	52
1882	767.899,570	59,092,802	7,473,446	2,810,876	69,377,124	4377	2444	1130	3633	52	50	55	52
1883	784,921,312	60,521,538	7,685,493	2,855,239	71,062,270	4414	2512	1134	3673	53	52	55	53
1884	801,464,367	60,099,011	7,595,391	2,828,241	70,522,643	4335	2468	1108	3606	53	51	56	53
1885	815.858.055	59,320,905	7,433,337	2,801,532	69,555,774	4208	2403	1082	3505	53	51	55	53
1886	828,344,254	59,277,628	7,519,043	2,795,282	69,591,953	4137	2407	1046	3446	53	50	55	52
1887	845,971,654	60,502,925	7,610,667	2,829,784	70,943,376	4179	2390	1042	3469	53	50	54	52
1888	864,695,963	62,005,633	7,994,427	2,894,605	72,894,665	4231	2495	1043	3520	52	58	53	52
1889	876,595,166	65,675,969	8,307,850	3,041,198	77,025,017	4467	2576	1072	3696	52	49	54	52
1890	897,472,026	68,272,908	8,550,457	3,125,337	79,948,702	4617	2621	1102	3813	54	42	56	54
1891	919,425,121	69,836,382	8,814,623	3,209,602	81,860,607	4710	2689	1103	3881	55	53	54	55
1892	944,357,320	69,852,358	9,061,931	3,177,751	82,092,040	4679	2748	1081	3864	56	52	55	56
1893	971,323,353	68,252,504	9,130,718	3,248,670	80,631,892	4491	2738	1069	3722	57	52	55	57
1894	985,387,355	71,934,167	8,981,077	3,395,587	84,310,831	4671	2598	1096	3820	57	52	54	56
1895	1,001,110,221	72,791,758	9,642,286	3,488,658	85,922,702	4689	2772	1074	3844	56	50	54	56
1896	1,029,475,335	76,584,956	10,055,662	3,478,504	90,119,122	4909	2853	1074	4009	56	51	55	56
1897	1,089,765,095	79,759,776	10,438,957	3,538,321	93,737,054	5052	2914	1097	4123	57	52	56	57
1898	1,134,468,462	81,780,501	10,873,318	3,598,682	96,252,501	5136	3010	1112	4205	59	53	58	58
1899	1,152,317,501	86,708,006	11,246,215	3,712,844	101,667,065	5412	3103	1146	4417	60	54	57	59
1900	1,176,001,890	89,392,501	11,603,010	3,806,347	104,801,858	5529	3199	1173	4523	63	57	60	62
1901	1,195,564,478	90,703,770	12,020,696	3,834,349	106,558,815	5520	3198	1154	4511	64	56	63	63
1902	1,216,861,421	93,369,104	12,074,237	4,026,379	109,469,720	5646	3200	1209	4607	63	55	61	62
1903	1,245,028.917	94,556,147	12,214,781	4,117,786	110,888,714	5647	3158	1215	4594	63	55	61	62
1904	1,268.494.000	95,397,455	12,295,869	4,139,948	111,833,272	5642	3135	1212	4586	63	54	62	62
1905	1 282.801.000	96,931,000	12,492.000	4,109,000	113,532,000	5680	3107	1198	4601	63	54	62	62
1906	1,286.883,000	100.288.839	12,751.670	4,186,122	117,227,931	5814	3131	1204	4695	63	56	61	62
1907	1,294.066.000	104.230 355	12.983,726	4,334,862	121,548,923	6025	3172	1247	4854	64	58	61	63
1908	1,310,533,000	102,949,621	12,689,248	4,255,458	119,894.327	5907	3101	1225	4764	65	57	63	64

THE AVERAGE RATE OF DIVIDEND OR INTEREST for the fifteen years 1893–1907 is as follows: (1) England and Wales, 3.65 per cent.; (2) Scotland, 3.2 per cent.; (3) Ireland, 4 per cent.; United Kingdom, 3·6 per cent.

PROGRESS OF THE POST OFFICE.

Years ended 31st March.	Millions of Letters delivered.				No. of Letters delivered per head of population.				Millions of Newspapers, Book-packets, etc., delivered.				Millions of Post Cards delivered.			
	England and Wales.	Scotland.	Ireland.	United Kingdom.	England and Wales.	Scotland.	Ireland.	United Kingdom.	England and Wales.	Scotland.	Ireland.	United Kingdom.	England and Wales.	Scotland.	Ireland.	United Kingdom.
	Millions	Mill.	Millions	Millions					Millions	Mill.	Mill.	Millions	Millions	Mill.	Mill.	Millions
1881	981	105	79	1165	38	28	15	34	307	39	28	374	104	13	6	123
1882	1037	110	82	1229	40	29	16	35	338	43	31	412	114	15	6	135
1883	1078	117	86	1281	41	31	17	36	353	45	31	429	121	16	7	144
1884	1112	122	88	1322	42	32	18	37	359	48	30	437	129	17	8	154
1885	1148	123	89	1360	43	32	18	38	380	51	33	464	134	18	8	160
1886	1187	126	90	1403	43	33	18	39	402	54	34	490	144	20	8	172
1887	1240	129	91	1460	45	33	19	40	429	56	35	520	151	20	8	179
1888	1287	132	93	1512	46	34	19	41	451	56	35	542	159	21	9	189
1889	1326	136	95	1557	47	34	20	42	471	57	36	564	170	22	9	201
1890	1413	140	97	1650	50	35	20	44	502	59	37	598	184	23	10	217
1891	1463	143	100	1706	51	36	21	45	536	61	41	638	195	24	11	230
1892	1516	146	105	1767	52	36	22	47	554	62	42	658	205	26	11	242
1893	1532	152	106	1790	52	37	23	47	584	69	45	698	206	27	11	244
1894	1549	154	109	1812	52	37	24	47	619	74	46	739	209	27	12	248
1895	1502	156	113	1771	50	37	25	46	640	78	48	766	272	29	12	313
1896	1559	163	112	1834	51	39	25	47	682	88	51	821	268	32	14	314
1897	1607	168	118	1893	52	40	26	48	700	93	56	849	287	34	15	336
1898	1711	177	124	2012	55	41	27	50	730	94	54	878	309	36	15	360
1899	1860	191	136	2287	59	44	30	54	709	93	54	856	327	39	16	382
1900	1909	197	141	2247	60	45	31	55	720	94	52	866	343	41	17	401
1901	1977	202	144	2323	61	46	32	56	747	97	56	900	359	42	18	419
1902	2085	218	149	2452	64	49	33	59	784	96	56	936	380	46	19	445
1903	2208	221	150	2579	67	49	34	61	820	108	58	986	416	54	19	489
1904	2218	226	153	2597	66	49	35	61	826	108	61	995	517	72	25	614
1905	2239	229	156	2624	66	50	35	61	848	113	62	1023	617	87	31	735
1906	2313	238	156	2707	68	51	36	62	897	119	61	1077	676	91	33	800
1907	2397	248	158	2804	69	53	36	64	936	124	61	1122	705	91	34	831
1908	2443	255	164	2863	70	54	38	65	950	126	63	1140	729	92	36	858
1909	2482	256	167	2907	70	53	38	65	962	127	66	1155	732	91	36	860

Year.	No. of Parcels Despatched. United Kingdom.	No. of Money Orders issued.				No. of Postal Orders issued.			
		England and Wales.	Scotland.	Ireland.	United Kingdom.	England and Wales.	Scotland.	Ireland.	United Kingdom.
1881	—	12,745,161	1,301,974	891,997	14,939,132	3,203,293	251,050	191,200	3,645,543
1882	—	12,254,728	1,235,062	860,880	14,350,670	6,291,225	395,133	348,601	7,034,959
1883	—	11,761,819	1,295,931	825,047	13,882,797	10,032,906	557,600	526,477	11,116,983
1884	—	10,556,599	1,240,798	771,834	12,569,231	15,069,842	872,561	834,351	16,776,754
1885	—	8,931,834	1,112,329	659,157	10,703,320	21,528,637	1,342,489	1,213,889	24,085,015
1886	—	8,133,411	1,061,736	611,912	9,807,059	26,985,336	1,734,466	1,505,528	30,225,360
1887	—	7,932,507	1,102,890	606,586	9,641,983	31,370,892	2,085,717	1,742,145	35,198,754
1888	38,794,000	7,630,441	1,081,836	592,495	9,304,772	34,909,632	2,386,813	1,942,608	39,239,053
1889	42,276,000	7,384,308	1,056,513	552,542	8,961,068	38,672,557	2,739,175	2,124,159	43,526,891
1890	45,529,000	7,352,013	1,072,036	571,019	9,027,363	42,505,381	3,075,222	2,290,195	47,870,798
1891	48,674,000	7,291,330	1,024,305	546,757	8,862,392	43,232,000	3,152,000	2,338,000	48,722,000
1892	51,608,000	7,394,124	1,031,999	539,106	8,965,229	46,614,000	3,429,000	2,503,000	52,546,000
1893	53,525,000	7,450,938	1,011,080	536,363	8,998,381	50,100,000	3,735,000	2,648,000	56,483,000
1894	56,668,000	7,634,760	1,002,844	538,575	9,176,179	50,442,000	3,908,000	2,770,000	57,120,000
1895	59,438,000	7,732,151	1,006,681	533,962	9,272,794	53,434,000	4,195,000	2,934,000	60,563,000
1896	63,081,000	7,851,428	1,010,889	544,836	9,407,153	56,331,000	4,547,000	3,079,000	63,957,000
1897	66,793,000	7,806,821	960,769	539,647	9,307,237	59,012,000	4,833,000	3,195,000	67,040,000
1898	71,399,000	8,120,826	992,505	559,327	9,672,658	62,607,000	5,252,000	3,373,000	71,232,000
1899	74,499,000	8,420,631	1,041,216	579,356	10,041,203	67,242,000	5,808,000	3,542,000	76,592,000
1900	79,780,000	9,513,474	1,077,100	629,498	11,220,072	71,986,000	6,245,000	3,695,000	81,926,000
1901	85,447,000	9,980,749	1,141,289	678,245	11,800,283	74,701,000	6,564,000	3,920,000	85,185,000
1902	89,319,000	10,351,461	1,178,335	715,788	12,245,584	77,474,000	5,902,000	4,012,000	88,388,000
1903	93,547,000	9,649,193	1,120,216	640,670	11,410,079	80,650,000	7,242,000	4,158,000	92,050,000
1904	97,049,000	9,145,325	1,007,477	580,932	10,733,725	78,517,000	7,103,000	4,190,000	89,810,000
1905	100,579,000	9,139,484	993,921	581,630	10,715,035	78,967,000	7,171,000	4,234,000	90,372,000
1906	103,876,000	9,244,499	990,470	597,348	10,832,317	83,896,000	7,695,000	4,479,000	96,070,000
1907	108,753,000	8,997,720	1,004,395	593,138	10,595,253	87,597,000	8,294,000	4,693,000	100,584,000
1908	113,000,000	8,668,230	992,858	571,860	10,232,448	—	—	—	122,893,000

TELEGRAPHS AND TELEPHONES.

No. in Thousands.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.	1908.	1909.
(1) Telegrams . .	92,648	93,505	95,773	93,462	92,625	93,414	93,771	89,493	85,969	84,825
(2) Telephone Calls .	8,981	10,082	11,574	13,468	15,488	18,008	19,856	21,000	22,860	23,502

SAVINGS BANKS OF THE UNITED KINGDOM.

(a) POST OFFICE SAVINGS BANKS.

	Number of Depositors.				Amount Received during Year including Interest.			
	England and Wales.	Scotland.	Ireland.	United Kingdom.	England and Wales.	Scotland.	Ireland.	United Kingdom.
					£	£	£	£
1892	5,027,431	199,062	225,823	5,452,316	22,653,356	635,287	1,302,651	24,591,294
1893	5,292,178	220,117	235,944	5,748,239	24,352,782	741,479	1,414,867	26,509,128
1894	5,610,032	238,861	259,870	6,108,763	29,602,953	988,234	1,864,165	32,455,352
1895	5,912,496	260,602	280,499	6,453,597	31,071,405	1,236,372	1,993,428	34,301,205
1896	6,276,493	283,566	301,976	6,862,035	35,177,703	1,420,754	2,120,537	38,718,994
1897	6,612,639	304,636	322,486	7,239,761	34,772,070	1,477,123	2,173,947	38,423,140
1898	6,960,995	327,437	342,070	7,630,502	36,382,192	1,566,930	2,251,020	40,200,142
1899	7,332,728	351,236	362,716	8,046,680	38,154,169	1,663,247	2,328,565	42,145,981
1900	7,685,317	372,801	381,865	8,439,983	39,596,852	1,671,225	2,394,335	43,662,412
1901	7,999,764	388,072	399,839	8,787,675	40,600,981	1,672,592	2,459,741	44,733,314
1902	8,303,586	405,673	423,902	9,133,161	41,117,126	1,776,469	2,714,377	45,607,972
1903	8,537,991	418,981	446,880	9,403,852	39,854,146	1,699,716	2,762,222	44,316,084
1904	8,777,231	431,391	465,095	9,673,717	39,795,478	1,675,423	2,637,699	44,108,600
1905	9,027,112	451,627	484,310	9,963,049	41,313,924	1,828,833	2,725,066	45,867,823
1906	9,351,739	474,619	506,426	10,332,784	43,011,551	1,864,887	2,771,870	47,648,308
1907	9,672,200	494,914	525,441	10,692,555	43,456,987	1,822,891	2,657,385	47,937,263
1908	9,966,540	515,151	546,560	11,018,251	43,625,116	2,060,779	2,847,642	48,543,537

(b) TRUSTEE SAVINGS BANKS.

	Number of Depositors.				Amount Received during Year including Interest.			
	England and Wales.	Scotland.	Ireland.	United Kingdom.	England and Wales.	Scotland.	Ireland.	United Kingdom.
					£	£	£	£
1892	1,065,024	387,891	49,005	1,501,920	5,937,807	2,830,666	372,727	9,141,200
1893	1,048,579	376,062	46,505	1,471,146	5,769,178	2,973,494	355,457	9,098,129
1894	1,038,246	385,190	47,510	1,470,946	6,439,860	3,473,213	441,376	10,354,449
1895	1,032,632	435,474	48,123	1,516,229	6,608,403	4,016,439	457,748	11,082,590
1896	1,016,798	430,194	48,911	1,495,903	6,932,435	4,623,017	468,677	12,024,129
1897	1,026,804	450,895	49,518	1,527,217	6,944,721	4,608,836	461,999	12,015,556
1898	1,045,508	468,714	49,725	1,563,947	6,990,276	4,796,769	457,131	12,244,176
1899	1,066,263	484,898	50,324	1,601,485	7,324,596	4,940,554	472,495	12,737,645
1900	1,078,705	496,000	50,318	1,625,023	7,177,591	4,606,333	463,748	12,247,672
1901	1,090,832	505,179	51,191	1,647,202	7,292,678	4,709,582	487,253	12,489,513
1902	1,102,737	515,361	52,296	1,670,394	7,278,089	5,025,015	502,081	12,805,185
1903	1,114,782	521,489	53,346	1,689,617	7,281,185	4,936,887	494,820	12,712,892
1904	1,123,912	527,373	53,481	1,704,766	7,972,312	5,367,247	521,689	13,861,248
1905	1,138,509	539,690	53,670	1,731,869	8,233,238	5,765,715	527,063	14,526,016
1906	1,153,529	552,838	54,632	1,760,999	8,424,744	5,768,553	534,978	14,728,275
1907	1,167,693	559,777	54,782	1,782,252	8,404,851	5,500,986	518,951	14,424,788
1908	1,169,585	564,285	54,163	1,788,033	8,149,343	5,916,894	510,088	14,586,325

(c) AMOUNTS DUE TO DEPOSITORS.

Year.	Post Office Savings Bank.				Trustee Savings Banks.			
	England and Wales.	Scotland.	Ireland.	United Kingdom.	England and Wales.	Scotland.	Ireland.	United Kingdom.
	£	£	£	£	£	£	£	£
1892	69,873,571	1,768,866	4,210,642	75,853,079	30,381,282	10,018,053	1,986,114	42,385,449
1893	74,277,260	1,980,225	4,340,156	80,597,641	29,878,105	10,478,773	1,886,722	42,243,600
1894	81,960,372	2,330,014	4,975,680	89,266,066	30,086,918	11,390,491	1,997,495	43,474,904
1895	89,420,027	2,844,706	5,604,242	97,868,975	30,625,114	12,600,170	2,087,397	45,312,681
1896	98,531,078	3,413,785	6,153,778	108,098,641	30,572,274	13,946,199	2,181,214	46,699,687
1897	105,255,253	3,935,926	6,705,607	115,896,786	31,347,428	14,865,272	2,252,097	48,464,797
1898	111,505,005	4,414,333	7,224,761	123,144,099	32,001,435	15,696,459	2,297,478	49,995,372
1899	117,619,724	4,787,810	7,711,071	130,118,605	32,684,007	16,365,619	2,355,403	51,404,929
1900	122,365,193	5,126,299	8,058,153	135,549,645	32,680,718	16,442,116	2,333,083	51,455,917
1901	126,575,173	5,381,468	8,436,275	140,392,916	32,658,585	16,924,024	2,383,777	51,966,386
1902	129,900,928	5,662,188	9,041,972	144,605,088	32,598,966	17,458,665	2,447,450	52,505,081
1903	130,799,452	5,786,898	9,548,797	146,135,147	32,415,418	17,627,502	2,497,419	52,540,339
1904	132,575,636	5,911,507	9,852,211	148,339,354	32,038,293	17,754,059	2,488,505	52,280,857
1905	135,668,450	6,205,339	10,237,351	152,111,140	32,011,798	18,212,898	2,488,740	52,723,436
1906	139,042,722	6,364,709	10,589,015	155,996,446	32,022,395	18,461,569	2,525,335	52,009,299
1907	140,587,592	6,336,571	10,575,914	157,500,077	31,594,580	18,045,771	2,513,244	52,153,595
1908	143,160,340	6,651,414	10,836,460	160,648,214	30,394,407	18,549,175	2,466,679	51,715,950

AIDS TO THE STUDY OF ENGLISH.

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PREFATORY REMARKS.

The aids here offered do not pretend to be a full and formal treatment of the subject, such as would necessitate a methodical exposition of the grammar of the language as a basis for the principles of correct and effective rendering of the English language. Our aim, for instance, in dealing with "Common Errors of Speech," is rather to enable our readers to avoid all solecisms of speech without renewing their study of formal grammar, such as occupied their unwilling attention when at school. This we purpose doing by setting, side by side, the errors commonly made and the correct forms of expression, as illustrations of the particular rule under consideration. The writer has kept constantly in mind the fact that this sub-section, like the rest of the work, is intended primarily for the purpose of reference. Great care accordingly has been taken to make references easy by clear arrangement, and by the use of such headings and varieties of type as to make evident, at a glance, the different topics treated and the relation between them. The rules and examples given in treating of "Common Errors of Speech" will be found particularly helpful by any one who has not had the advantage of acquiring the correct use of his mother tongue in early life. The subjects dealt with in the subsequent parts of this section, with the exception of the "Derivation of English Words," are almost solely for reference. Persons who are unacquainted with Latin and Greek would find it well worth acquiring a knowledge of Latin and Greek roots and prefixes as an aid to the knowledge of English, since they serve as a key to the right meaning and application of a large proportion of English words.

COMMON ERRORS OF SPEECH.

The commonest forms of error in speaking and writing fall naturally under the following headings: 1. Grammatical Errors. 2. Errors of Style. 3. Errors in Pronunciation. We may, therefore, conveniently treat them under these headings and in the above order. It must, however, be remembered that English is a living language and, as such, subject to change and modification, so that what was correct a century ago is not necessarily correct at the present time. Changes in grammatical forms, in the meaning of words, in diction, and in pronunciation are continually going on, and we must take account of these changes; otherwise, in our endeavours to avoid laxity we shall fall into pedantry, since it is important to remember that what is, strictly speaking, incorrect according to rule, often becomes correct according to usage.

As types of the changes above referred to we may mention the following:—

Change in Grammatical Form. Many verbs which originally belonged to the strong conjugation (i.e. formed their past tense by vowel change and past participle by the addition of -en, as with *write, wrote, written*), have now become weak, thus conforming to the general rule for the conjugation of English verbs. For example, *helped, lighted, clothed, crowed*, represent the earlier strong forms *help, lit, clad, crew.*

Change in the Meaning of Words. Words are continually changing in meaning, some few improving in the process, but the majority deteriorating, as witness the modern meaning of the following words compared with their original meaning, which is given in brackets—censure (opinion), villain (farm-labourer), caitiff (captive), knave (boy), cunning (having knowledge or skill), crafty (skilled in a craft).

Changes in Diction. Certain words and modes of expression when first introduced into the language are of the nature of slang and belong to the spoken rather than the written language; but, in course of time, these words and phrases either drop out of use altogether or become incorporated in the language.

Changes in Pronunciation. The pronunciation of to-day is not in all respects that of a hundred or even of fifty years ago. The changes which have taken place affect the vowel sounds in certain words; for instance, we now say *oblige* instead of *obleege*. The greatest change, however, has taken place in *accentuation*, the increasing tendency being to throw the accent as far back as possible. Many words, accordingly, are still in a transition stage, and allow of two pronunciations; for instance, we may say lab′oratory or labor′atory, con′tents or contents′, de′tail or detail′,

1. GRAMMATICAL ERRORS.

The English language, though not now a highly inflected one, has retained a certain number of case and verbal inflexions, and it is of vital importance that we should use these varying forms correctly. The pronouns, which have retained the greatest number of case inflexions, are a fertile source of error, and will be treated first.

PRONOUNS.

Personal Pronouns.

	1st Person.		2nd Person.		3rd Person.	
Nom. Case	I	we	thou	you	he, she, it	they
Obj. Case	me	us	thee	you	him, her, it	them

Relative Pronouns. **Interrogative Pronouns.**

	m, f.	n.	m, f, n.			
Nom. Case	who	which	that	who?	which?	what?
Obj. Case	whom	which	that	whom?	which?	what?

Demonstrative Pronouns.

	sing:	plural	sing:	plural
Nominative } Objective }	this	these	that	those

I.

Rule.—The Subject of a verb must be in the Nominative Case.

COMMON ERRORS.	CORRECTED FORMS.
Who is there? *Me.*	Who is there? *I* (am).
He writes better than *us.*	He writes better than *we* (do).
I am not so old as *him.*	I am not so old as *he* (is).
You are taller than *her.*	You are taller than *she* (is).
Mary plays better than *me.*	Mary plays better than *I* (do).
May John and *me* go out?	May John and *I* go out?
He is one *whom* I think will succeed.	He is one *who* (I think) will succeed.
Say *whom* you know will come.	Say *who* (you know) will come.

II.

Rule.—The Object of a verb must be in the Objective Case.

COMMON ERRORS.	CORRECTED FORMS.
He invited you and *I.*	He invited you and *me.*
Who do you think we saw?	*Whom* do you think we saw?
Who did you ask?	*Whom* did you ask?
Let you and *I* lead the way.	Let you and *me* lead the way.
I know *who* you mean.	I know *whom* you mean.

III.

Rule.—The noun or pronoun governed by a preposition must be in the Objective Case.

COMMON ERRORS.	CORRECTED FORMS.
Between you and *I.*	Between you and *me.*
Who were you speaking to?	To *whom* were you speaking?
They all returned save *he.*	They all returned save *him.*
Who is your letter from?	From *whom* is your letter?
Who is this for?	For *whom* is this?
They all walked but *I.*	They all walked but *me.*
Who do you refer to?	To *whom* do you refer?
The girl *who* I speak of is your sister.	The girl of *whom* I speak is your sister.
Who are you relying on?	On *whom* are you relying?

It should be noted that in several of the preceding examples the preposition, instead of immediately preceding the word it governs, is misplaced at the end of the sentence, and this no doubt has led to the error in each case. It must be borne in mind that a sentence should never end with a preposition.

IV.

The case of a pronoun after *as* or *than* depends on the relation in which it stands to the verb which is understood; for instance:—

He likes you better than I. = He likes you better than I (do).
He likes you better than me. = He likes you better than (he likes) me.

She spoke to you as well as I. = She spoke to you as well as I (did).
She spoke to you as well as me. = She spoke to you as well as (to) me.

The personal pronouns and the corresponding possessive adjectives must be carefully distinguished.

Personal Pronouns.—I, thou, he, she, it, we, you, they and their respective cases.

Possessive Adjectives.—My, thy, his, her, its, our, your, their.

COMMON ERRORS.	CORRECTED FORMS.
He hurt *his* self.	He hurt *him*self.
They pride *their*selves on their wealth.	They pride *them*selves on their wealth.
It is no use *me* going.	It is no use *my* going.
What is the good of *him* talking?	What is the good of *his* talking?
Pardon *me* not writing.	Pardon *my* not writing.
It is no good *them* waiting.	It is no good *their* waiting, *or*, *Their* waiting is useless.

The forms of the *Reflexive Pronouns* must be carefully distinguished. We must say myself, thyself, itself, ourselves, yourselves; but *him*self (not his self), *them*selves (not their selves). This inconsistency has no doubt given rise to the errors illustrated in the first two sentences in the preceding table.

In the last four sentences quoted above: *going*, *talking*, *writing*, *waiting*, are all *Verbal Nouns*, and must, therefore, be preceded by an adjective and not a pronoun.

REMARKS ON SPECIAL PRONOUNS.

I.

Each, Everyone, One, Either, Neither, are singular pronouns, and must be followed by the verb in the singular, while any pronoun or possessive adjective which refers to one of the above pronouns must also be in the singular number.

COMMON ERRORS.	CORRECTED FORMS.
Each of the men came forward in *their* turn.	*Each* of the men came forward in *his* turn.
Neither of the men got the post *they* wanted.	*Neither* of the men got the post *he* wanted.
I think *one* ought to help *their* friends.	I think *one* ought to help *one's* friends.
Every one must do *their* best.	*Every one* must do *his* best.
No one thinks *themselves* perfect.	*No one* thinks *himself* perfect.
If *any one* thought so *they* were mistaken.	If *any one* thought so *he* was mistaken.
If *either* of these boys wins a prize *they* will be fortunate.	If *either* of these boys wins a prize *he* will be fortunate.
Each one thought *their* own plan the best.	*Each one* thought *his* own plan the best.

II.

Caution.—Either and Neither can only have reference to one of *two* persons or things, and must not be used with reference to more than two. Say: "Either of the two," but "Any one of the three."

Similar care must be exercised in the use of the *Reciprocal Pronouns* :—

each other
the one . . the other } refer to two only.
one . . another are used of more than two.

COMMON ERRORS.	CORRECTED FORMS.
Neither of these various plans will succeed.	*Not one* (or none) of these various plans will succeed.
Either of those three men would fill the post well.	*Any one* of those three men would fill the post well.
Which of those four books did he choose ? *Neither.*	Which of those four books did he choose ? *None.*
These three children love *each other.*	These three children love *one another.*
Those two brothers are devoted to *one another.*	Those two brothers are devoted to *each other.*
All the prize-winners congratulated *each other.*	All the prize-winners congratulated *one another.*

III.

Caution 1. The relative pronoun *which* must have a noun or pronoun, and not a clause for its antecedent. Do not say, "He is very amusing *which* makes him popular," but, "He is very amusing *and that* makes him popular." Do not say, "The boy was frightened *which* caused him to tell a lie," but, "The boy was frightened *and that* caused him to tell a lie."

Caution 2. Emphatic pronouns have the same form as reflexive pronouns, but should not be confounded with them. The latter are used apart from another pronoun, as "He killed himself"; the former in apposition with the pronoun it emphasizes, as "I myself did it."

IV.

Many people have a pardonable difficulty in determining when to use the relative pronoun *that*, instead of *who* or *which*. A few examples will make the distinction clear.

That has been well named the Defining Relative, because the relative clause which it introduces serves to define more precisely what person or thing is indicated; e.g., (*a*) This is the house (*that* Jack built). (*b*) The boy (*that* brought the letter) is still here. The subordinate clause in (*a*) indicates *what house* is meant; and in (*b*) *what boy* is waiting.

Who and **Which**, on the other hand, do not serve to define more precisely the person or thing to which they refer, but merely give some additional information about it, "who"=and he (*or* and she, and it, and they).
"which"=and it; e.g.,

(*a*) Your father, *who* called yesterday, told us of your return. (*b*) His eldest son, *whom* we all like very much, stayed with us last Christmas. (*c*) The rebels, *who* were now greatly exasperated, lost all self-control. (*d*) Your kindness, *which* I greatly appreciate, has relieved me of all anxiety.

In sentences (*a*) and (*b*) it is self-evident that the words *father* and *eldest son* need no further defining.

THE CHOICE OF PRONOUNS.

Great care must be exercised in the use of pronouns in order that ambiguity may be avoided. As a ludicrous instance of this ambiguity we may quote the doctor's advice: "If fresh milk does not agree with the child boil it."

A pronoun is a convenient substitute for a noun, but it has its limits of usefulness, as in the following statement about a dog that had stolen a leg of mutton and dropped it. "*It* is fortunate that *it* dropped *it* and ran away to *its* owner.

Caution.—The use of *it* and *they* with reference to the same antecedent must be carefully avoided; e.g., This crew showed a marked falling off from the high standard *it* attained last year, when *they* won several races. Similarly —The masculine *who* and the neuter *it* should not be used with reference to the same antecedent; e.g., 'Twas love's mistake *who* fancied what *it* feared.

Certain mistakes seem too illiterate to mention here, yet it may be well to allude to them in passing. Among such mistakes may be included the use of *as* and *what* in the place of the relative pronouns *who* and *that*. The pages of Dickens are full of such instances, and most readers will recall one of the advertisements of the immortal Mrs. Jarley's Waxworks, which begins:—

"If I had a donkey *what* wouldn't go
To see Mrs. Jarley's waxwork show . . ."

As instances of the misuse of "as," the following may be given: (*a*) I knew the man *as* said it. (*b*) The boy *as* was injured is now in the hospital. (*c*) Did you see the person *as* called ? (*d*) The parcel *as* came was for you.

In all the above sentences *that* should be substituted for *as*.

Caution.—Avoid using *as* as a relative pronoun unless it has *same* or *such* for its antecedent, as in the following examples: Such aid *as* I can give is at your service. Things are not now the *same as* they were.

FORMS OF THE VERB.

Verbs are inflected or modified in form to indicate changes in voice, mood, tense, number, and person, and as mistakes frequently arise owing to ignorance of those inflexions, the following forms of the verb should be carefully studied.

INDICATIVE MOOD.

	Present Tense.		Past Tense.	
To be	I am	We are	I was	We were
	Thou art	You are	Thou wast	You were
	He is	They are	He was	They were
To have				
	I have	We have	I had	We had
	Thou hast	You have	Thou hadst	You had
	He has	They have	He had	They had
To do				
	I do	We do	I did	We did
	Thou dost	You do	Thou didst	You did
	He does	They do	He did	They did
To love				
	I love	We love	I loved	We loved
	Thou lovest	You love	Thou lovedst	You loved
	He loves	They love	He loved	They loved

I.

Rule.—A verb must agree with its subject in number and person.

EXAMPLES OF THE USE OF SINGULAR FOR PLURAL.

COMMON ERRORS.	CORRECTED FORMS.
You *was* not there.	You *were* not there.
There *is* many *thinks* as I do.	There *are* many who *think* as I do.
Time and tide *waits* for no man.	Time and tide *wait* for no man.
The jury *was* convinced of the man's innocence.	The jury *were* convinced of the man's innocence.
This is one of the best songs that *has* ever been sung.	This is one of the best songs that *have* ever been sung.
There *is* lots of time.	There *is* plenty of time.
You *was* angry but you *was* just.	You *were* angry but you *were* just.
She is one of those people that *knows* everything.	She is one of those people that *know* everything.

Remark 1.—When a collective noun (such as jury, crowd, army, senate) is used it should be followed by the verb in the plural if it is regarded as consisting of individuals acting separately, otherwise it must be followed by the verb in the singular number. Hence we say: "The jury *were* agreed"; but "The army *was* defeated."

Remark 2.—There is an apparent exception to the above rules about the agreement of the verb with its subject in such sentences as the following: "Every bush and every

tree *was* in bud." This seems due to the strongly separative force of *every*.

EXAMPLES OF THE USE OF THE PLURAL FOR THE SINGULAR.

COMMON ERRORS.	CORRECTED FORMS.
Neither you nor I *are* right.	Neither of us *is* right, or, We are neither of us right.
Are either of these books yours ?	Is either of these books yours ?
Every one of you *are* to blame.	Every one of you *is* to blame.
Six weeks' salary *have* been paid.	Six weeks' salary *has* been paid.
These *sort* of people *are* very unreasonable.	People of this sort are very unreasonable.
Each of these sisters *are* very tall.	Each of these sisters *is* very tall.
These kind of excuses *are* useless.	This kind of excuse *is* useless.
When he or his wife *come* we are delighted.	When he or his wife *comes* we are delighted.
The fleet *await* orders.	The fleet *awaits* orders.
Chaucer's "Canterbury Tales" *are* a great work.	Chaucer's "Canterbury Tales" *is* a great work.
The man with his two sons *were* present.	The man *was* present with his two sons.
Aren't I grand ?	*Am* I not grand ?
The number of failures *were* very great.	The number of failures *was* very great.

Remark 3.—In the last example, as in many others, the error is due to the fact that the verb is *attracted* into agreement with the nearer noun.

II.

An Intransitive Verb denotes an action or a state which is confined to the subject of that verb, as, I sleep, I run, I laugh, I wait. Certain intransitive verbs, however, such as *I am, I become, I seem*, need the addition of some other word to enable them to make a complete statement, and this word may be called the completion or *Complement*.

Rule.—The Complement of an intransitive verb must be in the same case as the subject of that verb.

Subject (Nominative Case).	Intransitive Verb.	Complement (Nominative Case).
I	am	he
It	is	I
James	became	king
He	seems	the leader

COMMON ERRORS.	CORRECTED FORMS.
That's *him*.	That is *he*.
I would go if I were *her*.	I would go if I were *she*.
Who is there ? It is *me*.	Who is there ? It is *I*.
Whom do you think I am ?	*Who* do you think I am ?
Whom does she appear to be ?	*Who* does she appear to be ?
I thought it was *her*.	I thought it was *she*.
I wonder *whom* it is.	I wonder *who* it is ?
She is not *me* and I am not *her*.	She is not *I* and I am not *she*.
If any one comes to meet you it will be *me*.	If any one comes to meet you it will be *I*.

III.

Many mistakes in connexion with the verb arise from a confusion between the forms of the different parts of the verb, the Past Tense and the Past Participle being especially liable to be mistaken for each other. The following is a list of verbs about which mistakes are most frequently made :—

PRES. TENSE.	PRES. PART.	PAST TENSE.	PAST PART.
beat	beating	beat	beaten
begin	beginning	began	begun
break	breaking	broke	broken
burst	bursting	burst	burst
come	coming	came	come
do	doing	did	done
drink	drinking	drank	drunk
eat	eating	eat (ate)	eaten
get	getting	got	got
go	going	went	gone
ring	ringing	rang	rung
say	saying	said	said
see	seeing	saw	seen
shake	shaking	shook	shaken
show	showing	showed	shown
shrink	shrinking	shrank	shrunk
sing	singing	sang	sung
sink	sinking	sank	sunk
speak	speaking	spoke	spoken
spring	springing	sprang	sprung
steal	stealing	stole	stolen
swim	swimming	swam	swum
take	taking	took	taken
throw	throwing	threw	thrown
wake	waking	woke, waked	woke, waked
write	writing	wrote	written

COMMON ERRORS.	CORRECTED FORMS.
She has *broke* a glass.	She has *broken* a glass.
Have you *drank* the milk ?	Have you *drunk* the milk ?
He has *stole* a watch.	He has *stolen* a watch.
I have often *sang* that song.	I have often *sung* that song.
She *sung* well.	She *sang* well.
It has just *began* to rain.	It has just *begun* to rain.
The ship *sunk* in the bay.	The ship *sank* in the bay.
They *drunk* your health.	They *drank* your health.
The boy *rung* the bell.	The boy *rang* the bell.
We *done* our best.	We *did* our best.
I *see* him yesterday.	I *saw* him yesterday.
This mistake *sprung* from ignorance.	This mistake *sprang* from ignorance.
I *seen* it myself.	I *saw* it myself.
He *says* to me last night, "Have you *showed* it to her ?"	He *said* to me last night, "Have you *shown* it to her ?"
John has often *beat* me at chess.	John has often *beaten* me at chess.
Have you *wrote* the letter ?	Have you *written* the letter ?
He has *eat* nothing to-day.	He has *eaten* nothing to-day.

Remark. To avoid errors of this kind, learn the forms of the verbs given above *for* the Past Tense and Past Participle, and with "has" or "have" use the past participle. e.g., he has *drunk* the milk, not he has *drank* the milk.

IV.

Verbs somewhat similar in form are often confused with one another, especially the following verbs :—

PRES. TENSE.	PRES. PART.	PAST TENSE.	PAST PART.
lie	lying	lay	lain
lay	laying	laid	laid
rise	rising	rose	risen
raise	raising	raised	raised
fly	flying	flew	flown
flow	flowing	flowed	flowed
sit	sitting	sat	sat
set	setting	set	set
hang	hanging	hanged	hanged (of persons)
		hung	hung (of things)

Remark. *To lie* is an intransitive verb and can, therefore, never have an object.

To lay is transitive, being the causative form of the verb *to lie*, since *to lay = to cause to lie*. But the right use of these two verbs "lie" and "lay" is very puzzling, because "lay" is both the present tense of the transitive verb and the past tense of the intransitive verb. Compare the two sentences: (1) *Lay* the book on the table. (2) She *lay* on the sofa. In (1) "lay" is the present tense of the transitive verb *to lay*. In (2) "lay" is the past tense of the intransitive verb *to lie*.

COMMON ERRORS.	CORRECTED FORMS.
The book was *laying* on the table.	The book was *lying* on the table.
I *laid* in bed till six o'clock.	I *lay* in bed till six o'clock.
She *lay* down the money.	She *laid* down the money.
The master *rose* the boy's wages.	The master *raised* the boy's wages.
There he *sets* by the fire.	There he *sits* by the fire.
The river has *overflown* its banks.	The river has *overflowed* its banks.
The man was *hung*.	The man was *hanged*.

V.

It must be borne in mind that the conjunctions—

either—or } are mutually exclusive.
neither—nor }

Consequently, if two singular subjects are connected by these conjunctions the verb must be in the singular number to agree with one *or* other of the alternative subjects.

Do not say: "Either John or Mary *are* going;" but, "Either John or Mary *is* going.

When, however, the persons of the two subjects differ, this construction should be avoided, unless the verb would agree equally with either subject.

We cannot say: "Either he or I *am* going." We must say: "He is going or else I am;" or, "Either he will go or I (shall)."

In the following incorrect sentences the verb does not agree in *person* with its subject. Here, also, as in former instances, the error is frequently due to attraction.

COMMON ERRORS.	CORRECTED FORMS.
I am the one who *am* responsible.	I am the one who *is* responsible.
Is it you who *has* done this?	Is it you who *have* done this?
Thou art the man who *hast* betrayed us.	Thou art the man who *has* betrayed us.
You are the person who *are* referred to.	You are the person who *is* referred to.
She *don't* agree with me.	She *does* not agree with me.
Thinks I to myself.	*Thought* I to myself.
He *do* sing well.	He *does* sing well.
It *don't* matter to me.	It *does* not matter to me.
"Who are you?" *says* I.	"Who are you?" *said* I.

TENSE.

I.

The Future Tense is a stumbling-block to many; we therefore give a model form below:—

Future Tense.

I shall write	We shall write
Thou wilt write	You will write
He will write	They will write

The difficulty which this tense presents to many people is due to the fact that it is conjugated with the help of two auxiliaries, *Shall* and *Will*, and they use the wrong auxiliary.

It is well to note the difference in meaning produced by substituting one auxiliary for the other—

I shall write (futurity simply). I *will* write (determination).

Thou wilt write (futurity). Thou *shalt* write (command).
He will write (futurity). He *shall* write (compulsion).
We shall write (futurity). We *will* write (determination).
You will write (futurity). You *shall* write (command).
They will write (futurity). They *shall* write (compulsion)

COMMON ERRORS.	CORRECTED FORMS.
I *will* be drowned and no one *shall* save me.	I *shall* be drowned and no one *will* save me.
What *will* I do?	What *shall* I do?
Do you think we *will* succeed?	Do you think we *shall* succeed.
Will I send the message?	*Shall* I send the message?
We *will* be starting soon.	We *shall* be starting soon.
What *shall* you do in that case.	What *will* you do in that case.
They say they *shall* know the result to-morrow.	They say they *will* know the result to-morrow.

II.

Tense of the Infinitive. When the Infinitive is used to complete the meaning of another verb the wrong tense is often used. This is due to the mistaken idea that the Present Infinitive must necessarily refer to present time, and cannot, therefore, be used after a past tense. This, however, is not the case, and we must remember that.

Rule.—The Present Infinitive must be used to denote an action or state cotemporaneous with that denoted by the principal verb.

COMMON ERRORS.	CORRECTED FORMS.
I forgot *to have mentioned* the fact.	I forgot *to mention* the fact.
We should have been glad *to have had* some shelter from the storm.	We should have been glad *to have* some shelter from the storm.
We wanted *to have gone*.	We wanted *to go*.
I intended *to have written*.	I intended *to write*.
He was prepared *to have risked* the loss of everything.	He was prepared *to risk* the loss of everything.

A comparison of the two following examples will make the distinction between the two tenses clear.

(*a*) When I heard the truth I was sorry *to have doubted* him. = When I heard the truth I was sorry that I had (previously) doubted him.

(*b*) When I heard the news I was sorry *to be unable* to return. = When I heard the news I was sorry that I was (at that moment) unable to return.

III.

The tenses of a verb may be thus classified:—

PRIMARY TENSES.	HISTORIC* TENSES.
Present—I write.	Imperfect—I was writing.
Future—I shall write.	Past Indefinite—I wrote.
Perfect—I have written.	Past Perfect—I had written.

* They are so called because used in narration.

Rule for the Sequence of Tenses.—Primary tenses follow primary, and historic tenses follow historic, e.g.,

I *am* sorry that I *have* offended you (Primary).
I *was* sorry that I *had* offended you (Historic).

COMMON ERRORS.	CORRECTED FORMS.
I *should* read the book if I *buy* it.	I *should* read the book if I *bought* it; or, I *shall* read the book if I *buy* it.
Should he succeed he *will* not be the happier.	Should he succeed he *would* not be the happier.
I *should* be glad if you *will* take the message.	I *should* be glad if you *would* take the message.

Exception.—If the subordinate sentence states a general truth the verb may be in the present tense even when the principal verb is in one of the historic tenses; e.g.

He *was* not aware of the fact that the earth *moves* round the sun. Surely you *knew* even then that the world *is* round. I *regretted* to hear that the man *is* blind.

THE SUBJUNCTIVE MOOD.

	PRESENT TENSE.		PAST TENSE.	
To be				
(If)	I be	We be	(If) I were	We were
	Thou be	You be	Thou wert	You were
	He be	They be	He were	They were.
To have				
(If)	I have	We have	(If) I had	We had
	Thou have	You have	Thou had	You had
	He have	They have	He had	They had
To love				
(If)	I love	We love	(If) I loved	We loved
	Thou love	You love	Thou lovedst	You loved
	He love	They love	He loved	They loved

The Subjunctive Mood expresses:—

(1) A *wish:* "O that it *were* morning!" "Mine *be* a cot beside a hill."

(2) A *purpose:* "Watch that ye *be* not taken unawares."

(3) A *condition*, when it has not been or cannot possibly be fulfilled: "I know what I would do if I *were* king." "If I *were* you I would act differently."

(4) *Doubt:* "If he *be* guilty he deserves to be punished."

Certain conjunctions, such as *if* and *though*, are followed by the Indicative, if the statement they introduce is an actual fact, and by the Subjunctive, if it is a mere supposition; e.g.

"Though the battle *is* won (fact) yet much remains to be done."

"Though he *were* my own brother (*mere supposition*) I would say the same."

Similarly:—"If you *are* your father's son (*fact*) you should try to be like him;" but, "If he *be* the elder I shall be surprised."

COMMON ERRORS.	CORRECTED FORMS.
Was such a thing possible it should be done.	*Were* such a thing possible it should be done.
I would go if I *was* you.	I would go if I *were* you.
Though he *was* my dearest friend I would not spare him.	Though he *were* my dearest friend I would not spare him.
Beware lest ye *are* taken unawares.	Beware lest ye *be* taken unawares.
Take heed that he *deceives* you not.	Take heed that he *deceive* you not.
O that life *was* ended!	O that life *were* ended!
Every one would be surprised if that man *was* successful.	Every one would be surprised if that man *were* successful.
I wish I *was* you.	I wish I *were* you.

THE VERBAL NOUN.

The form of the verb in "ing" may be used as a noun; e.g. *Writing* is easy. I like *reading*. When thus used *writing* and *reading* are verbal nouns.

Rule.—A verbal noun must be qualified by a pronominal adjective and not by a pronoun. Do not say "Were you surprised at *us* coming?" but "Were you surprised at *our* coming?"

Do not say "Do you mind *me* going?" but "Do you mind *my* going?"

THE ADJECTIVE.

Rule.—An adjective must agree with its noun in number, gender, and case.

As, however, the English language has lost most of its inflexions, this agreement is only seen in the case of the demonstrative adjectives *this* and *that*, with their plurals *these* and *those*.

COMMON ERRORS.	CORRECTED FORMS.
These sort of people are rare.	People of *this* sort are rare.
These kind of amusements are costly.	*This* kind of amusement is costly.
These manner of men are not uncommon.	*This* manner of man is not uncommon.
Those kind of remarks are annoying.	Remarks of *that* kind are annoying.

Caution.—In the use of the Distinguishing Adjectives care must be taken to avoid obscurity. When several different things are mentioned together, the distinguishing adjective should, as a rule, be prefixed to each noun; e.g. *The* horse and *the* dog are useful animals.

In many instances the omission of the distinguishing adjective before the second noun would alter the sense of the passage, as may be seen from the following examples:—

(*a*) She has a black and white dress=She has a dress which is black and white.

She has a black and a white dress=She has a black dress and also a white one.

(*b*) He sent for his brother and friend=He sent for his brother who was also his friend.

He sent for his brother and his friend=He sent for his brother and also for his friend.

COMPARISON OF ADJECTIVES.

I.

Rule.—When only two things are compared the Comparative must be used, but when more than two things are compared the Superlative must be used; for instance,

He is the *taller* of the two.

She is the *tallest* of the three.

The following adjectives are irregularly compared:—

POSITIVE.	COMPARATIVE.	SUPERLATIVE.
old	older	oldest
	elder	eldest (used of persons only)
little	less	least
far	farther	farthest
forth	further	furthest
late	later	latest (of time)
	latter	last (of position or order)
good	better	best
bad, evil	worse	worst
nigh	(nigher)	next
near	nearer	nearest

COMMON ERRORS.	CORRECTED FORMS.
She was his *oldest* daughter.	She was his *eldest* daughter.
Mary was the *eldest* of the two.	Mary was the *elder* of the two.
The *youngest* brother is the *best* of the two.	The *younger* brother is the *better* of the two.
I have *less* supporters than he has.	I have *fewer* supporters than he has.
Scott and Dickens are great novelists, but I prefer the *last*.	Scott and Dickens are great novelists, but I prefer the *latter*.
It had the widest circulation of any newspaper.	It had a wider circulation than any other newspaper; or, Of all newspapers it had the widest circulation.

Observe.—(1) *Oldest* is used absolutely, and with reference to either persons or things; *eldest* is used relatively, and with reference to persons only. Say "He is the *oldest* inhabitant;" "She is the *eldest* of the three."

(2) *Less* refers to quantity, *fewer* to number.

(3) The words *former* and *latter* should be used in speaking of two things only. The following sentence is, therefore, incorrect:—"James, Ellen, and Frances competed, but the *latter* won the prize" (say the *last named*).

(4) *Any newspaper* is singular, and the superlative cannot be used unless at least three things are compared.

II.

Words which do not admit of Comparison. Certain adjectives from their meaning already have a superlative force and cannot, therefore, be compared. Hence the following sentences are, strictly speaking, incorrect, though the first four are by general usage admissible.

Your account is *most complete.*
This is a *very perfect* specimen.
My determination is *more absolute* than ever.
Put on your *very best* gown.
This work is *extremely excellent.*
He is a *most unique* person.
Change of scene is a *most universal* remedy.
What you say is *very possible.*

In the last example, "possible," though not superlative in meaning, should not be compared, because there are not varying degrees of possibility.

THE ADVERB.

One of the commonest mistakes in connexion with the adverb is the use of the adjective instead of the corresponding adverb to modify a verb, adjective, or adverb.

COMMON ERRORS.	CORRECTED FORMS.
The girl walks *slow.*	The girl walks *slowly.*
He plays *beautiful.*	He plays *beautifully.*
You have done it very *quick.*	You have done it very *quickly.*
That man is *uncommon* proud.	That man is *uncommonly* proud.
He came back *quicker* than he went.	He came back more *quickly* than he went.
I can *easier* learn than teach.	I can more *easily* learn than teach.

Caution 1.—*Very* is an adverb which can be used to modify adjectives and adverbs, as in "very good" and "very well," but it should not be used to modify Participles, because Participles should not be modified by adverbs of degree.

Hence such expressions as "very surprised," "very alarmed," "very satisfied," are incorrect.

Very pleased, though commonly used, is not, strictly speaking, correct, but may perhaps be justified on the score that *pleased* has in many instances lost its participal force. For example, in the sentence "I shall be very pleased to see you," *pleased* is equivalent to the adjective *glad.*

Caution 2.—The adverbs *here* and *there* must never be used as adjectives. Hence we must avoid such expressions as "This *here* boy." "That *there* girl."

The personal pronoun and the corresponding demonstrative adjective must also be carefully distinguished. We must not say "I saw *them* pictures,"
but "I saw *those* pictures."

ORDER OF ADVERBS.

Rule.—An adverb should be placed as close as possible to the word it modifies. This rule is frequently broken in the case of the adverb *only*. Do not say "I *only* made one mistake." but "I made *only* one mistake," as "only" modifies "one." The importance of the position of the adverb may easily be realised from a comparison of the following sentences where the meaning varies according to the place of the adverb:—

(*a*) I have *only* taken one (i.e., and done nothing more). (*b*) I *only* have taken one (i.e., and no one else has). (*c*) I have taken *only* one (i.e., and no more). In (*b*) "only" is an adjective.

Compare (*a*) I have *only* a daughter (and no other child) (*b*) I have an *only* daughter (and no other daughter). Similarly: (*a*) I *only* have spoken the truth (and no one else has), (*b*) I have spoken *only* the truth (and nothing else).

Caution 1.—Beware of using *only* as a conjunction equivalent to *but*; e.g. "I knocked *only* (=but) I did not ring." "I spoke *only* (=but) you did not hear."

Caution 2.—An adverb must not be inserted between the sign of the Infinitive (to) and the Infinitive. The "Split Infinitive," as it is called, should be carefully avoided. Instead of saying "He promised to *thoroughly* sift the matter," say "He promised to sift the matter *thoroughly.*" Instead of "They seemed to *greatly* appreciate the joke," say "They seemed to appreciate the joke *greatly.*"

NEGATIVE ADVERBS.

The use of *double negatives* must be avoided, since two negatives make an affirmative.

COMMON ERRORS.	CORRECTED FORMS.
It is *not* here I *don't* think.	I do *not* think it is here.
I should *not* wonder if it does *not* rain.	I should *not* wonder if it rains.
I have *not* got no ink.	I have *no* ink.
He *won't* have *no* more.	He *won't* have any more.
Nothing never did annoy him.	*Nothing* ever did annoy him.
Nobody can't compel me to do it.	*Nobody* can compel me to do it.
No more don't I.	*Neither do* I.
He *never* said *nothing.*	He *never* said anything.
I *never* did *no* such thing.	I *never* did any such thing.
I did *not hardly* have time.	I *hardly* had time.

Remark. The second sentence as it stands would mean "If it does not rain I shall not be surprised," and should therefore be used if that is the meaning intended.

Remark.—The last sentence, though not actually containing two negatives, is practically an example of double negative, since *hardly* is equivalent to *almost not.*

THE PREPOSITION.

Two common errors in connexion with the preposition must be carefully avoided. (1) The use of the Nominative instead of the Objective after a preposition; e.g. "*Who* are you speaking *to?*" instead of "*To whom* are you speaking?" (2) The use of the wrong preposition; e.g. "Yours is different *to* mine," instead of "Yours is different *from* mine."

List of words requiring certain prepositions after them.

WORD.	PREPOSITION.	WORD.	PREPOSITION.
corresponding	to	afraid	of
different	from	frightened	at
similar	to	opposite	to
in accordance	with	buy	from
analogous	to	contrast	with
estranged	from	dissent	from
averse	from	disagree	with
agree	with (a person)	differ (to disagree)	with
agree	to (a thing)	differ (to be different)	from
part	from (a person)	know	of, about
part	with (a thing)	tell	of, about
prefer (one thing)	to (another)	think	of, about

To compare (to note the points of likeness and difference) must be followed by the preposition *with*; e.g. "Let us compare his hand writing with hers."

To compare (to regard as similar) must be followed by the preposition *to*; e.g. "I should compare your style *to* his."

COMMON ERRORS.	CORRECTED FORMS.
It is different *to* what I expected.	It is different *from* what I expected.
He is clever compared *to* his brother.	He is clever compared *with* his brother.
Think *on* me sometimes.	Think *of* me sometimes.
I bought it *off* him.	I bought it *of* him.
He had it *off of* me.	He had it *from* me.
I prefer to know the worst *than* to linger in suspense.	I prefer knowing the worst *to* lingering in suspense.
English parents who live in India are obliged to part *with* their children.	English parents who live in India are obliged to part *from* their children.
Pour the water *in* the basin.	Pour the water *into* the basin.
The poet had a strong distaste *to* publicity.	The poet had a strong distaste *for* publicity.
Will you try *and* finish it.	Will you try *to* finish it?
I was telling him *on* it.	I was telling him *of* it.
In point of style I should compare him *with* Dickens.	In point of style I should compare him *to* Dickens.
I get up very early *of* a morning.	I get up very early *in* the morning.

Similarly, prepositions must not be used to govern adverbs; the following are, therefore, incorrect:—

"*Where* are you going *to?*" (omit "to")

"*From whence* do you come?" (omit "from")

We must admit the phrase, "*Where* do you come *from?*" as sanctioned by general usage in place of the obsolete "Whence do you come?"

Again, prepositions cannot govern other prepositions. The following are, therefore, incorrect:—

"He sold it *at below* cost price" (omit "at")

"He sold it *at above* its value" (omit "at")

Between can only be used in reference to *two* things. When more than two things are in question *among* should be used; e.g. "The cake was divided *between* John and Mary," but "The cake was divided *among* all the children."

CORRELATIVES.

Certain words are used in pairs, and are then said to be correlative. The correlatives are chiefly conjunctions, but there are also a few adjectives and adverbs which have their appropriate correlatives.

LIST OF CORRELATIVES.	EXAMPLES.
Both—and	*Both* Scott *and* Dickens are great authors.
Either—or	*Either* the King *or* the Queen will come.
Neither—nor	*Neither* the King *nor* the Queen can come.
Whether—or	I wonder *whether* he *or* she will come.
Though—yet	*Though* he is just, *yet* he is generous.
Not only—but also	I act *not only* from choice *but also* from necessity.
Same (Adj.)—as (Pron.)	Your book is the *same as* mine.
Such (Adj.)—as (Pron.)	You have *such* opportunities *as* few enjoy.
Such (Adj.)—that (Conj.)	His determination is *such that* he is sure to succeed.
So (Adv.)—as (Conj.)	I am not *so* foolish *as* to credit that.
So (Adv.)—that (Conj.)	He was *so* credulous *that* he believed the most improbable tales.
More (Adv.)—than (Conj.)	The child is *more* frightened *than* hurt.

Caution.—Great care must be taken (*a*) to use the right correlative, (*b*) to put it in the right place.

Rule.—The correlative conjunctions should immediately precede the words they serve to connect. Hence "He *neither* fears death *or* captivity" is incorrect for two reasons:

(*a*) The wrong correlative is used. (*or* should be *nor*.)

(*b*) *Neither* is misplaced. (*neither* should immediately precede "death".)

The correct form is "He fears *neither* death *nor* captivity."

COMMON ERRORS.	CORRECTED FORMS.
Neither you *or* I have ever met her.	*Neither* you *nor* I have ever met her.
You are *as* tall or even taller *than* your brother.	You are *as* tall *as* your brother or even taller.
Your work is *as* good or even better *than* his.	Your work is *as* good *as* his or even better.
I do not know *if* he will come *or* not.	I do not know *whether* he will come *or* not.
He *neither* fears death *nor* exile.	He fears *neither* death *nor* exile.
She plays *more* accurately but not so impressively *as* her sister.	She plays *more* accurately *than* her sister but not so impressively.
The queen was *more* popular but not so gifted *as* her husband.	The queen was *more* popular *than* her husband, but not so gifted.
He *neither* loves his wife *or* children.	He loves *neither* his wife *nor* children.

Caution.—Certain correlative conjunctions, such as *either—or*, *neither—nor*, introduce alternative statements which are mutually exclusive; the verb must, therefore, agree with *one* or the *other* of the subjects, but not with both. Hence "Neither he nor I *are* welcome" is incorrect. Say "Neither is he welcome, nor am I," or "He is not welcome, nor am I."

THE APOSTROPHE.

Errors frequently occur in the use of the apostrophe. These errors, however, may easily be avoided by attention to the following simple rules:

Rule.—The possessive case of a noun is formed, (*a*) In the singular by the addition of 's to the nominative singular; in, "The poet's works"=The works of the poet. (*b*) In the plural by the addition of ', as, "The poets' works"= The works of the poets.

Exception to (*b*).—When the nominative plural does not end in s, the possessive plural is formed by adding 's, as in the singular; thus, The children's games; the men's wages.

Exception to (*a*).—When the Nominative Singular ends in an *s*, or an *s sound*, it is usual to omit s after the apostrophe, especially when the next word begins with s, as: "For *conscience*' sake." "For *righteousness*' sake." "*Moses*' rod that budded."

Note 1.—In the case of Proper Nouns the practice varies. For instance, the Possessive Case of James may be written *James*' or *James's*; e.g., "My house is in *James*' street," "This is *James's* book." Some common nouns also, such as *mistress*, *governess*, admit of either form; e.g. "She knocked at her *mistress's* door." "She did it for her *mistress*' sake."

Note 2.—For the sake of euphony, or for variety, *of*, followed by the Objective Case, is sometimes substituted for the Possessive Case. For example, we say, "The law

of Moses," not "Moses' Law"; "The wisdom of the Ancients," not "The Ancients' wisdom."

Rule.—When the nouns in the Possessive Case are in apposition, the apostrophe is added to the second only; e.g. "Coleridge the poet's works are full of genius." "Edward the King of England's Crown is in the Tower of London." This construction is to be avoided as inelegant. It is much better to say "The works of Coleridge the poet are full of genius."

Note 1.—The names of lifeless things are rarely put into the Possessive Case, the preposition *of* followed by the objective being used in preference. We say: "The top of the hill," not "the hill's top"; "The end of the story," not "The story's end." It is common, however, to say "the sun's heat," or "the moon's rays," as if sun and moon were regarded as living beings.

Note 2.—With regard to such an expression as "That friend of your *sister's* is clever," it is sometimes objected that the possessive is redundant, and that the correct expression is, "That friend of your sister is clever." But the former is quite correct when the friend spoken of is only one of a number, and is preferable to the latter when the speaker wishes to emphasize the fact.

Note 3.—The insertion of the apostrophe in the Possessive Case of personal pronouns is incorrect. Say, "I remain yours truly," not "your's truly"; "That dog loves its master," not "it's master."

2. ERRORS OF STYLE.

The subject of style is less definite in character than that of grammatical accuracy, being to a certain extent a question of taste, but even here certain rules may be laid down which are independent of individual preference. If the style of a writer or speaker is to be good there are certain characteristics he must acquire, and certain faults he must avoid. Three qualities may be mentioned as essential to a good style: (1) Clearness of expression, (2) purity of idiom, (3) simplicity of style.

With a view to *clearness of expression* we must avoid (*a*) misplacing words, as by so doing we alter or obscure the sense, (*b*) omitting words when their omission causes ambiguity.

With a view to *purity of idiom* we must avoid (*a*) redundant expressions, (*b*) faulty constructions, (*c*) inelegant constructions, (*d*) misuse of words, (*e*) slang words and phrases.

With a view to *simplicity of style* we must avoid every form of affectation or mannerism, including the use of pompous words and phrases. Foreign words and phrases should be introduced very sparingly into our conversation or writings.

INCORRECT ORDER OF WORDS.

A sentence is often rendered ludicrous, or, at least doubtful in meaning, by the misplacing of a word or phrase. For example:

1. A set of Scott's novels for sale by a gentleman about to go abroad elegantly bound in morocco. ("Elegantly bound in morocco" should be inserted after novels.")
2. Erected to the memory of John Phillips, who was accidentally shot as a mark of affection by his brother. ("As a mark of affection by his brother" should follow "Erected.")
3. The building has been sold where this noble patriot was assassinated for the benefit of the nation. ("Where this noble patriot was assassinated" should come after the word "building.")

The following instances of a similar character the reader will easily be able to recast in their correct form:—

1. No one ever learnt anything that was worth learning easily.
2. The speaker alluded to the statement that the treaty might be repudiated with scorn.
3. I have read the three first pages. (N.B.—There can only be *one* first page.)
4. We nearly saw a man run over to-day. (What word does "nearly" modify?)
5. The poor man spoke of his benefactor who had given him a guinea with gratitude.
6. She gave the doll to the baby whose head was off.
7. Wanted a boy to clean windows with good references.
8. Wanted a housekeeper in a small gentleman's family.
9. He shot himself after bidding his wife good-bye with a gun.
10. The speaker referred to the enemies who had always thwarted him in a spirit of generosity.
11. This is a proof of the boy's dishonesty whom we have just dismissed.
12. The traitor was ordered to be beheaded by the judge.
13. I saw a dead sheep walking across the moor.

N.B.—A study of the preceding examples will enable the reader to realize the great importance of keeping a relative word or phrase as close as possible to its antecedent. He will then avoid such ludicrous statements as the following:—

"That flower cost half-a-crown which he is wearing."

ELLIPSIS.

I.

Ellipsis, or the omission of a word or phrase, where the omission can easily be supplied mentally, is quite allowable, even in prose, while in poetry it is frequently employed with very good effect, e.g.

"There are in this loud stunning tide of human care and crime
(*those*) With whom the melodies abide of the everlasting chime,
Who carry music in their heart
Through dusky lane and wrangling mart,
Plying their daily task with busier feet,
Because their secret souls a holy strain repeat."

Keble.

A word, however, must never be omitted if its absence would either obscure the meaning or alter the sense of the passage. Ellipsis is frequently employed with a view to avoiding unnecessary repetition.

The principle is right, but it must be applied with care. For instance, when two subjects are followed by the same verb, the verb may often be omitted after one subject, *but only when the same part of the verb is understood.* It is correct to say, "The fires *were* lighted and the breakfast things laid," because *were* is expressed before "lighted" and understood before "laid." But we must not say, "The fire *was* lighted and the breakfast things laid," because in the latter example *was* is expressed before "lighted," whereas *were* is required before "laid."

Incorrect use of Ellipsis.

COMMON ERRORS.	CORRECTED FORMS.
I always have ^, and always shall *regret* my mistake.	I always have *regretted* my mistake and always shall *regret* it.
Do you think that such a thing is ^, has ^, or ever will *happen?*	Do you think that such a thing is *happening*, has *happened*, or ever will *happen?*
They ever have ^, and ever will *be* our enemies.	They ever have *been* and ever will *be* our enemies.
The master *trusted* us then and still does ^.	The master *trusted* us then and still does *trust* us.

II.

A verb and its subject should not both be omitted, as such an important omission would seriously affect both the sense and the construction.

Examples of construction spoilt by Ellipsis.

COMMON ERRORS.	CORRECTED FORMS.
He is not so passionate as ^ ^ formerly.	He is not so passionate as *he was* formerly.
Your work is better than ^ ^ last week.	Your work is better than *it was* last week.
I am much stronger than ^ ^ a year ago.	I am much stronger than *I was* a year ago.
The standpoint of the soldier and ^ of the diplomatist are radically different.	The standpoint of the soldier and *that* of the diplomatist are radically different.
I have found a pocket book with several letters and ^ a silver monogram on the back.	I have found a pocket-book with several letters and *with* a silver monogram on the back.
He is playing better than ^ last week.	He is playing better than *he did* last week.

Note.—The omission of the distinguishing adjective often alters the sense of a passage, e.g. "I saw the poet and the painter" (two distinct persons); "I saw the poet and painter" (i.e. the poet who was also a painter).

Caution.—The antecedent of a relative pronoun must not be omitted in prose. We must not say: "This is the best book and which is my favourite," but "This is the best book and *the one* that is my favourite."

REDUNDANCY.

Redundancy is the exact opposite of ellipsis. A word is said to be redundant, that is superfluous, when it is unnecessary both to the sense and to the construction. Redundant words are, as a rule, meaningless repetitions, and should be carefully eliminated.

Elliptical constructions are frequently justifiable, but redundant ones never, though certain redundant phrases have become sanctioned by usage. As an instance of this we may mention the insertion of a redundant *of* between two nouns in apposition; e.g. the City (of) London, the play (of) Hamlet, the story (of) The Vicar of Wakefield.

In poetry also redundant expressions are allowable, and frequently introduced for the sake of the sound or the metre; e.g.

"The pass was steep and rugged,
The wolves *they* howled and whined." —*Macaulay.*

With the above exceptions, however, redundant words should be avoided.

Sentences containing redundant words:—

1. I am fond of the name *of* Mary.
2. Marlowe is inferior to no poet except *to* Shakespeare.
3. These are their opinions *and* which I need not now describe more fully.
4. He sold it *at* above its market value.
5. He was a very different sort of *a* man in those days.
6. I bought it *off* of him.
7. The tiger is *equally* as strong as the lion.
8. Your plan appears to be *the more* preferable.
9. At length the discourse came to a *final* end.
10. *But* however I will come if you wish it.
11. He went *for* to do it in a hurry.
12. Lo! they were all *dead* corpses.

ERRORS IN CONSTRUCTION.

I.

One of the commonest errors in construction is the use of the *Unrelated Participle*, as it is called.

Rule.—A Participle should never be introduced into a sentence when there is no word expressed with which it can logically agree. Disregard of this rule frequently gives rise to incorrect and absurd statements; e.g.

1. *Walking* across the bridge my hat blew off.
2. *Riding* to market his horse cast a shoe.
3. The palace can be seen distinctly *walking* to the station.
4. *Having forgotten* to call at the cobbler's my shoes were not sent home.
5. *Going* to church a bee stung me.
6. *Sitting* on a stile a bull attacked him.
7. Did you see the beautiful sunset *coming* upstairs?

In the above sentences many absurd statements are unintentionally made. A hat is said to have walked across a bridge, a palace to have walked to the station, a bee to have gone to church, and so on.

These and similar sentences may easily be rectified, either by supplying words which are understood or by recasting. The above sentences will then read as follows:

1. *As I was walking* across the bridge my hat blew off.
2. *As he was riding* to market his horse cast a shoe.
3. The palace can be seen distinctly *as you are walking* to the station.
4. *As I forgot* to call at the cobbler's my shoes were not sent home.
5. *As I was going* to church a bee stung me.
6. *As he was sitting* on a stile a bull attacked him.
7. Did you see the beautiful sunset *as you were coming* upstairs?

II.

Rule.—The subject should not be changed in the middle of a sentence. The following sentences are faulty in this respect:—

1. Having finished his day's work, the rest of his time was spent in amusement.
2. Having written the letter, it was then posted.
3. Being his sole companion he naturally addressed himself to me.
4. On his putting the first question to the candidate he at once turned pale.
5. Alarmed at the ship's danger, the boat was launched.
6. Hoping you are well, believe me, etc.

The above examples may be rewritten as follows:—

1. Having finished his day's work, he spent the rest of his time in amusement.
2. The letter having been written was then posted, *or*, Having written the letter he then posted it.
3. Being his sole companion I was the one to whom he naturally addressed himself.
4. The first question put to the candidate caused him at once to turn pale.
5. Being alarmed at the ship's peril, they launched the boat.
6. Hoping you are well, I remain, etc.

III.

Illogical Statements should be carefully avoided; e.g.

(*a*) Alexander was greater than any monarch of his time. ("Any monarch" would include himself, and no man can be greater than himself. Say instead, "any *other* monarch.")

(*b*) My watch is too fast. (This implies that it is right for a watch to be a little fast. Omit the word *too*.)

(*c*) John and his brother won the two first prizes. (There cannot be two *first* prizes. Say the *first two* prizes.)

(*d*) Grace was the most talented of all her sisters. (This implies that Grace was one of her own sisters. Say "Grace was *more* talented *than* any of her sisters.")

(*e*) The statement may be perfectly true to some extent. (A statement cannot be perfectly true if it is only true to some extent. Omit *perfectly*.)

(*f*) The fairest of her daughters, Eve.

IV.

Anacoluthon, or a break-down in the sequence.

There is one form of error which occurs more frequently in the spoken than in the written language, namely, a sudden change of construction in the middle of a sentence. This is liable to happen when the speaker finds himself involved in a long sentence of which he has forgotten the beginning; e.g.

"Then the man, so great was his courage, and so undaunted his resolution, that even his enemies applauded him."

It will be observed that the word "man," which is intended to form the subject of the sentence, is left without a predicate.

V.

Other idiomatic mistakes are as follows:—

1. The use of the future for the present tense; e.g. I shall be pleased to accept your kind invitation. (Say, "I have much pleasure in accepting your kind invitation.")
2. The use of *when* to introduce a definition after the verb *to be*; e.g. An obstacle is *when* there is an impediment. (Say "an obstacle is an impediment.")
3. The use of an implied double negative; e.g. I shall not say more than I can avoid. (Say "I shall not say more than I am obliged.") I couldn't hardly credit it. (Say "I could hardly credit it.")
4. The choice of the wrong word as subject; e.g. Bills are requested not to be stuck here.
5. "I called but I found them out" is open to objection as an illogical statement. Say "I called but found that they were out."

PHRASEOLOGY.

Some forms of expression, without being absolutely ungrammatical, are very inelegant, and should be avoided for that reason, while others are both clumsy and ungrammatical. A few of the commonest instances are given below.

COMMON ERRORS.	CORRECTED FORMS.
I have *got to go* at eleven.	I *have to go* at eleven.
Will it come to-day? It *should do.*	Will it come to-day? It ought.
I thought you did not like tea. *No more I do.*	I thought you did not like tea. *No, I don't.*
I *didn't have* time to finish my work.	I *had not* time to finish my work.
You *didn't use* to talk *like that.*	You *used not* to talk *in that way.*
You *hadn't ought* to say that.	You *ought not* to say that.
I *never* said anything of the kind.	I said nothing of the kind.
I have read *pretty well* all those books.	I have read *nearly* all those books.
Whatever do you think?	*What* do you think?
A *whole lot* of them are lost.	*Several* of them are lost.
That is a fine one and *no mistake.*	That is *indeed* (or *certainly*) a fine one.
Mind you, I am not complaining.	You must not think I am complaining.
He has been away *a lot* this year.	He has been away a *great deal* this year.

MISAPPLICATION OF WORDS.

I.

Adjectives are especially liable to this abuse, and their force has in many instances been permanently weakened by a wanton perversion of their meaning. Such words as *awful, terrible, fearful,* are notable instances of this. We constantly hear of "an awful bore," and "a terrible nuisance." People are continually apologizing for being "fearfully early," "terribly late," "tremendously hungry." If people who use such expressions know they are talking slang, no more need be said. Again, great poverty of idea is shown in the attempt to make one adjective cover a wide range of meaning, and do duty for many different ideas. The word *nice* is, perhaps, the most striking instance of this. Compare the various meanings of nice in the following sentences:—

I had a *nice* walk to-day (pleasant).
This cake is very *nice* (delicious).
What a *nice* picture (beautiful).
We had a *nice* talk (enjoyable).
She wore a *nice* hat at the concert (pretty, becoming).
He has *nice* manners (pleasing, courteous).
What a *nice* view (lovely).
Your sister is very *nice* (charming, agreeable).
That is a very *nice* story (interesting).
That will be a *nice* help (great).

Beautiful and *lovely* are also often misapplied. These adjectives must never be applied to food, as they so often are. A picture may be beautiful, and scenery lovely, but a cake, however delicious, is neither lovely nor beautiful.

Good should not be used for *great.* Do not say "He took a *good* deal of trouble," but "He took a *great* deal of trouble."

II.

Verbs also are sometimes misapplied or used in excess. *To get* has been greatly abused, as will be seen from the following instances of the incorrect or clumsy use of this one word:—

I have *got* to go = I *am obliged to go.*
I have *got* several friends = I have several friends.
Now you must *get* to work = Now you must *set* to work.
I am *getting* to like it better = I am *beginning* to like it better.

To go is also greatly overused.

It has just *gone* nine = It has just *struck* nine.
Has the bell *gone* yet? = Has the bell *rung* yet?
That piano is *going* all day—That piano is *being played* all day.
He is very far *gone* = He is in a very serious condition.
Why do you *go on* like that? = Why do you *behave* like that?
It is your *go* next = It is your *turn* next.

To do is another verb that is overworked. "Have you *done* the clothes?" This at one time refers to "folding," at another time to "brushing," at another to "starching," and so on. This indefinite use of words is a common mark of an uneducated mind.

III.

The following words seem very liable to misuse:—*Without* is often used for *unless, like* for *as, as* for *that, as* for *who, what* for *who, and* for *to, only* for *but.*

COMMON ERRORS.	CORRECTED FORMS.
I will not go *without* you approve.	I will not go *unless* you approve.
You should speak *like* I do.	You should speak *as* I do.
Not *as* I am aware of.	Not *that* I am aware of.
Do you know the man *as* did it?	Do you know the man *who* did it?
Will you try *and* come early?	Will you try *to* come early.
I thought so, *only* I was not certain.	I thought so *but* I was not certain.
That is the man *what* did it.	That is the man *who* did it.

IV.

The following is a list of pairs of words which are often confused with each other.

affect (influence)	effect (bring about)
apparent (seeming)	manifest (evident)
but	than
compliment (complimentary speech)	complement (completion)
counsel (advice)	council (body of councillors)
can (is able)	may (is permitted)
continual (frequent)	continuous (without a break)
centre (middle point)	middle (middle line, midst)
couple (two)	pair (two that match)
dying (participle of die)	dyeing (participle of dye)

enjoy	suffer from, have
flown (participle of fly)	flowed (participle of flow)
formally (in a formal manner)	formerly (at a former time)
farther (comparative of far)	further (comparative of forth)
half	part
illusion (delusive appearance)	allusion (a reference)
less (not so much)	fewer (not so many)
plenty (denotes quantity)	many (denotes number)
principal (chief)	principle (rule of action)
stationary (at a standstill)	stationery (writing materials)
practice (the noun)	practise (the verb)
want (=desire)	need=(require) / lack

COMMON ERRORS.	CORRECTED FORMS.
I *enjoy* very bad health.	I *have* very bad health.
The weather *effects* my spirits.	The weather *affects* my spirits.
He parts his hair down the *centre*.	He parts his hair down the *middle*.
I was *formally* his housekeeper.	I was *formerly* his housekeeper.
He made an *illusion* to the fact.	He made an *allusion* to the fact.
I no sooner went out *but* it began to rain.	I no sooner went out *than* it began to rain.
You don't *want* to be too particular.	You *need* not be too particular.
Give me the smaller *half*.	Give me the smaller *part*.
That verb *wants* a *compliment*.	That verb *needs* a *complement*.
Can John come for a walk with me ?	*May* John come for a walk with me ?

SLANG WORDS AND PHRASES.

There are certain forms of expression which, though often used, are open to objection on account of their inelegance or vulgarity. For these reasons slang words, and words used in a slang sense, are generally speaking to be avoided. No hard and fast rule can be laid down, as it is largely a question of good taste, but a few examples may be given as specimens:—

Words used in a slang sense.

Rather. " Did you enjoy your holidays ? " Rather.
Rough. " That was rough on you."
Mighty. " You are mighty particular."
Screw. " My screw was raised last year."
Invite. " Did you get an invite to the Smiths' ball ? "

Slang phrases.

That will suit you *down to the ground.*
They were dressed *up to the nines.*
That *takes the cake.*
I was very angry *I promise you.*
It will *just serve you out.*
How will that *do* you ?
They *do* you very well at that hotel.
You *just* wait and see.
How *awfully* nice.

SIMPLICITY OF LANGUAGE.

In language, as well as in dress and behaviour, simplicity is a mark of good breeding. People who are half-educated often show a marked tendency to use grand words and pompous language. They also introduce foreign phrases into their conversation, often with disastrous results, owing to their imperfect knowledge of the language from which they quote.

Mistakes of language are excusable when they proceed from pure ignorance, but they are too often the result of an affected desire to impress others with a sense of the speaker's " superior " learning and social standing.

No doubt the subject of conversation sometimes requires the use of unfamiliar words, but as a rule the most homely words are the most vivid and graphic that we can employ. In illustration of this remark, let us compare Dr. Johnson's account of an incident in the Highlands written for the public eye and his account of the same incident in a private letter to a friend: (1) " Out of one of the beds on which we were to repose started up at our entrance a man black as a Cyclops from his forge." (2) " On our entering the room a man as black as a tinker bounced out of one of the beds on which we were to lie."

Caution.—Never use grand words where simple words will express your meaning equally well, since to do so is as great an offence against good taste as the wearing of a fine dress on an unsuitable occasion.

COMMON ERRORS.	CORRECTED FORMS.
I was just *commencing* to speak when you came in.	I was just *beginning* to speak when you came in.
Permit me to *assist* you to some tea.	Let me give you some tea.
At that moment the *missive* arrived which broke up our *festive assembly*.	At that moment the *note* arrived which broke up our *merry party*.
I *presume* you *allude to* me.	I *suppose* you *mean* me.
May I have the *felicity* of congratulating you ?	May I have the *pleasure* of congratulating you ?

PUNCTUATION.

If the meaning of a passage is to be clear, it must not only be correctly expressed, but the right words must be emphasized, and the *pauses* must occur in the proper places. In a written or printed passage these pauses are indicated by marks of punctuation or *stops*.

(*a*) **The Comma** (,) indicates a slight pause, and is used

(1) between short co-ordinate sentences, e.g.—
" Men may come, and men may go, but I go on for ever." *The Brook—Tennyson.*

(2) between the different clauses of a complex sentence, e.g.—
" I stood on the bridge at midnight,
As the clocks were striking the hour."
The Bridge—Longfellow.

(3) between words and phrases in apposition, e.g.—
Hereward, the last of the English, was a mighty man.

(4) between the different words constituting a list or enumeration, e.g.—
She was wise, witty, and generous.
Tea, sugar, and coffee are used in large quantities.

N.B.—A passage included between *two commas* is more or less parenthetical in character, and may often be removed without affecting the construction of the sentence. If its parenthetical character is to be emphasized, brackets should take the place of commas; e.g.—
Elizabeth, Queen of England, was a great ruler.
Elizabeth (so the story goes) gave a ring to Essex.

(5) Occasionally a comma is used to indicate the omission of a word, e.g.—
" To err is human; to forgive, divine."

(*b*) **The Semi-colon** (;) indicates a longer pause than the comma, and is used to separate long co-ordinate sentences; e.g.—
" From sunrise unto sunset
All earth shall hear thy fame;
A glorious city thou shalt build
And name it by thy name."
The Lay of Horatius—Macaulay.

(*c*) **The Colon** (:) indicates a still longer pause, and is used

(1) between the different parts of a paragraph where they are to be slightly connected, whereas a full stop would entirely disconnect them e.g.—

"O happy living things! no tongue
Their beauty might declare:
A spring of love gushed from my heart,
And I blessed them unaware."
The Ancient Mariner—Coleridge.

(2) It is also used before enumerations; e.g.—
The regiments in action were as follows: The Scots Greys, the Irish Fusiliers, etc.

(3) It is also used to introduce a quotation; e.g.—
And a verse of a Lapland song
Is haunting my memory still:
"A boy's will is the wind's will,
And the thoughts of youth are long long thoughts."
My Lost Youth—Longfellow.

(*d*) **The Period or Full Stop** (.) indicates that the sentence is complete; e.g.—
"When the pie was opened,
The birds began to sing."
It also marks abbreviated forms, as for instance,—
e.g. (exempli gratia=for the sake of example).
i.e. (id est=that is.)

(*e*) **The Mark of Interrogation** (?) is used instead of a full stop if the sentence takes the form of a *direct* question; e.g.—
"Was not that a dainty dish
To set before the king?"

(*f*) **The Mark of Exclamation** (!), as its name implies, is used after Interjections and exclamatory phrases or sentences, also after the Nominative of Address, e.g.—
"Hark!" she said, "I hear a rushing . . ."
"No, my child!" said old Nokomis,
"'Tis the night-wind in the pine-trees!"
Hiawatha—Longfellow.

(*g*) **Inverted Commas** (" ") are used to enclose a quotation, e.g.—
"Try not the pass," the old man said.

An amusing lesson on the importance of putting the stops in the right place is given in our first English Comedy, *Ralph Roister Doister*, written by Nicholas Udal, the Head Master of Eton, for his boys to act. In this play a love-letter is quite spoiled, and all its compliments turned into insults owing to the reader pausing at the wrong places. This is the letter:—

"Now by these presents I do you advertise
That I am minded to marry you in no wise.
For your goods and substance I could be content
To take you as ye are. If ye mind to be my wife
Ye shall be assured for the time of my life
I will keep ye right well from good raiment and fare
Ye shall not be kept but in sorrow and care.
Ye shall in no wise live at your own liberty;
Do and say what ye lust, ye shall never please me;
But when ye are merry, I will be all sad;
When ye are sorry I will be very glad;
When ye seek your heart's ease I will be unkind;
At no time in me shall ye much gentleness find."
Ralph Roister Doister. *Udal* (1534-1541).

3. COMMON ERRORS IN PRONUNCIATION.

Errors in pronunciation sometimes arise from lack of knowledge, but they are more often due to carelessness. With a view to avoiding such errors, from whichever cause they proceed, we may classify them as follows:—

(*a*) Incorrect accentuation; e.g., formid'able for for'midable, despic'able for des'picable.

(*b*) The sounding of letters which ought to be mute; e.g., the letter t in often, epistle, apostle.

(*c*) Incorrect pronunciation of words which are not pronounced as they are spelt; e.g., figure for figgur.

(*d*) The sounding of final e, or es, as a distinct syllable, when it should be mute, and vice-versa; for instance,
animal-cu-le for animal-cule
epi-tome for epit-o-me
anti-strophe for antis-tro-phe
anti-podes for antip-o-des
ration-ale for ration-a-le

(*e*) Mutilation of a word owing to ignorance of its form, as sparrowgrass for asparagus.

Errors due to want of care.

(*a*) Various forms of elision, such as—
The dropping of vowel sounds at the beginning, middle, or end of a word, for example—
The dropping of the initial vowel, as 'leven for eleven.
The dropping of a middle vowel, as histry for history, jography for geography, suprintend for superintend, sovrin for sovereign, vilet for violet, famly for family.
The dropping or clipping of the final consonant, as writin, readin, hopin, fearin, and the dropping of a consonant in the body of a word, as Febuary for February, artic for arctic.

(*b*) The insertion or addition of letters; e.g., substract for subtract, umberella for umbrella, sawr for saw, drawring for drawing.

(*c*) The substitution of one letter for another; e.g., nothink and somethink for nothing and something.

(*d*) The corruption of vowel sounds:
ai for a, as laidy, paiper, for lady, paper.
i or e for u, as jist or jest for just.
e for o, as perlice for police.

(*e*) A curious form of error has arisen in some cases from the n of the distinguishing adjective *an* being detached from it and added to the following noun; as a nour for an hour; a napple for an apple. In some instances this has led to a permanent change in the form of the word, e.g., "a newt" was originally an ewt; "for the nonce" was originally for then once.
Some words, on the contrary, have lost an initial n, owing to the n being detached from the noun and attached to the distinguishing adjective *a*, e.g., an orange for a nareng, an apron for a napron, an adder for a nadder.

(*f*) The incorrect insertion or dropping of the aspirate. This is a matter of vital importance, and is fully treated below.

Aids to Correct Pronunciation. Pronunciation is to a great extent a question of usage, and many words are even now in a state of transition. This accounts for the fact that certain words admit of two pronunciations, such as lab'oratory and labor'atory. It should also be noticed that some words are mispronounced owing to the speaker's clinging to an old pronunciation after it has become obsolete, such as contra'ry for con'trary. The following rules for pronouncing certain classes of words, may be found helpful:—

(*a*) A word ending in one of the following terminations is accented on the syllable immediately preceding it:—
—acal demoni'acal, mani'acal, Zodi'acal.
—cian politi'cian, physi'cian.
—cracy democ'racy, aristoc'racy, plutoc'racy.
—ferous aurif'erous, pestif'erous.
—gony cosmog'ony, theog'ony.
—grapher photog'rapher, geog'rapher, lithog'rapher.
—logy biol'ogy, geol'ogy, astrol'ogy, theol'ogy.
—meter perim'eter, gasom'eter, photom'eter, barom'eter.
—nomy astron'omy, econ'omy.
—pathy homœop'athy, allop'athy, telep'athy.
—tion vaca'tion, inflamma'tion, authorisa'tion, constitu'tion.

(*b*) We must carefully avoid the tendency to substitute ĭ for *a* in the following terminations, -age, -ain, -ate,

We must say savage, captain, moderate, and not savige, captin, moderit.

e for *a* in the terminations -ar, -ary. We must say regular, singular, necessary, and not reguler, singuler, necessery.

i for *e* in the endings -ed, -en, -et, -est, -ject, -stead, -ness. We must say wicked, sudden, forest, pocket, subject, object, instead, governess, and not wickid, suddin, forist, pockit, subjict, objict, instid, governiss.

e for *o* in the termination -or. We must say actor, auditor, governor, author, and not acter, auditer, governer, auther.

u for *e* or *i* or *o* in the endings -el, -il, -ent, -lent, -on, -om. We must say model, fossil, violent, present, and not modul, fossul, violunt, presunt.

c) We must be careful not to drop—

Vowels, e.g., p'raps, 'leven, Latn, jography, histry, for—perhaps, eleven, Latin, geography, history.

Consonants, e.g., hanful, writin, readin, fith, twelth, nex, jus, for han*d*ful, writin*g*, readin*g*, fi*f*th, twel*f*th, nex*t*, ju*st*.

THE ASPIRATE.

As some people find the letter *h* a source of difficulty, a few remarks on the subject may be of service, especially since the correct use of the aspirate is universally regarded as an essential mark of education and good breeding.

1. Remember that the *h* is mute, or silent, at the beginning of the following words: *h*our, *h*onesty, *h*onour, *h*eir. It follows that the initial *h* in words derived from the above will also be mute, as for instance: *h*eiress, *h*onourable, *h*ourly, and so on.

2. Be careful always to sound the aspirate in any word which begins with h, unless it is one of the words included in the preceding list. At one time it was considered correct to drop the h in "herb" and "humble," but it is not so now. Especial care is necessary to pronounce *h*e, *h*im, and *h*er correctly, for the tendency is either to drop the aspirate or to emphasize the pronoun—a word that seldom requires emphasis. It is also necessary to guard against the omission of *h* when the accent does not fall on the syllable beginning with *h*; e.g. "hotel," "vehement."

3. Never aspirate a word which does not begin with *h*, since to put an *h* in the wrong place is an even greater solecism than to drop an *h* which ought to be sounded. For instance, the pronunciation of *ever* as *hever*, *ours* as *hours*, or *enterprise* as *henterprise*, would at once stamp a man as uneducated or ill-bred.

4. Be careful to sound the *h* when it occurs in the middle of a word. This warning is especially needed, as many people who would never drop an initial *h* are not so careful to sound it when it occurs in the middle of a word; for example, in per*h*aps, in*h*abit, in*h*eritance, pro*h*ibition. The aspirate should be slightly sounded in such words as *which*, *where*, *what*.

N.B.—Ludicrous mistakes are apt to be made through carelessness about the aspirate when, as sometimes happens, there are two words which are alike in sound, except for the aspirate, such as *eat* and *heat*, *air* and *hair*, *ear* and *hear*.

The following well-known and ingenious lines on the letter *h* may appropriately be quoted here:—

"'Twas whispered in *h*eaven, 'twas muttered in *h*ell,
And ec*h*o caught faintly the sound as it fell;
'Twas allotted to man with his earliest brea*th*,
Attends at his birt*h* and awaits him in dea*th*;
It presides o'er his *h*appiness, *h*abits, and *h*ealth,
Is the prop of his *h*ouse and the end of his wealt*h*.
In the *h*eaps of the miser 'tis *h*oarded with care,
But is sure to be lost on his prodigal *h*eir.
Without it the soldier and seaman may roam,
But woe to the wretch who expels it from *h*ome.
'Twill not soften the *h*eart, and though deaf to the ear.
'Twill make it acutely and instantly *h*ear.
But in s*h*ade let it rest, like a delicate flower—
Oh, breathe on it softly—it dies in an *h*our."

COMMON ERRORS.	CORRECTED FORMS.
You must *eat* that iron at once.	You must *heat* that iron at once.
I prefer to *heat* cold salmon.	I prefer to *eat* cold salmon.
Those are my three favourite *hairs*.	Those are my three favourite *airs*.
Her *air* is curly.	Her *hair* is curly.
Her *earing* is not good.	Her *hearing* is not good.
Tell shot the apple with his *harrow*.	Tell shot the apple with his *arrow*.
He is a deceitful and *artless* man.	He is a deceitful and *heartless* man.
The *arrow* is a useful farm implement.	The *harrow* is a useful farm implement.
He is *ale* and *earty* because he drinks no *hale*.	He is *hale* and *hearty* because he drinks no *ale*.
The boots which were stolen were *hall* marked.	The boots which were stolen were *all* marked.
The pilot stood by the *elm*.	The pilot stood by the *helm*.
It is better to bear the woes we have than fly to *hills* unknown.	It is better to bear the woes we have than fly to *ills* unknown.
She is a simple, *heartless* maid.	She is a simple, *artless* maid.

WORDS OFTEN MISPRONOUNCED.

academ'ic
acou'stics, ou=ow
acu'men
ad'mirable
adver'tisement
aerated, a-er-ated
albu'men
al'gebra
a'lias
al'legory
ambigu'ity
an'archist, ch=k
anath'ema
ancho'vy or an'chovy
animal'cule, cule not *cu-le*
anom'aly
antis'trophe, stro-phe
antip'odes, -o-des
antip'odal
apparent
apos'trophe, -tro-phe
archangel, ch=k
arctic, ark-tic not *ar-tic*
aro'ma
artichoke, not *artijoke*
artif'icer
aspar'agus, not *grass*
assidu'ity
asterisk, not *asterix*
atax'y or at'axy
ate, ĕt
Au'gust (the month)
august' (=grand)
awkward, not *awkard*
aye, i, not *ay*
because, not *becos*
begone -gon, not *gaun*
beloved (verb) beluv'd
beloved (adj.) beluv'-ed
blessed (verb) blest
blessed (adj.) bless'-ed
boatswain, bo'sn
bom'bast
bosom, o as in wolf
bou'doir -dwar
ca'chet, t silent
calig'raphy
calorim'eter
campanile, cam'-pa-nil or cam-pa-ne'-la
canard'
capil'lary or cap'illary
catas'trophe 'tro-phe
cav'iare, -ar not a-re
cen'tenary or cente'nary
centrif'ugal
centrip'etal
cha'let, sha'-lay
cham'ois, sham-wa
champagne, sham-pain
cham'paign, sham'pain
champion, cham'-pi on
char'-à-banc, final c silent
chas'tisement
chirop'odist, ch=k
chimney, not *chimley*
clere'story, clear-story
clima'teric, or climacter'ic
coadju'tor
cof'fee, not *cau'fee*
colonel, kurn'el
com'mandant
commend'atory
com'parable
com'plaisance
com'promise
confirm'atory
confis'catory
con'fluent
con'gruent
conjure' (to implore)
con'jure (by magic)
con'strue, or construe'
con'summate (verb)
consum'mate (adj.)
con'tents, or contents'
con'trary, not *contra'ry*
con'troversy
con'tumely, con'-tu-me-ly
con'verse (noun)
converse' (verb)
corps, ps silent
courtesy, kort'esy or kurt'esy
coxswain, cox'-an
cro'chet, cro-shay
deca'dent
declam'atory
demon'strative
derog'atory
des'picable

de'tail, or detail'
diphthe'ria, ph=f
diph'thong, ph=f
disin'terested
dis'putable
drought, drout
dyn'asty, not *dy-nasty*
éclat', t silent
elegi'ac
em'issary
English, Inglish
envel'op (verb)
en'velope (noun)
epis'tle, t silent
epit'ome, e-pit'-o-me
eq'uipage, ek-wi-page
eq'uitable, ek'-wi-table
exec'utive
exec'utor
ex'piatory
extem'pore, -po-re
façade, ç=s
fakir', ir=eer
Feb'ruary, sound the r
fer'ment (noun)
ferment' (verb)
fe'tish, fee-tish
fifth, sound the f
fig'ure, fig'gur
finance'
form'ative
form'idable
fre'quent (adj.)
frequent' (verb)
fron'tier, frun'teer
gal'lant, brave
gallant', polite
ge-om'etry, not jom'etry
ge-og'raphy, not jog'raphy
gon'dola
gone, gŏn, not *gaun*
government, sound the n
gus'tatory
gutta-percha, not *persha*
gut'tural, tur=ter
hand'kerchief, -chif not *chieve*
height, not *heighth*
hein'ous, hay'nous
he'liotrope, he-li- not *hel-i*
hin'drance, not *hinderance*
his'tory, not *histry*
hos'pitable
hos'pital, not *hauspital*
hos'tage, o short
hough, hock
house'wifery
hyper'bole, -bo-le
hyster'ical, not *-tirical*
il'lustrated, -tra not *-tera*
impugn', impune
incom'parable
indict'ment, inditement
indis'putable
indis'soluble
inex'orable
in'famous
inhos'pitable
instead', not *instid'*
in'teresting, not *interest'ing*
in'terloper
inter'minable
in'ventory
irrel'evant, not *-revelant*
irrep'arable
irrev'ocable
isos'celes, *c* silent
jew-el, not jewl
lab'oratory or labor'atory
lam'entably
laud'atory
leg'islative
li'chen, lī-ken
lieuten'ant, lef-ten'-ant
lit'erary
lithog'raphy
machination, ch=k
main'tenance
malap'ropos s silent
medicine, i silent
meer'schaum
mel'ancholy
metamor'phosis
meta'thesis
metemp'sycho'sis, p silent
mid'wifery
min'ute (of time), minit
misan'thropy
mis'cellany, or miscel'lany
mis'chievous, not *-chee'vous*
mnemon'ics, initial m silent
muni'cipal
nothing, not *nothink*
oa'sis, o-a'-sis
ob'durate
ob'ligatory
often, t silent
omnip'otent
orthog'raphy
os'trich, not *ostridge*
pachyder'matous
pan'tomime, not *-mine*
parab'ola
par'tisan
pā'tent, a long
păt'ernoster, a short
pat'riot, or pa'triot
pā'tron, a long
pat'ronage, a short
pedom'eter
pen'ult
per'emptory
perhaps', not *praps*
perim'eter
periph'rasis
pet'rol
pharmaceu'tical, ceu=su
pharmacopœ'ia
photog'raphy
pho'togravure
photom'eter
phthi'sis, ph silent
pincers, not *pinchers*
pneumo'nia, p silent
polyg'amy
poor, not *pore*
preb'endary
prece'dent (adjective)
prec'edent (noun)
prece'dence
précis, s silent
pred'atory
pref'erable
prem'ature
pre'mier, or prem'ier
priv'acy, not pri'vacy
pro'bate
proce'dure
pro'gress (noun)
progress' (verb)
prolep'tic
pro'logue, pro'log
provoc'ative
quar'antine, -teen
quay', key
quoit, koit
radiom'eter
ra'tions, or rash'ions
rationa'le, -a-le
rat'line, rat-lin
recogn'izance, g silent
recognise, g sounded
rec'ondite, or recon'dite
rel'evant, not *revelant*
rem'ediless
remem'brance, not *-berance*
remon'strate
rep'arable
rep'utable
rere'dos, rear-dos
res'onant
res'pite
re'tail (adjective)
retail' (verb)
rev'enue
rose'mary
rout, rowt
route, root
row'lock, rul'ock
sal volatile, -ti-le
sarcoph'agus
sati'ety
sat'yr
schism, ch silent
sec'retary
sed'entary
sep'arate, not *seperate*
sep'arator
slough (mire), gh silent
slough (cast skin) sluff
sobriquet, sou'-bri-kay
soot, not *sut*
sov'ereign, not *sovrin*
stal'actite
stal'agmite
stone, not *stun*
stro'phe, stro-fe
sub'altern
subtract', not *substract*
super'fluous
superintend, not *suprintend*
surtout, t silent
syn'od, sin-od
syn'thesis
tautol'ogy
teleg'raphist
telep'athy
ten'et, not *te'net*
ten'tative
tetral'ogy
the'atre, not *thea'tre*
theoc'racy
theos'ophy
threepence, threp'ence
tia'ra, or ti'ara
tongs, not *tungs*
tracheot'omy
trait, t silent
trans'ferable, or transfer'able
tril'ogy
tri'pod
tri'pos
twelfth, not *twelth*
twopence, tuppence
umbrella, not *um-ber-ella*
val'et, t silent
vase, a=ah not *aw*
vi'olet, not *vilet*
violoncello, -chello
vol'atile, vol'-a-tile
vol'untary
waistcoat, wes-kot
were, wer not *ware*
wort, wirt
yacht, yot
yeast, yeest not *yest*
ze'bra, zee-bra
zoology, zo-ol-o-gy
zo'ophyte, zo-o-fite

HOMONYMS.

AN AID TO THE CORRECT SPELLING OF WORDS SIMILAR IN SOUND BUT DIFFERING IN MEANING.

Accidence, a part of grammar.
Accidents, mishaps.

Acts, deeds.
Axe, a chopper.

Ail, to be ill.
Ale, beer.

Air, atmosphere.
E'er, ever.
Ere, before.
Heir, one who inherits.

Ait, a small island.
Eight, twice four.

All, everything.
Awl, a tool.

Altar, the communion table.
Alter, to change.

Analyst, one who analyses.
Annalist, a writer of annals.

Anker, a liquid measure.
Anchor, an iron to hold a ship.

Arc, a part of a circle.
Ark, a chest; a ship.

Ascent, a climbing up.
Assent, to agree.

Asperate, to make rough.
Aspirate, to sound the letter *h*.

Assistance, help.
Assistants, those who assist.

At'tribute, an ascribed quality.
Attrib'ute, to ascribe.

Auger, a tool for boring.
Augur, a soothsayer.

Aught, anything.
Ought, to be bound by duty.

Au'gust, the name of a month.
August', inspiring awe.

Ay, yes.
Eye, for seeing.

Bad, not good.
Bade, ordered.

Bail, a surety.
Bale, a bundle of goods.

Ball, something round.
Bawl, to shout.

Bard, a poet.
Barred, did bar.

Bare, naked.
Bear, an animal.

Baron, a degree of nobility.
Barren, not fertile.

Base, the bottom.
Bass, the lowest part in music.

Bay, an inlet of the sea.
Bey, a Turkish governor.

Bays, inlets of the sea.
Baize, a coarse woollen stuff.

Beach, the shore.
Beech, a tree.

Beat, to strike.
Beet, a plant.

Beer, an intoxicant.
Bier, a carriage to bear the dead.

Bell, a hollow sounding body.
Belle, a beautiful lady.

Berry, a small fruit.
Bury, to put in the ground.

Berth, a situation.
Birth, a coming into life.

Better, of superior quality.
Bettor, one who bets.

Bight, a small bay.
Bite, to crush with the teeth.

Blew, did blow.
Blue, a colour.

Boa, a genus of serpents.
Boar, an animal.
Bore, to pierce holes.
Boor, an uneducated man.

Board, a piece of timber.
Bored, did bore.

Bole, the stem of a tree.
Bowl, a basin.

Born, brought into life.
Borne, carried.
Bourne, a limit.

Borough, a corporation-town.
Burrow, a rabbit-hole.

Bough, a branch.
Bow, to bend.

Bow, a weapon to shoot arrows.
Beau, a suitor.

Boy, a male child.
Buoy, a float.

Braid, to plait.
Brayed, did bray.

Brake, a carriage.
Break, to destroy.

Bread, food.
Bred, brought up.

Bridal, belonging to marriage.
Bridle, part of a horse's harness.

Broach, to start (a topic).
Brooch, an ornament.

Bruit, rumour.
Brute, savage; senseless.

But, except; yet.
Butt, to strike with the head.

Buy, to purchase.
By, near, beside.
Bye, in good-bye.

Calendar, a register of the year.
Calender, to dress cloth.
Cullender, a strainer.

Call, to summon.
Caul, a membrane.

Candid, open, ingenuous.
Candied, preserved in sugar.

Cannon, a big gun.
Canon, a law.
Cañon, a deep narrow gorge.

Canvas, a coarse cloth.
Canvass, to solicit votes.

Capital, first-class.
Capitol, a senate-house.

Carat, a weight of four grains.
Carrot, an edible root.
Caret, a mark (^) of omission.

Cask, a barrel.
Casque, a helmet.

Cast, to throw.
Caste, rank.

Cede, to give in.
Seed, a grain; offspring.

Ceiling, the inner roof.
Sealing, part of verb "to seal."

Cell, a small cavity.
Sell, to give for a price.

Cellar, an underground room.
Seller, one who sells.

Censer, an incense-vessel.
Censor, one who censures.

Cent, a hundred.
Scent, odour.
Sent, did send.

Cere, to wax.
Sear, to burn.
Seer, a prophet.
Sere, dry, withered.

Cereal, an edible grain.
Serial, relating to a series.

Cession, a giving up.
Session, a sitting.

Champagne, a wine.
Champaign, a plain.

Chaste, pure, virtuous.
Chased, hunted.

Check, to stop.
Cheque, an order for money.

Choler, anger.
Collar, a neckband.

Chord, notes played together.
Cord, small rope.

Clause, a sentence.
Claws, hooked nails.

Climb, to mount up.
Clime, a region.

Coarse, not refined.
Course, a career, a path.

Coat, an outer garment.
Cote, a sheepfold.

Complement, full amount.
Compliment, a polite expression.

Confidant, a trusted friend.
Confident, positive.

Conformation, form, shape.
Confirmation, a religious rite.

Coral, a substance found in the sea.
Corral, an enclosure for cattle.
Choral, belonging to a choir.

Core, the heart of a fruit.
Corps, a body of troops.

Council, a consulting body.
Counsel, advice.

Councillor, one of a council.
Counsellor, an adviser.

Courtesy, politeness.
Curtsey, a low bow.

Cozen, to cheat, to deceive.
Cousin, a relative.

Creak, a grating sound.
Creek, a small bay.

Crewel, a sort of yarn.
Cruel, inhuman.

Crit'ic, a fault-finder.
Critique', a criticism.

Cruise, a sea-trip.
Cruse, a small cup.
Crews, ships' companies.

Currant, a small fruit.
Current, a stream.

Dairy, where milk is kept.
Diary, a journal.

Dam, a bank to stop water.
Damn, to condemn.

Day, the time it is light.
Dey, a Turkish governor.

Dear, costly; beloved.
Deer, an animal.

Deference, respect.
Difference, disagreement.

Deformity, unnatural form.
Difformity, irregularity.

Descent', a coming down.
Dissent', disagreement.

Desert', to forsake.
Des'ert, uncultivated.
Dessert', the last course at dinner.

Dew, moisture.
Due, owed; fit.

Die, to expire.
Dye, to colour.

Dire, dreadful, horrible.
Dyer, one who dyes.

Divers, several.
Diverse, different.

Doe, a female deer.
Dough, uncooked paste.

Done, past participle of "do."
Dun, a brownish colour.

Draft, a detachment.
Draught, a drink.

Dram, the 16th of an ounce.
Drachm, a Greek coin.

Dual, twofold.
Duel, a fight between two.

Elicit, to draw out.
Illicit, unlawful.

Eligible, desirable.
Illegible, unreadable.

Elude, to avoid by artifice.
Illude, to deceive.

Eminent, famous.
Imminent, impending.

Empyreal, highly refined.
Imperial, relating to empire.

Eruption, a breaking forth.
Irruption, an invasion.

Exercise, to employ.
Exorcise, to drive away.

Ewer, a kind of jug.
Your, belonging to you.
Yore, long ago.

Fain, gladly.
Fane, a sacred edifice.
Feign, to pretend.

Faint, feeble, languid.
Feint, a pretence.

Fair, lovely; just.
Fare, food.

Feat, an exploit.
Feet, plural of "foot."

Fellow, an associate.
Felloe, the rim of a wheel.

Fer'ment, tumult.
Ferment', to put in motion.

Filter, a strainer.
Philtre, a love potion.

Fir, a tree.
Fur, soft hair.

Firs, trees.
Furs, skins.
Furze, a prickly shrub.

Fisher, one who fishes.
Fissure, a gaping crack.

Flea, an insect.
Flee, to run away.

Flew, did fly.
Flue, a part of a chimney.

Flour, prepared grain.
Flower, a blossom.

For, in the place of.
Fore, anterior.
Four, a number.

Fort, a fortified building.
Forte, a strong point.

Forth, forward.
Fourth, the ordinal of four.

Foul, filthy, polluted.
Fowl, a bird.

Frays, riots.
Phrase, a mode of speech.

Frees, sets free.
Freeze, to congeal with cold.
Frieze, a coarse cloth.

Gait, manner of walking.
Gate, a large door.

Gamble, to play for money.
Gambol, to frisk.

Gild, to overlay with gold.
Guild, a society.

Gilt, gold laid on.
Guilt, culpability.

Glair, the white of an egg.
Glare, a very brilliant light.

Grate, to make a harsh sound.
Great, big; eminent.

Greaves, armour for the legs.
Grieves, does grieve.

Grisly, hideous.
Gristly, like gristle.
Grizzly, somewhat grey.

Groan, a mournful sound.
Grown, past participle of "grow."

Grocer, a dealer in sugar, etc.
Grosser, coarser.

Guessed, did guess.
Guest, a visitor.

Hail, frozen rain.
Hale, healthy.

Hair, natural covering of the head.
Hare, a small animal.

Hall, a large room; a mansion.
Haul, to draw with force.

Hart, a stag.
Heart, a part of the body.

Heal, to grow well.
Heel, a part of the foot.

Hear, to perceive sounds.
Here, in this place.

Heard, did hear.
Herd, a number of cattle.

Hew, to fell.
Hue, a tint.

Hide, to conceal.
Hied, hastened.

Hie, to hasten.
High, lofty.

Hire, wages.
Higher, loftier.

Hoard, a hidden store.
Horde, a wandering tribe.

Hoarse, harsh of voice.
Horse, an animal.

Hole, a cavity or hollow place.
Whole, entire.

Holy, sacred.
Wholly, entirely.

Idle, unoccupied.
Idol, an object of worship.
Idyll, a short pastoral play.

Impotent, wanting power.
Impudent, bold, immodest.

Im'port, signification.
Import', to bring from abroad.

In'cense, perfume exhaled by fire.
Incense', to provoke to anger.

Incite, to stir up.
Insight, clear perception.

Indite, to compose.
Indict, to accuse.

Ingenious, skilful, inventive.
Ingenuous, open, candid.

Instants, moments.
Instance, an example.

In'stinct, natural impulse.
Instinct', moved, animated.

Isle, an island.
Aisle, a passage in a church.

Jam, a conserve of fruits, etc.
Jamb, the side post of a door, etc.

Jester, one who jests, a buffoon.
Gesture, a movement of the body

Kernel, the seed of some fruits.
Colonel, an officer in the army.

Key, an instrument to unlock.
Quay, a wharf.

Lac, a resin; a sum of rupees.
Lack, to be without.

Lade, to load.
Laid, did lay.

Lain, past participle of "lie."
Lane, a narrow street.

Lair, bed of a wild animal.
Layer, a stratum, a row.

Lax, not strict.
Lacs, sums of rupees.
Lacks, does lack.

Leaf, a part of a plant.
Lief, willingly.

Leak, a hole that lets in water.
Leek, a vegetable.

Led, did lead.
Lead, a metal.

Lee, the side facing the wind.
Lea, a meadow.

Lees, the dregs.
Lease, to let by lease.

Lessen, to diminish.
Lesson, something to be learned.

Levy, to raise money.
Levée, a prince's reception.

Liar, one who tells lies.
Lyre, a musical instrument.

Limb, a member.
Limn, to draw.

Lineament, a feature, outline.
Liniment, an ointment.

Links, connecting rings.
Lynx, an animal.

Load, a burden.
Lode, a vein of metal.
Lowed, did low.

Loan, something lent.
Lone, lonely, solitary.

Lock, something that fastens.
Loch, lough, a lake.

Made, did make.
Maid, a young, unmarried woman.

Magnate, a distinguished person.
Magnet, a loadstone.

Mail, a bag of letters.
Male, one of the sexes.

Main, principal, chief.
Mane, long hair on an animal's neck.
Maize, Indian corn.
Maze, a labyrinth; perplexity.

Manner, form, way, mode.
Manna, a kind of food.
Manor, land held by a nobleman.

Mantel, a chimney-piece.
Mantle, a cloak.

Mare, a female horse.
Mayor, a chief magistrate.

Mark, a line, dot, etc.
Marque, a licence to attack.

Marshal, a military officer.
Martial, warlike.

Marten, a kind of weasel.
Martin, a kind of swallow.

Mead, pasture ground.
Meed, reward.

Mean, low, not generous.
Mien, air, manner, look.

Meat, flesh for eating.
Meet, to come together.
Mete, to measure.

Medal, a coin bearing a device.
Meddle, to interfere.

Meddler, one who meddles.
Medlar, a fruit-tree.

Metal, gold, silver, iron, etc.
Mettle, courage, spirit.

Meter, that which measures.
Metre, verse.

Mews, stables.
Muse, to ponder.

Might, power.
Mite, something very small.

Millinery, bonnets, etc.
Millenary, a thousand years.

Miner, a worker in a mine.
Minor, one under age.

Missal, the mass-book.
Missel, a thrush.
Missile, something thrown.

Moan, an expression of pain.
Mown, past participle of "mow."

Moat, a ditch round a castle.
Mote, a small particle.

Mule, an animal.
Mewl, to cry as a child.

Muscle, a fleshy animal fibre
Mussel, a shell-fish.

Mustard, a plant.
Mustered, did muster.

Nave, the centre of a church.
Knave, a rascal, a rogue.

Nay, no.
Neigh, a horse's cry.

Need, to want.
Knead, to mix flour, etc.

New, fresh, modern.
Knew, did "know."

Night, the dark part of the day.
Knight, a title.

Nit, an insect's egg.
Knit, to join closely.

None, not any.
Nun, an inmate of a nunnery.

Nose, the organ of smell.
Knows, does know.

Not, a word expressing negation.
Knot, a nautical mile.

Oar, a rowing instrument.
O'er, contraction of over.
Ore, metal unrefined.

Ordinance, a law.
Ordnance, great guns.

Pail, a vessel to carry water.
Pale, without colour; wan.

Pain, suffering; punishment.
Pane, a square of glass.

Palate, the roof of the mouth.
Palette, a painter's colour-board.
Pallet, a small bed.

Pannel, a kind of saddle.
Panel, a piece of board, etc.

Pare, to cut away little by little.
Pair, a couple.
Pear, a fruit.

Patience, quiet endurance.
Patients, sick persons.

Paws, the feet of beasts.
Pause, a stop, a break.

Peace, rest from any disturbance.
Piece, a portion, a part.

Peak, the summit of a hill.
Pique, to cause offence.

Peal, a set of bells.
Peel, the skin or rind.

Pearl, a gem.
Purl, to ripple.

Peas, a number of peaseeds.
Pease, a quantity of the same.

Peer, a nobleman.
Pier, a projecting landing-place.

Pelisse, a lady's garment.
Police, guardians of the peace.

Pencil, a writing instrument.
Pensile, hanging.

Pendant, a hanging jewel.
Pendent, hanging.

Place, a space, a situation.
Plaice, a flat fish.

Plain, level, simple.
Plane, a joiner's tool.

Plait, to braid.
Plate, a household utensil.

Please, to give pleasure.
Pleas, excuses.

Plum, a fruit.
Plumb, a plummet.

Poll, a list of voters.
Pole, a measure of length.

Populace, the people.
Populous, thickly inhabited.

Pore, a minute opening in the skin.
Pour, to cause to flow.
Poor, in want, mean.

Practice, actual performance.
Practise, to perform.

Praise, to commend.
Prays, does pray.

Pray, to entreat.
Prey, plunder, spoil.

Prec'edent, an example for the future.
President, head of a society.

Pries, does pry.
Prize, a reward.

Prince, a ruler, a king's son.
Prints, engravings.

Principal, chief.
Principle, a maxim, a truth.

Profit, gain, benefit.
Prophet, one who foretells.

Prophecy, something foretold.
Prophesy, to foretell.

Quean, a worthless woman.
Queen, a female sovereign.

Quire, 24 sheets of paper.
Choir, a body of singers.
Coir, the husk of the cocoa-nut.

Rack, to torture.
Wrack, a sea-plant.

Radical, thorough, original.
Radicle, a young root.

Rain, moisture from the clouds.
Reign, to hold sovereign power.
Rein, part of a horse's harness.

Rap, to strike.
Wrap, to cover, to enfold.

Raze, to destroy.
Raise, to lift.
Rays, beams of light.

Read, to peruse.
Reed, a hollow stem.

Real, true, not imaginary.
Reel, a Scotch dance.

Reck, to care, to heed.
Wreck, the loss of a ship.

Red, a colour.
Read, did read.

Rest, repose, peace.
Wrest, to take by force.

Rigger, one who rigs a ship.
Rigour, severity.

Rime, hoar frost.
Rhyme, to agree in sound.

Ring, a circle; to resound.
Wring, to twist; to squeeze.

Rite, a solemn ceremony.
Right, correct; proper.
Wright, an artificer, a workman.
Write, to inscribe.

Road, a public way.
Rode, did ride.
Rowed, did row.

Roes, plural of "roe."
Rose, a flower.
Rows, does row.

Roll, to turn over and over.
Rôle, a character to be played.

Rood, a quarter of an acre.
Rude, rough; ill-mannered.

Root, part of a plant.
Route, the way to go.

Rote, learning by repetition.
Wrote, did write.

Ruff, an ornament for the neck
Rough, not smooth.

Ruse, a stratagem.
Rues, does rue.

Rye, a kind of grain.
Wry, crooked, distorted.

Sail, a sheet of canvas for ships.
Sale, the act of selling.

Sailer, a sailing ship.
Sailor, a seaman.

Salary, wages.
Celery, a salad vegetable.

Satire, sarcasm.
Satyr, a sylvan god.

Scene, a stage; a view.
Seen, past participle of "see."

Scents, odours.
Sense, understanding.

Seam, a joining line.
Seem, to appear.

See, to behold.
Sea, the ocean.

Sees, does see.
Seize, to lay hold of.

Serf, a slave.
Surf, the beating of the waves.

Serge, a kind of cloth.
Surge, to swell, to rise high.

Shagreen, a kind of leather.
Chagrin, vexation.

Shear, to clip.
Sheer, downright.

Shore, the coast.
Sure, certain, unfailing.

Side, a margin.
Sighed, did sigh.

Sight, the sense of seeing.
Site, situation.
Cite, to quote.

Signet, a seal.
Cygnet, a young swan.

Siliceous, containing silica.
Cilicious, made of hair.

Single, not double.
Cingle, a horse's girth.

Size, magnitude.
Sighs, does sigh.

Skull, the case for the brain.
Scull, a short oar.

Slay, to kill.
Sleigh, a snow carriage.

Slight, inconsiderable, slow.
Sleight, an artful trick.

Sloe, a wild plum.
Slow, not quick, late.

So, in like manner.
Sow, to scatter seed.
Sew, to use a needle and thread.

Soar, to fly aloft, to mount.
Sore, painful, tender.

Soared, did soar.
Sword, a weapon.

Sole, a flat fish.
Soul, the spirit of man.

Son, a male child.
Sun, the orb of day.

Stair, a step.
Stare, a fixed look.

Stake, a sharpened post.
Steak, a slice of meat.

Stationary, not moving.
Stationery, writing materials.

Stayed, did stay.
Staid, steady, grave.

Steal, to take by theft.
Steel, refined iron.

Step, a pace.
Steppe, a treeless plain.

Stile, a kind of barrier.
Style, manner of doing anything.

Storey, a stage of a building.
Story, a narrative.

Straight, not crooked.
Strait, a narrow passage.

Succour, help.
Sucker, a shoot of a plant.

Suite, a retinue; a series.
Sweet, not sour.

Sum, the amount.
Some, a part.

Surplice, a white garment.
Surplus, excess.

Sutler, a seller of provisions.
Subtler, more artful.

Symbol, a sign, an emblem.
Cymbal, a musical instrument.

Tacked, did tack.
Tact, skill in doing the right thing.

Tail, the hinder part.
Tale, a story, a narrative.

Tare, a weed in the corn.
Tear, to pull to pieces.

Tax, an impost.
Tacks, small nails.

Tea, a beverage.
Tee, the starting-point in golf.

Team, horses harnessed together.
Teem, to be plentiful.

Tear, moisture from the eyes.
Tier, a row, a rank.

Tease, a torment.
Teas, kinds of tea.

Tense, stretched.
Tents, movable houses.

Their, belonging to them.
There, in that place.

Throe, extreme agony.
Throw, to fling, to cast.

Throne, a royal seat.
Thrown, past participle of "throw."

Threw, did throw.
Through, from end to end.

Tide, ebb and flow of the sea.
Tied, did tie.

Time, the measure of duration.
Thyme, an aromatic plant.

To, denoting motion towards.
Too, over and above, also.
Two, a number.

Toe, a part of the foot.
Tow, to draw by a rope.

Told, did tell.
Tolled, did toll.

Ton, twenty hundredweight.
Tun, a large cask.

Tract, a region.
Tracked, did track.

Trait, a feature.
Tray, a household utensil.

Travel, to make a journey.
Travail, to toil, to labour.

Treaties, formal agreements.
Treatise, a written discourse.

Urn, a vessel, a sort of vase.
Earn, to gain by labour.

Vain, conceited, worthless.
Vane, a weathercock.
Vein, a blood-vessel.

Vale, a valley.
Veil, a covering for the face.

Vial, a small bottle.
Viol, a musical instrument.

Wade, to walk through water.
Weighed, did weigh.

Wail, to grieve aloud.
Wale, the mark of a stripe.
Whale, a large fish.

Wain, a waggon.
Wane, to decline, to decrease.

Waist, a part of the body.
Waste, to squander.

Wait, to stay for; to attend.
Weight, the amount a thing weighs.

Waive, to relinquish.
Wave, to undulate.

Ware, something for sale.
Wear, to have on the body.

Warn, to admonish.
Worn, past participle of "wear."

Way, the road one travels.
Weigh, to find the weight.
Whey, the thin part of milk.

We, the plural of I.
Wee, extremely small.

Weak, feeble, infirm.
Week, seven days.

Wean, to put from the breast.
Ween, to think, to fancy.

Weather, the state of the air.
Wether, a sheep.
Whether, which of the two.

Wield, to handle.
Weald, a wood or grove.

With, by means of.
Withe, a willow twig.

Won, did win.
One, a single thing.

Wood, a forest; timber.
Would, past tense of "will."

Yoke, a bond.
Yolk, part of an egg.

You, the person addressed.
Yew, an evergreen tree.
Ewe, a female sheep.

SYNONYMS.

AN AID TO THE SELECTION OF THE RIGHT WORD.

A FEW words on the use of the following list of synonyms may be of service, as a certain amount of caution must be exercised in the choice of such equivalents. Synonyms are frequently used in order to avoid the repetition of the same word, and also for reasons connected with metre and euphony. It must, however, be remembered, that few words are identically alike in meaning, and these slight shades of difference often make one particular word more appropriate than any of its synonyms in a given passage.

Take for example *separate*, *sever*, *part*, *divide*, and note the effect of substituting in the place of the word used any one of its synonyms:—

(*a*) He used a sieve for *separating* the flour from the bran.
(*b*) "Their graves are *severed* far and wide."
(*c*) She *parts* her hair down the middle.
(*d*) *Divide* the cake into six parts.

One other caution is necessary, namely, words that are synonymous with the same word are not necessarily synonymous with one another:—

Ex.: wanting=lacking. "He is *wanting* in ability."
=desiring. "He is always *wanting* something."

Yet *lacking* and *desiring* have no connexion.

Abandon, relinquish, desert, forsake.
Abandoned, reprobate, depraved, corrupt.
Abashed, humiliated, disconcerted, confused.
Abate, decrease, subside; reduce.
Abbreviate, shorten, curtail, abridge.
Abhorrence, loathing, hatred, detestation, aversion.
Abide, tarry, sojourn, remain, dwell.
Ability, power, capability, skill, faculty.
Abject, cast-away, mean.
Abjure, forswear, renounce.
Abnormal, irregular, exceptional, unusual, anomalous.
Abnegation, renunciation, self-denial.
Abode, residence, dwelling-place, domicile.
Abrogate, repeal, annul, abolish.
Absolute, unlimited, complete; positive, arbitrary.
Abstain, desist, refrain.
Abstemious, temperate, moderate, frugal.
Abstract (*a*) withdraw, remove, purloin, steal; (*b* epitome, summary, synopsis.
Abstraction, absorption, preoccupation.
Abstruse, recondite, occult, obscure, profound.
Absurd, ridiculous, irrational, preposterous.
Abundant, plentiful, copious, ample, profuse.
Abuse, misuse, pervert; vituperate.
Abyss, chasm, gulf.
Academy, school, seminary, college.
Accede, yield, comply, concur.
Accelerate, quicken, hasten.
Accept, receive, acknowledge.
Access, approach, entrance, ingress, admittance.
Accessory, auxiliary, aiding, countenancing.
Accident, chance, misfortune, calamity, casualty.
Acclivity, ascent, incline, rising.
Accommodate, adapt, adjust, suit; oblige.
Accomplish, complete, fulfil; achieve, effect.
Accord, agree, harmonize; grant.
Account, narrative, report, tale value, estimation.
Accoutre, arm, equip.
Accumulate, amass, collect, hoard.
Accuracy, precision, exactitude, correctness.
Accusation, charge, allegation, indictment.
Acerbity, bitterness, sharpness, acrimony.
Acknowledge, confess, own, admit, allow, grant.
Acme, height, culmination, summit, zenith.
Acquaintance, familiarity, intimacy.
Acquiesce, concur, agree, assent.
Acquit, exonerate, free.
Act, deed, action, performance.
Active, energetic, brisk.
Actual, real, identical, authentic.
Actuate, incite, impel, instigate.
Acumen, discernment, penetration, insight.
Acute, sharp, keen, shrewd.
Adage, saw, saying, proverb, maxim.
Addicted, prone, inclined.
Address, tact, ease, readiness.
Adduce, allege, cite, quote.
Adept, expert, proficient, apt.
Adequate, proportionate, equal, commensurate, sufficient.
Adhere, stick, cleave, cling.
Adieu, goodbye, farewell.
Adjacent, neighbouring, contiguous, bordering.
Adjudge, assign, award.
Adjunct, addition, appendage.
Adjure, conjure, exhort, entreat.
Administer, execute, dispense; manage, conduct.
Admirable, praiseworthy, laudable, estimable.
Admissible, permissible, allowable.
Admonish, exhort, warn, reprove.
Ado, stir, commotion, fuss.
Adore, worship, venerate.
Adorn, decorate, ornament, beautify.
Adroit, dexterous, skilful, handy.
Adulation, flattery, sycophancy.
Adulterate, vitiate, corrupt, debase.
Advance, proceed, progress; raise.
Advantage, gain, benefit, profit; superiority.
Advent, coming, arrival, approach.
Adventitious, extrinsic, external, accidental.
Adventurous, enterprising, daring, bold.
Adversary, opponent, antagonist, foe.
Adversity, affliction, trouble, misfortune.
Advertise, publish, notify; inform.
Advise, counsel, urge, persuade.
Advocate, support, champion, plead.
Affable, genial, gracious, sociable.
Affair, matter, concern, business.
Affinity, attraction, connexion, kinship, similarity.
Affirm, assert, declare, testify.
Affluence, abundance, riches, wealth.
Afford, furnish, supply, yield.
Affront, indignity, insult, outrage.
Aforesaid, foregoing, above-mentioned, stated.
Age, antiquity; period, epoch, era, generation.
Agent, actor, doer, performer.
Aggravate, intensify; irritate, exasperate.
Aggregate, sum, total, amount.
Aggression, encroachment, invasion, incursion.
Aggrieve, vex, hurt, wound.
Agile, sprightly, nimble.
Agitate, ruffle, excite, disturb.
Agony, anguish, torment, torture.
Agriculture, tillage, husbandry, farming.
Aid, help, assist, succour.
Ailment, complaint, disease, sickness.
Aim, end, purpose, endeavour.
Airy, ethereal, light.
Akin, allied, related, similar.
Alacrity, readiness, eagerness, swiftness.
Alarm, fear, dread, apprehension.
Alert, ready, prompt, vigilant.
Alien, foreign, strange.
Alight, dismount, descend.
Alike, same, similar; equally.
Aliment, nutriment, sustenance, food.
Alive, living, alert, vivacious.
Allay, alleviate, assuage, soothe, mitigate.
Allegiance, fealty, loyalty, adherence, homage.
Allegory, fable, parable.
Alliance, union, compact, confederation.
Allot, assign, award, apportion.
Allow, grant, permit, suffer.
Ally, helper, friend, coadjutor.
Aloud, audibly, loudly.
Alter, change, vary.
Altercation, dispute, quarrel, dissension.
Alternative, choice, resource.
Altogether, fully, entirely, quite.
Amalgamate, combine, unite, fuse.
Amass, gather, collect, hoard.
Amazed, astonished, bewildered, dumbfounded.
Ambiguous, uncertain, doubtful, equivocal.
Ambition, aspiration, aim, desire.
Ameliorate, better, improve.
Amenable, tractable, docile liable, accountable.
Amends, reparation, restitution, satisfaction.
Amiable, lovable, engaging, good-tempered.
Amicable, friendly, kindly, sociable.
Amiss, wrongly, mistakenly, injudiciously.
Amnesty, pardon, oblivion.
Amorphous, shapeless, formless, confused.
Amplify, enlarge, increase, augment.
Analogy, likeness, similarity, correspondence.
Analyse, test, assay, examine.
Anarchy, lawlessness, confusion, disorder.
Angelic, heavenly, seraphic, spiritual.
Anger, passion, wrath, fury, rage.
Animadversion, censure, invective, diatribe.
Animated, spirited, lively, vivacious.
Annals, chronicles, records.
Annihilate, exterminate, destroy.
Annotation, note, comment, explanation.
Announce, proclaim, publish, advertise.
Annoy, vex, irritate; molest, harass.
Anonymous, nameless, unacknowledged.
Answer, reply, retort; solution.
Answerable, accountable, responsible, liable.
Anterior, prior, previous, antecedent.
Anticipate, expect; forestall.
Antiquated, obsolete, old-fashioned, out-of-date.
Antithesis, opposite, contrast.
Anxious, uneasy, disquieted, troubled.
Apathetic, impassive, indifferent, listless.
Ape, imitate, mimic.
Aperture, opening, cleft, crevice.
Apocryphal, doubtful, unauthenticated, spurious.
Apology, excuse, defence, justification.
Apostate, renegade, traitor.
Appal, daunt, terrify, dismay.
Apparel, raiment, clothing, garb.
Apparent, manifest, obvious, seeming.
Appearance, look, aspect, semblance.
Appease, pacify, calm, quiet.
Appellation, designation, title, name.
Appetite, desire, craving, passion.
Applause, praise, commendation, acclamation.
Applicable, appropriate, suitable, adapted.
Application, diligence, industry, assiduity.
Apply, devote, use, employ; refer; administer.
Appoint, fix, settle, name.
Appraise, estimate, value.
Appreciate, prize, value, esteem, estimate.
Apprehend, understand grasp; expect, fear.
Approbation, sanction, approval.
Appropriate, apposite, apt; annex.
Arbiter, arbitrator, umpire, judge.
Architect, builder, designer, constructor.
Ardent, fervent, fiery, enthusiastic.
Arduous, difficult, laborious; steep.
Argue, reason, debate; infer; imply.
Arid, parched, dry, sterile, barren.
Arouse, stir, stimulate, excite.
Arrange, settle, order, classify.
Arrant, utter, flagrant, notorious.
Array, marshal, arrange; deck, adorn.
Arrest, stay, stop; detain, apprehend.
Arrogant, haughty, proud, assuming.
Art, skill, dexterity; craft, wiliness.
Artificial, unnatural, affected, insincere.
Ascend, mount, soar, rise.
Ascendancy, supremacy, mastery, upper-hand.
Ascertain, discover, learn.
Ascribe, attribute, impute, render.
Asperity, harshness, severity, austerity.
Asperse, malign, traduce, slander.
Assault, attack, assail storm.
Assemble, collect, gather, muster.
Associate, companion, friend, partner.
Assurance, self-confidence, audacity; pledge.
Asunder, divided, disunited, apart.
Athletic, strong, vigorous, active.
Atom, bit, particle, jot.
Atonement, reconciliation, reparation, expiation.
Atrocious, horrible, monstrous, outrageous.
Attach, append, affix, subjoin, fasten.
Attain, gain, realize, compass.
Attemper, modify, adjust, adapt.
Attempt, try, strive, endeavour.
Attention, care, heed, observation.
Attest, witness, certify, testify, affirm.
Attire, costume, raiment, apparel.
Attitude, posture, position.
Attract, draw, lure, entice.
Audacious, bold, daring, presumptuous.
Audience, hearers, listeners; interview.
August, majestic, stately, dignified.
Auspicious, propitious, favourable, fortunate.

Authentic, true, real, genuine.
Authoritative, weighty; dictatorial, imperious.
Autocratic, despotic, tyrannical.
Avail, use, help, assistance.
Avarice, rapacity, greed, cupidity.
Average, mean, medium, ordinary.
Avidity, eagerness, greediness.
Avoid, shun, elude, escape.
Aware, conscious, cognizant, sensible.
Awful, awe-inspiring, terrible, fearful.
Awkward, clumsy, uncouth, ungainly.

Babble, prate, chatter, gossip.
Babel, din, uproar, clamour.
Backbiter, detractor, slanderer, calumniator.
Bad, evil, worthless, wicked; ill.
Baffle, foil, thwart, balk, frustrate.
Bait, lure, decoy, enticement.
Balance, poise, equalize, adjust.
Bandy, interchange, exchange.
Baneful, harmful, hurtful, pernicious.
Banish, dismiss; expel, expatriate.
Banquet, feast, festival.
Banter, raillery, badinage.
Barbarous, uncivilized, savage, cruel.
Barely, hardly, scarcely, narrowly.
Bargain, chaffer; compact, agreement.
Base, low, mean, sordid.
Baseless, groundless, unfounded.
Bashful, shy, modest, retiring, coy.
Bask, luxuriate, sun oneself.
Battle, fight, combat, encounter.
Bauble, toy, plaything, trifle.
Bawl, shout, bellow, vociferate.
Beach, shore, strand, coast.
Beaming, radiant, shining, smiling.
Bear, carry; endure, suffer, tolerate.
Bearing, carriage, attitude; tenour, drift.
Beat, thrash, defeat; outdo, surpass.
Beatitude, blessing, bliss, blessedness.
Beauty, loveliness, charm.
Becoming, fitting, appropriate, seemly.
Befall, betide, happen.
Beg, implore, entreat, pray, beseech.
Beggarly, paltry, mean, stingy.
Beggary, indigence, penury, want.
Beginner, novice, tyro.
Beginning, outset, commencement, origin, source; elements, rudiments.
Behaviour, conduct, manners.
Behest, injunction, command.
Behold, see, survey, view.
Beholden, indebted, obliged, bound.
Beholder, spectator, witness, observer.
Belief, trust, confidence, faith, creed.
Bellicose, pugnacious, warlike; polemical.
Belong, pertain, concern, relate.
Bend, stoop, bow, yield.
Benediction, blessing, benison.
Benefactor, patron, friend, helper.
Beneficial, advantageous, salutary, profitable.
Benevolent, generous, charitable, kind.
Bent, leaning, tendency, bias.
Bequeath, will, devise, leave.
Bereave, deprive, strip, spoil.
Beset, besiege, surround, encompass.
Bestow, grant, confer.
Betimes, early, seasonably.
Betoken, indicate, signify, foreshadow
Betray, reveal, manifest, disclose.
Bewail, lament, deplore.
Beware, avoid, shun.
Bewildered, confused, perplexed, dazed.
Bewitching, fascinating, captivating, charming.
Bicker, wrangle, dispute.
Bid, order, command, direct; offer.
Bigoted, narrow-minded, prejudiced, fanatical.
Bind, tie, limit, restrict; compel.
Birth, race, origin, descent.
Biting, pungent, caustic, stinging.
Bitter, sharp, sour, acrid.
Blacken, vilify, defame, decry.
Blackguard, rascal, scoundrel.
Blame, reprove, censure, condemn.
Bland, smooth, mild, insinuating.
Blandishment, fawning, flattery, cajolery.
Blank, empty, void; dismayed.
Blasphemy, impiety, profanity, swearing.
Blast, wither, shrivel, blight.
Blatant, clamorous, bellowing, noisy.
Bleach, blanch, whiten.
Bleak, cold, inclement.
Blemish, blot, stain, spot.
Blench, falter, flinch, shrink.
Blend, mingle, harmonize.
Blithe, gay, light-hearted.
Blockhead, dolt, dullard.
Bloodshed, carnage, slaughter.
Bloodthirsty, savage, cruel, implacable.
Bloom, flower, blossom.
Blow, stroke, shock.
Blunder, error, mistake.
Blunt, out-spoken, bluff, plain-spoken.
Blustering, noisy, bullying.
Boast, brag, vaunt.
Bode, portend, threaten, foreshadow.
Bodily, corporeal, material.
Boil, fume, effervesce, seethe.
Boisterous, rough, roistering.
Bold, daring, audacious, venturesome.
Bolster, prop.
Bombastic, inflated, pompous, grandiloquent.
Bond, tie, link; compact, agreement.
Bondage, servitude, slavery, subjection.
Bonny, comely, pretty.
Booby, dolt, idiot, ninny.
Boorish, clownish, awkward, ill-mannered.
Bootless, unavailing, fruitless, vain.
Border, edge, boundary, limit.
Bore, nuisance, trouble, annoyance.
Bosom, breast, heart, affections.
Botch, cobble, bungle.
Boundless, unbounded, vast, measureless.
Bounty, generosity, goodness, liberality.
Bower, arbour, nook.
Braid, plait, interweave, intertwine.
Branch, bough, limb; off-shoot, subdivision.
Brand, stigmatize, stamp, denounce.
Brandish, wave, flourish.
Bravado, defiance, daring.
Brave, courageous, valiant, gallant.
Brawl, strife, contention, broil.
Brawny, muscular, sinewy, stalwart.
Breach, gap; discord, disunion.
Break, crack, smash, shatter.
Breath, whiff; breathing-time, respite.
Breed, race, line, lineage.
Brevity, terseness, conciseness, briefness.
Bridle, curb, restrain, control.
Bright, shining; cheerful, lively.
Brilliant, glittering, splendid; clever, sparkling.
Brisk, energetic, nimble, active.
Brittle, fragile, breakable.
Broach, open, introduce, moot.
Broad, wide, extensive, vast.
Brook, endure, tolerate, suffer.
Brotherhood, fraternity, community.
Brunt, burden, onus, shock.
Brutal, inhuman, savage, cruel.
Buffoon, clown, jester, mountebank.
Bugbear, hobgoblin, phantom.
Building, edifice, structure, fabric.
Bulk, mass, size, volume.
Bully, browbeat, hector.
Bulwark, defence, protection.
Bungler, muddler, blunderer, botcher.
Buoyant, light-hearted, elastic.
Burden, weight, load, sorrow.
Burial, interment, funeral, obsequies.
Burlesque, caricature, parody, travesty.
Burly, big, huge, unwieldy.
Burn, consume; cauterize; shine.
Burnish, polish, brighten, lacquer.
Burst, explode, break; rush.
Business, calling, trade; affair, concern.
Bustle, commotion, turmoil.
Busy, occupied, industrious, active.
But, nevertheless, however, still, yet.
Buxom, comely, shapely, blithe, bonny.
Buy, purchase; bribe.

Cabal, clique, league, faction.
Cadaverous, pale, deathly, ashy.
Caged, confined, pent, imprisoned.
Caitiff, coward, recreant, poltroon.
Calamity, disaster, misfortune, catastrophe.
Calculate, reckon, count, compute.
Calibre, quality, compass, temper.
Call, name, designate; summon.
Callous, hard, unfeeling, insensate.
Calm, tranquil, peaceful, unruffled.
Calumnious, slanderous, libellous.
Cancel, annul, obliterate, destroy.
Candid, frank, sincere; plain-spoken.
Capable, competent, able, qualified.
Capacity, capability, faculty; volume.
Capital, chief, principal; excellent.
Caprice, whim, vagary, crotchet.
Captious, carping, cavilling, fault-finding.
Captivity, imprisonment, bondage.
Care, attention, heed; anxiety.
Career, course, progress, life.
Caress, fondle, embrace.
Cargo, freight, ship-load.
Carnal, fleshly, sensual.
Carriage, vehicle, conveyance; bearing.
Case, state, condition; fact, matter; cause.
Cash, coin, money, specie.
Cast, throw, fling; found.
Caste, class, rank, status.
Castigate, chastise, beat, punish.
Casual, accidental, chance.
Casuistry, subtlety, specious argument.
Catalogue, list, register, summary.
Catch, seize, grip; overtake.
Catching, infectious, contagious.
Catechism, interrogation, questioning.
Category, list, class.
Cause, reason, origin, ground; law-suit, action.
Caution, warning, admonition; prudence, circumspection.
Cavity, hollow, hole.
Cease, end, desist, stop.
Cede, yield, surrender.
Celebrated, famous, distinguished, noted.
Celestial, heavenly, angelic, divine.
Censure, blame, condemn, reprove.
Ceremony, rite, formality, function.
Certain, sure, positive, reliable.
Certify, testify, avouch, declare.
Chafe, gall, fret, rub.
Challenge, dare, defy, brave.
Champion, defender, protector, hero.
Chance, accident; uncertainty; possibility
Chaplet, wreath, garland, crown.
Character, nature, kind; traits, qualities, personage.
Charge, exhort, enjoin; accuse.
Charitable, generous, liberal, kind.
Chary, cautious, wary, sparing.
Chase, pursue, hunt.
Chaste, pure, spotless, virtuous.
Chattels, goods, movables, belongings.
Cheat, deceive, dupe, defraud.
Check, curb, restrain, hinder, impede.
Cheer, console, encourage; applaud.
Cherish, foster, harbour, nourish.
Chicanery, trickery, subterfuge, artifice.
Chide, scold, rebuke, reprove.
Chieftain, leader, head, chief.
Childish, puerile, unreasoning, silly.
Chimerical, impracticable, visionary, fantastic.
Chivalrous, courteous, gallant, noble-minded.
Choice, selection, preference; select.
Choke, suffocate, stifle, strangle.
Chronicle, record, enroll, register.
Churchyard, graveyard, cemetery, burial-ground.
Cipher, nonentity; monogram; code.
Circuitous, roundabout, indirect.
Circulate, spread, publish, diffuse.
Circumscribe, confine, limit, restrict.
Circumspect, cautious, wary, guarded.
Circumstance, fact, detail, incident.
Circumvent, outwit, baffle, frustrate.
Cite, quote, adduce; summon.
Civilization, culture, refinement.
Claim, demand, title, right.
Clandestine, secret, underhand.
Clear, plain, obvious; transparent; lucid.
Cleave, cling, adhere, stick; split, sunder.
Clemency, mercy, leniency, pity.
Clever, able, dexterous, ingenious.
Climax, summit, crisis, height.
Climb, mount, scale, clamber.
Cloke, hide, conceal, veil, mask.
Close, near; oppressive, stifling; reticent, reserved.
Clothing, attire, raiment, dress.
Clutch, grasp, seize, grip, snatch.
Coarse, rough, unrefined, indelicate.
Coax, wheedle, cajole, entice.
Coddle, pamper, pet, cosset.
Coerce, compel, force, constrain.
Cogent, forcible, urgent, weighty.
Cogitate, ponder, reflect, consider.
Coherent, lucid, connected, consistent.
Coin, invent, devise, fabricate.
Colleague, fellow-worker, partner, associate.
Colloquy, conference, discussion.
Collusion, complicity.
Colossal, gigantic, huge, enormous.
Colour, hue, tint, tinge, complexion.
Comfortable, cosy, snug, pleasant.
Comic, droll, humorous, funny, odd.
Commence, begin, undertake, inaugurate.
Commend, praise, laud, approve.
Comment, note, criticism, remark.
Commerce, trade, business.
Commiserate, pity, compassionate, deplore.
Commit, perform, do; entrust.
Commodious, convenient, roomy, spacious.
Commodities, articles, wares, merchandize.
Common, ordinary, everyday, frequent; vulgar, low.
Commotion, tumult, turmoil, excitement.
Com'pact, agreement, understanding, covenant.
Companion, comrade, friend, associate.
Company, assembly, visitors; association.
Compass, range, radius; powers.
Compassion, pity, sympathy.
Compatible, consistent, harmonious.
Compeer, equal, peer, mate.
Compel, force, constrain, oblige.
Compendious, comprehensive, succinct, summarized.
Compensation, atonement, reparation, amends.
Competition, rivalry, emulation.
Complacent, contented, self-satisfied.
Complete, finish, conclude, terminate, perfect.
Complex, complicated, knotty.
Compliance, consent, yielding.
Component, ingredient, constituent, factor, element.
Comport, conduct, behave.
Composure, calmness, equanimity, tranquility.
Compound, combine, mix; adjust, settle.
Comprehend, understand, grasp, realize.
Compressed, compact, concise, condensed.
Comprise, include, embrace, contain.
Compulsion, force, constraint, necessity.
Compunction, remorse, contrition, relenting.
Concave, hollow, vaulted.
Conceal, hide, cover, suppress.
Conceited, vain, consequential.
Conceive, think, imagine, understand.
Concentrated, centred, fixed, condensed.
Conciliate, propitiate.
Concise, terse, brief, condensed.
Conclave, council, synod, assembly.

Conclude, end, finish, terminate; infer
Concoct, devise, invent, fabricate.
Concomitant, attendant, accompanying.
Concord, harmony, unity, agreement, accord.
Concourse, throng, crowd, assembly.
Concrete, material, substantial, solid.
Condemn, reprehend, blame.
Condign, richly-deserved, well-merited.
Condiment, sauce, seasoning, relish.
Condition, state, plight; stipulation.
Conduce, tend, contribute, lead.
Con'duct, lead, escort, convoy.
Confederacy, conspiracy, plot, intrigue.
Confer, bestow, grant; consult.
Confide, rely; entrust, commit.
Configuration, outline, contour.
Confine, limit, restrict.
Confirm, ratify; strengthen, stablish.
Conflict, strife, encounter, contention.
Confluence, junction, meeting-point.
Conformity, compliance, uniformity, agreement.
Confound, confuse; astound; overthrow.
Confusion, tumult, disorder; destruction.
Congeal, solidify, freeze, curdle.
Congenial, welcome, pleasing.
Conglomeration, heap, mass, medley.
Congress, synod, council, assembly.
Conjecture, surmise, supposition, guess.
Conjugal, connubial, nuptial, matrimonial.
Conquer, overcome, defeat, subdue.
Conscientious, high-principled, scrupulous, painstaking.
Conscious, aware, cognizant, sensible.
Consecrated, dedicated, hallowed, sanctified.
Consecutive, following, successive.
Consent, sanction, acquiescence, permission.
Consequence, result, outcome, effect, issue; importance, moment.
Consequently, accordingly, therefore, hence.
Consider, reflect, ponder; think, judge.
Considerate, thoughtful, unselfish.
Console, comfort, soothe, solace.
Consolidate, strengthen, cement, bind.
Conspicuous, striking, noticeable, prominent.
Constant, resolute, steadfast; continual.
Consternation, panic, dismay.
Constitution, system, structure, composition.
Construe, interpret, expound, explain.
Consume, devour, destroy, spend, waste.
Consummate, perfect, superlative. absolute.
Contact, touch, communication, collision.
Contaminate, defile, pollute, corrupt.
Contemn, scorn, despise, disdain.
Contemplate, survey, ponder; purpose.
Contend, dispute; strive; argue, maintain.
Continue, last, endure; proceed; prolong.
Contradict, gainsay, deny.
Contrary, opposite, adverse; perverse, contradictory.
Contribution, donation, gift, assistance.
Contrive, endeavour, manage; devise.
Control, govern, master, restrain.
Controversy, dispute, discussion, argument.
Contumacy, obstinacy, perversity, stubbornness.
Contumely, obloquy, ignominy, insolence.
Convenient, suitable, adapted, opportune.
Conventional, formal, ceremonious, customary.
Conversant, proficient, versed, familiar.
Conversation, intercourse, talk, converse.
Conversion, change, transmutation, transformation.
Convey, carry, transmit, bear.
Conviction, persuasion, assurance; condemnation.
Convivial, festive, social, jovial.
Convoy, escort, guard, conduct.
Convulsion, spasm, contortion, disturbance.
Cool, cold, distant; calm, self-possessed.
Co-operation, help, assistance.
Copy, fac-simile, imitation; pattern.
Cordial, hearty, warm-hearted, friendly.
Corner, recess, nook, niche.
Corollary, deduction, inference.
Corporal, physical, bodily, material.
Corpse, remains, body.
Corpulent, stout, fat, obese.
Correct, right, proper, suitable.
Correlation, correspondence, reciprocity.
Correspond, tally, agree, answer, harmonize.
Corrupt, depraved, vicious, vile.
Coruscate, flash, glitter, scintillate.
Cosmos, world, universe.
Cost, price, expense, expenditure.
Costume, raiment, dress, uniform.
Countenance, face, visage, features, expression.
Counteract, neutralize, nullify.
Counterfeit, sham, deception, imitation.
Countless, innumerable, numberless.
Couple, pair, brace.
Courage, bravery, valour, fortitude.
Course, plan, line, way, method.
Court, woo, seek, solicit.
Courtesy, politeness, civility.
Covenant, treaty, bond, compact.
Covet, crave, desire.
Cow, intimidate, overawe, daunt.
Coxcomb, fop, dandy, puppy.
Cozen, deceive, cheat, dupe.
Crabbed, crusty, surly, sour.
Cracked, chipped, split; crazy.
Craft, skill, ingenuity; trade, occupation; cunning, wiliness, guile.
Cram, stuff, squeeze, ram.
Cramp, confine, limit, restrict.
Crash, downfall, collapse, ruin.
Crave, beg, implore.
Create, originate; constitute, appoint.
Credence, belief, credit.
Creditable, meritorious, praiseworthy; honourable.
Creed, faith, belief, conviction.
Crest, brow, summit; emblem, device.
Crestfallen, abashed, humiliated.
Crew, gang, horde, mob.
Crime, wickedness, sin, misdeed.
Cringing, fawning, obsequious, servile.
Crippled, lamed, disabled, impaired.
Croaking, querulous, grumbling.
Crony, chum.
Crop, clip, trim, prune.
Cross, ill-tempered, peevish, irritable; to thwart.
Crow, boast, exult.
Crowd, throng, swarm, mass.
Crucial, severe, searching; critical.
Crude, unripe, immature, unfinished.
Crush, press, squeeze, overpower.
Cull, gather, pick, select.
Culpable, guilty, reprehensible, blamable.
Cultivate, to foster, cherish, rear; till.
Cupidity, greed, avarice, covetousness.
Cure, heal, restore, remedy.
Curious, strange, odd, extraordinary; rare; inquisitive.
Current, drift, tenour; present, passing; rumoured.
Curse, ban, blight, imprecation.
Cursory, passing, hasty, superficial.
Custody, charge, guardianship; imprisonment.
Custom, fashion, usage; habit, practic
Cutting, biting, sarcastic, severe.

Daft, foolish, idiotic, imbecile.
Dainty, delicacy; fastidious; exquisite.
Dally, trifle, toy, wanton.
Damage, injury, loss, harm, mischief.
Danger, peril, risk, jeopardy.
Dapper, trim, spruce, smart.
Dare, presume, venture; brave, defy.
Dark, sombre, gloomy, dismal.
Darling, dear, favourite, idol.
Dashing, venturesome; showy.
Daunt, dismay, dishearten, discourage.
Dawdling, loitering, idling, lagging, dilatory.
Dawn, day-break, rise, appearance.
Dead, lifeless, inert; deceased, departed.
Deadly, fatal, mortal, baleful.
Dear, costly, expensive; precious, cherished.
Dearth, lack, scarcity, famine.
Death, decease, dissolution; ruin.
Debar, hinder, preclude.
Debase, degrade, lower, humiliate.
Debatable, disputable, questionable, doubtful.
Debility, weakness, languor.
Debt, obligation, liability, due.
Decay, moulder, rot; decline, perish.
Deceit, guile, cunning, deception.
Decent, proper, becoming, respectable.
Decision, determination, resolution; judgment.
Declaration, announcement, assertion, statement.
Declension, deterioration, decadence.
Declivity, slope, incline.
Decompose, decay; resolve, disintegrate.
Decorum, propriety, decency, modesty.
Decoy, allure, entice, ensnare.
Decrease, diminish, reduce; wane.
Decree, statute, ordinance, decision.
Decrepit, crippled, infirm, lame.
Deduction, inference, conclusion; subtraction.
Deed, action, feat, exploit.
Deem, think, judge, consider.
Deep, profound, abstruse, obscure.
Defeat, overthrow, baffle, discomfit.
Defect, imperfection, flaw, blemish.
Defence, protection, safeguard; resistance; vindication, justification.
Defer, postpone, delay, retard.
Deference, respect, regard, veneration.
Deficient, wanting, lacking, defective.
Definite, precise, exact, defined, distinct.
Deformity, unshapeliness, disfigurement, malformation.
Defray, pay, settle, discharge.
Degree, step, stage; extent; rank, class.
Dejected, downcast, depressed, dispirited.
Delegate, deputy, representative, commissioner.
Deleterious, noxious, hurtful, harmful.
Deliberate, reflect, ponder; cool, slow, circumspect.
Delicacy, refinement, modesty; fineness, fragility, sensitiveness.
Delicious, delightful, pleasing, palatable.
Delineate, depict, portray, describe.
Delinquent, offender, culprit.
Deliver, release, free, liberate.
Deluge, flood, torrent, inundation.
Demoniacal, fiendish, devilish, diabolical.
Demure, sedate, sober, grave.
Denizen, inhabitant, dweller, occupant.
Denominate, name, entitle, designate.
Dense, dull, obtuse, slow-witted.
Denude, strip, divest, deprive.
Depart, go, withdraw, die.
Department, branch, section, division.
Dependent, subordinate, conditional.
Deplorable, lamentable, pitiable, wretched.
Depredation, plundering, pillaging.
Derision, mockery, scorn, contempt.
Derive, draw, obtain.
Desecrate, profane, pollute.
Des'ert, waste, barren, uninhabited.
Desert', forsake, abandon.
Deserve, merit, earn.
Design, plan, intention; artifice.
Desirable, advisable, expedient, requisite.
Desolate, lonely, deserted, forsaken.
Despair, despondency, hopelessness.
Despise, scorn, disdain.
Despotic, tyrannical, domineering, autocratic.
Destiny, lot, fate, doom.
Destroy, annihilate, ruin, slay.
Detail, particular, point, respect.
Detain, withhold; delay.
Detect, discover, espy.
Deter, hinder, prevent, debar.
Detraction, depreciation, disparagement.
Detrimental, harmful, injurious, disadvantageous.
Develop, perfect, mature.
Deviate, swerve, diverge, wander.
Device, plan, expedient; artifice, design.
Devise, invent, plan, concoct.
Devoid, empty, lacking, destitute.
Devotion, affection, zeal, application.
Diadem, tiara, crown, coronet.
Diction, style, expression, wording.
Didactic, instructive, moral.
Die, wither, fade, decay, perish, expire.
Diet, fare, food, victuals.
Difference, distinction, dissimilarity; disagreement.
Difficult, hard, troublesome, trying.
Diffuse, prolix, verbose.
Dignified, stately, majestic.
Dilapidation, ruin, decay.
Dilate, enlarge, expatiate.
Dilemma, difficulty, quandary.
Dim, dull, lustreless; faint, shadowy.
Dimension, measurement, size.
Dingy, shabby, dull, faded.
Diplomatic, politic, tactful, judicious.
Directly, forthwith, instantly, immediately, straightway.
Dirge, lament, elegy.
Disability, disqualification, drawback.
Disabuse, undeceive, enlighten.
Discernment, discrimination, perception, insight.
Discharge, dismiss; fulfil, perform.
Disciple, learner follower votary.
Disclose, reveal, unfold, display.
Discomfort, unpleasantness, hardship.
Disconcert, embarrass, confuse.
Disconsolate, inconsolable, woeful, wretched.
Discover, invent; find, detect.
Discreet, prudent, tactful, judicious.
Disease, disorder, malady, complaint.
Disgust, distaste, loathing, aversion.
Dismal, dull, dreary, doleful.
Dismay, daunt, terrify, dishearten.
Disparage, depreciate, decry, undervalue.
Dispensation, exemption, indulgence; visitation.
Disperse, scatter, dispel; separate.
Display, ostentation, parade; exhibition.
Disquisition, harangue, treatise.
Disseminate, spread, circulate, propagate.
Dissolute, wanton, licentious, profligate.
Distant, far, remote.
Distinct, separate; clear, audible; definite.
Distinguished, eminent, illustrious, famous.
Distracted, distraught, worried, harassed.
Distress, trouble, affliction; need.
Disturb, disarrange, disorder; trouble.
Divert, alienate; amuse, entertain.
Divest, strip, denude, deprive.
Division, partition, separation; disagreement.
Divination, witchcraft, sorcery; intuition.
Divorce, separate, sunder.
Do, perform, execute.
Docile, teachable, tractable, compliant.
Doctrine, theory, dogma, creed.
Dogged, obstinate, determined, persistent.
Dogmatic, positive, autocratic.
Domain, territory, estate; jurisdiction.
Domineering, tyrannical, overbearing, dictatorial.
Dominion, lordship; territories, empire.
Doom, fate, lot, destiny; sentence.
Dormant, latent, slumbering, quiescent.
Doubt, uncertainty, perplexity; suspicion.
Dowdy, shabby, unfashionable, ill-dressed.
Draft, plan, sketch, outline; cheque, order.
Drag, haul, tug; lag.
Drain, filter, strain, exhaust, dry.
Draw, pull, drag, attract.
Dread, terror, fear, horror, awe.
Dream, vision, fancy, imagination.

Dregs, lees, sediment.
Drench, soak, steep, saturate.
Drift, bearing, purport, tenour.
Drill, train, exercise, practise.
Droop, drop, bend; pine, flag.
Drowsy, sleepy, torpid, heavy.
Dry, parched, arid, thirsty.
Dudgeon, resentment, umbrage.
Due, owing, just, right.
Dumb, speechless, silent, mute.
Durable, lasting, permanent.
Dwindle, shrink, diminish, waste.

Eager, impetuous, keen, ardent, enthusiastic.
Earnest, sincere, grave, intent, zealous.
Ease, rest, repose, comfort, relaxation.
Ebb, recede, wane.
Eccentric, odd, peculiar, erratic.
Ecstasy, rapture, transport.
Edify, instruct, improve.
Educate, train, cultivate, teach, instruct.
Efface, obliterate, erase, remove.
Effective, striking; effectual, efficient.
Effeminate, womanish, unmanly, luxurious.
Effete, exhausted, nerveless.
Effigy, image, figure, model.
Effluence, emanation.
Effort, attempt, endeavour, exertion.
Effrontery, audacity, impudence, assurance.
Effulgence, radiance, brightness.
Egotistic, self-centred.
Egregious, monstrous, outrageous, extraordinary.
Eject, expel, cast out.
Elastic, rebounding, springy, buoyant.
Elated, uplifted, exultant, proud.
Elect, select, chosen, élite.
Electrify, thrill, shock, astonish.
Elegant, graceful, polished, refined.
Elementary, rudimentary, simple.
Elevation, height, altitude, loftiness.
Elicit, evoke, draw, worm, extract.
Eligible, desirable, suitable, advantageous.
Elocution, oratory, declamation.
Elucidate, explain, interpret.
Elude, evade, escape, baffle.
Emanate, issue, proceed.
Emancipate, liberate, free, release.
Embarrass, disconcert, confuse; hamper, impede.
Embezzlement, fraud, peculation, swindling.
Emblem, symbol, token, device.
Embryo, nucleus, germ.
Emergency, crisis, strait, exigency.
Emotion, feeling, agitation, passion.
Emphatic, positive, decided, forcible.
Empire, rule, sway, dominion.
Employ, engage, hire; occupy, engross, use.
Empower, authorize, warrant.
Enamoured, captivated, charmed, fascinated.
Encomium, praise, eulogy, panegyric.
Encourage, cheer, hearten; incite.
Encroach, trespass.
Encumber, impede, shackle, clog.
End, completion, conclusion, termination; goal, aim.
Endanger, imperil, risk, jeopardize.
Endless, infinite, countless, boundless.
Endowed, gifted, vested, endued.
Enervate, unnerve, weaken.
Engage, undertake, promise, vouch.
Engender, beget, breed, create.
Enmity, hatred, discord, hostility.
Enormous, vast, huge, immense.
Enthusiasm, fervour, ardour, zeal.
Entreat, beseech, supplicate, urge.
Enunciate, state, propound.
Envelop, enfold, enclose, wrap.
Ephemeral, transitive, fleeting, evanescent.
Equanimity, composure, tranquility.
Equivocal, questionable, doubtful, dubious.
Eradicate, uproot, extirpate, exterminate.
Errand, mission, commission.
Erratic, flighty, eccentric, unstable.
Erudition, learning, scholarship.
Essential, vital, requisite, indispensable.
Esteem, prize, value, honour.
Eternal, everlasting, undying, perpetual.
Evasion, subterfuge, quibble.
Evidence, proof, testimony; sign, indication.
Exact, precise, definite; require.
Examine, investigate, inspect, test.
Example, pattern; instance, illustration.
Exasperate, irritate, annoy.
Excel, surpass, outdo, exceed.
Excessively, extremely, inordinately, immoderately.
Excruciating, agonizing, racking, torturing.
Exculpate, exonerate, acquit.
Excuse, overlook, pardon; remit.
Execrable, detestable, abominable, disgraceful.
Exemption, immunity.
Exhibit, display, show, manifest.
Exhort, counsel, admonish, advise.
Exit, egress, outlet.
Expedient, advantageous, advisable, profitable.
Expedition, journey, undertaking; speed, despatch.
Experiment, test, proof.
Explanation, interpretation, justification, excuse.
Explicit, definite, clear, express.
Expostulate, remonstrate, protest.
Expression, term, phrase; countenance.
Exquisite, choice rare, dainty.
Extempore, unprepared, unpremeditated.
Extend, stretch, spread, reach.
Extent, degree, amount; size, area.
Extenuate, palliate, excuse, minimize.
Exterior, outside, surface.
Extermination, extinction, abolition, extirpation.
Extinction, death, annihilation; quenching.
Extol, praise, laud.
Extort, wrest, force.
Extraordinary, unusual, remarkable, astonishing.
Extravagant, wasteful, excessive; fantastic.
Extreme, intense, excessive.
Exultation, joy, transport, triumph.

Fabulous, fictitious, imaginary, incredible.
Facetious, jocular, jesting.
Facility, ease, readiness; pliancy.
Faithfulness, fidelity, constancy, loyalty.
Fame, glory, renown, reputation.
Fanatic, bigot, zealot.
Fancy, imagination, notion freak, whim; wish, desire.
Fashion, style, mode, custom; to mould, frame.
Fate, lot, destiny, doom.
Fatigue, weariness, exhaustion.
Faultless, blameless, perfect, flawless.
Favour, goodwill; boon, privilege.
Fawning, cringing, servile, obsequious.
Feasible, practicable, possible.
Feature, characteristic, trait.
Felicitous, happy, apt, appropriate.
Fell, fierce, deadly, cruel.
Fellowship, companionship, intimacy, association.
Festive, jovial, gay.
Fetter, hamper, clog, impede, trammel.
Fickle, capricious, inconstant, changeable.
Fiction, invention, fable, fabrication.
Field, sphere, scope.
Figurative, allegorical, symbolical, emblematic.
Finish, end, conclude, terminate; perfect.
Flaccid, nerveless, limp, flabby.
Flexible, pliant, supple, elastic.
Flinch, shrink, recoil, falter.
Flippant, pert, irreverent.
Flock, herd, congregation, throng.
Florid, flowery, ornate; sanguine, ruddy.
Flourish, wave, brandish; thrive, prosper.
Fluster, flurry, excitement, agitation.
Foible, failing, weakness.
Foil, baffle, defeat; set-off, contrast.
Follower, adherent, partisan, disciple.
Folly, frivolity, senselessness, imprudence.
Foment, foster, intensify, fan.
Footing, ground, standing.
Fop, dandy, exquisite.
Forbearing, long-suffering; refraining, abstaining.
Forbidding, repellent, threatening, austere.
Force, thrust, obtrude; might, violence.
Foreign, outlandish, alien; extraneous.
Forerunner, precursor, herald, harbinger.
Foresight, prevision, forethought, prudence.
Foretell, predict, forecast, prophesy.
Forgery, counterfeit, imitation.
Forgo, waive, resign, drop.
Forlorn, wretched, lonely, desolate.
Former, preceding, prior, earlier.
Forthwith, straightway, immediately, hereupon.
Fortitude, endurance, courage.
Fortuitous, accidental, chance, casual.
Found, establish, originate.
Fractious, peevish, irritable, petulant.
Frail, fragile, weak, delicate.
Fragrance, perfume, odour, scent.
Frank, out-spoken, candid; sincere.
Fray, brawl, tumult, riot.
Frivolous, light-minded, giddy; trivial.
Fret, chafe, fume; pine.
Froward, perverse, obstinate, headstrong.
Fruitful, fertile, productive, prolific.
Fulfil, accomplish, achieve, effect.
Fulsome, nauseating, gross.
Function, duty, office; ceremony.
Furious, raving, frantic, frenzied
Furtive, sly, stealthy, underhand.
Futile, useless, vain, ineffectual.

Gain, win, attain, profit, earn.
Garb, dress, costume, raiment.
Garble, falsify, distort.
Garland, wreath, chaplet, coronal.
Garrulous, talkative, chattering.
Gaudy, showy, staring.
Gauge, sound, fathom, estimate.
Gaunt, lank, lean, haggard.
Generality, majority, mass, bulk.
Generation, age, race.
Generous, munificent, liberal; chivalrous.
Genial, cordial, hearty, warm.
Genuine, sincere, real.
Germ, seed, embryo.
Germane, akin, allied, related.
Ghastly, pale, wan.
Ghost, spirit, spectre, shadow.
Gibe, mock, taunt, sneer.
Giddy, unsteady, frivolous; dizzy.
Gift, talent, faculty, endowment; present.
Gigantic, colossal, enormous, immense.
Gist, point, bearing, drift.
Glib, smooth-tongued, plausible, fluent.
Glorify, extol, honour, exalt.
Gloss, (*a*) note, comment, interpretation; (*b*) polish, lustre.
Goad, spur, stimulate, urge.
Goodly, comely, pleasant, fair.
Gorgeous, splendid, showy, magnificent.
Govern, rule, control, direct.
Gracious, cordial, affable.
Gradually, step by step, little by little, by degrees.
Grand, stately, splendid, magnificent.
Grandiloquent, pompous, bombastic, inflated.
Grant, admit, concede; allowance.
Graphic, vivid, picturesque, realistic.
Grasp, grip, seize; comprehend.
Gratification, satisfaction, pleasure.
Gratuitous, uncalled-for, voluntary.
Grave, serious, sedate, sober, solemn.
Greedy, gluttonous, voracious, grasping.
Grief, sorrow, distress, woe.
Grievance, wrong, injustice.
Grotesque, quaint, odd, bizarre.
Ground, authority, foundation, reason.
Group, cluster, collection; class, order.
Growl, snarl, grumble, complain.
Grudge, malice, ill-will, spite.
Guardian, keeper, protector.
Guess, surmise, conjecture.
Guile, deceit, wile, stratagem.
Guise, form, aspect, garb.

Habitual, customary, usual, regular.
Hail, greet, accost, address.
Handle, touch, wield; treat.
Hands, workpeople, employés.
Handsome, good-looking; generous, munificent.
Handy, useful, convenient; dexterous, skilful.
Harass, worry, annoy.
Harbinger, herald, precursor, forerunner.
Harbour, cherish, entertain; admit, shelter.
Harm, hurt, injury, mischief.
Hatch, devise, concoct.
Hateful, odious, detestable, obnoxious.
Havoc, ruin, devastation.
Hazard, chance, venture, risk, peril.
Head, chief, leader; top.
Hearsay, report, rumour, gossip.
Heavy, downcast; ponderous; burdensome.
Heedful, mindful, careful, prudent.
Heighten, raise, elevate, intensify.
Heinous, hateful, odious.
Hereditary, inherited, ancestral, inborn.
Hesitation, doubt, wavering; reluctance.
Heterodox, unorthodox, heretical.
Hindrance, obstacle, impediment, obstruction.
Holy, sacred, divine; pure, saintly.
Honesty, integrity, uprightness; sincerity.
Honour, respect, esteem; rectitude, self-respect.
Horrible, frightful, terrible, dreadful.
Hostile, inimical, unfriendly, opposed.
Hot, fiery, impetuous; keen, eager.
Hound, chase, pursue, hunt.
Huge, immense, bulky, enormous, vast.
Humour, mood, temper; wit.
Hurt, harm, injure.

Idea, thought, notion, conception.
Identical, precise, exact; same.
Idiocy, folly, senselessness, imbecility.
Idle, lazy, unoccupied; vain, futile.
Ignominious, humiliating, degrading.
Ignorant, uneducated, illiterate; unaware.
Ignore, disregard.
Ill-bred, discourteous, rude, impolite.
Illusive, deceptive, misleading.
Illustrate, exemplify.
Illustrious, distinguished, renowned.
Ill-will, malice, spite, ill-feeling.
Image, form, likeness, similitude.
Imagery, symbolism.
Imagine, think, suppose, conceive.
Imbecile, idiotic, inane, half-witted.
Imitate, copy, mimic.
Immaculate, spotless, unblemished, faultless.
Immanent, inherent, innate.
Immaterial, unsubstantial, spiritual; unimportant.
Immature, crude, imperfect, undeveloped.
Immeasurable, boundless, illimitable.
Immediately, forthwith, straightway.
Immerse, plunge, dip.
Imminent, threatening, impending.
Immolate, sacrifice.
Immunity, exemption.
Impact, collision, shock.
Impair, injure, weaken, enfeeble.
Impassioned, fervid, ardent, enthusiastic.
Impediment, hindrance, obstacle.
Impending, overhanging, threatening.
Imperative, authoritative; urgent, pressing
Imperfection, blemish, defect, flaw.
Imperial, regal, stately.

Imperious, dictatorial, domineering.
Impious, profane, blasphemous, ungodly.
Implement, tool, instrument.
Implicate, compromise, involve.
Implicit, absolute; implied, involved.
Implore, pray, beseech, beg, entreat.
Imply, infer, hint.
Important, weighty, serious, urgent.
Import, meaning, bearing, drift.
Imposture, fraud, deception.
Impotence, powerlessness, helplessness.
Impressive, striking, imposing.
Imprisoned, pent, confined.
Impudence, impertinence, audacity, shamelessness.
Impulsive, hasty, impetuous.
Impute, attribute, assign.
Inadvertently, unwittingly, heedlessly.
Inane, senseless, vapid, vacuous.
Inanition, hunger, exhaustion.
Inappreciable, imperceptible, infinitesimal.
Incantation, spell, charm.
Incarnation, embodiment, personification.
Incense, inflame, irritate, exasperate.
Incentive, motive, inducement, stimulus, spur.
Incessant, unceasing, continual, repeated.
Incivility, rudeness, discourtesy.
Inclement, harsh, severe, pitiless.
Inclination, tendency, proneness, leaning.
Incomparable, unequalled, unrivalled, matchless.
Inconstant, fickle, changeable, faithless.
Incontestable, indisputable.
Inculcate, implant, instil, infuse.
Incursion, inroad, invasion, raid.
Indecorous, unseemly, unbecoming, improper.
Indigent, needy, poor, destitute.
Indignity, insult, humiliation, affront.
Indisposed, disinclined; unwell, out of sorts.
Indomitable, dauntless.
Indorse, ratify, sanction.
Induce, persuade, prevail upon.
Industrious, persevering, diligent.
Inert, sluggish, inactive.
Infamous, shameful, disgraceful, scandalous.
Inference, conclusion, deduction.
Influence, power, weight.
Infringe, encroach, trespass.
Infuse, instil, implant, inculcate.
Ingenuous, guileless, frank, open.
Ingredient, element, factor, constituent.
Inherent, inborn, innate.
Iniquity, wickedness, injustice.
Injunction, command, order, charge.
Injurious, harmful, hurtful, deleterious.
Innocent, blameless, guileless; unconscious.
Inordinate, excessive, undue.
Inquiry, investigation, question.
Insidious, crafty, wily, stealthy.
Insinuate, hint, imply.
Insipid, tasteless, flavourless.
Insolence, impertinence, arrogance, rudeness.
Inspect, investigate, examine.
Instability, inconstancy, fickleness.
Instance, example, illustration.
Instantaneous, momentary, sudden.
Instinct, intuition.
Institute, found, establish, originate.
Instruct, teach, inform; order.
Instrument, tool, implement.
Insurrection, rebellion, rising, revolt.
Integrity, probity, uprightness, honour.
Intellect, mind, reason, understanding.
Intellectual, educated, cultured.
Intelligence, understanding; news, information.
Intense, extreme, acute, keen.
Intentional, deliberate, studied.
Intercession, pleading, mediation, intervention.
Interdict, veto, embargo.
Interloper, intruder.
Interminable, unending, tedious, protracted.
Intermission, cessation, relaxation.
Interpret, expound, explain.
Intimidate, daunt, cow, overawe.
Intrepid, bold, fearless, dauntless.
Introduction, preface, prelude.
Invective, abuse, railing.
Invention, discovery; fabrication.
Inviting, charming, tempting, alluring.
Involve, implicate, include.
Irksome, tedious, vexatious, wearisome.
Ironical, satirical, sarcastic.
Irritate, annoy, exasperate.
Isolated, solitary, detached.
Issue, outcome, consequence, result, upshot.

Jaded, fagged, worn-out, exhausted.
Jargon, gibberish.
Jealousy, suspicion; envy, emulation.
Jeer, mock, scoff, sneer.
Jeopardy, peril, risk, hazard.
Jocose, facetious, jocular, jesting.
Join, unite, combine; link, couple.
Jostle, hustle, push, shove.
Jot, atom, whit, bit, particle.
Jovial, merry, hilarious.
Joy, bliss, rapture, rejoicing.
Judgment, opinion; decision, sentence.
Judicious, discreet, prudent, wise.
Jumble, mixture, medley.
Junction, union, combination.
Just, fair, equitable, right.
Justify, exonerate, vindicate.
Juvenile, youthful, childish.

Keen, eager, zealous.
Keep, retain; protect; observe, obey.
Keeping, custody, guardianship, ward.
Keepsake, memento, souvenir, remembrance.
Key, clue, solution, explanation.
Kind, species, genus, class, description.
Kindred, race, relations; kinship, affinity.
Kingdom, realm, dominion.
Kingly, regal, royal.
Knave, scoundrel, rogue, rascal.
Knowing, acute, sharp, shrewd.

Labour, toil, exertion, work.
Laconic, brief, terse, succinct.
Lament, bewail, deplore, regret.
Language, speech, diction.
Languid, listless, weak, inert.
Lasting, unending, ceaseless; durable.
Lately, recently.
Latent, hidden, dormant.
Lavish, squander, waste; profuse, extravagant.
Lawful, permissible, allowable, legitimate.
Lawless, unruly, disorderly.
Lax, loose, slack.
Lay, set, place, deposit.
Lead, guide, conduct, escort.
League, bond, union.
Lean, recline, rest; slant, slope.
Leap, bound, spring.
Leave, permission, sanction.
Legal, lawful, legitimate; judicial.
Legendary, fabulous, mythical.
Lesson, instruction; example, warning.
Let, allow, permit, suffer.
Lethargic, sleepy, torpid, drowsy.
Level, even, smooth; plane.
Libellous, slanderous, calumnious.
Liberal, generous, bountiful; open-minded.
Licentious, profligate, wanton.
Lie, untruth, falsehood.
Life, vitality, vivacity, vigour, energy.
Lift, raise, elevate, hoist.
Likeness, resemblance, similarity; portrait, photograph.
Liking, inclination, fondness, preference.
Lineage, race, descent, line.
Linger, delay, loiter, lag.
List, catalogue, register, record, roll.
Literary, scholarly, educated, cultured.
Little, small, petty, mean.
Live, exist, survive; dwell.
Lively, vivacious, spirited, gay.
Load, burden, weight.
Lofty, high, elevated, soaring, towering.
Logical, reasonable, consistent.
Loiter, linger, stroll, saunter.
Longing, desire, craving, yearning.
Look, glance; appearance.
Loose, untied, unfastened; lax, slack.
Lordly, proud, haughty.
Lot, fate, fortunes, destiny.
Loth, disinclined, unwilling.
Loud, audible, distinct, noisy; showy.
Lovely, beautiful, exquisite, charming.
Lover, sweetheart, suitor.
Lower, humiliate, degrade; let down.
Lowly, humble, meek, unassuming.
Loyalty, fealty, fidelity.
Lucid, clear, comprehensible.
Ludicrous, laughable, comical, droll.
Lunacy, madness, insanity, imbecility.
Lustre, radiance, brilliancy; polish, gloss.
Luxurious, dainty; voluptuous, effeminate.

Machination, plotting, scheming.
Madness, insanity, lunacy; frenzy, fury.
Magnanimous, high-minded, generous.
Magnificent, grand, splendid, superb.
Maim, mutilate, cripple, mar.
Mainly, chiefly, principally, especially.
Maintenance, support, livelihood, living.
Majestic, stately, august.
Malady, disease, illness, disorder.
Management, conduct, control, superintendence.
Mandate, command, order.
Manifest, plain, clear, evident.
Manifold, various, divers, numerous.
Manner, mode, fashion, kind.
Manœuvre, device, artifice, scheme.
Mark, sign, indication, token.
Marked, noticeable, pointed, pronounced.
Marshal, muster, rally, array.
Marvel, wonder, miracle, prodigy.
Maxim, precept, proverb, saying, saw.
Mean, stingy, sordid; low, base.
Mechanic, artisan, workman.
Mediation, intervention, intercession, arbitration.
Mediocre, average, ordinary, commonplace.
Melancholy, sad, gloomy, depressed.
Melodious, musical, tuneful.
Memorial, remembrance, memento, token.
Memory, remembrance, recollection, reminiscence.
Menace, threat, danger.
Mendacious, lying, false.
Mercenary, sordid, grasping, mean.
Metaphorical, allegorical, symbolical, figurative.
Method, system, plan; manner.
Mien, aspect, countenance.
Minor, subordinate, secondary, lesser; junior.
Minute, tiny; exact, detailed.
Miraculous, wonderful, marvellous, supernatural.
Misanthrope, cynic.
Miscellaneous, various, divers.
Mischievous, malicious, hurtful.
Miserly, niggardly, grasping, mean.
Miserable, wretched, woe-begone, forlorn.
Mob, rabble, rout.
Mock, jeer, taunt.
Model, pattern, copy, design.
Modification, alteration, adaptation.
Molest, harass, trouble, annoy.
Monarch, sovereign, ruler, king.
Monotonous, unvarying, tedious.
Monstrous, huge, immense; infamous.
Mood, temper, vein, mode.
Moody, sullen, morose, gloomy.
Moot, broach, introduce; disputed.
Morbid, diseased, unhealthy.
Mortal, fatal, deadly; human.
Mortified, humiliated, annoyed; gangrened.
Motive, purpose, object, reason.
Mould, shape, form, fashion.
Mouldy, mildewed, musty.
Multitude, throng, crowd, swarm.
Mundane, worldly, secular, earthly.
Munificent, generous, bountiful.
Murmur, grumble, complain; mutter.
Muscular, sinewy, stalwart, brawny.
Muse, meditate, ponder, reflect.
Mutable, changeable, inconstant.
Mute, speechless, dumb, silent.

Narcotic, soporific, opiate.
Narrative, tale, narration, report.
Nation, people, race.
Nature, quality, kind, properties, characteristics.
Necessary, needful, requisite, imperative; inevitable.
Neglect, disregard, slight.
Neutrality, impartiality, non-interference.
New, fresh, recent, modern, novel; unused, unworn.
Nimble, agile, brisk, sprightly.
Nomad, roving, wandering.
Normal, natural, ordinary, regular.
Note, observe, notice, remark.
Notion, idea, conception, theory.
Nugatory, futile, idle, trivial.
Nuisance, annoyance, offence.
Nuptials, wedding, marriage.

Obdurate, callous, hardened, unrelenting.
Object, end, aim, purpose.
Obligation, necessity, compulsion; tie, bond.
Oblique, slanting, indirect.
Obloquy, abuse, opprobrium.
Obnoxious, baneful, objectionable, odious.
Obscure, dark, unintelligible; unknown.
Obsequious, fawning, cringing, servile.
Observe, note, remark; watch, mark.
Obsolete, archaic, out-of-date.
Obstacle, impediment, hindrance, obstruction.
Obstinate, stubborn, headstrong, self-willed.
Obtrude, thrust, force.
Obtuse, dull-witted, slow.
Obvious, self-evident, manifest, patent, clear.
Occasion, time, opportunity; need, reason.
Occult, secret, mysterious, hidden.
Occupant, inhabitant, resident, occupier.
Occurrence, affair, event, incident.
Odd, strange, curious, eccentric; uneven.
Odious, hateful, detestable, offensive.
Offence, misdemeanour, trespass; affront.
Offend, displease, pain, annoy.
Omen, sign, portent, presage.
Omnipotent, all-powerful, all-mighty.
Onerous, burdensome, heavy, difficult.
Opinion, view, impression, theory.
Opportunity, occasion, opening, chance.
Oppressive, tyrannical; heavy, burdensome.
Opulence, wealth, riches.
Oratorical, declamatory, rhetorical.
Organic, fundamental, radical.
Origin, source, fountain, spring, cause.
Ostensible, apparent, professed.
Ostentatious, showy, boastful, pompous.
Outcast, waif, castaway; exile.
Outlandish, foreign, strange, eccentric.
Outline, sketch, plan.
Outlook, prospect, view.
Outrage, insult, indignity, assault.
Outshine, eclipse, surpass, outdo.
Overjoyed, transported, enraptured, ecstatic.
Overlook, pardon, condone.
Overt, open, public.
Overture, opening, advance.
Own, confess, admit; possess.

Pace, rate; stride, step.
Pacific, peaceful, conciliatory, peaceable.

Pagan, heathen, idolater.
Pageantry, pomp, display, ceremonial
Palter, shuffle, prevaricate.
Paltry, insignificant, trifling, mean.
Pang, throe, pain, anguish.
Parade, show, ostentation, display.
Parallel, analogous, corresponding, similar.
Parasite, flatterer, toady, sycophant.
Partake, participate, share.
Partial, imperfect, incomplete; biassed, inclined.
Partisan, adherent, follower, supporter.
Passive, inactive, unresisting, inert.
Pastime, amusement, recreation, diversion.
Patent, evident, obvious, manifest, palpable.
Patient, submissive, forbearing, long-suffering.
Patrician, aristocrat, noble.
Patronizing, condescending.
Pattern, example, copy, model, design.
Peasant, villager, rustic; clown.
Peculiar, odd, eccentric; characteristic.
Pedigree, lineage, genealogy.
Peerless, matchless, unequalled.
Peevish, irritable, fretful, petulant.
Penalty, punishment, fine, forfeit.
Penetrate, pierce, fathom.
Penetration, acumen, discernment, insight.
Penitent, repentant, remorseful.
Pensive, thoughtful, mournful, reflective.
Penury, indigence, want, poverty.
Perception, insight, discernment.
Perdition, ruin, destruction.
Peremptory, dictatorial, masterful, authoritative.
Perfect, complete; whole, sound; faultless.
Perfidious, faithless, treacherous, false.
Perform, accomplish, achieve, effect.
Perfume, scent, odour, fragrance.
Perfunctory, mechanical.
Peril, risk, hazard, danger.
Period, time, era, date; term, season.
Perish, die, expire, end.
Permit, allow, suffer, sanction.
Pernicious, harmful, baneful, destructive.
Perpetual, unceasing, unfailing, constant.
Perplex, puzzle, bewilder, confuse.
Persecute, harass, annoy, importune.
Perseverance, application, persistency.
Personification, impersonation, representation.
Perspicuity, clearness, lucidity.
Persuade, induce; convince; advise, urge.
Pert, saucy, impudent, impertinent.
Pertinacity, persistency, determination, obstinacy.
Pertinent, appropriate, apposite, apt.
Perverse, headstrong, self-willed, contrary.
Perversion, misrepresentation, distortion, misapplication.
Petition, supplication, request, entreaty.
Petty, insignificant, trifling, mean.
Pharisaical, self-righteous, self-satisfied.
Piety, religion, sanctity, holiness, devotion.
Pillar, prop, support.
Pilot, helmsman, steersman, guide.
Pine, languish, fret, grieve.
Piquant, pungent, witty, racy.
Piteous, woeful, lamentable, deplorable.
Pith, marrow, gist, essence.
Pity, compassion, mercy, sympathy.
Placid, peaceful, tranquil, equable.
Plausible, specious.
Plea, petition; excuse, pretext.
Plebeian, low-born, vulgar, common.
Pledge, promise, guarantee, security.
Plot, conspiracy, stratagem, scheme.
Polite, courteous, well-bred, refined.
Politic, diplomatic, prudent, discreet.
Pollute, defile, corrupt, contaminate.
Pomp, ostentation, parade, ceremony.
Populous, crowded, thronged.
Port, carriage, bearing, deportment.
Portend, foreshadow, presage, augur.
Portentous, ominous, ill-omened.
Positive, certain, explicit; dogmatic.
Posterity, progeny, offspring, descendants.
Potent, powerful, effectual.
Power, ability, strength; authority.
Practice, skill, experience; custom, habit.
Prank, trick, antic.
Prayer, supplication, entreaty, petition.
Preamble, preface, prelude.
Precarious, hazardous, risky, uncertain.
Precise, exact, definite; prim, formal.
Preclude, hinder, debar.
Precursor, forerunner, herald.
Predict, foretell, forecast, prophesy.
Predilection, preference, fancy, inclination.
Predominant, ruling, prevailing.
Pre-eminent, distinguished, illustrious.
Preface, introduction, prelude, preamble.
Preferment, promotion, advancement.
Prejudice, bias, aversion, prepossession; detriment.
Prejudicial, injurious, disadvantageous, harmful.
Prepossessing, charming, attractive.
Preposterous, monstrous, unreasonable, absurd.
Prerogative, privilege.
Presage, portent, omen, augury, prognostic.
Prescience, foreknowledge, foresight.
Presentiment, foreboding, anticipation.
Preserve, save, safeguard, maintain, uphold.
Pressing, urgent, imperative.
Presumption, effrontery, assurance; assumption.
Pretence, feigning, simulation; plea, excuse.
Prevalent, rife, universal, wide-spread.
Prevarication, evasion, quibble, fib.
Prevent, hinder, debar.
Previous, preceding, former, prior.
Price, cost, value, worth.
Pride, haughtiness, arrogance.
Prim, stiff, precise, formal.
Primitive, ancient, early, original.
Principal, chief, leading, predominant.
Principle, rule, system, tenet.
Privation, want, hardship, destitution.
Probability, likelihood, prospect.
Probity, uprightness, integrity, rectitude.
Proclaim, publish, announce, declare.
Procure, secure, obtain, get.
Prodigious, marvellous, monstrous, vast.
Prodigy, wonder, marvel, phenomenon.
Product, result, outcome, fruits.
Profane, blasphemous, sacrilegious.
Profession, calling, vocation; avowal.
Proficiency, skill, dexterity.
Profit, gain, advantage.
Profound, deep, abstruse.
Profuse, copious, abundant; lavish, extravagant.
Progeny, offspring, descendants.
Prohibit, debar, hinder, prevent; forbid.
Project, plan, device, scheme.
Prolix, verbose, wordy, long-winded.
Prolong, extend, protract, lengthen.
Prominent, leading, important, striking.
Promise, vouch, undertake; pledge.
Promote, further, aid; raise, exalt.
Prompt, ready, speedy.
Pronounce, declare, assert.
Propagate, spread, disseminate, promulgate.
Proper, fit, suitable, becoming, correct.
Property, goods, possessions, belongings.
Proposal, suggestion, offer, proposition.
Propriety, seemliness, fitness.
Prosaic, dull, humdrum, matter-of-fact.
Proselyte, convert.
Prospect, view; outlook, likelihood.
Protect, guard, defend, safeguard.
Protest, object, remonstrate.
Proverb, saw, saying, maxim; by-word.
Provide, supply, furnish.
Province, sphere, area.
Provoke, vex, irritate, rouse.
Proximity, nearness, vicinity, neighbourhood.
Prudent, wise, discreet, circumspect.
Puerile, childish, silly, trivial.
Pure, undiluted, unmixed; undefiled, spotless.
Purport, tenour, drift, import, gist.
Purpose, intention, plan, design.
Pursue, chase, hunt; prosecute, carry on.
Push, thrust, drive, press.
Putrefy, decay, moulder, rot.
Puzzle, perplex, bewilder; riddle, enigma.

Quail, shrink, falter.
Quake, tremble, shake, shudder.
Qualified, adapted, fitted, calculated.
Quality, kind, degree, nature.
Quantity, amount, measure, number.
Quarrel, dispute, dissension; wrangle.
Queer, strange, odd, eccentric.
Query, question, doubt.
Question, enquiry, investigation, doubt; matter, subject.
Quibble, evasion, prevarication.
Quick, swift, speedy, rapid; living.
Quiescence, repose, inaction.
Quiet, silent, noiseless; calm, tranquil.
Quit, leave, abandon, forsake.
Quite, altogether, wholly, absolutely.
Quote, cite, repeat.

Rabid, raving, furious, raging.
Radiant, shining, beaming, brilliant.
Radical, thorough, complete, absolute.
Rage, fury, frenzy.
Raiment, apparel, clothing, dress, garb.
Rancour, ill-will, malice, spite.
Rapacious, greedy, grasping, ravenous.
Rapture, ecstasy, bliss, transport.
Rascal, scoundrel, rogue, knave.
Rash, reckless, heedless, imprudent.
Ratify, confirm.
Rationable, reasonable, sane, logical.
Ravage, devastate, plunder, waste.
Reach, stretch, extend; attain.
Ready, prepared; alert; prone.
Real, genuine, sincere; actual.
Reason, cause, motive, purpose.
Rebound, recoil.
Rebuke, reprove, chide.
Reciprocal, mutual.
Recognize, acknowledge, admit; identify.
Recollect, recall, remember.
Recommend, advise, counsel; commend.
Recompense, reward, payment, guerdon.
Recondite, abstruse, far-fetched, deep.
Redemption, salvation, deliverance, rescue.
Redundant, pleonastic, superfluous.
Reflection, meditation, thought; image.
Reform, amend, improve, reconstitute.
Refractory, recalcitrant, perverse, restive.
Refute, confute, disprove.
Regard, consider; view; esteem.
Region, district, quarter.
Regular, punctual, methodical, normal.
Regulation, rule, ordinance.
Rejoinder, answer, reply, retort.
Related, connected, akin, germane.
Relax, slacken, intermit, abate.
Relevant, pertinent.
Reliance, trust, confidence.
Religion, creed, belief; piety.
Relinquish, abandon, resign, forego.
Remarkable, striking, noticeable, extraordinary.
Remunerate, recompense, reward.
Renegade, apostate.
Renounce, abjure, forego, resign.
Renown, fame, glory.
Repartee, reply, retort.
Repeal, rescind, revoke, annul.
Repine, murmur, complain.
Report, rumour, hearsay.
Repose, rest, tranquility.
Repress, suppress, check, stifle.
Repugnant, abhorrent, distasteful, repulsive.
Resentment, indignation, umbrage, dudgeon.
Resignation, submission, acquiescence.
Resist, oppose, withstand.
Resolute, determined, firm.
Resound, re-echo, reverberate, ring.
Respect, detail, particular; esteem.
Result, issue, outcome, consequence.
Retard, hinder, delay, impede.
Reticent, reserved, uncommunicative.
Revulsion, recoil, shrinking, abhorrence.
Ridicule, mockery, jeering, banter.
Rigid, stiff, unbending.
Rite, form, ceremony.
Romantic, imaginative, sentimental, fanciful.
Rudiment, element, germ, embryo.
Rule, authority; ordinance; practice.
Ruminate, ponder, reflect.
Rupture, breach.
Rustic, rural, countrified.
Ruthless, relentless, pitiless.

Sanctify, hallow, purify.
Sanguine, hopeful, optimistic.
Sarcastic, satirical, caustic, ironical.
Satisfaction, reparation, atonement; contentment.
Savage, inhuman, brutal, fierce.
Saw, saying, proverb, adage.
Scheme, device, design, plan.
Scoff, mock, jeer, deride.
Scope, sphere, range.
Scorn, despise, contemn, disdain.
Scoundrel, rascal, villain, knave.
Security, safety; bond, guarantee.
Sediment, dregs, lees.
Sedition, revolt, mutiny, conspiracy.
Seemly, becoming, fitting, meet.
Self-willed, obstinate, wilful, headstrong.
Semblance, appearance, show.
Sentiment, feeling, romance; opinion.
Separate, part, divide, sever.
Sequel, continuation, issue, outcome.
Serene, tranquil, calm, unruffled.
Service, help, assistance; attendance.
Servile, obsequious, cringing, fawning.
Shabby, dingy, faded; mean.
Sham, counterfeit, pretence; spurious.
Shame, disgrace, humiliation, dishonour.
Shape, fashion, mould; form.
Sharp, acute, intelligent; cutting.
Shed, drop; diffuse, emit.
Shift, expedient; transfer, change.
Show, manifest, exhibit; ostentation.
Shrewd, acute, sharp, discerning.
Shun, avoid, evade.
Side, party, faction; hand.
Sign, symbol, token, indication.
Stipulation, bargain, condition, proviso.
Store, stock, fund, supply.
Strange, unknown; unusual, inexplicable.
Stratagem, artifice, snare, plot.
Stretch, extend, reach; expand.
Strict, stringent, severe.
Stricture, blame, condemnation, censure.
Strife, dissension, contention, warfare.
Strive, endeavour, struggle, labour.
Strong, vigorous, sturdy; powerful; robust, forcible; impregnable.
Structure, fabric, edifice, building.
Struggle, effort, strife, contest.
Stubborn, obstinate, headstrong, self-willed.
Style, fashion, mode, manner.
Subdue, conquer, repress, check.
Subject, liable, prone; theme, topic; question, matter.
Subsequent, following, after, later.
Substance, matter, material.
Substitute, deputy, proxy.
Subterfuge, evasion, quibble.
Subtle, cunning.
Succeed, prosper, thrive; follow.
Suffer, endure, bear, tolerate; permit.

Suitable, fit, appropriate, becoming.
Sullen, gloomy, lowering, overcast.
Sumptuous, costly, expensive, luxurious.
Superb, glorious, magnificent, splendid.
Supercilious, disdainful, haughty, contemptuous.
Superintend, manage, supervise, control.
Supine, slothful, inactive, inert.
Supplicate, entreat, pray, beseech.
Support, maintenance, aid, help.
Suppose, imagine, conjecture; assume.
Surety, bail, guarantee, security.
Significant, expressive, suggestive, indicative.
Similitude, likeness, comparison, figure.
Simple, plain, easy; artless.
Singular, strange, unique, peculiar.
Sinister, ill-omened, inauspicious, malign.
Skilful, practised, expert, adroit.
Snare, toil, trap, stratagem.
Sneering, scoffing, jeering, supercilious.
Solution, explanation, key.
Sorcerer, wizard, enchanter, magician.
Sovereign, supreme, absolute, regal.
Spectator, onlooker, observer, witness.
Speculation, theory, supposition.
Sphere, range, compass; rank.
Spiritual, sacred, divine; immaterial.
Spite, malice, ill-will, venom.
Splendid, glorious, magnificent, grand.
Spoil, plunder, rob.
Spot, place; stain, mark.
Sprightly, vivacious, nimble, active.
Spring, fountain, source, origin.
Sprite, elf, spirit, fairy.
Spruce, trim, neat, smart.
Spurious, counterfeit.
Squalid, grimy, sordid, dirty.
Squander, waste, lavish, dissipate.
Stable, firm, constant, unchanging.
Staid, sedate, demure, sober.
State, assert, declare; condition, situation; ceremony, pomp.
Station, rank, position, standing.
Staunch, steadfast, true, reliable.
Stay, stop, remain; standstill; support, prop.
Stiff, rigid, starched, unbending.
Stingy, mean, parsimonious, grudging.
Surmise, conjecture, guess, suspect.
Surplus, balance, excess, superabundance.
Surprise, astonishment, amazement.
Surreptitious, underhand, stealthy.
Susceptible, sensitive, impressionable.
Suspicion, mistrust, jealousy; surmise.
Swear, affirm, declare; curse.
Swindle, fleece, defraud, cheat.
Sympathy, fellow-feeling, accord; compassion.
Symptom, sign, indication, token.
Synonymous, identical, equivalent.
Synopsis, epitome, abstract, summary.
System, method, arrangement, scheme.

Taciturn, silent, reserved, uncommunicative.
Tally, correspond, agree, harmonize.
Tardy, dilatory, late, slow.
Talents, gifts, powers, ability.
Temerity, audacity, daring, assurance.
Temperate, moderate, sober.
Tempest, hurricane, gale, storm.
Tempt, allure, entice.
Tenacity, persistency, pertinacity, determination.
Tend, foster, nurture, serve.
Tendency, proneness, proclivity, bias.
Tender, proffer, offer.
Tenets, views, doctrines, opinions.
Test, proof, trial; touchstone, standard.
Testimony, evidence, witness.
Thought, reflection, idea.
Threat, menace.
Thrift, economy, frugality.
Thrive, prosper, succeed, flourish.
Tidings, news, word, report.
Tint, hue, shade, colour.
Tired, weary, fatigued, exhausted.
Title, appellation.
Tolerable, bearable, endurable.
Toll, tax, duty, impost.
Tomb, grave, sepulchre.
Torture, agony, anguish.
Total, entire, whole; sum.
Totter, reel, waver, stagger.
Trace, track, discern.
Tract, region, expanse, district.
Trade, commerce, business, traffic.
Train, suite, rear; following.
Trammel, hinder, impede, clog.
Transcend, surpass, excel.
Transformation, change, transmutation.
Transgress, trespass, overstep; sin, disregard.
Transport, rapture, ecstasy.
Trap, snare, stratagem.
Treachery, perfidy, treason, betrayal.
Treaty, compact, understanding.
Tremble, quiver, shudder, shake.
Tremendous, vast, overpowering, immense.
Trepidation, fear, trembling, misgiving.
Tribute, duty, tax; testimony.
Trick, wile, artifice; mannerism.
Triumph, victory, exultation, elation.
Trivial, trifling, insignificant, puerile.
Troop, band, company, flock.
Tumult, uproar, confusion.
Type, representative, pattern; symbol.
Tyrannical, despotic, overbearing, domineering.

Ulterior, behind, underlying.
Ultimate, final.
Umbrage, offence, dudgeon.
Umpire, arbitrator, referee.
Unanimity, accord, consent.
Undertaking, attempt, task.
Ungracious, unaccommodating, unbending.
Uniform, regular, even.
Unite, combine, connect; join.
Unity, harmony, concord, amity.
Unstable, inconstant, fickle, changeable.
Upbraid, chide, rebuke.
Uphold, maintain, support.
Uprightness, integrity, probity, rectitude.
Uproot, extirpate, eradicate.
Upshot, outcome, issue.
Urbane, polished, courtly, suave.
Urgent, pressing, imperative.
Usage, fashion, custom, practice.
Use, advantage, profit; exercise; accustom.
Usual, customary, ordinary, regular.

Vacant, empty, void, unoccupied.
Vagabond, vagrant, tramp.
Vagary, whim, caprice.
Vague, indefinite, undefined; dim.
Valid, weighty, strong, cogent.
Value, price, cost, worth.
Vanquish, overcome, conquer.
Vapid, insipid, flat, savourless.
Variety, diversity.
Vaunt, boast, brag.
Vehement, impetuous, eager.
Velocity, speed, rapidity; rate.
Vengeance, retaliation, revenge.
Venomous, poisonous, spiteful, virulent.
Venture, hazard, risk, dare.
Venturesome, daring, hardy.
Veracious, truthful.
Verbose, wordy, prolix.
Verdict, sentence, judgment, decision.
Verge, edge.
Versed, practised, skilled, experienced.
Vicious, spiteful, bad-tempered.
Vindicate, justify; exonerate, clear.
Virago, termagant, vixen.
Virile, manly, robust, strong.
Virulent, spiteful, malignant.
Vital, living; essential.
Vocation, calling, mission.
Voluntary, spontaneous, willing.
Volunteer, tender, proffer, offer.
Voluptuous, luxurious, pleasure-loving.
Voracious, ravenous, greedy, gluttonous.

Waive, forego, resign, yield.
Wan, pale, ghostly.
Wander, roam, rove; stray.
Wane, decrease, diminish, lessen.
Want, lack; poverty, need.
Wanton, heedless, licentious.
Warlike, martial, pugnacious.
Warrant, authority, justification; guarantee.
Wary, guarded, circumspect, discreet.
Waste, squander; devastate; pine.
Waver, falter, hesitate, vacillate.
Wayward, wilful, perverse, headstrong.
Wean, detach, alienate.
Wed, marry, espouse; unite.
Whimsical, capricious, fantastic, fanciful.
Winning, charming, lovable.
Witchcraft, sorcery, magic, enchantment.
Withstand, resist, oppose, gainsay.
Witness, testimony, evidence.
Wonder, astonishment, amazement, surprise.
Wont, custom, habit.
Workman, artisan.
World, earth, universe, humanity.
Wrangle, quarrel, dispute, contend.
Wrath, ire, rage, anger.
Wrench, twist; wrest, extort.
Wrong, mistaken, incorrect, unjustifiable.

Yearly, annual.
Yearn, crave, long.
Yield, succumb; submit, surrender; concede; produce.
Yoke, couple, unite, harness.
Youthful, juvenile.

Zeal, ardour, eagerness, enthusiasm.
Zealot, devotee, fanatic.
Zenith, summit, height.
Zero, cipher, nought.
Zest, ardour, zeal.

THE DERIVATION OF ENGLISH WORDS.

THE English language as spoken to-day differs in many respects from the language spoken by our forefathers when they first settled in Britain. One important difference is that Anglo-Saxon, as the language was then called, was a pure language, that is, it contained no foreign elements, whereas modern English has a vocabulary enriched from many sources. The history of a nation is embedded in its language, and those who have never realized this would be surprised and interested to discover what light the careful study of a language throws upon the history and upon the character of the race by which it is spoken.

After the "coming of the English" to what was then known as Britain, they came in contact successively with the Kelts (the original inhabitants), the Danes, and the Normans. Of this we find unmistakable traces in the vocabulary of our language. The Norman conquerors tried in vain to force their language upon the unwilling Saxons, whose attitude towards their hated foes is skilfully represented by Scott in "Ivanhoe" in the person of Wamba the jester, who bitterly points out to Gurth the Swineherd that *swine* and *oxen* and *calves* are known by their Saxon names while they are in the charge of Saxon slaves and bondmen, but are "converted into Normans," as *pork* and *beef* and *veal* "when they arrive before the worshipful jaws that are destined to consume them."

But, while rejecting the language as a whole, in the course of time they admitted certain words to supply deficiencies in the existing vocabulary, Norman French being much richer than English in terms connected with poetry and chivalry. Roughly speaking, we may say that the simplest and most homely words, the names of the commonest sights and sounds and feelings of every-day life, the names of the closest family ties, in fact all the most vital elements of the language have remained pure

Saxon. Witness such words as hope, love, fear, sorrow, father, mother, friend, sun and moon, hail and rain, sea and land, day and night, bread, milk, plough, harrow. But while English remained the language of the cottage, Norman French became the language of the castle, the court, the nobility and the educated classes generally. Consequently we find that words connected with *education, culture, refinement,* and *luxury,* as well as terms denoting *power, authority* and *dignity* are of French or Latin origin, as these very words themselves testify.

We owe to the Normans many words of Latin origin, but coming to us through the medium of another language those words have been considerably modified both in form and meaning. At the "Revival of Learning," however, there was a great influx of Latin words derived directly from the original source, owing to the interest then kindled in the Greek and Latin authors. This accounts for the curious fact that there exist in our language many pairs of words or "doublets" derived from the same Latin root, but differing from one another in form and meaning, one having come to us direct from the Latin, the other through the medium of French. The latter is usually less harsh in sound and often more poetical or metaphorical in meaning.

A few instances will effectively illustrate this.

Latin Word.	English Equivalents.	
	Direct from Latin.	Through the medium of French.
amicus	amicable	amiable.
legalis	legal	loyal.
regalis	regal	royal.
fidelitas	fidelity	fealty.
adamantis	adamant	diamond.
populus	populace	people.
magister	magistrate	master.
captivus	captive	caitiff.
florem	floral	flower.
potionis	potion	poison.
pungentis	pungent	poignant.
separare	separate	sever.
monasterium	monastery	minster.

A large number of English words are composed of three elements: (1) the body of the word (often derived from a Latin or Greek root); (2) a syllable at the beginning of the word, called a prefix; and (3) a syllable at the end, called a suffix. Both prefix and suffix do not, of course, always occur in the same word, but one or other or both appear in a large proportion of English words, in the formation of which prefixes, especially, play an important part.

By means of prefixes many words may be formed containing the same root, as import, export, support, transport. It is important to know the meaning of each prefix in order to understand the effect it will have on the words of which it forms a part; for instance, the negative force of the Latin prefix *in* before adjectives, as independent, indefinite, indistinct.

A prefix often undergoes some little change of form to enable it to assimilate better with the word to which it is joined; and usually this change consists in the final consonant of the prefix changing into the initial consonant of the word with which it is combined. Thus, in the words immaterial, irresponsible, illimitable, the negative "in" is changed into *im, ir, il* respectively. In the list of examples given below will be found many instances of such "assimilation of consonants."

GREEK PREFIXES.

A, an, *not;* as atheist, one who does not believe in God; anæsthetic, causing absence of sensation; anæmia, lack of blood, poverty of blood.

Amphi, *both, round about;* as amphibious, living both on land and in water; amphitheatre, a circular building with seats all round.

Ana, *up;* as analyse, to break up.

Anti, *against, opposite to;* as antarctic, opposite to the arctic region; antagonist, one who contends against another.

Apo, *away, from;* as apostle, one sent away, or sent forth.

Arch, archi, *chief, first;* as archbishop, the chief bishop; archetype, the primitive type.

Auto, *self;* as automobile, self-moving; autonomy, self-government; automatic, self-acting.

Dia, *through, across;* as diameter, measurement across a circle; diagonal, line crossing a figure from opposite angles.

Dis or di, *twice;* as dissyllable, a word of two syllables; dilemma, a double difficulty.

Ec or ex, *out of;* as exodus, a going out; ecstasy, a standing outside oneself, rapture.

En, *in, on;* as encaustic, burnt in; enclitic, leaning on.

Epi, *on;* as epitaph, an inscription on a tomb.

Eu, *well;* as euphonious, well-sounding; euphemism, a pleasing name for an unpleasant idea.

Hemi, *half;* as hemisphere, a half-sphere.

Hyper, *beyond;* as hyperbole, a shooting beyond the mark, an exaggerated expression; hyperborean, beyond the North; hypercritical, over-critical.

Hypo, *under;* as hypocrite; hypothesis, something understood or assumed as true.

Kata, *down;* as catacomb, a subterranean burying-place.

Meta, *after;* as metaphysics, which in the writings of Aristotle came *after* Physics.

[Note.—In compounds *meta* generally denotes change, transference or transposition; e.g. metathesis—transposition of letters; metamorphosis, change of form.]

Pan, *all;* panacea, a cure for all ills; pantechnicon, a warehouse for all kinds of articles.

Para, par (1) *beside;* as parallel, side by side; (2) *against;* as paradox, a seeming contradiction.

Peri, *round;* as periphrasis, a roundabout expression; perimeter, the "measurement round," or the sum of the sides which bound a plane figure.

Pro, *before;* as prologue, a preface or introduction; prophesy, to foretell, predict.

Syn, *with;* as syntax, the putting together, or correct arrangement, of words in sentences; synagogue, a "gathering together," a Jewish church or congregation.

[Note.—*Syn* appears in a modified form in syllogism, sympathy, symphony, system.]

LATIN PREFIXES.

A or ab, *from or away;* as avert, to turn from; abject, cast away.

Ad, *to;* as advent, a coming to; address, to speak to.

[Note.—The *d* in *ad* often changes into the first letter of the next syllable, as in accede, affection, allow, apply, attract.]

Ante, *before;* as antediluvian, before the flood; antenatal, before birth.

Bis or bi, *two;* as biscuit, twice baked; bisect, cut in two.

Circum, *round;* as circumlocution, roundabout speech; circumspect, looking round, wary.

Cum, *with or together,* generally appears as *co-* or *con-;* as co-exist, to exist together, or at the same time; connect, to tie together, to join.

[Note.—Modified forms of *cum* appear in the following words: collect, compress, correlative.]

Contra, *against, opposite,* frequently appears as *counter;* as contradict, to say the opposite; controversy, a turning against, a dispute; counteract, to act against or in an opposite manner.

De, *from or down;* as detract, to draw from; depreciate, to take away the value from; descend, to go down.

Demi, *half;* as demi-semiquaver, half a semiquaver.

Dis, *in two;* [Note.—This prefix has a strongly separative force in most instances, as in distract, to draw apart; but in some cases it has a negative force and is equivalent to the negative prefix *un*=not, as in dissimilar, not similar.]
It is "separative" in disunite, disjoin, disassociate, disintegrate.
It is "negative" in dislike, disagree, displease, dissentient.
E or **ex,** *out, out of;* as educe, to lead or draw out; exclude, to shut out.
In, *in, into, on;* as inhabit, to dwell in; infuse, to pour into; invest, to put on.
[Note.—Modified forms of *in* appear in illuminate and impose.]
In, *not;* as intact, untouched, whole; infinite, not finite; independent, not dependent.
[Note.—Modified forms of *in* appear in illimitable, immoderate, irreproachable.]
Inter, *between;* as intervene, to come between; interpose, to place between.
Intro, *within;* as introduction, a leading within.
Male, *ill;* as malevolent, ill-wishing; malediction, an evil speech, a curse.
Ne, non, *not;* as nefarious, not lawful, wicked; nonsense, not sense; non-existent, not existent.
Pene, *almost;* as peninsula, almost an island.
Per, *through, by;* as permeate, to flow through; perambulate, to walk through; percentage, the proportion on each hundred.
Post, *after;* as postpone, to place after, to defer.
Prae, pre, *before;* as prejudice, a previous judgment; precede, to go before.
Pro, (1) *forth;* as produce, to lead forth; (2) *for, instead of;* as pronoun, for a noun.
Re, red, *back;* as recall, to call back; repay, to pay back; redeem, to buy back.
Retro, *back;* as retrograde, stepping back.
Se, *apart;* as secede, to go apart, withdraw; secure, free from care, hence, safe.
Semi, *half;* as semi-circle, a half-circle.
Sub, *under, from under;* as subdue, to bring under; subterranean, under the earth; subtract, to draw from under.
[Note.—Modified forms of *sub* appear in succeed, sufficient, suggest, summon, suppress, surrender, suspend.]
Super, *over, above;* as supervise, to oversee; supernatural, above what is natural.
Trans, *beyond, across;* as transfer, to carry across; transmit, to send across; transatlantic, across the Atlantic.

GREEK ROOTS.

Agon, *a contest.* Agony, antagonist.
Aisthesis, *perception.* Æsthetic, anæsthetic.
Akoloutheo, *I follow.* Acolyte, anacoluthon.
Akouo, *I hear.* Acoustics.
Akros, *the top.* Acropolis, acrostic, acrobat.
Allos, *other.* Allopathy, allotropic.
Angelos, *a messenger.* Angel, archangel, evangelist.
Anthos, *a flower.* Anther, anthology, polyanthus.
Anthropos, *a man.* Anthropology, misanthrope, philanthropy.
Archaios, *old, antique.* Archaic, archæology.
Archo, *I rule.* Monarch, oligarch, tetrarch, heptarchy.
Arithmos, *a number.* Arithmetic, logarithm.
Aster, Astron, *a star.* Asterisk, astrology, asteroid, astronomy.
Autos, *self.* Autocratic, automobile, automaton, automatic, autonomy, autopsy.
Ballo, *I throw.* Hyperbole, hyperbola, parabola.
Baros, *weight.* Barometer, baritone.
Biblion, *a book.* Bible, bibliography, bibliomaniac.
Bios, *life.* Biology, biography, amphibious.
Charis, *grace, thanks.* Eucharist.
Chloros, *green.* Chlorine, chloroform, chloral, chlorophyll, chlorosis.
Chole, *bile, anger.* Choler, cholera, melancholy.
Chrio, *I anoint.* Christ, chrism.
Chronos, *time.* Chronometer, chronology, chronic, chronicle, anachronism, synchronism.
Chrysos, *gold.* Chrysanthemum, chrysolite, chrysoprase, chrysalis.
Daktylos, *a finger.* Dactyl, pterodactyl.
Deka, *ten.* Decade, decalogue, decasyllabic, decahedron.
Demos, *people.* Demagogue, democracy.
Dendron, *a tree.* Rhododendron, dendrology, dendrite, lithodendron.
Derma, *skin.* dermatology, epidermis, hypodermic, pachydermatous, taxidermy.
Dipsa, *thirst.* Dipsomaniac.
Dokeo, *think, seem.* Dogma, orthodox, heterodox.
Drao, *I do.* Drastic, drama.
Dromos, *a race, running.* Dromedary, hippodrome.
Dynamis, *strength, force.* Dynamo, dynamics, dynamite.
Eikon, *image.* Iconoclast.
Elektron, *amber.* Electricity, electro, electrometer, electrolysis, electrophone, electroscope, electrotype.
Enteron, *intestine.* Enteric, enteritis, dysentery.
Ergon, *work.* Energy, metallurgy.
Gamos, *marriage.* Bigamy, polygamy, misogamy.
Ge, *the earth.* Geography, geology, geometry.
Gennao, *I beget.* Genesis, generation, genealogy, oxygen, hydrogen, nitrogen.
Gignosko, *I know.* Agnostic, diagnosis, prognosticate.
Glossa, *a tongue, word.* Gloss, glossary, polyglot.
Glykys, *sweet.* Glucose, glycerine, liquorice.
Gramma, *a letter, something written.* Grammar, anagram, diagram, epigram, telegram, phonogram.
Grapho, *I write.* Graph, graphic, graphite, autograph, biography, geography, hectograph, lithograph, monograph, paragraph, phonograph, photograph, telegraph.
Gyne, *woman.* Misogynist, gynæcology.
Gyros, *a circle.* Gyre, gyrate, gyroscope, gyroidal.
Haima, *blood.* Hæmorrhage, anæmic, hæmatite.
Haireo, *I take, choose.* Heresy, aphæresis, diæresis.
Hedone, *pleasure.* Hedonist, hedonism.
Helios, *the sun.* Heliotrope, heliograph, heliogravure, helioscope, heliotype.
Hemera, *a day.* Ephemeral.
Heurisko, *I find.* Heuristic, eureka.
Hieros, *sacred.* Hieroglyph, hierarchy, hieratic, hierophant.
Hippos, *a horse.* Hippopotamus, hippodrome, hippophagy, hippophagist.
Hodos, *a way, journey.* Exodus, period, cathode, method.
Holos, *whole.* Holocaust, holograph, catholic.
Homos, *like.* Homogeneous, homologous, homœopathic, homonym.
Hydor, *water.* Hydrogen, hydrostatics, hydrometer, hydrophobia, hydrant, hydrate, hydraulic.
Idios, *belonging to oneself, characteristic.* Idiom, idiosyncrasy, idiot.
Isos, *equal.* Isobar, isochronous, isometric, isosceles, isothermal.
Kaio, *I burn.* Caustic, cauterize, encaustic, holocaust.
Kardia, *the heart.* Cardiac, cardiograph, cardialgia, pericarditis.
Klimax, *a ladder.* Climax, anticlimax, acclimatize.
Klino, *I bend, lean.* Decline, enclitic, incline, recline.
Koma, *sleep.* Coma, comatose, cemetery.
Kosmos, *order, universe, adornment.* Cosmos, cosmopolitan, cosmic, cosmetic.
Krino, *I judge.* Critic, criterion, critical, crisis, hypocritical.
Krypto, *I hide.* Crypt, cryptogram, cryptogamous, apocrypha.
Kyanos, *dark blue.* Cyanide, cyanite, cyanogen, cyanosis, cyanotype, cyanometer.
Kyklos, *circle.* Cycle, encyclical, encyclopædia, bicycle, cyclometer, cyclone.
Kyon, Kynos, *a dog.* Cynic, cynophilist, cynosure (lit. dog's tail).
Lambano, *I take.* Catalepsy, dilemma, epilepsy, syllable.
Lego, *I choose, say.* Eclectic, eulogium, lexicon.

Lithos, *a stone.* Lithograph, lithocarp, lithoglyph, monolith, aerolite, meteorolite.
Logos, *word, reason.* Logic, dialogue, logarithm, syllogism, apology, biology, geology, pathology, zoology.
Lyo, *I loosen.* Analyse, paralyse, palsy.
Metron, *measure.* Barometer, cyclometer, diameter, hygrometer, metre, perimeter, thermometer, radiometer, symmetry.
Mikros, *small.* Microbe, microcosm, micrograph, micrometer, microphone, microscope.
Misos, *hate* Misanthropy, misogamy, misogynist.
Monos, *alone, single.* Monocotyledon, monolith, monologue, monomania, monopoly, monosyllable, monotheism, monastery, monad.
Morphe, *shape, form.* Amorphous, metamorphosis, morphology, morphosis.
Nekros, *a dead body.* Necromancy, necropolis, necrosis.
Nesos, *an island.* Melanesia, Polynesia, Peloponnesus.
Nomos, *law.* Astronomy, autonomy, economy, gastronomy.
Ode, *a song.* Ode, epode, melody, monody, parody, psalmody, rhapsody, comedy, tragedy.
Okto, *eight.* Octopus, octagon, octahedron.
Onoma, *a name.* Onomatopœia, anonymous, antonym, homonym, metonymy, synonym.
Ops, *the eye.* Optical, optician, synoptic.
Ornis, *a bird.* Ornithology, ornithorhynchus.
Osteon, *a bone.* Osteology.
Pais, paidos, *a boy.* Pedagogue, pedagogics.
Pan, *all.* Pantheism, pandemonium, panorama, panoply, pantomime.
Palin, *back again.* Palindrome, palingenesis, palimpsest.
Pathos, *suffering.* Pathetic, pathology, allopathy, homœopathy, sympathy.
Pente, *five.* Pentagon, pentameter, Pentateuch, Pentecost.
Pharmakon, *a remedy.* Pharmacopœia, pharmacy.
Philos, *a friend, loving.* Philanthropy, philosophy, philology, Philadelphia, philtre.
Phone, *the voice.* Phonetic, phonograph, euphony, gramophone, telephone, symphony.
Phos, *light.* Phosphorus, photograph, photogravure.
Phren, *the mind.* Phrenology, frantic, frenzy.
Physis, *nature.* Physical, physics, physiology, physiography, physiognomy, metaphysical.
Phyton, *a plant.* Zoophyte, phytology, phytophagy, phytography.
Pneo, *I breathe.* Pneumatic, pneumonia.
Poieo, *I make.* Poet, pharmacopœia, posy.
Polis, *a city.* Politics, policy, polite, police, polity, metropolis, necropolis.
Polys, *many.* Polyanthus, polygamy, polygon, polytechnic, polyhedron, polyglot, Polynesia, polypus, polysyllable, polytheism.
Pous, *a foot.* Antipodes, tripod, octopus, polypus.
Protos, *first.* Protocol, protoplasm, prototype, protozoa.
Pseudes, *false.* Pseudo, pseudoaisthesis, pseudograph, pseudonym.
Psyche, *the soul.* Psychical, psychology, metempsychosis.
Pyr, *fire.* Pyre, pyrites, pyrotechnics.
Rheo, *I flow.* Rheumatic, catarrh, diarrhœa.
Sarx sarkos, *flesh.* Sarcophagus, sarcasm, sarcology, sarcosis.
Schizo, *I cleave.* Schism, schist, schedule.
Skopeo, *I see.* Scope, telescope, microscope, stethoscope, stereoscope, spectroscope, kaleidoscope, laryngoscope.
Sophos, *wise.* Sophism, philosophy, theosophy.
Stasis, *standing.* Apostasy, statics, hydrostatics.
Stello, *I send.* Apostle, epistle.
Stratos, *an army.* Strategy, stratagem.
Strepho, *I turn.* Apostrophe, catastrophe, strophe, antistrophe.
Taxis, *an arrangement.* Tactics, syntax, taxidermy.
Techne, *art.* Technical, technique, polytechnic, pyrotechnics.
Tele, *distant.* Telegraph, telepathy, telephone, telescope.
Temno, *I cut.* Anatomy, epitome, tracheotomy, phlebotomy.
Theaomai, *I behold.* Theatre, theory, theorem.
Theos, *God.* Theistic, theology, theosophy, theocracy, monotheism, polytheism.
Therme, *heat.* Thermometer, thermopile, isothermal.
Thesis, *a placing, setting.* Thesis, antithesis, epithesis, epenthesis, hypothesis, metathesis, parenthesis, synthesis.
Topos, *place.* Topography, topic, topical.
Treis, *three.* Trigonometry, tripod, trilogy.
Trepo, *I turn.* Trope, tropics, allotropic, trophy.
Typto, *I strike.* Type, antitype, archetype, prototype platinotype, stereotype, daguerreotype.
Zoon, *an animal.* Zoology, zoophyte, zoological, zodiac.

LATIN ROOTS.

It will be observed that in most cases *two forms* of the Latin original are given below. The reason for this in the case of verbs and nouns is as follows:—

(1) **The Verb.** Just as an English verb has three distinct forms, Present Tense, Past Tense, Perfect Participle, e.g. *write, wrote, written*, so a Latin verb has varying forms, e.g. *scribo, scripsi, scriptum.*

From Scribo, *I write*, we get scribe, scribble, inscribe; from Scriptum we get scripture, manuscript, rescript. Hence the importance of giving both parts is self-evident.

(2) **The Noun.** The Genitive case of a Latin noun corresponds to the Possessive case of an English noun, and both differ in form from the Nominative. As in English we have *king, king's*, so in Latin we have rex, regis.

Words derived from a Latin noun contain the stem of that noun, and this is always clearly seen in the Genitive case, whereas in the Nominative it often appears in a very modified form. A few instances will illustrate this fact.

Nominative.	Genitive.	Stem.	Derivatives.
Rex	Reg-is	Reg-	Regal, regalia.
Virgo	Virgin-is	Virgin-	Virgin.
Lapis	Lapid-is	Lapid-	Lapidary, dilapidated.
Ordo	Ordin-is	Ordin-	Ordinal, ordinary.
Lex	Leg-is	Leg-	Legal, legislation.

English derivatives from Latin have often come through the French. Compare—*poverty*, L. pauper (poor), F. pauvre (poor); *cherish*, L. carus (dear), F. cher (dear).

Ædes, *a house.* Edifice, edify.
Æquus, *equal, fair.* Equality, equation, equanimity, equilibrium, equinox, equity, equivalent.
Ago, actum, *I do, drive.* Agent, reagent, agile, agitate, cogent, exigent, act, action, reaction.
Alius, *other.* Alias, alibi, aliquot, alien.
Alter, *one of two.* Alternate, alternative, altercation, subaltern.
Altus, *high.* Altitude, altar, alto, contralto, exalt, haughty.
Amo, amatum, *I love.* Amiable, amicable, amity, amative, amorous.
Angulus, *a corner.* Angle, angular, quadrangle, rectangle, triangle.
Annus, *a year.* Annual, biennial, triennial, perennial, annals, anniversary, superannuate.
Aqua, *water.* Aquarium, aquatic, aqueous, aqueduct.
Arbitror, arbitratus, *I judge.* Arbiter, arbitration.
Ardeo, arsum, *I burn.* Ardent, arson.
Audio, auditum, *I hear.* Audible, audience, inaudible, audit, auditor, auditorium.
Bene, *well.* Benefit, benefice, benefactor, benevolent, beneficent, benediction, benison.
Bis, *twice.* Biscuit, biennial, bisect, bicentenary, bilingual, bimetallism, bilateral.
Brachium, *an arm.* Brace, bracelet, embrace.
Brevis, *short.* Brevity, abridge, brief.
Cado, casum, *I fall.* Cadence, decadence, accident, incident, incidence, case, casual, casualty.

Cædo, cæsum, *I kill, cut.* Fratricide, homicidal, matricide, parricide, incisive, decisive, precise, concise, excision, circumcision, cæsura.

Cano, cantum, *I sing.* Canticle, canto, cantata, incantation, chant, enchant.

Capio, captum, *I take.* Captive, captivate, capture, accept, conception, conceit, receipt, deception, reception, exception, perception.

Caput, capitis *a head.* Cape, capital, capitation, decapitate, captain.

Caro, carnis, *flesh.* Carnal, carnival, carnivorous, carnage, carrion, charnal, carnation, incarnation.

Cedo, cessum, *I go, yield.* Cede, recede, concede, precede, accede, proceed, intercede, accession, procession.

Centum, *A hundred.* Century, centenary, centenarian, cent, centime, centipede.

Cerebrum, *the brain.* Cerebral, cerebration, cerebellum.

Cerno, cretum, *I perceive.* Discern, concern, decree, decretal, discretion.

Cito, *I rouse.* Cite, excite, incite, resuscitate.

Civis, *a citizen.* Civic, civil, civilian, civilization.

Clamo, clamatum, *I shout.* Clamour, exclaim, declaim, disclaim, proclaim, reclaim, acclamation.

Claudo, clausum, *I shut.* Clause, include, exclude, preclude, seclusion, close, closure, disclosure.

Colo, cultum, *I cultivate.* Colony, culture, agriculture, floriculture, cultivate, horticulture.

Cor, cordis *the heart.* Cordial, accord, concord, courageous, discord.

Corona, *a crown, garland.* Crown, coronet, coronal, corolla.

Corpus, *a body.* Corpse, corporal, corporeal, corporate, corporation, corpulent, corpuscle.

Credo, creditum, *I believe.* Creed, credulous, credit, creditable, credible.

Cresco, cretum, *I grow.* Crescent, decrease, increase, increment.

Crux, crucis, *a cross.* Crucify, cruciform, crucial, crusader, excruciating.

Cumbo, cubitum, *I lie down.* Cubicle, incumbent, incubator, recumbent, succumb.

Culpo, culpatum, *I blame.* Culpable, exculpate, inculpate.

Curo, curatum, *I take care.* Cure, curate, curator, curative, secure, sinecure.

Curro, cursum, *I run.* Current, occurrence, recurrent, course, cursory, discursive, excursion, incursion.

Debeo, debitum, *I owe, ought.* Debt, debtor, debit, debenture.

Decem, *ten.* Decimal, decimate, December.

Dens, dentis, *a tooth.* Dental, dentist, dent.

Dico, dictum *I say.* Diction, dictate, dictum, dictionary, dictatorial, indict, interdict, indicate, edict, prediction, predicate, verdict.

Dies, *a day.* Diet, diurnal, diary, dial, quotidian, meridian.

Dignus, *worthy.* Dignity, dignified, deign, disdain, indignant.

Do, datum, *I give.* Date, data, dative.

Dono, donatum, *I give.* Donation, donative, donor, condone.

Doceo, doctum, *I teach.* Docile, doctor, doctrine, indoctrinate.

Dominus, *a lord.* Domineer, dominate, dominion, domain, predominate.

Dormio, dormitum, *I sleep.* Dormant, dormouse, dormitory.

Duco, ductum, *I lead.* Duke, educate, duct, ductile, conduct, conducive, induction, deduction, reduction, production.

Duo, *two.* Dual, duet, duodecimo, duplex, duplicate, duplicity, double.

Emo, emptum, *I buy.* Redeem, pre-emption, exemption.

Facio, factum, *I make, do.* Fact, factor, feat, feasible, efficient, effective, defective, confectionery, sufficient, affection.

Fero, tuli, latum, *I bear, carry.* Confer, differ, defer, infer, prefer, transfer, relate, relation, translation.

Ferveo, *I boil.* Fervent, fervour, fervid, ferment, effervesce.

Fido, *I trust.* Fidelity, affidavit, confidence, diffident, infidel, perfidious, fealty, defy.

Fingo, fictum, *fashion, invent.* Feign, fiction, fictitious.

Finis, *an end.* Final, finality, confine, define, infinite, infinity, infinitive.

Firmus, *firm.* Firmament, affirm, confirmation, infirm, infirmary.

Fiscus, *treasury.* Fiscal, confiscation.

Flecto, flexum, *I bend.* Flexible, circumflex, deflect, inflexion, inflexible, reflection.

Fligo, flictum, *I dash.* Afflict, conflict, inflict, profligate.

Flo, flatum, *I blow.* Flatulency, inflated.

Flos, floris, *a flower.* Florist, floral, florid, flourish, inflorescent.

Fluo, fluxum, *I flow.* Fluid, fluent, fluctuate, affluence, confluence, effluence, influence, refluence, superfluous, influx.

Fortis, *strong.* Fort, fortitude, fortify, reinforce, comfort.

Frango, fractum, *I break.* Fragile, fracture, infraction, fraction, frail, irrefragable.

Frater, fratris, *brother.* Fraternize, fraternal, fraternity, fratricide.

Frons, frontis, *forehead.* Front, frontier, frontal, frontispiece, affront, effrontery.

Fugio, fugitum, *I flee.* Fugitive, refugee, centrifugal, subterfuge.

Fundo, fusum, *I pour.* Confound, fuse, effusive, diffusion, confusion, infusion, refuse.

Fundus, *the bottom.* Fundamental, foundation, founder, profound.

Gens, gentis, *race, people.* Gentile, degenerate, generation, progeny, progenitor.

Gero, gestum, *I carry on.* Belligerent, vicegerent.

Gradus, *a step.* Grade, gradual, graduate, gradient, retrograde, degradation, aggression, egress, ingress, congress, transgression, progression.

Gratia, *favour.* Grace, gratitude, gratis, gratuity, gratify, congratulate, ingratiate.

Grex, gregis, *flock.* Gregarious, aggregate, congregate, egregious, segregation.

Habeo, habitum, *I have.* Habit, ability, exhibit, inhibit, prohibit, rehabilitate.

Hæreo, hæsum, *I stick.* Hesitate, adhere, cohere, adhesive.

Homo, *a man.* Homicide, human, humane, humanity, humanize.

Horreo, *I bristle.* Horrid, horrible, horror, horrify.

Hospes, hospitis, *a guest.* Hospitality, hospital, hotel, host, ostler.

Idem, *the same.* Identical, identity, identify.

Impero, imperatum, *I command.* Imperial, imperious, imperative, empire, emperor.

Index, indicis, *the forefinger.* Index, indicative, indication.

Insula, *an island.* Isle, insular, insulate, peninsula, isolate.

Integer, *whole.* Integer, integrity, integral, entire, disintegrate.

Intelligo, intellectum, *I understand.* Intelligent, intellect, intelligible.

Invenio, inventum, *I find.* Invention, inventory.

Jacio, jactum, *I throw.* Adjective, abject, conjecture, interjection, dejection, eject, inject, object, subject, subjection, reject, project, jet, jetty, jetsam, ejaculation.

Jungo, junctum, *I join.* Junction, juncture, joint, conjunction, subjunctive, injunction, conjugal, subjugate.

Juro, juratum, *I swear.* Jury, perjury, adjure, conjure.

Jus, juris, *law, right.* Jurisdiction, jurisprudence, jurist, just, justice, justify, injury.

Labor, lapsus, *I glide.* Lapse, elapse, collapse, relapse.

Lædo, læsum, *I injure, strike.* Lesion, collision, elision.

Lapis, lapidis, *a stone.* Lapidary, dilapidation.

Latus, lateris, *a side.* Lateral, equilateral, quadrilateral, collateral.

Laus, laudis, *praise.* Laud, laudable, laudatory, allow.

Lavo lavatum, *I wash.* Lave, laver, lavatory, laundry, lava, lavender, lotion.

Lego, lectum (1) *I gather, choose.* Collect, elect, neglect, eligible, coil, cull, elegant, legion, predilection, selection; (2) *I read.* Legend, legible, lection, lesson, lecture, lectern.

Levis, *light.* Levity, leaven, alleviate.
Levo, levatum, *I raise.* Levy, levee, levant, lever, relevant, relieve.
Lex, legis, *law.* Legal, loyal, leal, legislator, legitimate, privilege (originally, an exceptional law).
Liber, *free.* Liberal, liberate, libertine.
Liber, *a book.* Libel, library, libretto.
Ligo, ligatum, *I bind.* Ligature, ligament, league, liable, lien, liege, allegiance, ally, obligation, religion.
Linquo, lictum, *I leave.* Delinquent, relinquish, derelict, relict, relic, reliquary.
Locus, *a place.* Local, locality, localize, locative, locomotive, locomotion, collocation, dislocation, lieu, lieutenant.
Loquor, locutus, *I speak.* Loquacious, circumlocution, colloquy, elocution, obloquy, soliloquy, ventriloquist.
Luceo, *I shine.* Lucid, lustrous, lustre, elucidate, illustrious, pellucid, translucent.
Ludo, lusum, *I play.* Ludicrous, allusion, collusion, delusion, elude, illusion, prelude, interlude.
Luo, lutum, *I wash.* Ablution, alluvial, antediluvian, deluge, dilute.
Magister, *a master.* Magistrate, magisterial, master, mister.
Magnus, *great.* Magnanimity, magnate, magnificent, magnitude, majesty.
Major, *greater.* Major, majority, mayor.
Malus, *bad.* Malady, malaria, malice, mal-à-propos, malign, malignant, malevolent, maltreat.
Mando, mandatum, *I entrust, enjoin.* Mandate, command, demand, recommend, remand, countermand.
Maneo, mansum, *I remain.* Mansion, manor, manse, permanent, remnant.
Manus, *a hand.* Manual, manacle, manage, maintain, manifesto, manufacture, manuscript, mortmain, legerdemain, manipulate, manœuvre, amanuensis.
Mare, *the sea.* Mariner, maritime, marine, submarine, mermaid.
Mater, matris, *a mother.* Maternal, matron, matriculate, matricide, matrimony, matrix.
Maturus, *ripe.* Maturity, immature, premature.
Medeor, *I heal.* Medicine, medical, medicate, remedy.
Medius, *middle.* Mediator, medium, mediocre, meridian, immediate, intermediate, mediæval, Mediterranean.
Memini, *I remember.* Memento, reminiscence.
Memor, *mindful.* Memoir, memory, memorandum, commemorate, remember.
Mens, mentis, *the mind.* Mental, demented, vehement.
Mergo, mersum, *I dip.* Merge, emergency, emerge, immerse, submerge.
Merx, mercis, *merchandise.* Mercenary, mercer, merchant, mercantile, mart, market, commerce.
Metior, mensus, *I measure.* Mensuration, commensurate, dimension, immense.
Migro, migratum, *I migrate.* Migratory, emigrant, immigrant.
Miles, militis, *a soldier.* Militant, militate, military, militia.
Mille, *a thousand.* Mile, million, millennium, millenary.
Minae, *threats.* Minatory, menace, commination.
Minuo, minutum, *I lessen.* Minute, minuet, diminution.
Minimus, *least.* Minim, minimum, minimize.
Miror, miratus, *I wonder.* Miracle, marvel, mirage, admire.
Misceo, mixtum, *I mix.* Miscellany, mixture, medley, promiscuous.
Miser, *wretched.* Miser, miserable, commiserate.
Mitto, missum, *I send.* Missive, missile, mission, dismiss, admission, commit, emit, remit, intermit, permit, submit, promise, premise.
Modus, *measure.* Mood, mode, modify, modulate, moderate, model, commodious, accommodate.
Moneo, monitum, *I advise.* Monitor, admonition, premonition, summon.
Mons, montis, *a mountain.* Mount, mountaineer, promontory, dismount, surmount, remount, amount, paramount.
Monstro, monstratum, *I show.* Monster, monstrous, demonstrate, remonstrate.
Mordeo, morsum, *I bite.* Morsel, remorse, mordant.
Mors, mortis, *death.* Mortal, mortuary, mortmain, mortgage, murrain, moribund, postmortem.
Moveo, motum, *I move.* Movable, mobile, motor, motive, mob, momentum, motion, commotion, emotion, promotion.
Multus, *much, many.* Multifarious, multitude, multiple, multiply, multiform.
Munio, munitum, *I fortify.* Munition, ammunition, muniment.
Munus, muneris, *gift, office.* Munificent, municipal, remunerate.
Murus, *a wall.* Mural, immure, intramural.
Muto, mutatum, *I change.* Mutable, commute, permutation, transmute.
Nascor, natus, *I am born.* Nascent, renaissance, natal, native, nation, nativity, cognate, innate.
Navis, *a ship.* Navy, naval, navigation, nave.
Necto, nexum, *I bind.* Annex, connexion, disconnect.
Nego, negatum, *I deny.* Negation, negative.
Nihil, *nothing.* Nihilist, nihilism, annihilate.
Noceo, nocitum, *I injure.* Noxious, obnoxious, innocuous, innocent, annoyance.
Nomen, nominis, *a name.* Nominate, nominative, noun, nominal, cognomen, denominator, ignominy, pronominal.
Non, *not.* Nonentity, nondescript, nonplus, nonpareil, nonsense.
Norma, *a rule, standard.* Normal, abnormal, enormous.
Nosco, notum, *I know.* Note, notable, notion, notice, notify, denote, cognizance, recognize.
Novem, *nine.* November, nonagenarian.
Novus, *new.* Novel, novelty, novice, noviciate, innovation, renovation.
Nox, noctis, *night.* Nocturn, nocturnal, equinox.
Nullus, *no, none.* Nullify, nullity, annul.
Numerus, *a number.* Numerous, numerator, enumerate, innumerable, supernumerary.
Nuntio, nuntiatum, *I proclaim.* Nuntio, announce, annunciation, denounce, enunciation, pronounce.
Nutrio, nutritum, *I nourish.* Nutriment, nutrition, nurture, nurse, nourishment.
Octo, *eight.* Octave, octavo, octopus, octogenarian, October, octagon, octangular, octahedron, octosyllabic.
Oculus, *eye.* Ocular, oculist, binocular, inoculate.
Odor, odoris, *smell.* Odour, odoriferous, deodorize.
Officium, *duty, function.* Office, official, officious, officiate.
Olere, *to smell.* Olfactory, redolent.
Omnis, *all, every.* Omnibus, omnipotent, omniscient, omnivorous.
Onus, oneris, *burden.* Onus, onerous, exonerate.
Opto, optatum, *I wish.* Option, optative, adoption, co-opt.
Opus, operis, *a work.* Opera, operation, operative, co-operate.
Orbis, *a circle.* Orb, orbit, exorbitant.
Ordo, ordinis, *order.* Ordinal, ordinary, ordain, ordinance, ordination, extraordinary.
Orior, ortus, *I rise.* Orient, orientation, origin, original, aborigines, abortive.
Oro, oratum, *I pray.* Orison, oratory, oration, orator, oratorio, oracle, adoration, inexorable, peroration.
Os, oris, *a mouth.* Oral, orifice.
Os, ossis, *a bone.* Ossification, osseous, osprey.
Ostendo, ostensum, *I show.* Ostensible, ostentation.
Pando, pansum, *I spread.* Expand, expanse.
Pango, pactum, *I fasten.* Compact, impact, impinge.
Par, paris, *equal.* Pair, peer, disparity, nonpareil.
Parco, parsum, *I spare.* Parsimony.
Pario, partum, *I bring forth.* Parent, parturition.
Paro, *I get ready.* Pare, repair, prepare.
Pars, partis, *a part.* Partition, party, particle, parse, participate, partisan, partner, partake, participle, parboil.
Pasco, pastum, *I feed.* Pastor, pasture, repast, pastern, pastille.
Pater, patris, *father.* Paternal, paternity, patron, patrician, patrimony, expatriate, padre, padrone.

Patior, passus, *I suffer.* Patient, passive, passion, compassion, impassioned, impassive.
Pauper, *poor.* Pauper, poor, poverty, impoverish.
Pax, pacis, *peace.* Pacify, pacific.
Pecunia, *money.* Pecuniary, impecunious.
Pello, pulsum, *I drive.* Compel, expel, impel, pulse, impulse, repulse, pulsation, expulsion, repellent, repulsive.
Pendeo, pensum, *I hang.* Pendant, pending, pendulum, pensile, impending, appendix, depend, suspense.
Pendo, pensum, *I weigh, pay, hang.* Append, compendium, perpendicular, stipend, compensate, expense, pension, recompense.
Pene, *almost.* Peninsula, penultimate, penumbra.
Penna, *a wing, feather.* Pen, pennon, pinion.
Pes, pedis, *a foot.* Pedal, pedestal, pedestrian, biped, expedition, expedient, impediment, quadruped.
Peto, petitum, *I beg, seek.* Petition, petulant, appetite, competition, impetuous, impetus, repetition.
Petra, *a stone.* Petrify, petroleum, saltpetre.
Pingo, pictum, *I paint.* Pigment, picture, paint, depict.
Pietas, *piety.* Pity, pious, expiation.
Placeo, *I please.* Placid, pleasant, complacent, complaisant.
Placo, *I appease.* Implacable.
Plango, planctum, *I bewail.* Plaint, plaintive, plaintiff, complaint.
Planus, *level.* Plane, plain, explain.
Plaudo, plausum, *I applaud.* Plaudit, plausible, applause.
Plecto, plexum, *I weave.* Complexion, complex, duplex, perplex, duplicity, complicity, accomplice.
Pleo, pletum, *I fill.* Plenary, plenty, accomplish, complement, complete, comply, depletion, expletive, replenish, supplement.
Plico, plicatum, *I fold.* Plait, pleat, plight, plot, display, complicated, duplicate, explicit, exploit, implicate, imply, multiple, supple, supplicate, simplicity.
Plumbum, *lead.* Plumb, plummet, plumber, plumbago.
Pœna, *punishment.* Penal, penalty, pain, penance, penitence, repentance.
Pondus, ponderis, *weight.* Ponderous, preponderate, ponder, poise, avoirdupois, pound.
Pono, positum, *I place.* Position, post, apposition, compound, component, deposit, deponent, exposition, impostor, opposite, opponent, position, positive.
Populus, *people.* Populace, popular, population, depopulate.
Porta, *a gate.* Portal, porch, portico, porter, portcullis.
Porto, portatum, *I carry.* Portable, import, export, deportment, porter, portfolio, portmanteau.
Possum, *I am able.* Possible, puissant, potent, potentate, potential.
Post, *after.* Post-mortem, postpone, post-obit, posterior, posterity, preposterous, posthumous, postern.
Precor, precatus, *I pray.* Precarious, imprecation, deprecate.
Prehendo, prehensum, *I seize.* Prehensile, apprehend, comprehend, reprehensible.
Premo, pressum, *I press.* Pressure, compress, depression, express, impression, oppress, repress.
Pretium, *price.* Precious, appreciate, appraise, depreciate.
Primus, *first.* Prime, primary, primeval, primate, premier, primitive, primogeniture.
Princeps, principis, *chief.* Prince, principal, principle.
Privo, privatum, *I deprive, separate.* Privation, private, privity, privacy, privilege.
Probo, probatum, *I prove, test.* Probe, probable, probate, probity, proof, approbation, reprobate.
Prope, *near.* Propinquity.
Proximus, *nearest.* Proximity, approximate, approach.
Proprius, *own.* Proper, propriety, property, appropriate.
Pugno, pugnatum, *I fight.* Pugnacious, impugn, repugnant.
Pungo, punctum, *I prick.* Puncture, pungent, punctuation, punctual, punctilio.
Puto, putatum, *I think.* Putative, deputation, dispute, computation, impute, reputation.
Quæro, quæsitum, *I seek.* Quest, question, enquire, exquisite, inquest, inquisition, inquisitive, perquisite.
Quattuor, *four*, **Quartus,** *fourth.* Quart, quarter, quadrilateral, quartet, quarto, quatrain, quadrant, quadrangle, quadrille.
Quies, quietis, *rest.* Quiet, quietus, quiescent, acquiesce.
Radius, *a rod.* Ray, radius, radiate, radiant.
Radix, radicis, *a root.* Radical, eradicate, radish.
Rapio, raptum, *I seize.* Rape, rapture, rapacious, rapine, ravage, ravish.
Rego, rectum, *I rule.* Regent, regular, regulate, regimen, regiment, rector, rectitude, rectify, director, correct, incorrigible.
Regnum, *a kingdom.* Reign, realm, interregnum.
Res, *a thing.* Reality, republic, rebus.
Rex, regis, *a king.* Regal, regalia, regicide, royal.
Rideo, risum, *I laugh.* Ridicule, ridiculous, risible, derision.
Rodo, rosum, *I gnaw.* Rodent, corrode, erosion.
Rogo, rogatum, *I ask.* Rogation, arrogance, derogatory, interrogation, prerogative, prorogation.
Rota, *a wheel.* Rota, rotate, rotation, rotatory, routine.
Ruber, *red.* Ruby, rubric, rubicund.
Rumpo, ruptum, *I break.* Rupture, abrupt, corrupt, disruption, eruption, interrupt, irruption, bankrupt.
Rus, ruris, *the country.* Rustic, rusticate, rural.
Sacer, *sacred.* Sacerdotal, sacrament, sacrifice, sacrilege, sacristan, sexton, consecrate, desecrate, execrate.
Salio, *I leap.* Sally, salient, assail, assault, insult, result.
Salus, salutis, *health.* Salute, salutary, salubrious.
Salvus, *safe.* Salve, salvage, salvation.
Sanctus, *holy.* Sanctify, sanctimonious, saint.
Sanguis, sanguinis, *blood.* Sanguine, sanguinary, consanguineous.
Sanus, *sound, healthy.* Sane, sanitary, sanatorium, insane.
Scando, scansum, *I climb.* Scan, scansion, ascend, descend, condescend, transcend.
Scindo, scissum, *I cleave, split.* Scissors, rescind, rescission.
Scio, *I know.* Science, conscience, omniscient, prescient.
Scribo, scriptum, *I write.* Scribe, scribble, scrip, scripture, ascribe, conscript, describe, inscribe, proscribe, postscript, rescript, superscription, transcription.
Seco, sectum, *I cut.* Secant, sect, section, segment, scion, sickle, bisect, dissect, intersect.
Sedeo, sessum, *I sit.* Sedentary, sedate, sediment, session, assiduous, assize, insidious, preside, residence, residue, subside, supersede.
Senex, *old.* Senate, senile, senior, seniority.
Sentio, sensum, *I feel.* Sentient, sentiment, assent, consent, dissent, resent, sense, sensation, sensible, sensual, sensuous.
Sequor, secutus, *I follow.* Sequence, sequel, consequence, consecutive, inconsequent, obsequious, persecute, prosecute, sue, suit, suitor, pursuit.
Servo, servatum, *I keep, guard.* Conservation, conservatory, observe, preserve, reserve, reservoir.
Servio, servitum, *I serve.* Serve, servant, service, servile, subservient, servitude, serf, deserve, dessert.
Signum, *a mark, token.* Sign, signal, signify, assign, consign, design, ensign, insignia, resign.
Similis, *like.* Simile, similar, similitude, simulate, assimilate, semblance, dissemble, resemble.
Sisto, *I stand.* Consist, desist, exist, insist, interstice, persist, resist, subsistence.
Solus, *alone, only.* Sole, solitary, solitude.
Solvo, solutum, *I loosen, pay.* Solve, solvent, solution, soluble, absolve, dissolve, dissolute, resolve, insolvent.
Somnus, *sleep.* Somnambulist, somniferous, somnolent, insomnia.
Spargo, sparsum, *I sprinkle, scatter.* Sparse, aspersion, disperse.
Specto, spectatum, *I look.* Spectacle, spectator, aspect, expect, inspect, introspective, perspective, prospect, respect, suspect.
Spiro, spiratum *I breathe.* Spirit, sprite, aspire, conspire, expire, inspire, perspire, respiration.

Spondeo, sponsum, *I promise.* Sponsor, spouse, correspond, despond, espouse, respond.
Statuo, statutum, *I place.* Statute, constitution, destitute, institute, restitution, substitute.
Sterno, stratum, *I lay down.* Stratum, street, stratify, consternation, prostrate.
Stinguo, stinctum (1) *I prick.* Distinguish, instigate, instinct. (2) *I quench.* Extinguish, extinct.
Sto, statum, *I stand.* State, status, station, statue, stature, stability, distant, extant, instant, solstice, substance, superstition.
Stringo, strictum, *I bind.* String, stringent, astringent, stricture, boa-constrictor.
Struo, structum, *I build.* Construe, structure, construction, destruction, instruction.
Suadeo, suasum, *I persuade.* Dissuade, suasion, persuasion.
Sumo, sumptum, *I take.* Assume, consume, presume, resume, assumption.
Surgo, surrectum, *I rise.* Surge, insurgent, insurrection, resurrection.
Taceo, tacitum, *I am silent.* Tacit, tacitum, reticent.
Tango, tactum, *I touch.* Tangent, tangible, contingent, contagion, contiguous, tact, tactile, contact, intact, integer, disintegrate.
Tego, tectum, *I cover.* Integument, detect, protect.
Tempus, temporis, *time.* Tense, temporal, temporary, contemporary, extempore.
Tendo, tensum, *I stretch.* Tend, tendon, attend, contend, distend, extend, intend, pretend, subtend, tense, intense.
Teneo, tentum, *I hold.* Tenable, tenor, tenure, tenant, tenement, tenacious, attain, attentive, countenance, contain, contents, detain, impertinent, maintain, pertain, retain, retentive, sustain, sustenance.
Terminus, *an end.* Term, terminus, termination, determine, exterminate, interminable.
Terra, *the earth.* Territory, terrestrial, interment, terra-cotta, terra-firma, Mediterranean, subterranean.
Terreo, territum, *I frighten.* Terror, terrify, terrible, terrific.
Testis, *a witness.* Testimony, testify, testament, testator, attest, intestate, protest.
Texo, textum, *I weave.* Textile, texture, text, context, pretext.
Torqueo, tortum, *I twist.* Torture, torment, contortion, distort, extortion, retort.
Traho, tractum, *I draw.* Tract, tractable, traction, train, attract, contract, detract, distract, retract, subtract, subtrahend.
Tremo, *I tremble.* Tremendous, tremor, tremulous.
Tres, *three.* Triple, triplet, triangle, tricolour, trident, trefoil.
Tribuo, tributum, *I give, assign.* Tribute, tributary, attribute, contribute, distribute, retribution.
Umbra, *shade.* Umber, umbrage, umbrageous, umbrella, adumbrate, penumbra.
Unda, *a wave.* Undulate, inundate, abound, redound, redundancy.
Unus, *one.* Unit, unite, unity, unique, unison, uniformity, disunion, reunion.
Urbs, urbis, *a city.* Urbane, suburban.
Utor, usus, *I use.* Use, usage, utensil, utility, usual, usury, abuse, misuse.
Vaco, vacatum, *I am empty.* Vacant, vacate, vacation, vacuous, vacuum, evacuate.
Vagor, vagatus, *I wander.* Vagrant, vagabond, vague, vagary, extravagant.
Valeo, *I am strong.* Valiant, valid, valour, value, avail, convalescent, invalid, prevail, prevalent.
Veho, vectum, *I convey.* Vehicle, conveyance, convection.
Venio, ventum, *I come.* Advent, covenant, circumvent, contravene, event, eventual, invent, intervention, prevent.
Verbum, *a word.* Verb, verbatim, verbal, adverb, proverb.
Verto, versum, *I turn.* Verse, versatile, version, adversity, advertize, controversy, converse, conversion, diverse, divorce, inverse, perverse, reverse, subvert, traverse, transverse, vertebrate.
Verus, *true.* Very, veracious, verdict, verisimilitude, verity, aver.
Vestis, *a garment.* Vest, vestment, vestry, vesture, divest, invest, investiture, travesty.
Via, *a way.* Viaduct, voyage, convoy, deviate, envoy, impervious, obviate, obvious, previous, trivial.
Vicis, *change;* **Vice,** *instead of.* Vicar, viceroy, vice-gerent, vice-versa, vicissitude, viscount.
Video, visum, *I see.* Vision, visit, visor, vista, visual, advice, advise, envy, evident, improvise, invidious, provident, proviso, revise, supervise, prudence.
Vinco, victum, *I conquer.* Victor, convince, evict, evince, invincible, vanquish.
Vindico, vindicatum, *I lay claim to.* Vindicate, vindictive, avenge, revenge.
Vir, *a man.* Virile, virago, virtue.
Vivo, victum, *I live.* Victuals, viands, vital, vivacity, vivid, vivisection, convivial, revive, survive.
Voco, vocatum, *I call.* Vocal, vocative, vocation, vociferate, voice, vowel, vouch, advocate, advowson, convoke, invoke, provoke, revoke.
Volo, *I wish.* Voluntary, volition.
Volvo, volutum, *I roll.* Voluble, volume, circumvolution, convolvulus, convolution, devolve, evolution, involve, revolve.
Voveo, votum, *I vow.* Vote, vow, votary, avowal, devote, devout, devotion, devotee.
Vulgus, *the common people.* Vulgar, Vulgate, divulge.

DERIVATION OF BRITISH NAMES OF PLACES.

Aber, mouth of a river. Aberdeen, Aberystwith.
Ac, an oak. Acton, Uckfield.
Ard, high. Ardnamuchan, Armagh.
Bal, a village. Balbriggan, Balcombe, Ballycastle.
Beck, a brook. Beckford, Beckton, Holbeck.
Ben, Pen, a mountain. Ben Nevis, Penmaenmawr.
Blair, a plain. Blair Athol, Blairgowrie, Ardblair.
Brae, a height. Braemar, Blackbraes.
Burgh, Bury, a stronghold. Edinburgh, Canterbury.
Burn, a stream. Bannockburn, Blackburn.
Caer, a fort. Carnarvon, Carlisle, Cardiff.
Cairn, a heap of stones. Cairngorm, Carnwath.
Cam, crooked. R. Cam, Cambus, Morecambe Bay.
Castra, a camp. Chester, Lancaster, Exeter (Ex-cester).
Ceapian, to buy. Eastcheap, Chepstow, Chippenham.
Colonia, a colony. Lincoln, Colchester.
Combe, a hollow. Ilfracombe, Wycombe, Boscombe.
Dal, a dale. Scarsdale, Arundel, Dalkeith.
Dun, Don, a fortified hill. Dumbarton, Dunkeld, Dundee, Croydon, London.
Ex, water. Exeter, Axminster, Oxford, Uxbridge.
Ea, Ey, island. Orkney, Sheppey, Anglesea.
Fell, a rocky hill. Scawfell, Snaefell, Goat Fell.
Garth, enclosure. Applegarth, Fishguard.
Ham, a home. Hampstead, Hampton, Nottingham.
Hurst, a wood. Midhurst, Lyndhurst, Hursley.
Inch, an island. Inchkeith, Inchcape, Inchcolm (Columba's Isle).
Inver, mouth of a river. Inverary, Inverness.
Kill, cell or chapel. Kilrush, Killarney, Kilmarnock.

Kirk, a church. Kirby, Kirkpatrick, Kirkcudbright (Cuthbert's Church).
Law, a hill. Broadlaw, Greenlaw.
Lea, Ley, a meadow. Bromley, Bexley, Hadleigh.
Lin, a deep pool. Lincoln, Dublin, Lynn Regis.
Llan, a church. Llandaff, Llandudno, Lampeter.
More, great. Ballymore, Glenmore, Rathmore.
Ness, a headland. Dungeness, Sheerness, Caithness.
Portus, a harbour. Portsmouth, Portrush, Southport.
Rath, a fort. Rathangan, Rathmore, Rathdrum.
Ross, a promontory. Ross (Co.), Rossmore, Kinross.
Stan, a stone. Stanton, Stanford.
Stead, a place or town. Halstead, Berkhamsted.
Stock, Stow, a fenced place. Stoke, Woodstock, Chepstow, Stockton.
Strata, a paved way. Stratford, Stratton, Streatham.
Strath, a valley. Strathmore, Strathclyde, Strathyre.
Suther, south. Sutton, Sudbury, Sutherland (so named by the Northmen).
Thorpe, a village. Bishopsthorpe, Milnthorp.
Tre, a town. Tremadoc, Oswestry, (Oswald's Town), Coventry.
Wal, Walt, a wood. Waltham, Walton, Walthamstow.
Wick, a town. Northwich, Nantwich, Warwick.
Wik, Vik, a creek. Harwich, Ipswich, Berwick.
Worth, a farm or estate. Worthing, Kenilworth, Tamworth.

DERIVATIVES FROM THE NAMES OF PERSONS AND PLACES.

Academy, from *Academia*, where Plato taught.
Agate, from *Achates*, a river of Sicily.
Amazon, name of a warlike tribe of women in Scythia.
Arabesque, a kind of ornamentation, from *Arabia*.
Argosy, from the ship *Argo* in which Jason sailed. (See *Dict. of Gen. Inf.*)
Artesian, from *Artois* in north-west of France.
Atlas, from one of the Titans named *Atlas*. (See *Dict. of Gen. Inf.*)
August, from *Augustus* Cæsar.
Bacchanalian, from *Bacchus*. (See *Dict. of Gen. Inf.*)
Bantam, from *Bantam* in Java.
Bayonet, from *Bayonne* in south of France.
Bedlam, from *Bethlehem*, a lunatic asylum.
Bergamot, from *Bergamo* in Lombardy.
Bezant, a coin, from *Byzantium*.
Bilboes, bars of iron to fasten the feet of prisoners, from *Bilbao* in Spain.
Blucher, from Marshal *Blücher*.
Bohemian, one who leads a sort of gypsy life. The French call gypsies "Bohémiens," supposing them to have come from *Bohemia*.
Boycott, to have no dealings with, from Mr. *Boycott*, agent of an Irish landlord.
Brobdingnagian, from *Brobdingnag*, a country of giants ("Gulliver's Travels").
Brougham, from the famous Lord *Brougham*.
Buhl, from *Boule*, a French cabinetmaker.
Buncombe (bunkum), frothy words, from *Buncombe* in Carolina, its representative in Congress having declared on one occasion that he was speaking simply to please Buncombe.
Burke, to throttle, from *Burke*, a murderer in Edinburgh.
Calico, from *Calicut* in India.
Cambric, from *Cambray* in north-east of France.
Canary (wine and bird), from *Canary* Islands.
Canter, favourite pace of the *Canterbury* pilgrims.
Carronade, a short cannon, from *Carron*, in Stirlingshire, where it was made.
Chauvinism, exaggerated patriotism. (See *Dict. of Gen. Inf.*)
Cherry, from *Cerasus*, in Asia Minor.
Chimera, from *Chimæra*, a fabulous monster. (See *Dict. of Gen. Inf.*)
Cicerone, a guide, from *Cicero*.
Colt, a revolving pistol, from the name of the inventor.
Copper and **Cypress**, from *Cyprus*.
Cordwainer, a shoemaker, from *Cordova*, in Spain, famous for leather.
Cravat, from the *Croats* in Croatia, by whom large neckties were worn.
Currants, from *Corinth* in Greece.
Daguerreotype, from M. *Daguerre*, the inventor.
Dahlia, from *Dahl*, a Swedish botanist.
Damask and **Damson**, from *Damascus*.
Delf, earthenware, from *Delft*, Holland.
Derringer, a pistol, from the inventor.
Diaper, from *Ypres*, in Belgium.
Doyly, so called from the maker.
Draconian (code), a very severe code; from *Draco*, a severe Athenian legislator.
Dunce, from the learned *Duns* Scotus. (See *Dict. of Gen. Inf.*)
Elysian, very delightful, from *Elysium*.
Epicure, a voluptuary, from *Epicurus*, a Greek philosopher. (See *Dict. of Gen. Inf.*)
Ermine, from *Armenia*, the fur being derived from the Armenian rat.
Euphuism, a style of diction adopted in *Euphues*. (See *Dict. of Gen. Inf.*)
Faience, a sort of fine pottery, from *Faenza* in Italy.
Faun, from *Faunus*, a sylvan deity.
Fauna, the collective name for all the animals of a region, from *Faunus*, a Roman god of the woods.
Flora, the collective name for all the plants of a region, from *Flora*, the Roman goddess of flowers.
Florin, a coin named from *Florence*.
Fribble, from a character of that name in Garrick's farce "Miss in her Teens."
Fuchsia, from *Fuchs*, a German botanist.
Fustian, from *Fostat*, a suburb of Cairo.
Galloway, a small species of horse, found chiefly in *Galloway*, south-west of Scotland.
Galvanism, from *Galvani*, an Italian scientist.
Gamboge, a pigment, from *Cambodia*.
Garibaldi, a red shirt, commonly worn by the Italian patriot, *Garibaldi*.
Gasconading, boasting, to which the *Gascons* were especially prone.
Gingham, from *Guingamp*, in Brittany.
Gordian (knot), tied by *Gordius*. (See *Dict. of Gen. Inf.*)
Grog, from "Old Grog," the nickname of Admiral Vernon. (See *Dict. of Gen. Inf.*)
Guinea, first coined in 1663, from gold brought from the *Guinea* coast.
Guillotine, from Dr. *Guillotin*, the inventor.
Gypsy, so called because supposed to have come from *Egypt*.
Hansom, from the inventor.
Hector (verb), "to talk big," from *Hector*, a brave boastful Trojan leader.
Hock, a wine from *Hockheim*, Germany.
Indigo, dye from an *Indian* plant.
Italics, a type invented by an *Italian*, named Aldus Manutius.
Jacobins, violent French revolutionists, so called from meeting in the hall of the *Jacobin Friars*, in Paris.
Jacobite, an adherent of James II., from *Jacobus*, the Latin for James.
Jalap, from *Xalapa*, in Mexico.
Jane, a fabric from *Genoa*.
January, from *Janus*, a Roman god. (See *Dict. of Gen. Inf.*)
Jeremiad, a tale of woe, from *Jeremiah*, author of "The Lamentations."
Jovial, from *Jove* (Jupiter), the happiest star under which to be born.
July, from *Julius* Cæsar.
Kit-Cat, a portrait of a certain size, named from the *Kit-Cat* Club. (See *Dict. of Gen. Inf.*)
Laconic, short and pithy, from *Laconia*, the country of the Spartans.
Landau, from *Landau*, in Bavaria.
Lazaretto, Lazar-house, from the name of the beggar *Lazarus*.
Lilliputian, from *Lilliput*, a country of dwarfs ("Gulliver's Travels").
Lumber, from *Lombard*. The lumber-room was the room where the Lombard money-lenders placed their pledges.
Lynch-law, from an American judge, named *Lynch*, who made short work of his trials and his prisoners.
Macadamize, from a capital road-maker, named *Macadam*.
Mackintosh, from the inventor.
Magnet, from *Magnesia*, in Asia Minor.
Magnolia, from *Magnol*, a French botanist.
Majolica, from *Majorca*.
Malmsey, from *Malvasia*, in Greece.
Mantua, a lady's gown, from *Mantua*, in Italy.
March, from *Mars*, the god of war.
Martinet, from *M. Martinet*, an officer in the army of Louis XIV.
Maudlin, from Mary *Magdalene*, usually represented with tearful eyes.
Mausoleum, from *Mausolus*. (See *Dict. of Gen. Inf.*)
Meander, from the winding river *Meander*, in Asia Minor.
Mentor, the wise instructor of Telemachus. (See *Dict. of Gen. Inf.*)
Mercurial, of a light-hearted temperament, as if born under the influence of *Mercury*.
Mesmerism, from the German physician named *Mesmer*. (See *Dict. of Gen. Inf.*)
Milliner, from *Milan*.
Morris-dance, from *Morocco*.
Muslin, from *Mosul* on the Tigris.
Nankeen, from *Nanking*, in China.
Negus, from Colonel *Negus*, who first mixed the beverage.
Nicotine, from *Nicot*, one of the first to bring tobacco into use in Europe.
Orrery, an astronomical contrivance for illustrating the solar system, from Lord *Orrery*, for whom it was first made.
Palladium, the famous statue of *Pallas*, regarded as the safeguard of Troy.

Panic, from *Pan*. (See *Dict. of Gen. Inf.*)
Paramatta, a light fabric, from *Paramatta*, in New South Wales.
Pasquinade, from *Pasquin*, a Roman tailor famous for his sarcastic speeches.
Peach, from *Persia*.
Petrel, from *Peter*, in allusion to his walking on the water.
Phaeton, from *Phaethon*. (See *Dict. of Gen. Inf.*)
Pheasant, from the *Phasis*, a river of Colchis, flowing into the Black Sea.
Philippic, an invective speech, so named from the orations of Demosthenes against *Philip* of Macedon.
Pinchbeck, from its inventor.
Pistol, from *Pistoja*, near Florence.
Plutonic, volcanic, from *Pluto*, the god of the infernal regions.
Port, from *Oporto*, in Portugal.
Protean, assuming different shapes, from *Proteus*. (See *Dict. of Gen. Inf.*)
Quixotic, chivalrous to excess, from Don *Quixote*.
Rodomontade, rant, from *Rodomont*, a famous hero in Ariosto's "Orlando Furioso." (See *Dict. of Gen. Inf.*)
Sarcenet, a fine thin silk cloth, first made by the *Saracens*.
Sardonic, said of a bitter sort of laugh, from *Sardinia*, where grows a herb which, if eaten, causes forced laughter.
Saturnine, gloomy of disposition, as if born under the influence of *Saturn*.
Shalloon, a woollen stuff, from *Chalons*, in France.
Shallot, an onion, from *Ascalon*, in Palestine.
Sherry, from *Xeres*, in Spain.
Silhouette, a figure cut out in black paper, from M. de *Silhouette*. See *Dict. of Gen. Inf.*)
Simony, from *Simon* Magus, the sorcerer. (See *Dict. of Gen. Inf.*)
Solecism, a blunder in the use of words, from *Soli*, in Asia Minor, where bad Greek was spoken.
Spaniel, from *Spain*.
Stentorian, excessively loud, from *Stentor*. (See *Dict. of Gen. Inf.*)
Stoic, from *Stoa* Poikile, the Painted Porch, in Athens, where Zeno, the founder of the Stoic school, taught.
Swede, a turnip, from *Sweden*.
Tantalize, from *Tantalus*. (See *Dict. of Gen. Inf.*)
Tontine, from its inventor, *Tonti*, an Italian. (See *Dict. of Gen. Inf.*)
Utopian, from *Utopia*. (See *Dict. of Gen. Inf.*)
Valentine, from *St. Valentine*. (See *Dict. of Gen. Inf.*)
Volcano and **Vulcanite**, from *Vulcan*, the god of fire. (See *Dict. of Gen. Inf.*)
Volt, **Voltaic**, from *Volta*, an Italian physicist. (See *Dict. of Gen. Inf.*)
Worsted, from *Worsted*, near Norwich.

PHRASES, CLASSICAL AND FOREIGN,

(Current in English Literature and Legal Documents).

N.B.—Many single words and short phrases from foreign sources will be found in the "English Dictionary" (p. 1031).

[The letters F, Ger, Gr, It, Sp, denote that the quotations come from the French, German, Greek, Italian, and Spanish languages respectively. All the other phrases come from the Latin. In pronouncing the Latin words put the accent on the *penult* when it is marked with a stroke (—), or when the vowel of that syllable comes before two or more consonants. In every other case put the accent on the *antepenult*. Every vowel in Latin is to be sounded; thus *celare* is a word of three syllables.]

Ab extra. From outside.
Ab initio. From the beginning.
Ab intra. From inside.
A bon droit. (F.) Justly.
A bon marché. (F.) Cheap.
Ab orĭgine. From the beginning.
Ab ovo. (From the egg). From the beginning.
Ab ovo usque ad mala. (From the egg to the apples, i.e., from the first course at dinner to the last). From first to last.
A bras ouverts. (F.) With open arms.
Absit invidia. Let envy play no part.
Absit omen. May it not portend evil.
Ab uno disce omnes. (From one learn all). A single instance is typical.
Ab urbe condĭta, or *anno urbis conditae*, *A.U.C.* From the year of the foundation of the city (i.e., of Rome, in 753 B.C.).
A cheval. (F.) On horseback.
A compte. (F.) On account.
A couvert. (F.) Under cover.
A cruce salus. Salvation through the Cross.
Ad captandum vulgus. To catch the fancy of the general public.
Ad extrēmum. At last.
Ad finem (*ad fin.*). At the end.
Ad Graecas Kalendas. (At the Greek Kalends.) Never.
Ad hoc. To or for this, i.e., for this particular purpose.
Ad hominem. (To the man). Personal; applying to the individual.
Ad infinītum. To infinity; without end.
Ad initĭum, *ad init.* At the beginning.
Ad interim. Meanwhile.
Ad lĭbitum, *ad lib.* At pleasure.
Ad majōrem dei glōriam, *A.M.D.G.* To the greater glory of God.
Ad nauseam. To disgust, till one is sick of it.
Ad patres. (Gathered to one's fathers). Dead.
Ad rem. To the point; pertinent.
Adsum. (I am present). Here!
Ad unguem. (To a nail's breadth). To a nicety.
Ad unum omnes. (All to a man). Every one without exception.
Ad utrumque parātus. Prepared for either emergency.
Ad valōrem. According to the value.
Æquo animo. Calmly.
Ætātis, *æt.* (*Aetatis suae*). Of his age.
Affaire d' amour. (F.) A love affair.
Affaire d' honneur. (F.) A matter of honour; a duel.
Affaire du cœur. (F.) (An affair of the heart). A love affair.
A fond. (F.) Thoroughly.
A fortiōri. With greater reason; much more.
Agnus Dei. The Lamb of God.
Aide-toi, et le ciel t' aidera. (F.) Heaven helps those who help themselves.
A la bonne heure. (F.) At the fitting moment; well-timed.
A la carte. (F.) According to the bill of fare.
A l'anglaise. (F.) In the English fashion.
A la française. (F.) In the French fashion.
A la mode. (F.) Fashionable.
Al fresco. (It.) In the open air.
Allons. (F.) (Let us go). Come on.
Alma mater. Kindly mother.
Alter ego. One's second self.
Alter idem. An exact duplicate.
Alter ipse amīcus. A friend is a second self.
Amantium iræ amōris redintegrātio. Lovers' quarrels prove love's renewal.
Amende honorable. (F.) Satisfactory apology.
A mensa et toro. (From table and couch). From bed and board.
Amīcus Plato, sed magis amīca veritas. (Plato is dear, but truth more dear). Truth must be preferred to personal feelings.
Amor patriae. Love of fatherland.
Amour propre. (F.) Self-esteem.
Ancien régime. (F.) The old order of things.
Anglice. In English.
Anno Christi. In the year of Christ.
Anno Domini, *A.D.* In the year of our Lord.
Anno mundi. In the year of the world.
Anno urbis conditae, *A.U.C.* In the year of the foundation of the city (of Rome, 753 B.C.)
Annus mirābilis. The year of wonders.
Ante Christum, *A.C.* Before Christ.
Ante meridiem, *A.M.* Before mid-day.
A outrance. (F.) To the bitter end.
A pied. (F.) On foot.
A posteriōri. By induction; from observation.
A prima vista. (It.) At first sight.
A priōri. By deduction; from hypothesis.
A propos. (F.) To the point.
Apropos de bottes. (F.) (As to boots). To digress!
Apropos de rien. (F.) Without anything to do with the subject.
Aqua vitæ. (Water of life). Brandy.
Arbiter elegantiārum. An umpire in questions of taste.
Arcades ambo. (Arcadians both). A well matched pair.
Argent comptant. (F.) Ready money.
Argumentum ad hominem. An argument adapted to the person addressed.
Argumentum ad populum. An argument that appeals to popular prejudice.
Ἄριστον μὲν ὕδωρ [*ariston men hudor*]. (Gr.) (Water is best). Water is the prime element.
Ἄριστον μέτρον [*ariston metron*]. (Gr.) The golden mean; moderation is best.
Arrière pensée. (F.) A mental reservation.
Ars est celāre artem. The highest art lies in the concealment of art.
Ars longa, vita brevis. Art is long, but life is fleeting.
A tout prix. (F.) At any cost.
Au contraire. (F.) On the contrary.
Au courant. (F.) Well versed in.
Audi alteram partem. Hear the other side.
Au fond. (F.) At the bottom.
Au fait. (F.) Skilful.
Aurea mediocritas. The golden mean.
Au reste. (F.) As to the rest.
Au revoir. (F.) Good-bye till we meet again.
Aussitôt dit, aussitôt fait. (F.) No sooner said than done.

Auri sacra fames. The accursed lust for gold.
Aut Cæsar, aut nullus. (Either Cæsar or no one). First or nowhere.
Aut vincere aut mori. Victory or death.
Aux armes. (F.) To arms!
A votre santé. (F.) Your health!
Ballon d' essai. (F.) (A balloon sent up to test the wind). An experiment to ascertain public opinion.
Bas bleu. (F.) A blue stocking; a learned woman.
Beau idéal. (F.) Standard of perfection.
Beau monde. (F.) The world of fashion.
Beaux esprits. (F.) Men of wit.
Beaux yeux. (F.) (Beautiful eyes). Beauty.
Bel esprit. (F.) A genius; a wit.
Ben trovato. (It.) Well invented.
Bête noire. (F.) (A black beast). A bugbear.
Billet doux. (F.) A love letter.
Bis dat qui cito dat. To give at once is as good as giving twice over.
Bis pueri senes. Old age is a second childhood.
Bona fide. In good faith.
Bon gré, mal gré. (F.) Willing or unwilling.
Bonhomie. (F.) Good nature.
Bon jour. (F.) Good day.
Bonne bouche. (F.) A tit-bit.
Bon soir. (F.) Good evening.
Bon ton. (F.) The height of fashion.
Bon vivant. (F.) A man addicted to the pleasures of the table.
Brevis esse labōro, obscūrus fio. In striving to be concise, I become obscure.
Brutum fulmen. A thunderbolt that falls harmless.
Cacoëthes scrībendi. The itch for writing.
Cadit quæstio. The question falls to the ground; there is nothing more to be said.
Campo santo. (It.) A burying-ground.
Canaille. (F.) The rabble; mob.
Cap-à-pie. (F.) From head to foot.
Carpe diem. Seize the opportunity.
Casus belli. A cause for war.
Cause célèbre. A celebrated law-suit.
Caveat emptor. Let the buyer beware.
Cave canem. Beware of the dog!
Cavendo tutus. Safe, because cautious.
Cedant arma togæ. Let war give place to law.
Cela va sans dire. (F.) That goes without saying.
Ce n'est que le premier pas qui coûte. (F.) It is only the first step that 'costs,' or that is so difficult to take.
C'est à dire. (F.) That is to say.
C'est une autre chose. (F.) That is quite another matter.
Cēteris paribus. Other things being equal.
Chacun à son gout. (F.) Every one to his taste.
Chargé d' affaires. (F.) A diplomat of subordinate rank.
Chateaux en Espagne. (F.) (Castles in Spain). "Castles in the air."
Chef de cuisine. (F.) A head cook.
Chef d' œuvre. (F.) A masterpiece in art.
Chemin de fer. (F.) A railway.
Che sarà, sarà. (It.) What will be, will be.
Chevalier d' industrie. (F.) (A knight of industry). A man who gets his living by his wits, i.e., by fraud.
Chose jugée. (F.) A matter which has been decided.
Ci-devant. (F.) Former.
Ci-gît. (F.) Here lies (inscription on tomb-stones).
Circulus in probando. An argument in a circle (which assumes in the course of the argument the very point to be proved).
Claqueur. (F.) One hired to applaud.
Clarum et venerābile nomen. A famous and honourable name.
Cœlum non animum mutant qui trans mare currunt. Crossing the seas brings a change of sky (or climate), but not of temper or disposition.
Cōgito, ergo sum. I think, therefore I exist.
Comme il faut. (F.) Proper; fitting; as it should be.
Commūni consensu. By general agreement.
Compagnon de voyage. (F.) A fellow-traveller.
Compos mentis. Of sane mind.
Compte rendu. (F.) A report; account.
Con amore. (It.) With one's whole heart.
Conseil d'état. (F.) A council of state; a privy-council.
Conseil de famille. (F.) A family council.
Consule Planco (Horace, Odes III. xiv). (When Plancus was consul). In my young days.
Contrāria contrāriis curantur. The cure by contraries: allopathy.
Contre-temps. (F.) An unlucky accident.
Cordon bleu. (F.) (A blue riband). A first-rate cook.
Cordon sanitaire. (F.) A line of guards to impose quarantine.
Corps de ballet. (F.) The ballet-dancers.
Corps diplomatique. (F.) The diplomatic body.
Corrigenda. A list of corrections needed.
Couleur de rose. (F.) Rose-tinted (of the imagination).
Coup de grâce. (F.) A finishing blow.
Coup de main. (F.) A sudden stroke.
Coup d' essai. (F.) A first attempt.
Coup de soleil. (F.) A sunstroke.
Coup d'état. (F.) A sudden stroke of policy.
Coup de théâtre. (F.) A theatrical effect.
Coup d' œil. (F.) A rapid glance.
Coûte que coûte. (F.) Cost what it may.
Crambe repetīta. (Cabbage served up twice). A tedious repetition.
Credat Judæus Apella. (Let the Jew, Apella, believe that). Tell it to the horse-marines.
Crescit eundo. It grows bigger as it goes along.
Cucullus non facit monachum. The cowl does not make the monk.
Cui bono? What is the good?
Cuique suum. Everybody to have his own.
Cul de sac. (F.) A road without an outlet; a blind alley.
Cum grano salis. With a grain of salt.
Cum privilēgio. With privilege.
Curiōsa felīcitas. Clever happiness of phrase.
Currente calamo. With running pen.
Da capo. (It.) From the beginning again.
Dame d' honneur. (F.) Maid of honour.
De die in diem. From day to day.
De facto (opposed to *de jūre*). As a matter of fact (*opposed to* as a matter of right.)
Dégagé. (F.) Easy; unconstrained.
De gustibus non est disputandum. It is no use arguing about questions of taste.
Dei gratia, D.G. By the grace of God.
Déjeuner à la fourchette. (F). A meat breakfast.
De jure. By right of law.
De minimis non curat lex. The law takes no account of trifles.
De mortuis nil nisi bonum. About the dead say nothing but what is good.
De novo. Anew.
Deo grātias. Thanks to God.
Deo juvante. With God's help.
Deo volente, D.V. God being willing.
De profundis. Out of the depths.
Dernier ressort. (F.) A last resource.
Desipere in loco. To play the fool at the right moment.
Desunt cætera. The remainder is wanting.
De trop. (F.) (Too much). A hindrance.
Deus ex machinâ. The one who steps in at a critical moment and sets things right.
Dies non. A day that does not count for business.
Dieu et mon droit. (F.) God and my right.
Die Wacht am Rhein. (Ger.) "The Watch on the Rhine."
Disjecta membra. Scattered remains.
Distingué. (F.) Of distinguished appearance.
Divide et impera. (Divide and conquer). Gain empire by making factions.
Docendo discimus. We learn by teaching.
Dolce far niente. (It.) Enjoyable idleness.
Domine dirige nos. O Lord, direct us.
Dominus vobiscum. The Lord be with you.
Domus et placens uxor. Home and the good wife.
Dormītat Homērus; Aliquando bonus dormītat Homērus; Quandōque bonus dormītat Homērus. (At times even the good Homer nods). The wisest man may be caught napping.
Double entendre. (F.) A double meaning.
Do ut des. (I give that you may give). Reciprocity is expected.
Drāmatis personæ. The characters of a play.
Dulce domum. Home, sweet home.
Dulce est dēsipere in loco. A jest at the right moment is pleasant.
Dulce et decōrum est pro patria mori. A sweet and noble thing is it to die for one's country.
Dum spiro, spero. While I live, I hope.
Dum vivimus, vivāmus. While we live, let us enjoy life.
Ecce Homo. Behold the Man!
E contra. On the other hand.
Edition de luxe. (F.) A luxurious edition of a book.
Editio princeps. An original edition.
Ego et rex meus. (Lit.) "I and my king."
Eheu! fugāces labuntur anni. Alas! our fleeting years glide away.
Embarras de richesse (F.) Such a number of good things as to cause perplexity.
En ami. (F.) As a friend.
En arrière. (F.) In the rear.
En attendant. (F.) Meanwhile.
En avant. (F.) Forward.
Ende gut, alles gut. (Ger.) All's well that ends well.
En déshabillé. (F.) In undress.
En effet. (F.) In effect, practically.
En famille. (F.) As a member of the family; at home.
Enfant gâté. (F.) A spoiled child.
Enfants perdus. (F.) (Lost children). A forlorn hope.
Enfant terrible. (F.) (A terrible child). A child that makes tell-tale remarks.
En grande tenue. (F.) In full dress.
En masse. (F.) In a body.
Ἐν νυκτὶ βουλή [*en nukti boulē.*] (Gr.) (In the night there is counsel). Sleep on it.
Ἐν οἴνῳ ἀλήθεια [*en oino alētheia.*] (Gr.) In wine there is truth.
En passant. (F.) By the way.
En plein jour. (F.) In broad daylight.
En rapport. (F.) In connection.
En règle. (F.) According to rule.
En revanche. (F.) In return.
En route. (F.) On the way.
En suite. (F.) In company.
Entente cordiale. (F.) A hearty mutual understanding.
Entêté. (F.) Headstrong.
Entourage. (F.) Surroundings; environment.
Entre nous. (F.) Between ourselves; in confidence.
En vérité. (F.) In truth.
Epicūri de grege porcus. (A pig from the herd of Epicurus). An Epicurean; one whose motto is, "Let us eat and drink, for to-morrow we die."

Errāre est humanum. To err is human.
Errāta. A list of mistakes.
Esprit de corps. (F.) Corporate spirit.
Esse quam vidēri. Reality rather than appearance.
Est modus in rebus. There is moderation in all things.
Et cētera, et cet., etc. &c. And the rest.
Et hoc genus omne. And everything of the kind.
Et sequentes; et sequentia; et sqq. And those following.
Et tu, Brute. You too, Brutus! (Cæsar's last words to his friend who helped in his assassination).
Εὕρηκα [*heurēka.*] (Gr.) I have discovered it.
Ex animo. Heartily; cordially.
Ex cathedra. (From the chair). With authority, authoritative.
Excelsior. Higher and higher!
Exceptio probat regulam. The exception proves the rule.
Exceptis excipiendis. Necessary allowances being made.
Exēgi monumentum ære perennius. I have completed a monument more enduring than brass.
Exempli grātia, e.g. For example.
Exeunt omnes. All retire.
Ex mero motu. Of one's own free will.
Ex nihilo nihil fit. From nothing there results nothing.
Ex officio. In virtue of one's office, officially.
Ex opere operāto. By the mere performance of the act.
Ex parte. On one side.
Ex pede Herculem. (From the foot, Hercules). One can judge of the whole from a characteristic part.
Experientia docet. (Experience teaches). We learn by experience.
Experientia docet stultos. Even fools learn by experience.
Experto crede. Believe one who has tried it.
Ex post facto. After the event.
Expressis verbis. In express words.
Ex ungue leōnem. One can tell a lion by his claws.
Ex uno disce omnes. From a single instance or individual, judge the remainder; a single instance is typical.
Faber quisque suae fortunæ. Every man is the architect of his own fortunes.
Facile princeps. Easily first.
Facilis est descensus Averno. The road down to hell is an easy one.
Façon de parler. (F.) Manner of speech.
Faire sans dire. Action not talk.
Fait accompli. (F.) An accomplished fact.
Far niente. (It.) The doing of nothing.
Fas est et ab hoste docēri. One ought to learn a lesson even from a foe.
Fasti et nefasti dies. Lucky and unlucky days.
Faux pas. (F.) A false step.
Felo de se. A suicide.
Femme de chambre. (F.) A chambermaid.
Ferae naturae. Of a wild nature.
Fervet opus. The work goes on vigorously.
Festīna lente. Hasten slowly; more haste, less speed.
Fête champêtre. (F.) A rustic festival.
Feu de joie. (F.) A firing of guns in rejoicing.
Fiat experimentum in corpore vili. Make the experiment on something that does not matter.
Fiat justitia, ruat cœlum. Let justice be done, though the heavens fall.
Fiat lux. Let there be light.
Fidei defensor (Fid. def.) Defender of the Faith.
Fides Pūnica. (Carthaginian honour). Treachery.
Fidus Achātes. (The faithful Achates.) A trusty friend.
Fīlius nullīus. A son of a nobody.
Fīlius populi. A son of the people.
Fīlius terrae. A son of the soil.
Fille de chambre. (F.) A chambermaid.
Fille de joie. (F.) A woman of pleasure.
Finem respice. Look to the end.
Finis corōnat opus. The end crowns the work.
Flagrante bello. While war is raging.
Flagrante delicto. In the very act.
Fons et orīgo malōrum. The ultimate source of our ills.
Forensis strepitus. The babel of the law-court.
Fortiter in re. Resolute in action.
Fortūna favet fortibus. Fortune favours the brave.
Frangas, non flectes. You may break, but you will not bend.
Fronti nulla fides. There is no trusting appearances.
Fruges consūmere nati. Born only to eat.
Fulmen brutum. A harmless thunderbolt.
Furor arma ministrat. Rage lends weapons.
Furor loquendi. The rage for oratory.
Furor poēticus. Poetic frenzy.
Furor scrībendi. The rage for authorship.
Gaieté de cœur. (F.) Light-heartedness.
Gallicè. In French.
Garçon. (F.) A boy; a waiter.
Genius loci. The patron deity or presiding spirit of the place.
Gens d' armes. (F.) Military police.
Gens de lettres. (F.) Men of letters.
Genus irritabile vātum (or *poetārum*). The irritable race of poets.
Germanicè. In German.
Gitano. (Sp.) A gipsy.
Glōria in excelsis Deo. Glory to God in the highest.
Glōria Patri. Glory be to the Father.
Γνῶθι σεαυτόν [*gnōthi seauton.*] (Gr.) Know thyself.
Gradus ad Parnassum. (Steps up to Parnassus). Aids to classical lore, especially to verse composition.
Græcè. In Greek.
Grande parure. (F.) Full dress.
Grande toilette. (F.) Full dress.
Grand merci. (F.) Many thanks.
Gratis. Free; for nothing.
Graviōra manent. Worse remains behind.
Guerre à outrance; guerre à mort. (F.) War to the bitter end.
Gutta cavat lapidem, non vi, sed saepe cadendo. It is by constant dripping, not by force, that water wears away the stone.
Hæc olim meminisse juvābit. One day we shall enjoy this memory.
Helluo librōrum. A book-worm.
Hic et ubique. Here and everywhere.
Hic jacet. Here lies.
Hic sepultus. Here buried.
Hinc illæ lachrymae. Hence these tears.
Hoc opus, hic labor est. This is the real task, the real difficulty.
Hodie mihi, cras tibi. To-day my turn, to-morrow yours.
Homme des affaires. (F.) A man of business.
Homme d' esprit. (F.) A man of wit.
Homo sum; humani nihil ā me alienum puto. I too am a man, and have a sympathy for all that touches man.
Homo unius lībri. A man of a single book.
Honi soit qui mal y pense. (F.) Evil be to him that evil thinks.
Honos habet onus. Rank brings responsibility.
Horresco referens. I shudder to relate it.
Hors de combat. (F.) Out of the fight; disabled.
Hors d' œuvre. (F.) Out of course.
Hôtel de ville. (F.) A town-hall.
Hôtel Dieu. (F.) A hospital.
Humānum est errāre. To err is human.
Ibīdem, ibid. In the same place.
Ich dien. (Ger.) I serve.
Id est, i.e. That is.
Ignis fatuus. A deceiving light; a will o' the wisp.
Ignorātio elenchi. An ignoring of the point at issue.
Ignōtum per ignōtius. To reach the unknown through the still more unknown.
Il penseroso. (It.) The man of melancholy; the pensive man.
Imo pectore. From the bottom of one's heart.
Impedimenta. Baggage; luggage.
Imperium in imperio. A power within a power.
Imprimātur. (Let it be printed). An authorization.
Imprīmis. First of all.
In aeternum. For ever.
In articulo mortis. On the point of death.
In bianco. (It.) In blank; in white.
In camera. In the judge's room; in secret.
In cœlo quies. In heaven rest and peace.
Index expurgatōrius. An expurgated index; a list of books forbidden to be read by Roman Catholics.
In esse. In actual existence.
In extenso. At full length.
In extrēmis. On the point of death.
Infandum renovāre dolōrem. To revive an unspeakable sorrow.
In forma pauperis. As a poor man.
In foro conscientiae. At the bar of conscience.
Infra dignitātem, infra dig. Beneath one's dignity.
In hoc signo vinces. Under this standard you will be victorious.
In līmine, in lim. On the threshold.
In loco, in loc. In its place.
In loco parentis. Occupying the place of a father.
In medias res. Into the heart of the matter.
In medio tutissimus ībis. Along the middle path you will find the safest way.
In memoriam. To the memory.
In nūbibus. (In the clouds). Unsubstantial.
In pace. In peace.
In partibus; in partibus infidēlium. Amongst the unbelievers.
In petto. (It.) In reserve.
In posse. Potentially; in possibility.
In propria persōna. In one's own person.
In puris naturālibus. In a state of nature, stark naked.
I.N.R.I., Jesus Nazarenus, Rex Judæorum. Jesus of Nazareth, King of the Jews.
In rērum natūra. In the nature of things.
In saecula saeculorum. For ever and ever.
In situ. In its original position.
Instar omnium. An example for all.
In statu quo; in statu quo ante. In the same condition as it was before.
In te, Domine, sperāvi. In Thee, O Lord, have I put my trust.
Inter alia. Amongst other matters.
Inter canem et lupum. (Between the dog and the wolf). At twilight.
Inter nos. Between ourselves.
Inter pōcula. In one's cups.
In terrōrem. As a warning.
Inter se. Among themselves; mutually.
In totidem verbis. In so many words.
In toto. Altogether.
In vino vēritas. When the wine is in, the truth comes out.
Invīta Minerva. (Against Minerva's will.) Without genius; uninspired.
Ipse dixit. (He himself said it.) A dogmatic assertion.
Ipsissima verba. The exact words.
Ipso facto. In virtue of the mere fact itself.
Ira furor brevis est. Anger is temporary insanity.
Irritābile genus poetārum. (*See* genus irritabile vatum.)

Jacta ālea est. The die is cast.
Jānuis clausis. With doors closed; in secret.
Je ne sais quoi. (F.) I know not what; something or other.
Je suis prêt. (F.) I am ready.
Jeu de main. (F.) A practical joke.
Jesus hominum Salvātor, I. H. S. Jesus the Saviour of mankind (IHS are the first three Latin letters of the Greek for Jesus). *See* p. 795.
Jeu de mots. (F.) A play on words; a pun.
Jeu d' esprit. (F.) A witticism.
Jeu de théâtre. (F.) A stage trick; clap-trap.
Jure divīno (opposed to *jure humāno*). By divine law or right (*opposed to* by the law of man).
Juris utriusque doctor. A doctor of both canon and civil law.
Jus canonicum. Canon law.
Jus civīle. Civil law.
Jus divīnum. Divine law.
Jus gentium. The law of nations.
Jus gladii. Right of the sword.
Jus possessiōnis. Right of possession.
Juste milieu. (F.) The golden mean.
Justum et tenācem propositi virum. An upright man who holds to his purpose.
Laborāre est orāre. To work is to pray.
Labor omnia vincit. Work overcomes all difficulties.
La critique est aisée, et l'art est difficile. (F.) Criticism is easy, art difficult.
La fortune passe partout. (F.) Fortune affects all.
Laisser faire. (F.) Leaving things alone to take their own course.
L' allegro. (It.) The light-hearted man.
Langage des halles. (F.) The language of the markets; Billingsgate.
Lapsus calami. A slip of the pen.
Lapsus linguae. A slip of the tongue.
Lapsus memoriae. A slip of the memory.
Lares et penātes. One's household gods; hearth and home.
Lasciate ogni speranza voi, che 'ntrate. (It.) All hope abandon, ye who enter here.
Latet anguis in herba. A snake lurks hid in the grass.
Latīne. In Latin.
Laudāri a viro laudāto. To be praised by one who is himself praised.
Laudātor temporis acti. One whose praise is for the good old days.
Laus Deo. Praise to God.
L' avenir. (F.) The future.
Le beau monde. (F.) The fashionable world.
Legātus a latere. A Papal ambassador.
Le grand monarque. (F.) The grand monarch. (Louis XIV.)
Le jeu n'en vaut pas la chandelle. (F.) The game is not worth the candle.
Le monde est le livre des femmes. (F.) The world is woman's book.
L' enfant prodigue. (F.) The prodigal son.
Le pas. (F.) Precedence in rank.
Le roi le veut. (F.) The king wills it.
Les absents ont toujours tort. (F.) The absent are always in the wrong.
Lèse majesté. (F.) High treason.
Les murailles ont des oreilles. (F.) Walls have ears.
Le tout ensemble. (F.) The general effect.
Lettre de change. (F.) A bill of exchange.
Lettres de cachet. (F.) Private sealed letters.
Le vrai n'est pas toujours vraisemblable. (F.) Truth is not always what is likely; truth is stranger than fiction.
Lex non scripta. The unwritten law.
Lex taliōnis. The law of retaliation, "an eye for an eye."
L' homme propose, et Dieu dispose. (F.) Man proposes, but God disposes.
Liberum arbitrium. Free will.
L' inconnu. (F.) The unknown.
L' incroyable. (F.) The incredible.
Lite pendente. While the law-suit is undecided.
Litera scripta manet. What is committed to writing cannot be done away with.
Loco citāto, (en loc, cit., l.c.) In the passage quoted.
Locum tenens. A deputy; substitute.
Locus classicus. A classical passage (an authority for reference).
Locus pœnitentiae. Room for repentance.
Locus standi. Standing in a case; concern with a case.
Longo intervallo. By a long interval.
Lucus a non lucendo. (A grove, from its not being light: an erroneous derivation of *lucus*, a grove, from *lucem*, light). An inconsequence.
Lupum auribus teneo. (I have got the wolf by his ears). I have caught a Tartar.
Lupus in fābula. The wolf of the fable; "Talk of the devil," etc.
Lusus natūrae. A freak of nature.
Ma chère. (F.) My dear.
Macte animo. Courage!
Ma foi. (F.) Upon my word!
Magister ceremoniārum. Master of the Ceremonies.
Magna cīvitas, magna solitūdo. A great city is a great desert.
Magna est veritas, et praevalēbit. Mighty is truth, and it will prevail.
Magna est vis consuetūdinis. Mighty is the force of habit.
Magnas inter opes inops. Poor amidst plenty.
Magnum bonum. A great blessing.
Magnum opus. The great work of a lifetime.
Maison de santé. (F.) A private asylum.
Maison de ville. (F.) A town-hall.
Maître d' hôtel. (F.) A house steward.
Maladie du pays. (F.) Home sickness.
Mala fide. In bad faith.
Mal à propos. (F.) Ill-timed.
Mal de dents. (F.) Tooth-ache.
Mal de mer. (F.) Sea-sickness.
Mal de tête. (F.) Head-ache.
Malgré nous. (F.) In spite of us.
Mandāmus. (We order). A law-writ.
Manibus pedibusque. (With hands and feet). With might and main.
Mardi gras. (F). Shrove Tuesday.
Mare clausum. A closed sea.
Mariage de convenance. (F.) A match due to considerations of profit.
Mauvaise honte. (F.) Bashfulness.
Mauvais goût. (F.) Bad taste.
Mauvais sujet. (F.) A good-for-nothing fellow; a ne'er-do-well.
Mea culpa. My own fault, or by my own fault.
Medio tutissimus ībis. The middle way is safest.
Me jūdice. In my opinion.
Memento mori. Remember death.
Memoriter. By rote; by heart.
Mensa et toro. From bed and board.
Mens conscia (sibi) recti. A mind conscious of integrity.
Mens sana in corpore sano. A sound mind in a sound body.
Meo perīculo. At my own risk.
Meum et tuum. Mine and thine.
Mirābile dictu. Wondrous to tell!
Mirābile visu. Wonderful to see!
Mise en scène. (F.) The putting on the stage.
Modus operandi. The method of operation.
Mollia tempora fandi. The favourable moment for speaking.
Mon ami. (F.) My friend.
Mon cher. (F.) My dear fellow.
More majōrum. According to ancestral custom.
More suo. In his own fashion.
Mors jānua vitae. Death is the gate of life.
Mors omnibus commūnis. Death is common to all.
Mots d' usage. (F.) Commonly used phrases; catchwords.
Motu proprio. On one's own initiative; of one's own accord.
Multum in parvo. Much in little.
Mutātis mutandis. The necessary changes being made.
Mutāto nōmine, de te jābula narrātur. Change the name, and the story applies to yourself; "Thou art the man."
Natūram expellas fūrca, tamen usque recurret. (You may drive out nature with a pitchfork, but she will continue to return). What is innate is ineradicable.
Ne cedas malis; ne cede malis. Do not give way to misfortunes.
Necessitas non habet legem. Necessity knows no law.
Nec mora nec requies. Neither delay nor rest.
Nec prece nec pretio. Neither by entreaties nor by bribes.
Nec scire fas est omnia. It is not God's will for us to know everything.
Nec temere, nec timide. Neither rashly nor timidly.
Ne fronti crede. Do not trust appearances.
Nēmine contradicente (nem. con.) Without opposition; unanimously.
Nemo me impūne lacessit. No one annoys me with impunity.
Nemo mortālium omnibus horis sapit. To no mortal is it given to be always wise.
Nēmo repente fuit turpissimus. No one ever became utterly bad all at once.
Ne plus ultra. Unsurpassable.
Ne quid nimis. Avoid too much of anything.
Ne sutor ultra crepidam. Let the shoemaker stick to his last.
Nihil ad rem. Nothing to the point.
Nihil quod tetigit non ornāvit. He dealt with no matter without adorning it.
Nil admirāri. To wonder at nothing.
Nil desperandum. Never despair.
Nil nisi cruce. Nothing without suffering.
Ni l' un ni l' autre. (F.) Neither the one nor the other.
N' importe. (F.) It does not matter.
Nisi prius. Unless before.
Noblesse oblige. (F.) Rank has its responsibilities.
Nolens volens. Willing or not; willy-nilly.
Noli me tangere. Touch me not.
Nolle prōsequi. To be unwilling to carry the matter further.
Nolo episcopāri. I do not want to be a bishop.
Nom de guerre. (F.) An assumed name.
Nom de plume. (F.) An assumed name (of an author).
Non compos mentis. Of unsound mind.
Non cuīvis hominicontingit adīre Corinthum. It falls not to every man's lot to visit Corinth (the home of luxury).
Non est vīvere, sed valēre, vita. Not existence, but health, makes life.
Non ignāra mali, miseris succurrere disco. Myself acquainted with misfortune, I learn how to help the unfortunate.
Non mi ricordo. (It.) I do not remember.
Non multa, sed multum. Not many things, but much.
Non obstante. Notwithstanding.
Non omne licitum honestum. Not all that is lawful is right.
Non omnia possumus omnes. We cannot all do all things.
Non omnis moriar. I shall not wholly die.
Non sequitur, non seq. It does not follow.
Non sum qualis eram. I am not the man I was.
Nosce te ipsum. Know thyself.
Noscitur ex sociis. A man is known by the company he keeps.
Nota bene, N.B. Mark well; note.
Notre Dame. (F.) Our Lady; the Blessed Virgin Mary.

Νοῦς [*nous.*] (Gr.) Mother-wit; sense; intelligence.
Nous avons changé tout cela. (F.) We have changed all that.
Nous verrons. (F.) We shall see.
Novus homo. A man of obscure parentage.
Nulla dies sine lineâ. (No day without a line). No day without something done.
Nulla nuova, buona nuova. (It.) No news, good news.
Nulli secundus. Second to none.
Nullius addictus jurāre in verba magistri. Not wont to swear to the utterances of any teacher; not a party man; a free lance; unprejudiced.
Nunc aut nunquam. Now or never.
Nunquam minus solus quam cum solus. Never less alone than when alone.
Nunquam non parātus. Never unprepared.
Obiit, ob. He (or she) died.
Obiter dictum. A thing said by the way; an incidental utterance.
Obscūrum per obscūrius. Explaining what is obscure by what is still more obscure.
Obsta principiis. Resist the first beginnings.
Oderint modo metuant. Provided they fear us, never mind if they hate us.
Odi profānum vulgus, et arceo. I hate the vulgar mob, and keep them at arm's length.
Odium theologicum. Hatred among theologians.
Œil de bœuf. (F.) Bull's eye; a bull's eye window.
O fortunātos nimium, sua si bona norint. Oh, all too happy they, did they but recognise their good fortune.
Οἱ πολλοί [*hoi polloi.*] (Gr.) The multitude; the common folk.
Omne ignōtum pro magnifico. The unknown gets magnified.
Omnia ad Dei gloriam. All things for the glory of God.
Omnia bona bonis. All things to the good are good.
Omnia mutantur, nos et mutāmur in illis. All things change, and with them we too change.
Omnia vincit amor. Love overcomes all things; "Love laughs at locksmiths."
Omnis amans amens. When a man is in love, he is out of his mind.
On dit. (F.) Folk say.
Onus probandi. The burden of proof.
Operae pretium est. It is worth while.
Opere citato, op. cit. In the work quoted.
Ora et labōra. Work and pray.
Ora pro nobis. Pray for us.
Ore rotundo. With full voice.
O si sic omnes. Oh, if all were thus!
O si sic omnia. Oh, if all things were so! Oh, if he had ever acted thus!
O tempora, o mōres! Ah, for the times and the manners!
Otiōsa sedūlitas. Laborious trifling.
Otium cum dignitāte. Ease with dignity.
Oui-dire. (F.) Hearsay.
Ouvrage de longue haleine. (F.) A long-winded business.
Pace tua. By your leave.
Palmam qui meruit ferat. Let him who has earned the prize carry it off.
Par ci par là. (F.) Here and there.
Par excellence. (F.) Pre-eminently.
Pari passu. With equal step, equally.
Par nōbile frātrum. (A noble pair of brothers). A well-matched pair.
Parole d' honneur. (F.) Word of honour.
Particeps crīminis. An accomplice.
Parturiunt montes, nascētur ridiculus mus. The mountains are in labour, and will bring forth a mere mouse.
Parva compōnere magnis. To compare small things with great.
Parvum parva decent. Mean things befit the mean man.
Passim. Here and there, throughout.
Passe-partout. (F.) A master-key.
Pâté de foie gras. (F.) Pie of goose-livers.
Pater familias. The father of a family.
Pater patriae. The father of his country.
Παθήματα μαθήματα, [*pathēmata mathēmata.*] (Gr.) Suffering brings wisdom.
Patres conscripti. Roman senators.
Pauca sed bona. Few in number, but good in quality.
Pax Romana. The Roman Empire.
Pax vobiscum. Peace be with you.
Peccāvi. I have sinned.
Pede poena claudo. Retribution follows, though with limping gait.
Peine forte et dure. (F.) Violent pain.
Pensée. (F.) A thought.
Per angusta ad augusta. Through trials to triumph.
Per annum, per ann. By the year.
Per ardua libertas. Freedom through difficulties.
Per aspera ad astra. Through sufferings to renown.
Per centum, per cent. By the hundred; each hundred.
Per contra. On the contrary.
Per diem. By the day.
Per fas et nefas. Through right and wrong.
Per mare, per terras. By sea and land.
Per saltum. By a leap.
Per se. In itself.
Perfervidum ingenium Scotorum. The intense and concentrated ability of Scotsmen.
Persōna grata. Personally acceptable, a favourite.
Petītio principii. A begging of the question.
Petit-maître. (F.) A fop.
Peu de gens savent être vieux. (F.) Few people know how to be old.
Pied à terre. (F.) A resting-place.
Pinxit, pinx, pxt. He painted it.
Pis aller. (F.) A last resource.
Placet (opposed to *non placet*). Agreed; aye!
Pleno jure. With full authority.
Poco à poco. (It.) Little by little.
Poēta nascitur, non fit. The poet's genius is inborn, not acquired.
Point d'appui. (F.) A rallying-point; point of support.
Pons asinōrum. The asses' bridge. (Euclid, Book I, Proposition 5).
Populus vult dēcipi, et decipiātur. Let people be deceived, if they want to be.
Posse comitātus. The civil force.
Possunt quia posse videntur. They are capable because they seem to be.
Post cineres glōria sera venit. It is a tardy fame that comes after death.
Post equitem sedet ātra cūra. (Behind the rider sits black care). People who drive their carriages are often unhappy.
Post hoc ergo propter hoc. B follows A, therefore B is caused by A. (A fallacy in logic).
Poste-restante. (F.) To wait till called for.
Post mortem. After death.
Pour encourager les autres. (F.) To encourage the rest.
Pour faire rire. (F.) To cause laughter.
Pour passer le temps. (F.) To while away the time.
Pour prendre congé, P.P.C. (F.) To take leave.
Praemonitus, praemūnītus. Forewarned, forearmed.
Prendre la lune avec les dents. (F.) (To seize the moon with one's teeth). To attempt impossibilities.
Presto maturo, presto marcio. (It.) Soon ripe, soon rotten.
Preux chevalier. (F.) A brave knight.
Prima facie. On first view.
Primum mōbile. The original impulse; the source of motion.
Primus inter pares. First among his peers.
Principiis obsta. (*See* obsta principiis).
Pro aris et focis. For our altars and our hearths.
Probitas laudātur et alget. People praise honesty and leave it to starve.
Pro bono publico. For the public good.
Procès-verbal. (F.) A written statement.
Pro Deo et Ecclēsia. For God and the Church.
Pro forma. For form's sake.
Pro hac vice. For this turn.
Proh pudor! For shame!
Pro patria. For our country.
Pro rata. In proportion.
Pro rege, lege, grege. For king, law, and people.
Pro salūte animae. For the health of the soul.
Pro tanto. As far as it goes.
Pro tempore, pro tem. For the time being, temporary.
Pugnis et calcibus. (With fists and heels). With might and main.
Pūnica fides. (*See* fides Pūnica).
Quae fuerant vitia, mores sunt. What was once deemed wicked is now fashionable.
Quae nocent, docent. Pain brings wisdom.
Qualis ab incepto. As at the beginning.
Quam diu se bene gesserit. As long as he conducts himself properly; during good behaviour.
Quanti est sapere. How precious is wisdom.
Quantité négligeable. Something that need not be taken into account.
Quantum libet. As much as you please.
Quantum mutātus ab illo. How changed from what he once was!
Quantum sufficit, quant. suff. As much as is enough.
Quelque chose. (F.) Something; a trifle.
Quid pro quo. (Something for something). An equivalent in return; tit for tat.
Quid rides? Why do you laugh?
Quien sabe. (Sp.) Who knows?
Qui m' aime aime mon chien. (F.) Love me, love my dog.
Qui n'a santé, n'a rien. (F.) If one has not health, one has nothing.
Quis custōdiet ipsos custōdes? Who will guard the guards themselves?
Qui va là? (F.) Who goes there?
Qui vive? (F.) Who goes there?
Quoad hoc. To this extent.
Quo animo? With what intent?
Quocunque trahunt fata sequāmur or *Quo fata vocant.* Wherever destiny guides us, let us go.
Quod di omen avertant; quod avertat Deus! And may the gods avert it! God forbid!
Quod erat demonstrandum, Q.E.D. Which had to be proved.
Quod erat faciendum, Q.E.F. Which had to be done.
Quod non opus est, asse carum est. What is not needed is dear at a halfpenny.
Quod petis hic est. What you are looking for is close at hand.
Quod semper, quod ubique, quod ab omnibus. What has been received in every age, in every place, and by every one.
Quod vide, q.v. Which see.
Quo fata vocant. Whither the fates call.
Quōrum pars magna fui. Of whom I was not least in importance.
Quos Deus vult perdere, prius dementat. Whom God wills to destroy, he first deprives of their senses.
Quot homines, tot sententiae. As many opinions as people; many men, many minds.
Raison d' être. (F.) Reason for existence.
Rara avis in terris, nigrōque simillima cygno. A rare bird on earth, and very like a black swan; a prodigy.
Rari nantes in gurgite vasto. Swimming, one here, another there, in the vast deep.
Reculer pour mieux sauter. (F.) To step back in order to take a better leap.
Redeunt saturnia regna. The golden age returns.

Redolet lucerna. It smells of the lamp (of any laboured composition).
Reductio ad absurdum. Reducing to an absurdity.
Re infecta. Without accomplishing the business, unsuccessful.
Relāta refero. I report what was reported to me.
Rem acu tetigisti. (You have touched the thing with the needle-point). You have hit the nail on the head.
Remis vēlisque. (With oars and sails). By all means in one's power.
Requiescat in pace, R.I.P. May he (she) rest in peace!
Res angusta domi. Straitened means at home.
Res gestæ. Exploits.
Res judicata. A matter already settled.
Respice finem. Look to the end.
Resurgam. I shall rise again.
Revenons à nos moutons. (F.) Let us come back to the point.
Re vera. In truth.
Ridēre in stomacho. To laugh in one's sleeve.
Ride si sapis. Laugh if you are wise.
Rien n' est beau que le vrai. (F.) Nothing is fine but the truth.
Rira bien, qui rira le dernier. (F.) He laughs longest who laughs last.
Risu inepto res ineptior nulla. There is nothing more foolish than the laughter of fools.
Robe de chambre. (F.) A dressing-gown.
Ruat cœlum. See *Fiat justitia.*
Ruse de guerre. (F.) A stratagem in war.
Rus in urbe. Country in the midst of town.
Rusticus expectat dum dēfluat amnis. The countryman is waiting for the river to flow by.
Sal Atticum. (Attic salt). Wit.
Salle à manger. (F.) (A room for eating in). A dining-room.
Salus populi suprēma est lex. The welfare of the people is the supreme law.
Salvo jure. Saving the right.
Salvo pudōre. Without offence to modesty.
Sanctum sanctorum. The Holy of Holies.
Sang froid. (F.) Apathy; coolness, calm courage.
Sans cérémonie; sans façon. (F.) Without standing on ceremony.
Sans peur et sans reproche. (F.) Without fear and without reproach.
Sans souci. (F.) (Without care). Free and easy.
Sapere aude. Dare to be wise.
Sartor resartus. The tailor patched; "the tailor re-tailed."
Satis eloquentiae, sapientiae parum. Plenty of words but little wisdom.
Satis superque. Enough and over.
Sauve qui peut. (F.) Each man save himself if he can.
Savoir faire. (F.) Tact.
Savoir vivre. (F.) Good manners.
Scīlicet, scil., sc. To wit; namely.
Scrībimus indocti doctique poēmata passim. Learned or no, we all alike scribble our verses.
Sculpsit, sculp., sc. He engraved it.
Secundum artem. According to rule.
Secundum natūram. According to nature.
Selon les règles. (F.) According to rule.
Semper avārus eget. The covetous man is ever in want.
Semper eadem; Semper īdem. Always the same.
Semper fidēlis. Loyal always.
Semper parātus. Ever ready.
Se non è vero, è ben trovato. (It.) Perhaps not true, but well imagined.
Sequentia; Sequentes: sq., sqq. What follows.
Seriātim. In a series; one by one.
Serus in cælum redeas. (Late may you return to heaven). Long may you live.
Servāre modum. To keep within bounds.
Servus servōrum Dei. The servant of God's servants. (A title of the Pope).
Sic itur ad astra. This is the path to immortality.
Sic passim. So everywhere.
Sic transit glōria mundi. Thus the world's glory passes away.
Sicut ante. As before.
Sic volo, sic jubeo. (So I wish, so I order). My whim is equivalent to a command.
Sic vos non vobis. Thus you strive, but not for yourselves.
Silent leges inter arma. Law is in abeyance in time of war.
Similia similibus curantur. Like cures like. (Homœopathy.)
Si monumentum requīris, circumspice. If you seek his monument, look around you.
Simplex munditiis. Simple and elegant; neat, not gaudy.
Sine cura. Without care.
Sine die. Without a day being named.
Sine dubio. Without doubt.
Sine qua non. An indispensable condition.
Siste viātor. Stay your steps, wayfarer!
Sit tibi terra levis. May the sod lie light on thy head!
Si vis me flere. If you wish me to weep.
Si vis pacem, para bellum. If you wish for peace, get ready for war.
Soi-disant. (F.) Self-styled.
Sola nobilitas virtus. Virtue is the only patent of nobility.
Solitūdinem faciunt, pacem appellant. They make it a desert and call it peace.
Solvuntur tabulae. The defendant is acquitted.
Sotto voce. (It.) In an undertone.
Souffler le chaud et le froid. (F.) To blow hot and cold.
Spolia opīma. The richest of the spoils.
Sponte sua. Of one's own accord.
Spretae injuria formae. The affront offered to her slighted beauty.
Stans pede in uno. (While standing on one foot). Easily done.
Stat magni nōminis umbra. He stands, the mere shadow of a mighty name.
Status quo; status in quo; statu quo. The present condition.
Status quo ante. The previous condition.
Stemmata quid faciunt? What is a long pedigree worth?
Stet. Let it stand.
Sturm und Drang. (Ger.) Storm and stress.
Sua cuīque voluptas. Every man has his own idea of pleasure.
Suāviter in modo, fortiter in re. (Gently in manner, firmly in act). "The iron hand in the velvet glove."
Sub hoc signo vinces. Under this standard will you conquer.
Sub jūdice. (Under the judge.) Under consideration.
Sublāta causa, tollitur effectus. Remove the cause and the effect ceases.
Sub poena. Under a penalty.
Sub rosa. Under the rose, privately.
Sub silentio. In silence.
Sub voce, s.v. Under such and such a word.
Suggestio falsi. An insinuation of what is not true.
Sui generis. (Of its own kind). Unique.
Summum bonum. The supreme good.
Summum jus summa injūria. Rigorous justice often proves to be the height of injustice.
Sum quod eris, fui quod es. I am now what you will be one day, what you are now I once was.
Sunt lachrymae rerum. Tears are not wanting for such fortunes.
Sunt superis sua jura. The gods are a law to themselves.
Suo marte. By his own unaided skill.
Suppressio veri. A suppression of what is true.
Surgit amāri aliquid. There comes a bitter flavour.
Sursum corda. Lift up your hearts.
Suum cuīque. Every one to have his own.
Suus cuīque mos. Every one has his own characteristic ways.
Tableau vivant. (F.) A scene in which living persons represent statuary or pictures.
Table d' hôte. (F.) A common table for guests.
Tabula rasa. A blank writing-tablet.
Tâche sans tache. (F.) A work without stain.
Talis pater, qualis filius. Like father, like son.
Tam Marte quam Minerva. As much by courage as by wisdom.
Tantaene animis cœlestibus irae? Do the gods indulge in such resentment.?
Tant mieux. (F.) So much the better.
Tant pis. (F.) So much the worse.
Tarde venientibus ossa. Late-comers only get bones.
Tel maître, tel valet. (F.) Like master, like man.
Tempora mutantur, nos et mutāmur in illis. Times change, and we change with them.
Tempori parendum. One must move with the times.
Tempus edax rerum. Time, which devours all.
Tempus fugit. Time flies.
Tempus omnia revēlat. Time discovers all things.
Teres atque rotundus. (Smooth and round). A man polished and complete.
Terminus ad quem. The goal, the end.
Terminus a quo. The starting-point.
Terrae filius. (*See* filius terrae).
Terra incognita. An unknown land.
Tertium quid. A third alternative.
Tête-à-tête. (F.) (Head to head). A private conversation.
Tiens ta foi. (F.) Keep faith.
Tiers état. (F.) (The third estate). The commons.
Timeo Danaos et dona ferentes. I mistrust the Greeks, even when they proffer presents.
Tirer le diable par la queue. (F.) To tweak the devil by the tail). Opposed in meaning "to take the bull by the horns."
Toga virīlis. The garb of manhood.
Τὸ καλόν, [*to kalon.*] (Gr.) The beautiful.
Το πρέπον, [*to prepon.*] (Gr.) The seemly.
Tot homines, tot sententiae. Many men, many minds.
Totidem verbis. In so many words.
Toties quoties. As often as.
Toto cœlo. (By the whole heaven). Wide as the poles asunder.
Toujours perdrix. (F.) (Always partridge!) The same thing again and again.
Toujours prêt. (F.) Always ready.
Tour de force. (F.) A feat of strength.
Tourner casaque. (F.) (To turn one's coat). To change one's party.
Tout-à-fait. (F.) Entirely.
Tout bien ou rien. (F.) All or nothing.
Tout ensemble. (F.) The whole, the general effect.
Tout le monde est sage après le coup. (F.) Every one is wise after the event.
Traduttori, traditori. (It.) Translators are traitors.
Trahit sua quemque voluptas. Every one follows his own fancy.
Tria juncta in ūno. Three joined in one.
Troja fuit. Once Troy existed.
Tua res agitur. It is a matter that concerns you.
Tulit alter honōres. Your rival has carried off the honours.
Tu ne cede malis. Yield not to misfortunes.

Tu quoque. You also; "you're another."
Ubi bene ibi patria. One's fatherland is where one is successful.
Ubi jus incertum, ibi jus nullum. Where the law is uncertain, there is no law.
Ubi mel, ibi apes. Where is honey, there are bees.
Ubi supra. Where above mentioned.
Ultima ratio regum. The last argument of kings (i.e., an appeal to arms).
Ultimus Romanorum. The last of the Romans.
Ultra vires. Beyond one's legal or constitutional powers.
Un fait accompli. (F.) An accomplished fact.
Unguibus et rostro. With talons and beak.
Urbi et orbi. For the city (i.e., Rome), and the world.
Usque ad aras. To the very altars.
Usque ad nauseam. To utter disgust.
Usus loquendi. The usage in speaking.
Utile dulci. The expedient with the agreeable.
Ut infra. As below mentioned.
Uti possidētis. As you now possess.
Ut supra. As above mentioned.
Vacuus cantat coram latrōne viātor. The traveller whose pockets are empty sings when the highwayman comes.
Vade mecum. (Go with me). A constant companion.
Vade retro. Avaunt.
Vae victis! Woe to the conquered!
Valeat quantum valēre potest. Let it pass for what it is worth.
Valet de chambre. (F.) A personal attendant.
Valēte ac plaudite. Farewell, and give us your applause.
Vānitas vanitātum, omnia vānitas. Vanity of vanities, all is vanity.
Varia lectio; Variae lectiōnes; v.l.; vv. ll. Variant reading or readings.
Varium et mutābile semper fēmina. Woman is ever fickle and changeable.
Velis et rēmis. With sails and oars.
Veluti in speculum. As in a mirror.
Veni, vidi, vici. I came, I saw, I conquered.
Ventis secundis; Vento secundo. With favourable winds.
Ventre affamé n' a point d' oreilles. (F.) An empty stomach has no ears.
Vera incessu patuit dea. She stood revealed a goddess by her gait.
Verbatim et literātim. Word for word, and letter for letter.
Verba volant, scripta manent. What is spoken flies abroad, what is written remains behind.
Verbum sat sapienti; verbum sap. A word is enough for a wise man.
Vēritas parit odium. Telling the truth begets ill-will.
Veritas praevalebit. Truth shall prevail.
Vestīgia nulla retrorsum. There are no footprints of a return journey.
Vexāta quaestio. A disputed point.
Via media. The middle course.
Via trita, via tuta. The beaten track is safe.
Vice. In place of.
Vice versa. Interchanged.
Victis honos. Honour to a fallen foe.
Vide ut supra. See above.
Video meliōra probōque, deteriōra sequor. While I see what is better and approve it, I follow what is worse.
Vi et armis. By main force.
Vigilāte et orāte. Watch and pray.
Vincit amor patriae. Love of fatherland will prevail.
Vincit omnia vēritas. Truth overcomes everything.
Vincit qui patitur. He who suffers conquers.
Vires acquīrit eundo. As she goes she gathers strength (of Rumour).
Virtus in arduis. Courage in difficulties.
Virtus laudatur et alget. People praise virtue and leave it to starve.
Virtus semper viridis. Virtue never fades.
Vis à-vis. (F.) Opposite; face to face.
Vis consili expers mole ruit sua. Strength, not tempered with judgment, falls to ruin by its own weight.
Vis inertiae. The force of passive resistance.
Vita brevis, ars longa. (*See* ars longa, vita brevis).
Vivat rex. Long live the king.
Viva voce. With the living voice.
Vive la bagatelle. (F.) Good luck to trifling!
Vive la république. (F.) Success to the republic.
Vive le roi. (F.) Long live the king!
Vixēre fortes ante Agamemnona. There were brave men alive before Agamemnon.
Voilà tout. That's all.
Voilà une autre chose. (F.) That's another matter.
Volenti non fit injūria. There is no injustice if the other party consents.
Volo, non valeo. I am willing but not able.
Vox et praeterea nihil. A voice and nothing more; a mere sound.
Vox faucibus haesit. The word stuck in his throat, died on his lips.
Vox populi, vox Dei. The voice of the people is the voice of God.
Vultus est index animi. The face is the index of the mind.
Weltpolitik. (Ger.) (World policy). The political considerations that determine the policy of a nation in relation to all other nations.
Zeitgeist. (Ger.) The spirit of the age.
Zonam perdidit. (He has lost his purse). He is in distressed circumstances.

CHARACTERS IN FICTION, POETRY, AND DRAMA (chiefly English).

Abdiel, a seraph, "Among the faithless faithful only he"; *Paradise Lost, Book V.*, Milton.

Aben-Ezra, Raphael, friend of the Prefect of Alexandria; *Hypatia*, C. Kingsley.

Abou Hassan, a youth of Bagdad who is carried, while asleep, to the Caliph's bed, and is surprised next morning, to find himself saluted as Caliph; *Arabian Nights.*

Absalom, stands for the Duke of Monmouth in Dryden's famous satire; *Absalom and Achitophel*, Dryden.

Absolute Captain, son of Sir Anthony, in love with Lydia Languish, whom he courts under the name of Captain Beverley; *The Rivals*, Sheridan.

Achitophel, who "for a calm unfit would steer too near the sands to boast his wit," represents Shaftesbury; *Absalom and Achitophel*, Dryden.

Acrasia, the fair enchantress representing Intemperance, whose abode is the "Bower of Bliss" where she transforms her victims into beasts; *Faerie Queene*, Spenser.

Acres, Bob, a blustering coward with fantastic oaths; *The Rivals*, Sheridan.

Adam, a type of the good old servant of ancient times "when service sweat for duty not for meed"; *As You Like It*, Shakespeare.

Adams, Parson, an ideal country clergyman, devoid, however, of practical wisdom; *Joseph Andrews*, Fielding.

Adhem, Abou Ben, showed his love for God by loving his fellow-man; *Abou Ben Adhem*, Leigh Hunt.

Adonais, stands for Keats in the immortal elegy of his poet friend; *Adonais*, Shelley.

Aguecheek, Sir Andrew, the parrot-like repeater of other people's stale jests and the butt of the witty and unscrupulous Sir Toby; *Twelfth Night*, Shakespeare.

Ahmed, Prince, had a tent that could cover a whole army, and squeeze into a pocket; *Arabian Nights.*

Aimwell, Viscount, a beau who schemes successfully for the hand of Dorinda, daughter of Lady Bountiful; *The Beaux' Stratagem*, Farquhar.

Aladdin rubs his magic lamp and all his desires are gratified; *Arabian Nights.*

Alasnam, a prince who had eight valuable statues, but sought one still more precious, and this he found in the person of a pure and beautiful woman; *Arabian Nights.*

Alceste, a straightforward, honest man, generous at heart but surly in manner; *Le Misanthrope*, Molière.

Aldiborontiphoscophornio, a character in a burlesque, whose extraordinary name was humorously given by the Author of Waverley to his printer, James Ballantyne; *Chrononhotonthologos*, H. Carey.

Ali Mahbub, an Indian Secret Service officer, employed by government to collect frontier news: *Kim*, Kipling.

Allan M'Aulay, a cousin of Lord Menteith, supposed to have the gift of "second sight"; *Legend of Montrose.* Scott.

Allworthy, Mr., "did good by stealth, and blushed to find it fame"; *Tom Jones*, Fielding.

Alnaschar, spends all his money in buying a basket of glassware, but while dreaming of the fortune he is going to make with his wares, kicks over his stock-in-trade and ruins his prospects; *Arabian Nights.*

Altamont, Col., an escaped convict, first husband of Lady Clavering, and the sword of Damocles suspended over the head of her second; *Pendennis*, Thackeray.

Almeria, heroine of the tragedy beginning "Music hath charms"; *The Mourning Bride*, Congreve.

Amadis de Gaul, the most prominent figure in many Spanish and Portuguese romances.

Amaryllis, the name often given to a country maiden in ancient pastoral poetry; hence commonly applied to a rustic beauty.

Amelia, "the most charming character," says Thackeray, "in English fiction" *Amelia*, Fielding.

Amoret and Belphœbe, the twin sisters found in a wood by Venus and Diana; the former, brought up by Venus, stands as a type of womanly charm, the latter, trained by Diana, as a type of womanly purity; *Faerie Queene*, Spenser.

Amory, Blanche, an insipid young lady to whom Pendennis was engaged for a time; *Pendennis*, Thackeray.

Ancient Mariner, the hero of a story which turns on his shooting an albatross, a bird of good omen; *The Ancient Mariner*, Coleridge.

Andrea del Sarto, "the faultless painter"; *Men and Women*, Browning.

Anna Karenina, the heroine of a powerful Russian story; *Anna Karenina*, Tolstoi.

Apollyon, an angel of "the bottomless pit," with whom Christian has a terrible encounter; *Pilgrim's Progress*, Bunyan.

Aram, Eugene, scholar, schoolmaster, and murderer; *Eugene Aram*, E. B. Lytton and Tom Hood.

Archimago, the "arch-enchanter," who deceives unwary knights, represents Hypocrisy; *Faerie Queene*, Spenser.

Arden, Enoch, returning, after a long absence, to find his wife happily married, departs without a word; *Enoch Arden*, Tennyson.

Aresby, Captain, feather-brained and affected in parading French phrases; *Cecilia*, Madame D'Arblay.

Ariel, the spirit of the air who is forced to serve Prospero for a season; *The Tempest*, Shakespeare.

Armida, an enchantress who seduced Rinaldo and other Crusaders from their great enterprise; *Jerusalem Delivered*. Tasso.

Artegal, Sir, the hero of the Fifth Book, representing Justice in the spiritual allegory; *Faerie Queene*, Spenser.

Artful Dodger, a young pickpocket; *Oliver Twist*, Dickens.

Ashford, Isaac, a noble peasant "contemning all things mean"; *Parish Register*, Crabbe.

Ashton, Lucy, see *Lammermoor, Bride of.*

Asmodeus, a demon with more drollery than malice, "un diable bon-homme"; *Devil on Two Sticks*, Lesage.

Aspasia, the gifted friend of Pericles, the most cultured woman of her time; *Pericles and Aspasia*, Landor.

Astarte, heroine of the poem; *Manfred*, Byron.

Astrophel, the faithful shepherd, stands for Sir Philip Sidney, while *Colin Clout* stands for the poet himself; *Shepherd's Calendar*, Spenser.

Athalie, or Athaliah, the central figure of Racine's chef d'œuvre; *Athalie*, Racine.

Athelstane, "The Unready"; *Ivanhoe*, Scott.

Autolycus, a thievish pedlar, "a snapper-up of unconsidered trifles"; *Winter's Tale*, Shakespeare.

Bab, copies the grand airs of her mistress; *High Life Below Stairs*, Townley.

Baba, Ali, discovered the pass-word, "Sesame"; *Arabian Nights.*

Backbite, a scurrilous poet and scandal-monger; *School for Scandal*, Sheridan.

Bagstock, Major, varies his Christian name, "Old Joe," "Josh," "J. B." etc., an admirer of Miss Tox; *Dombey and Son*, Dickens.

Bailey, Harry, mine host of the *Tabard*, who proposes to the Canterbury pilgrims that they should tell tales on the way; *Canterbury Tales*, Chaucer.

Balderstone, Caleb, the devoted and resourceful servant of Ravenswood, who ingeniously strives to hide his master's poverty; *Bride of Lammermoor*, Scott.

Balwhidder, Rev. Micah, an excellently drawn character; *Annals of the Parish*, **Galt.**

Baly, a "godlike king" outwitted by a dwarf; *Curse of Kehama*, Southey.

Banquo, a general of Duncan's army whose ghost appears to Macbeth; *Macbeth*, Shakespeare.

Bardell, Mrs., plaintiff against Pickwick for breach of promise of marriage; *Pickwick Papers*, Dickens.

Bardolph, "white-livered and red-faced. faces it out but fights not"; *Henry V.*, Shakespeare.

Barkis, the carrier who proposed marriage by sending the message "Barkis is willin'"; *David Copperfield*, Dickens.

Barlasch, a taciturn old soldier of Napoleon's Guard, who becomes the guardian of the family on whom he is quartered; *Barlasch of the Guard*, Merriman.

Barlass, Kate, the heroic Katharine Douglas, who thrust her arm through the staple of the door to save the life of James I. of Scotland; *The King's Tragedy*, Rossetti.

Barnwell, George, gradually sinks in crime induced by Sarah Millwood (both were hanged in 1732); *George Barnwell*, Lillo.

Barraclough, Rev Amos, Primitive Methodist in love with Jessie Roantree; *Life's Handicap*, Kipling.

Barton, Mary, the heroine of a tale of Lancashire factory workers; *Mary Barton*, Mrs. Gaskell.

Bates, Charley, Fagin's precocious pupil; *Oliver Twist*, Dickens.

Battle, Mrs., her opinions on whist are proverbial, "a clear fire, a clean hearth, and the rigour of the game"; *Essays of Elia*, C. Lamb.

Bayham, Fred, an impecunious, thriftless, good-hearted friend of Pendennis; *The Newcomes*, Thackeray.

Bean, Alice, daughter of a Highland robber chief, who nurses Waverley; *Waverley*, Scott.

Beatrice, (1) Dante's guide through the *Paradise*, and his ideal of womanly perfection; *The Divine Comedy*, Dante, (2) The brilliant niece of the Duke with whom Benedick falls in love; *Much Ado about Nothing*, Shakespeare.

Beau Tibbs, foppish, showy, and "hard-up"; *Citizen of the World*, Goldsmith.

Beck, Gilead P., an American who "strikes ile," and reveres the learned; *The Golden Butterfly*, Besant and Rice.

Beck, Madame, head of a girls' boarding-school, noiseless and watchful, "shod with the shoes of silence"; *Villette*, C. Brontë.

Bede, Adam, a carpenter, but one of Nature's noblemen; *Adam Bede*, G. Eliot.

Bedivere, Sir, "first made and latest left of all the knights" of the Round Table; *Passing of Arthur*, Tennyson.

Belch, Sir Toby, the witty and unscrupulous uncle of Olivia, who turns her house into an ale-house; *Twelfth Night*, Shakespeare.

Belinda, the heroine of a mock-heroic poem arising out of the incident of a gentleman cutting off a lock of the lady's hair; *Rape of the Lock*, Pope.

Bell, Laura, the sweet, lovable, deeply religious heroine of Pendennis, whom she marries; *Pendennis*, Thackeray.

Bellaston, Lady, the shameless "friend" of Tom Jones; *Tom Jones*, Fielding.

Belvidera, heroine of the tragedy, becomes insane from grief; *Venice Preserved*, Otway.

Benedick, professes to despise women till enthralled by Beatrice; *Much Ado about Nothing*, Shakespeare.

Bennett, Elizabeth, captivating in mind and person; wise and penetrating in her judgment of character; *Pride and Prejudice*, **Jane Austen.**

Beowulf, the Norse viking who is the hero of our first English poem.

Bessie of Bethnal Green, the blind beggar's daughter; *Reliques*, Percy.

Bickerstaff, Isaac, the supposed author of a prophetic almanack written by Dean Swift.

Binnie, James, a shrewd, kindly Scot, an Indian Civil servant, and Col. Newcome's friend; *The Newcomes*, Thackeray.

Blatant Beast, supposed to typify slander or the unthinking outcry of a mob; *Faerie Queene*, Spenser.

Blimber, Dr., conducted a high-class school at Brighton; *Dombey and Son*, Dickens.

Blondel de Nesle, favourite minstrel of Richard I., who is said to have discovered where the king was imprisoned; *The Talisman*, Scott.

Blood, Col., emissary of the Duke of Buckingham; *Peveril of the Peak*, Scott.

Bloughram, Bishop, a worldly-minded bishop who had scant sympathy for high and unattainable ideals; *Bishop Bloughram's Apology*, Browning.

Bluff, Capt. Noll, champion of fighting for its own sake; *Old Bachelor*, Congreve.

Boanerges, a lion in the pulpit, a sucking-dove at the tea-table; *Salem Chapel*, Mrs. Oliphant.

Bobadil, Capt., a coward and braggart; *Every Man in His Humour*, Ben Jonson.

Bœuf, Front de, a brutal adherent of King John; *Ivanhoe*, Scott.

Boffin, Nicodemus, an untaught dustman, who became unexpectedly wealthy, "a man of high simplicity," shrewd and kindly; *Our Mutual Friend*, Dickens.

Bois Guilbert, Sir Brian de, a Knight Templar, made insulting love to Rebecca, killed in a duel with Ivanhoe; *Ivanhoe*, Scott.

Boldwood, Farmer, shot Troy the unworthy husband of Bathsheba; *Far from the Madding Crowd*, Hardy.

Boniface, landlord of the inn at Lichfield, always says, "as the sayin is"; *The Beaux' Stratagem*, G. Farquhar.

Booby, Lady, a caricature of Pamela; *Joseph Andrews*, Fielding.

Booth, Capt., scoundrel husband of Amelia; *Amelia*, Fielding.

Bors, Sir, a type of humility and unselfish devotion, who saw the vision of the Holy Grail; *Holy Grail*, Tennyson.

Bottom, Nick, a consequential weaver, who leads a band of artisans to a wood to rehearse "Pyramus and Thisbe"; *Midsummer Night's Dream*, Shakespeare.

Bounderby, Josiah, "the bully of humility"; *Hard Times*, Dickens.

Bountiful, Lady, benefactress of the whole parish; *The Beaux' Stratagem*, Farquhar.

Bowling, Tom, a naval character in Roderick Random and Dibdin's song; *Roderick Random*, Smollett.

Boythorn, Lawrence, a kind-hearted gentleman who affects great ferocity in a stentorian voice; *Bleak House*, Dickens.

Bradwardine, Baron, supporter of "Prince Charlie," a true gentleman; *Waverley*, Scott.

Bradwardine, Rose, modest and charming, marries Waverley; *Waverley*, Scott.

Brady, Widow, courted when twenty-three by a suitor of sixty-three, whom she shocks by her bold manners, and then marries his nephew; *The Irish Widow*, Garrick.

Brag, Jack, vulgar, boastful, and amusing; *Jack Brag*, Theodore Hook.

Braggadochio, the type of empty boastfulness, distinguished also by his utter cowardice; *Faerie Queene*, **Spenser.**

Bramble, Matthew, a gouty, splenetic, but generous country gentleman; *Humphrey Clinker*, Smollett.

Bramble, Tabitha, sister of Matthew, vain, prim, mean, and ridiculous; *Humphrey Clinker*, Smollett.

Brass, Sampson and Sally, brother and sister, engaged in the lowest kind of legal practice, with manners and morals to match; *Old Curiosity Shop*, Dickens.

Bratts, Ned, hanged with his wife for crimes confessed; *Dramatic Idylls*, Browning.

Bride of Abydos, her lover being shot by her father, she dies of a broken heart; *Bride of Abydos*, Byron.

Bridgenorth, Major Ralph, a staunch Roundhead, the neighbour and friend of Julian Peveril; *Peveril of the Peak*, Scott.

Briggs, "the stoney," petrified by drops of wisdom; *Dombey and Son*, Dickens.

Britomart, the maiden warrior who represents the virtue of Chastity; *Faerie Queene*, Spenser.

Brocklehurst, Rev. Mr., the "black-marble" clergyman of Lowood school; *Jane Eyre*, C. Brontë.

Browdie, John, a hearty, bluff, and boisterous Yorkshireman; *Nicholas Nickleby*, Dickens.

Brown, Mrs., symbol of English ignorance and mother-wit combined; *Mrs. Brown*, Arthur Sketchley.

Brown, Tom, a not uncommon type of the English Public School boy, fonder of sports than books, able to give and take hard knocks without malice; *Tom Brown's Schooldays*, T. Hughes.

Brownlow, Mr., the benevolent old gentleman who rescues Oliver from the gang of thieves; *Oliver Twist*, Dickens.

Brunhild, a princess of extraordinary strength and prowess, who vowed that none should wed her that could not excel her feats of strength; *Nibelungenlied.*

Brutus, a true, single-minded patriot, who is prevailed upon by the subtle Cassius to head the conspiracy against Cæsar; *Julius Cæsar*, Shakespeare.

Bucket, the detective who discovered the real murderer of Mr. Tulkinghorn; *Bleak House*, Dickens.

Bumble, the embodiment of petty parochialism, with a ludicrous sense of its official importance; *Oliver Twist*, Dickens.

Bunsby, Jack, owner of the "Cautious Clara," a phenomenon of wisdom in the eyes of Captain Cuttle; *Dombey and Son*, Dickens.

Burchell, Mr. (Sir William Thornhill), generous benefactor of the Primrose family; *Vicar of Wakefield*, Goldsmith.

Burton, James, the honest Chelsea blacksmith, the ideal of all blacksmiths; *Hillyars and Burtons*, H. Kingsley.

Burton, Samuel, a type of the convict class, a cunning villain, "more fiendish than the snake, more savage than the shark"; *Hillyars and Burtons*, H. Kingsley.

Buzfuz, Sergeant, the pompous advocate for Mrs. Bardell; *Pickwick Papers*, Dickens.

Caliban, a mis-shapen, brute-like savage, who is quick to assimilate evil, and slow to assimilate good; *The Tempest*, Shakespeare.

Calidore, Sir, represents the virtue of Courtesy, and in the personal allegory stands for that flower of chivalry, Sir Philip Sidney; *Faerie Queene*, Spenser.

Cambel and Triamond jointly represent Friendship; *Faerie Queene*, Spenser.

Canace, the heroine of the unfinished Squire's Tale, mentioned in Milton's *Il Penseroso*: "And who had Canace to wife, that owned the virtuous ring and glass"; *Canterbury Tales*, Chaucer.

Candour, Mrs., Queen of backbiters; *School for Scandal*, Sheridan.

Capechi, Cavalieri, the wicked and ill-fated brother of Lauretta; *John Inglesant*, Shorthouse.

Cantwell, Dr., "the meek and saintly hypocrite," who endeavours to seduce the wife of his best friend; *The Hypocrite*, Bickerstaff.

Caponsacchi, the noble priest who aided Pompilia in her flight; *Ring and the Book*, Browning.

Casabianca, a type of noble, unquestioning obedience in the face of deadly peril; *Casabianca*, F. Hemans.

Carker, James, the evil-minded manager of Dombey's house, whose smile was like "the snarl of a cat"; *Dombey and Son*, Dickens.

Carton, Sydney, goes to the guillotine to save from death the husband of the woman he loves; *Tale of Two Cities*, Dickens.

Casaubon, an elderly pedant, more fossil than man, a genuine Dr. Dryasdust, *Middlemarch*, G. Eliot.

Castlewood, Beatrix, heroine of Esmond; *Esmond*, Thackeray.

Caudle, Mrs., the wife who lectures in her nightcap her long-suffering husband; *Curtain Lectures*, Douglas Jerrold.

Caxon, Jacob, a humorous, gossiping barber; *Antiquary*, Scott.

Caxton, Mr., a scholar and a gentleman amusingly dreamy and absent-minded; *The Caxtons*, Bulwer Lytton.

Caxton, Pisistratus, the chief figure in the charming family picture; *The Caxtons*, Bulwer Lytton.

Cedric the Saxon, a Thane who disinherits his only son for becoming a Crusader under King Richard; *Ivanhoe*, Scott.

Celadon and Amelia, lovers, the latter struck dead by lightning; *The Seasons* (Summer), Thomson.

Celia, Rosalind's devoted cousin; *As You Like It*, Shakespeare.

Cenci, Beatrice, daughter of a Roman nobleman, who was hanged with two others for the murder of her cruel father; *The Cenci*, Shelley.

Chadband, Rev. Mr., a self-indulgent ranter; *Bleak House*, Dickens.

Champneys, Sir Geoffrey, "blue-blood" neighbour of Middlewick, a retired butterman; *Our Boys*, H. J. Byron.

Cheeryble Brothers, Twins, who rose to wealth by sheer industry and integrity, were most kind to the unfortunate, and never failed at dinner to drink "to the memory of our dear mother"; *Nicholas Nickleby*, Dickens.

Chester, Sir John, cold-hearted and swaggering, killed in a duel by Mr. Haredale; *Barnaby Rudge*, Dickens.

Cheyne, Harvey, son and heir of an American millionaire, a spoilt boy and highly objectionable until cured by an involuntary fishing cruise on the Grand Banks; *Captains Courageous*, Kipling.

Chick, Louisa, gives poor Mrs. Dombey the counsel to "make an effort"; *Dombey and Son*, Dickens.

Chickweed, Conkey, the man who robbed himself when on the eve of bankruptcy; *Oliver Twist*, Dickens.

Chinn, John, "the slender little hookey-nosed boy," afterwards the apostle of vaccination in his district; *The Tomb of his Ancestors*, Kipling.

Christabel meets in the forest "a serpent woman" whom she takes home and befriends; *Christabel*, Coleridge.

Christian, the pilgrim who sets out from the City of Destruction to the Celestial City; *Pilgrim's Progress*, Bunyan.

Chriemhild, same as *Gudrun* (which see).

Chucks, the boatswain under Captain Savage; *Peter Simple*, Marryat.

Chuzzlewit, Martin, the hero of novel of same name; *Martin Chuzzlewit*, Dickens.

Chuzzlewit, Jonas, a scoundrel who poisons himself to escape being hanged; *Martin Chuzzlewit*, Dickens.

Cid, The, the King Arthur or the Roland of the Spaniards, their champion against the Moors; *Chronicle of the Cid*, Southey.

Claypole, Noah, one of Dickens's family of hypocrites, a sneak, a spy, an impostor; *Oliver Twist*, Dickens.

Clementina loves Sir Charles Grandison without return of affection; *Sir Charles Grandison*, Richardson.

Clifford, Paul, a highwayman redeemed by love; *Paul Clifford*, Bulwer Lytton.

Clifford, Rosamond, the mistress of Henry II., famed for her beauty, commonly called "Fair Rosamond"; *Talisman*, Scott.

Clinker, Humphrey, the methodistical, excellent servant of the Brambles; *Humphrey Clinker*, Smollett.

Clon, dumb porter at Cocleforêt; *Under the Red Robe*, Stanley Weyman.

Cloudesley, William of, a famous north-country archer and robber; *Reliques*, Percy.

Codlin and Short, travelling showmen of the Punch-and-Judy type, both thoroughly selfish—"Codlin's the friend not Short"; *Old Curiosity Shop*, Dickens.

Cœlia, mother of Faith, Hope, and Charity, who lived in the Hospice, Holiness; *Faerie Queene*, Spenser.

Coffin, Long Tom, a fine specimen of a sailor; *The Pilot*, Fenimore Cooper.

Collet, Mary, one of the saintly and devoted family of Little Gidding; *John Inglesant*, Shorthouse.

Collingwood, popped an acorn into every vacant place in his estate; *Vanity Fair*, Thackeray.

Colombe of Ravenstein, a duchess who refuses a prince and marries an advocate; *Colombe's Birthday*, Browning.

Compeyson, a flash "gentleman" and forger; *Great Expectations*, Dickens.

Comus, son of the enchantress, Circe, who lures unwary travellers to drink of his magic goblet; *Comus*, Milton.

Conachar, one who escaped death in the terrible clan duel, described in *The Fair Maid of Perth*, Scott.

Coningsby, hero of novel, said to stand for Lord Lyttleton; *Coningsby*, Disraeli.

Cophetua, a legendary king of Africa, who married a beggar-maid; *An Old Ballad.*

Conrad, Lord, a corsair, afterwards called Lara; *Corsair and Lara*, Byron.

Conrade, Marquis of Montserrat, conspired against Cœur de Lion, assassinated by the Templar; *Talisman*, Scott.

Consuelo, impersonation of moral purity; *Consuelo*, George Sand.

Copperfield, David, hero of perhaps the best of Dickens's novels; *David Copperfield*, Dickens.

Cordelia, a touching picture of filial affection, most loving when most wronged; *Lear*, Shakespeare.

Corinne, the heroine of a novel which is supposed to be autobiographical in character; *Corinne*, Mme. de Stael.

Corney, Mrs., matron of the workhouse where Oliver Twist was born, marries Bumble and makes him stand in awe of her; *Oliver Twist*, Dickens.

Costigan, Captain, a reprobate, dram-drinking, out-at-elbows old scamp; *Pendennis*, Thackeray.

Costigan, Emily, an actress, with whom as a lad Pendennis falls violently in love; *Pendennis*, Thackeray.

Coverley, Sir Roger de, an ideal squire, who is loyal to his Sovereign and his Church, and beneficent to the poor; *Spectator*, Addison.

Cratchit, Bob, Scrooge's clerk, underpaid and overworked, but always contented and even cheerful; *Christmas Carol*, Dickens.

Crawley, Rawdon, an officer in the Guards, who lived at other people's expense, and became Becky Sharp's husband; *Vanity Fair*, Thackeray.

Crimsworth, Edward, the brutally hard master of his brother William; *The Professor*, C. Brontë.

Crusoe, Robinson, the hero of Defoe's wonderful story, in which fiction appears as fact from the realistic way in which it is told; *Robinson Crusoe*, Defoe.

Cute, Alderman, "resolved to put down everything"; *Chimes*, Dickens.

Cuttle, Captain, a retired mariner, guileless, tender-hearted, simple-minded, whose favourite phrase was "when found make a note on"; *Dombey and Son*, Dickens.

Cynthia, "the moon-goddess," the name by which Queen Elizabeth is celebrated by Spenser in "Colin Clout," by Raleigh in his "Cynthia," and by Ben Jonson in his "Cynthia's Revels."

Dagonet, Sir, the fool of King Arthur's court, made mock-knight of the Round Table; *Idylls*, Tennyson.

Dale, Lætitia, marries the Egoist after making him do many generous acts; *Egoist*, Meredith.

Dalgetty, Dugald, laird of Drumthwacket, pedant and soldado; *Legend of Montrose*, Scott.

Damosel, The Blessed, subject of a picture and a poem by the painter-poet, Rossetti; *The Blessed Damosel*, Rossetti.

Dane, William, the hypocritical thief who accused Silas Marner and robbed him of Sarah; *Silas Marner*, G. Eliot.

Darch, Car and Nancy, Queen of Spades and Queen of Diamonds respectively; *Tess of the D'Urbervilles*, Hardy.

Dawson, Phœbe, a rustic beauty, whose loss too late "the marriage rite repaired;" *Parish Register*, Crabbe.

Dean, Mrs., Lockwood's housekeeper and narrator in the early part of the story; *Wuthering Heights*, Emily Brontë.

Deans, Jeanie and Effie, two daughters of Davie Deans of Edinburgh. Effie went wrong and was convicted of the murder of her illegitimate child. Jeanie saved her life by walking to London and appealing to the Queen for her pardon; *Heart of Midlothian*, Scott.

Deborah, Miss, the devoted admirer of Dr. Johnson, and a great stickler for the proprieties; *Cranford*, Mrs. Gaskell.

Dedlock, Sir Leicester, his "family as old as the hills," his wife, Lady Dedlock, mother out of wedlock to Esther Summerson; *Bleak House*, Dickens.

Deerslayer, an often recurring character in Cooper's novels; *Deerslayer* and four other novels, Cooper.

Desdemona, the innocent victim of the fatal jealousy of her husband, the Moorish chief, Othello; *Othello*, Shakespeare.

Dewy, Dick, hero of the novel, *Under the Greenwood Tree*, Hardy.

Dick, Mr., a crazy gentleman, mad about King Charles's head; *David Copperfield*, Dickens.

Diddler, Jeremy, a clever swindler, who wheedles money out of reluctant hands by his drollery; *Raising the Wind*, Kenny.

Dinmont, Dandie, a lowland farmer, owner of a famous breed of dogs; *Guy Mannering*, Scott.

Dirkovitch, Col., a Russian soldier and spy, travelling in India as war correspondent; *Life's Handicap*, Kipling.

Dobbin, William, the hero of "a novel without a hero"—awkward, shy, blundering, but truthful, honest and reliable; *Vanity Fair*, Thackeray.

Dodson and Fogg, lawyers who sue Pickwick for breach of promise; *Pickwick Papers*, Dickens.

Dogberry, a city officer who teaches the watchmen how to do their duty by evading it; *Much Ado About Nothing*, Shakespeare.

Dombey, Mr., egoistic and phenomenally proud, most sensitive as to the standing of the firm of "Dombey and Son," in the eyes of the City; *Dombey and Son*, Dickens.

Dombey, Florence, chilled by her father's unkindness, she makes friends everywhere outside his house, from which she makes her escape; *Dombey and Son*, Dickens.

Donnithorne, Arthur, seducer of Hetty Sorrel, appeared with her reprieve at the moment for mounting the scaffold; *Adam Bede*, G. Eliot.

Donovan, an earnest-minded youth who passes through a period of dark unbelief into light; *Donovan*, Edna Lyall.

Doones, The, a band of outlaws who settled in one of the valleys of Exmoor, and kept the district in terror; *Lorna Doone*, Blackmore.

Doorm, the russet-bearded Earl, who loved Enid, and was killed by her husband, Geraint; *Idylls*, Tennyson.

Douglas, Jim, an Englishman whose courage and resource stood the test in Delhi during the siege; *On the Face of the Waters*, Mrs. Steele.

Dousterswivel, astrologist and master of the black art; *Antiquary*, Scott.

Dromio, the name of twin brothers, who are attendants on twins, thus giving rise to amusing complications; *Comedy of Errors*, Shakespeare.

Duessa, "the double-faced," represents Falsehood, and in the personal allegory stands for Mary Queen of Scots; *Faerie Queene*, Spenser.

Dulcinea del Toboso, a country wench, but in Don Quixote's eyes a high-born lady; *Don Quixote*, Cervantes.

Dumbiedikes, the laird whose advice to his son was, "Plant trees, Jack; they're aye growin' while you are sleepin'"; *Heart of Midlothian*, Scott.

Dundreary, Lord, a most gentlemanly noodle, who puzzled over the simplest matter in the most diverting way; *Our American Cousin*, Tom Taylor.

Durbeyfield, Tess, heroine of the novel, seduced, executed for the murder of her seducer; *Tess of the D'Urbervilles*, Hardy.

Durward, Quentin, a Scottish lad who by extraordinary courage and address won his way with Louis XI.; *Quentin Durward*, Scott.

Easy, Midshipman, an adventurous hero; *Midshipman Easy*, Marryat.

Easy, Sir Charles, the good-for-nothing husband; *Careless Husband*, Colley Cibber.

Edwin and Angelina, hero and heroine of the ballad; *The Hermit*, Goldsmith.

Elaine, "the lily maid of Astolat," loved Sir Launcelot "with that love which was her doom;" *Idylls of the King*, Tennyson.

Elia, Bridget, Lamb's sister Mary who in a fit of insanity killed her mother; *Essays of Elia*, Lamb.

Elsie, a pure, true-hearted maiden who offers her life to save the life of the Prince; *The Golden Legend*, Longfellow.

Endymion, the youth who fell in love with Diana, the moon; *Endymion*, Keats.

Enid, wife of Geraint, to whom she is loyal and obedient under harsh treatment; *Idylls of the King*, Tennyson.

Epicœne, "the silent woman," after marriage suddenly becomes a virago, and turns out to be a boy in disguise; *Epicœne*, Ben Jonson.

Erl King, an elf of evil genius that haunts the Black Forest; *Ballad*, Goethe.

Esmond, Beatrix, a heartless, brilliant coquette; *Esmond*, Thackeray.

Esmond, Henry, a colonel in the service of Queen Anne, and one who intrigues for the succession of the Stuarts; *Esmond*, Thackeray.

Ettarre, though beloved by the noble knight, Pelleas, scorns him for the false Gawain; *Idylls of the King*, Tennyson.

Euphorion, impatient of the limitations of human existence, he springs into space and vanishes; *Faust*, Goethe.

Euphues, a young Athenian who, after an idle life of pleasure in Italy, returns home "a sadder and a wiser man"; *Euphues*, Lyly.

Eva, the daughter of an indulgent slave-owner, adored by her father's slaves, and the sunbeam of her home; *Uncle Tom's Cabin*, Mrs. Stowe.

Evangeline, the heroine of the poem founded on the expatriation of the French colonists of Acadia (Nova Scotia); *Evangeline*, Longfellow.

Evelina, a young orphan whose "coming out" gives scope for spirited sketches of the manners of the day; *Evelina*, F. Burney.

Eyre, Jane, one of the most marvellous figures in fiction; *Jane Eyre*, C. Brontë.

Faggus, Tom, a cousin of John Ridds, a highwayman by profession, owner of the wonderful mare Winnie; *Lorna Doone*, Blackmore.

Fagin, the hideous Jew who trains thieves and lives upon their spoil; *Oliver Twist*, Dickens.

Fairleigh, Frank, hero of a novel of this name; *Frank Fairleigh*, Smedley.

Fair Maid of Perth, coquettish daughter of Simon Glover; *Fair Maid of Perth*, Scott.

Fair Rosamond, see *Clifford, Rosamond.*

Fairservice, Andrew, gardener at Osbaldistone Hall, full of Scotch "canniness"; *Rob Roy*, Scott.

Faithful, the companion of Christian on the way to the Celestial City; *Pilgrim's Progress*, Bunyan.

Falconer, Mrs., a powerful type of rugged Scotch Calvinism; *Robert Falconer*, Macdonald.

Falstaff, Sir John, the fat knight who was the boon companion of Prince Hal in his wild days; *Henry IV.*, *Merry Wives of Windsor*, Shakespeare.

Fang, magistrate prevented from convicting Oliver by Mr. Brownlow; *Oliver Twist*, Dickens.

Farintosh, Marquis of, suitor for the hand of Miss Ethel Newcome; *The Newcomes*, Thackeray.

Fat Boy, the gormandizer, who sleeps often, but sometimes sees more than is desirable; *Pickwick Papers*, Dickens.

Faust, a famous magician who sold himself to the devil on condition that he gave him the capacity and means of enjoyment for a certain period; *Faust*, Goethe, and *Dr. Faustus*, Marlowe.

Fenella, feigned to be deaf and dumb to discover the secrets of her mistress, the Countess of Derby; *Peveril of the Peak*, Scott.

Ferrar, Nicholas, the saintly founder of a religious society at Little Gidding; *John Inglesant*, Shorthouse.

Feste, the jester attached to the household of Olivia. His chief characteristics are his wit, his fine voice, and his love of money; *Twelfth Night*, Shakespeare.

Festus, the friend of Paracelsus before he set out on his aspiring quest; *Paracelsus*, Browning.

Fielding, Mary, marries her old lover, who returns on the morning when she is going to marry Tackleton against her will; *Cricket on the Hearth*, Dickens.

Fifine, the gipsy who fascinates the wicked Don Juan; *Fifine at the Fair*, Browning.

Figaro, in one play he appears as a barber, in the other as a valet, and in both he outwits every one by his extraordinary cunning; *Barbier de Seville* and *Mariage de Figaro*, Beaumarchais.

Filch, a notorious thief; *Beggars' Opera*, Gay.

Filomena, Santa, stands for Florence Nightingale, "the lady with the lamp . . . a noble type of good, heroic womanhood;" *Santa Filomena*, Longfellow.

Findlayson, C. E., the plucky and persistent engineer; *Bridge Builders*, Kipling.

Fips, Mr., the legal agent of old Martin Chuzzlewit, who engages Tom Pinch as a librarian in the Temple; *Martin Chuzzlewit*, Dickens.

Flanders, Moll, a profligate beauty of varied and discreditable fortune; *The Fortunes of Moll Flanders*, Defoe.

Fledgeby, "Fascination," dolt and dandy, but keen as a fox in money matters; *Our Mutual Friend*, Dickens.

Fleming, Marjorie, Sir Walter Scott's child friend, whose letters give a vivid picture of her short life; *Marjorie Fleming*, Dr. J. Brown.

Flibbertigibbet, a mischievous imp of a boy; *Kenilworth*, Scott.

Flite, Miss, the little crazy lady who haunts the Court of Chancery; *Bleak House*, Dickens.

Florac, Count de, a buoyant, extravagant, light-hearted Frenchman, for much of his life "chronically impecunious"; *The Newcomes*, Thackeray.

Florimel, in whom are combined both grace and chastity, stands as a type of perfect womanhood; *Faerie Queene*, Spenser.

Fluellen, a Welsh soldier, hot-tempered and dictatorial, but true as steel and full of valour; *Henry V.*, Shakespeare.

Foker, Harry, a dashing Cambridge undergraduate of the tandem-driving, barge-fighting type; *Pendennis*, Thackeray.

Foppington, Lord, "the prince of coxcombs;" *The Relapse*, Vanbrugh.

Ford, Mrs., one of the women who made Falstaff the victim of their practical jokes; *Merry Wives of Windsor*, Shakespeare.

Francesca da Rimini, condemned to dwell with her lover Paolo in the Inferno with other guilty lovers; *Divine Comedy*, Dante.

Frankenstein, the student who creates a monster in human form from gruesome materials, and loathes his own creation; *Frankenstein*, Mrs. Shelley.

Freeport, Sir Andrew, the type of a shrewd and upright British merchant; *Spectator*, Addison and Steele.

Friar John, a profane and dissolute reveller, always in the heart of the fun; *Gargantua and Pantagruel*, Rabelais.

Friar Tuck, chaplain and steward to Robin Hood, a sort of Falstaff masquerading as a monk; *Ivanhoe*, Scott.

Friday, My man, Robinson Crusoe's faithful savage and companion; *Robinson Crusoe*, Defoe.

Friendly, Dinah, marries "the bashful man"; *The Bashful Man*, Moncrieff.

Fritchie, Barbara, an aged American patriot who, when ninety, defended her country's flag at the risk of her life; *Barbara Fritchie*, Whittier.

Gadsby, Captain, a Hussar officer, eight scenes from whose life form the "Story of the Gadsbys," and give a picture of garrison life in India; *Story of the Gadsbys*, Kipling.

Galahad, Sir, the purest of Arthur's knights the only one who had the full vision of the Holy Grail; *Holy Grail*, Tennyson.

Gamp, Sairey, a drunken nurse of the old school. "Leave the bottle on the chimley-piece, and don't ask me to take none, but let me put my lips to it when I am so disposed"; *Martin Chuzzlewit*, Dickens.

Gareth, son of Queen Bellicent, bound by an oath to serve for a year and a day as a scullion; *Gareth and Lynette*, Tennyson.

Gargantua, the gigantic hero of a fantastic romance; *Gargantua*, Rabelais.

Gargery, Joe, a blacksmith, a noble-hearted fellow who had the misfortune to marry a virago; *Great Expectations*, Dickens.

Garth, Caleb, a fine type of a noble and simple-hearted English yeoman of unblemished integrity; *Middlemarch*, G. Eliot.

Gautier, Marguerite, a fallen woman redeemed by love, subject of the opera "La Traviata" and of *La Dame aux Camélias*; Dumas (fils).

Gawain, a bold, irreverent knight; *Holy Grail*, Tennyson.

Geddes, a Quaker family in *Redgauntlet*, Scott.

Geierstein, Anne of, "the maiden of the mist," Baroness of Arnheim; *Anne of Geierstein*, Scott.

George, a time-expired dragoon, "a fine, bluff-looking man of a frank, free bearing," keeper of a shooting gallery; *Bleak House*, Dickens.

Geraldine, The Lady, the mysterious serpent-woman whom Christabel met in the forest and befriended; *Christabel*, Coleridge.

Geraint, a noble knight who for a season mistrusts and harshly treats his true and devoted wife; *Idylls of the King*, Tennyson.

Giant Despair, the lord of Doubting Castle from which Christian and Hopeful escaped by the key "Promise"; *Pilgrim's Progress*, Bunyan.

Gibbie, Guse, a daft laddie in the service of Lady Bellenden; *Old Mortality*, Scott.

Gil Blas, the hero of a diverting novel, brimful of wit and humour; *Gil Blas*, Lesage.

Ginevra, the bride who hid in an old chest where she was entombed alive; *Ballad*, T. H. Bayley.

Gilpin, John, a London linen-draper, the hero of a famous ride; *John Gilpin*, Cowper.

Ginx's Baby, the type of a poor gutter child; *Ginx's Baby*, Edward Jenkins.

Giovanni, Don, Italian form of *Don Juan*, (which see).

Glegg, Mrs., aunt of Maggie Tulliver, succumbs to the eloquence of the packman; *Mill on the Floss*, G. Eliot.

Glenalvon, slays Norval and is in turn slain by Randolph; *Douglas*, Home.

Glendining, a family raised by worth and marriage from poverty to nobility and affluence; *Monastery*, Scott.

Glenthorn, Lord, personification of *ennui*; *Ennui*, Miss Edgeworth.

Gloriana, the "Queene of Faerie," who sends out her knights on their respective quests, and represents in the political allegory Queen Elizabeth; *Faerie Queene*, Spenser.

Glover, Simon, father of the "fair maid," a glover by trade; *Fair Maid of Perth*, Scott.

Gobbo, Launcelot, the clown who forsakes the service of Shylock for that of Bassanio; *Merchant of Venice*, Shakespeare.

Goodfellow, Robin, also called *Puck* (which see).

Gorboduc, an ancient king of Britain. The dissensions between his two sons form the plot of our first English tragedy; *Gorboduc*, Sackville and Norton.

Gordon, Lord George, the hare-brained Protestant leader of the riots in London, 1780; *Barnaby Rudge*, Dickens.

Gow, Harry, the man who fought "for his own hand" from pure love of fighting, in the famous Highland combat; *Fair Maid of Perth*, Scott.

Gradgrind (father and son), the father was a retired wholesale hardware merchant, devoted to "facts," whilst the son was the victim of an education of "facts"—sensual, selfish, and dishonest; *Hard Times*, Dickens.

Grandet, Eugenie, the daughter of a miser whose besetting sin is vividly described; *Eugenie Grandet*, Balzac.

Grandison, Sir Charles, intended as an ideal Christian and gentleman; *Sir Charles Grandison*, Richardson.

Grantly Archdeacon, a lax ecclesiastic; *Barchester Towers*, Trollope.

Greatheart, the faithful guide to the Celestial City of Christiana and her children; *Pilgrim's Progress*, Bunyan.

Green, Verdant, as a freshman at Oxford an unqualified greenhorn, at whose expense many practical jokes were played; *Verdant Green*, Bradley.

Grenville, Sir Richard, a naval hero, celebrated for his last fight on the "Revenge"; *Westward Ho!* C. Kingsley, and *The Revenge*, Tennyson.

Grimwig, Mr., the irascible but warm-hearted friend of Mr. Brownlow, who would "eat his head," if his opinions were ever upset; *Oliver Twist*, Dickens.

Griselda, the patient, whose story is portrayed in a series of pictures at the National Gallery, is a type of wifely devotion and patience; *Canterbury Tales*, Chaucer.

Grueby, John, imperturbable servant of Lord George Gordon; *Barnaby Rudge*, Dickens.

Grundy, Mrs., personification of Conventional Propriety or of Social Criticism on "proper" behaviour; *Speed the Plough*, Morton.

Gudrun, wife of the mighty warrior Sigurd (Siegfried), at whose murder she suffers tragic grief; *Volsunga Saga* and *Niebelungenlied*.

Guido, Franceschini, a wicked nobleman who kills his wife and her supposed parents; *Ring and the Book*, Browning.

Guinevere, wife of King Arthur, who had a guilty love for Launcelot; *Idylls of the King*, Tennyson.

Gulliver, a sea-captain who visits Lilliput, Brobdingnag, Laputa, and the land of the Houyhnhnms; *Gulliver's Travels*, Swift.

Gumbo, a manumitted slave, the servant of Harry Warrington on his European tour; *The Virginians*, Thackeray.

Gummidge, Mrs., widow of Peggotty's partner, "a lone, lorn creetur"; *David Copperfield*, Dickens.

Gurth, swineherd, a thrall of Cedric's; *Ivanhoe*, Scott.

Guster, maid-of-all work to the Snagsbys, subject to fits; *Bleak House*, Dickens.

Guyon, Sir, represents the virtue of temperance, the golden mean; *Faerie Queene*, Spenser.

Haidee, daughter of a Greek pirate who falls in love with Don Juan; *Don Juan*, Byron.

Hakim, Saladin disguised as a physician who came to cure his enemy, Cœur de Lion; *Talisman*, Scott.

Hall, Father, an intriguing ecclesiastic; *John Inglesant*, Shorthouse.

Hallam, Arthur Henry, the A. H. H. of Tennyson's "In Memoriam," a man of brilliant promise, who died in early manhood.

Hamlet, Prince of Denmark, naturally a dreamer, who fails through irresolution; *Hamlet*, Shakespeare.

Hardcastle, Squire, step-father of Tony Lumpkin, and father of the young lady who assumes the role of chambermaid in order "to conquer" young Marlow; *She Stoops to Conquer*, Goldsmith.

Harding, Mr., precentor and lover of music, an admirable clergyman of the old school; *Barchester Towers*, Trollope.

Harlowe, Clarissa, "the sweetest martyr in fiction"; *Clarissa Harlowe*, Richardson.

Harold, Childe, "Lord Byron in a fancy dress"; *Childe Harold*, Byron.

Haroun al Raschid, Sultan of the Saracen Empire (786–808), having Bagdad as its capital, a familiar figure in many Eastern Tales; *Arabian Nights.*

Harpagon, the typical miser in Molière's Comedy; *L'Avare*, Molière.

Harrington, Melchizedec, "The Great Mell," a fashionable tailor; *Evan Harrington*, Meredith.

Harrington, Evan, son of the above, after many adventures marries Rose Jocelyn, daughter of Sir Franks Jocelyn; *Evan Harrington*, Meredith.

Harris, Mrs., oft-quoted but imaginary friend of Sairey Gamp; *Martin Chuzzlewit*, Dickens.

Harrison, Dr., a discriminating philanthropist; *Amelia*, Fielding.

Hatteraick, Dirk, half smuggler and half pirate, a consummate villain; *Guy Mannering*, Scott.

Hawk, Sir Mulberry, "a fashionable gambler, roué, and knave," who ruins young men; *Nicholas Nickleby*, Dickens.

Headrigg, Cuddie, in danger of execution, but saved by his adroitness under examination; *Old Mortality*, Scott.

Headstone, Bradley, schoolmaster, in love with Lizzie Hexam, dies in a death-grapple with Rogue Riderhood; *Our Mutual Friend*, Dickens.

Heathcliff, a terrible example of a nature utterly warped and degraded by cruel treatment in early years; *Wuthering Heights*, E. Brontë.

Heep, Uriah, an oily hypocrite, unspeakably "'umble," who inveigles Mr. Wickfield, his employer, but is counterchecked by Micawber; *David Copperfield*, Dickens.

Helbeck, Alan, Roman Catholic squire, deeply religious, in love with Laura; *Helbeck of Bannisdale*, Mrs. H. Ward.

Henri, Mdlle., the charming pupil, afterwards wife, of the "Professor"; *The Professor*, C. Brontë.

Hereward the Wake, the "Last of the English"; *Hereward the Wake*, C. Kingsley.

Hermione, after sixteen years' absence from her jealous husband, Leontes, is restored to him as a living statue; *Winter's Tale*, Shakespeare.

Hernani, a noble Spaniard who commits suicide on "a point of honour"; *Hernani*, Victor Hugo.

Hiawatha, prophet, teacher, and civilizer of his Indian tribe; *Hiawatha*, Longfellow.

Higden, Mrs., the old woman who hated the workhouse more than death; *Our Mutual Friend*, Dickens.

Hinchcliffe, Henry Salt, a first-rate engine-room artificer—capable, resourceful, daring; *Their Lawful Occasions*, Kipling.

Holmes, Sherlock, a celebrated detective, with wonderful powers of observation and reasoning, equal to the unravelling of any plot, however strange and mysterious; *Strand Magazine*, Conan Doyle.

Honeycombe, Will, an oracle on matters of fashion, and "where women are not concerned, an honest and worthy man"; *Spectator*, Steele.

Honeyman, Charles, a "society" clergyman, showy and superficial, worldly-minded, and unprincipled; *The Newcomes*, Thackeray.

Hope, Evelyn, a maiden of sixteen beloved by a man of forty-eight; *Men and Women*, Browning.

Horatio, Hamlet's one faithful friend, well-balanced in mind, unemotional in temperament; *Hamlet*, Shakespeare.

Horatius, famed for his heroic defence of the Tiber bridge against the host of Tarquin; *Lays of Ancient Rome*, Macaulay.

Howe, Miss, the confidential and prudent adviser of Clarissa; *Clarissa Harlowe*, Richardson.

Hoyden, Miss, type of ill-educated, romping, rustic damsels; *The Relapse*, Vanbrugh.

Hudibras, Sir, hero of a laughable satire directed against the Puritans; *Sir Hudibras*, Samuel Butler.

Hudson, Sir Geoffrey, Queen Henrietta's dwarf page; *Peveril of the Peak*, Scott.

Hunsden, Mr., a manufacturer rough in tongue and manners but possessed of a kind heart; *The Professor*, C. Brontë.

Hypatia, one of the "martyrs of philosophy," she suffered a cruel death at the hands of the mob of Alexandria; *Hypatia*, C. Kingsley.

Hyperion, god of the sun, at the fall of the Titans had to give place to Apollo, the new sun-god; *Hyperion*, Keats.

Hythloday, Raphael, a Portuguese mariner whose tongue More employs to express his ideas on an ideal commonwealth; *Utopia*, More.

Iago, a clever villain who poisons Othello's mind against his loyal wife, Desdemona; *Othello*, Shakespeare.

Ida, Princess, founds a college for the emancipation of women; *The Princess*, Tennyson.

Imogen, falsely accused by Iachimo of infidelity to her husband, triumphantly establishes her innocence; *Cymbeline*, Shakespeare.

Inglesant, John, a gentleman who played a noble part in the time of the Civil War in the courts of England and Italy; *John Inglesant*, Shorthouse.

Isaac of York, a rich Jew, persecuted and plundered by the dissolute followers of King John; *Ivanhoe*, Scott.

Isengrim, the name of the wolf in the German story of *Reineche Fuchs.*

Iseult, bride of King Mark, who, through drinking a love-potion unawares, fell in love with Sir Tristram; *Tristram and Iseult*, M. Arnold.

Ithuriel, one of the angels appointed to guard Adam and Eve at night; *Paradise Lost, Bk. IV.*, Milton.

Ivanhoe, Wilfrid of, son of Cedric, who was disinherited for becoming a Crusader under King Richard; *Ivanhoe*, Scott.

Jachin, the parish clerk who stole the money given at Holy Communion; *The Borough*, Crabbe.

Jacynth, the maid who fell asleep while the gipsy bewitched the Duchess; *Flight of the Duchess*, Browning.

Jaggers, Mr., a typical Old Bailey advocate, known to and knowing half the criminals in the metropolis; *Great Expectations*, Dickens.

Jakin, Bob, the kind-hearted packman who befriends Tom Tulliver; *Mill on the Floss*, G. Eliot.

Jaques, the typical cynic, his famous speech on the "Seven Ages" is a graphic picture of the cynic's view of life; *As You Like It*, Shakespeare.

Jarley, Mrs., owner of the unrivalled wax-work show; *Old Curiosity Shop*, Dickens.

Jarvie, Bailie Nicol, a shrewd and kindly man of business, rather pompous and not over-valiant; *Rob Roy*, Scott.

Jean Valjean, a convict hero who strives to expiate a past crime by a life of self-forgetfulness and devotion to others; *Les Miserables*, Victor Hugo.

Jekyll, Dr., the noble-minded doctor whose other self was the vicious Mr. Hyde; *Dr. Jekyll and Mr. Hyde*, R. L. Stevenson.

Jellyby, Mrs., neglects her home in her devotion to the natives of Borrioboola Gha; *Bleak House*, Dickens.

Jess, a brave, patient soul who for twenty years viewed the world from her cottage window and had "a terrible lot to be thankful for"; *A Window in Thrums*, Barrie.

Jessica, daughter of Shylock, who forsakes him to marry Lorenzo; *Merchant of Venice*, Shakespeare.

Jingle, Alfred, strolling actor, boaster, and swindler, who speaks most rapidly in disjointed sentences; *Pickwick Papers*, Dickens.

Jo, a poor outcast, living in "Tom-all-alone's"; *Bleak House*, Dickens.

Jones, Tom, a young man of an attractive and generous nature, but many of the details of his life are of an unsavoury nature; *Tom Jones*, Fielding.

Joseph, Heathcliff's canting servant: "ransacked the Bible for promises to himself and curses to his neighbour"; *Wuthering Heights*, Emily Brontë.

Jourdain, Monsieur, a plain citizen who aspires to be a gentleman and discovers to his surprise that he has been talking prose all his life; *Le Bourgeois Gentilhomme*, Molière.

Juan, Don, a partly legendary character of the 14th century, of Spanish origin, noted for his amours. The hero of a remarkable poem by Byron; *Don Juan*, Byron.

Julian, Count, although a Spanish Goth, invites the Moors to Spain to dethrone the ravisher, Roderick; *Roderick*, Southey.

Juliet, the young bride whose heroism was rendered useless by Romeo's rash despair; *Romeo and Juliet*, Shakespeare.

Jupe, Cecilia, a clown's daughter adopted by Gradgrind; *Hard Times*, Dickens.

Kailyal, an heroine distinguished for virtue; *Curse of Kehama*, Southey.

Kamal, Border chieftain, robber, and outlaw, who generously gives up his son to the service of the Empress of India; *East and West*, Kipling.

Katusha, the poor ruined girl sent to Siberia for a crime of which she was innocent; *Resurrection*, Tolstoy.

Kehama, the almighty rajah who wished to die but could not for the curse; *Curse of Kehama*, Southey.

Kettle, Captain, the most amusing and pugnacious hero of a series of books called *The Adventures of Captain Kettle*, Cutcliffe Hyne.

Kew, Countess of, a society "great lady," elderly and domineering, of the world, worldly; *The Newcomes*, Thackeray.

Kezia, "the bad-tempered, good-hearted housemaid;" *Mill on the Floss*, G. Eliot.

Kilmansegg, Miss, an heiress with a golden leg; *Miss Kilmansegg*, Thomas Hood.

Kim, son of a sergeant in a regiment stationed in India, brought up by a half-caste, combines the qualities of his parentage and training; *Kim*, Kipling.

Kite, Sergeant, "a striking picture of low life and humour;" *The Recruiting Sergeant*, Farquhar.

Knight, The, a type of the noblest form of chivalry, embodying courage, courtesy, and humility; *Canterbury Tales*, Chaucer.

Krook, keeper of a rag-and-bone shop, so soaked with spirits from hard drinking, that he died of spontaneous combustion; *Bleak House*, Dickens.

Kubla Khan, the prince who built the "pleasure-dome" seen by the poet in a dream; *Kubla Khan*, Coleridge.

La Creevy, Miss, a little talkative, miniature-painter, as blithe as a lark; *Nicholas Nickleby*, Dickens.

Lady of Shalott, The, bound by a curse to weave, night and day, without a look towards Camelot; *Lady of Shalott*, Tennyson.

Lady of Lyons, The, a proud Lyons beauty who unwittingly marries a gardener's son; *Lady of Lyons*, Lytton.

Lady of the Lake, (1) Vivien, the mistress of the enchanter Merlin. (2) Ellen Douglas, who retired with her father from the court of King James V. to the vicinity of Loch Katrine; *Lady of the Lake*, Scott.

Laila, the Moorish maiden who leapt with her lover, Manuel, from a precipice; *The Lovers' Rock*, Southey.

Lalla Rookh, an Indian princess for whose behoof the four stories of the poem were told on the way to meet her betrothed; *Lalla Rookh*, Moore.

Lambert, Hetty, the sprightly daughter of Col. Lambert, whose sharp tongue made Harry Warrington a soldier; *The Virginians*, Thackeray.

Lamia, a serpent-woman who wedded Lycius, a Corinthian youth; *Lamia*, Keats.

Lammermoor, Bride of, baffled in love, wounds her husband and goes mad; *Bride of Lammermoor*, Scott.

Languish, Lydia, an insatiable novel-reader; *The Rivals*, Sheridan.

Launce, a servant who plays the part of a clown; *Two Gentlemen of Verona*, Shakespeare.

Launcelot, Sir, the greatest of the knights of the Round Table; *Idylls of the King*, Tennyson.

Launfal, Sir, a knight of the Round Table, the subject of a poem entitled *The Vision of Sir Launfal*, J. R. Lowell.

Laura, the lady to whom Petrarch addresses his sonnets; *Sonnets*, Petrarch.

Lauretta di Guardino, first the temptress and then the wife of John Inglesant, dies in the plague; *John Inglesant*, Shorthouse.

Lavington, Squire, denied that any duties were attached to property; *Yeast*, C. Kingsley.

Lear, a terrible picture of madness brought on by ungovernable rage; *King Lear*, Shakespeare.

Learoyd, John, "six-and-a-half feet of slow-moving, heavy-footed Yorkshireman"; *Life's Handicap*, Kipling.

Lee, Alice, daughter of the old and staunch Royalist, Sir Henry Lee; *Woodstock*, Scott.

Lefevre, Lieut., an officer who died from starvation. His death is an affecting scene; *Tristram Shandy*, Sterne.

Legree, a brutal overseer of a slave plantation; *Uncle Tom's Cabin*, Mrs. H. B. Stowe.

Leigh, Amyas, son of a noble mother, and hero of the novel; *Westward Ho!* C. Kingsley.

Leigh, Aurora, heroine of the poem so-named; *Aurora Leigh*, Mrs. Browning.

Leontes, having wrongly accused his wife, loses her for 16 years; *Winter's Tale*, Shakespeare.

Lewsome, Mr., sells Jonas the drugs with which to poison Old Anthony, and finally confesses; *Martin Chuzzlewit*, Dickens.

Lillian, the heroine of the story; *Alton Locke*, C. Kingsley.

Limmason, Lieut., a Hussar officer, treacherously held a prisoner in Siberia for many years. Escapes, but only when a mental and physical wreck; *Life's Handicap*, Kipling.

Linkinwater, Tim, confidential clerk to Cheeryble Bros., to whom he is loyal and faithful; *Nicholas Nickleby*, Dickens.

Lismahago, Obadiah, the contentious and mutilated officer who marries Tabitha Bramble; *Humphry Clinker*, Smollett.

Little Billee, a young and gifted artist, who with two friends leads a Bohemian life in Paris; *Trilby*, Du Maurier.

Little Dorrit, the "child of the Marshalsea," a debtors' prison, where she spent her childhood, like a sunbeam unsoiled by the sordid vice around her; *Little Dorrit*, Dickens.

Little Em'ly, betrayed and ruined through her vanity; *David Copperfield*, Dickens.

Little Lord Fauntleroy, a simple-hearted, graceful child, who charms away the fierceness of his grandfather; *Little Lord Fauntleroy*, F. H. Burnett.

Little Mildred, the junior subaltern, worth £4,000 a year; *The Man who was*, Kipling.

Little Nell, the guardian angel of her gambling grandfather. The story of her death is now classical; *Old Curiosity Shop*, Dickens.

Lochinvar, the hero of the ballad in which "the laggard in love" is forestalled; *Marmion*, Scott.

Locke, Alton, tailor, poet, chartist; *Alton Locke*, C. Kingsley.

Lorelei, the siren of the Rhine who by her sweet songs lured the sailors to destruction; *German Legend.*

Lothario, a libertine, the seducer of Calista. His name has become the synonym for a fashionable and unscrupulous rake; *The Fair Penitent*, Rowe.

Lovelace, an unscrupulous libertine, the principal male character in the novel; *Clarissa Harlowe*, Richardson.

Lumpkin, Tony, the bibulous, ignorant, conceited, and loutish country squire; *She Stoops to Conquer*, Goldsmith.

Luria, the ill-treated champion of Florence against the Pisano; *Luria*, Browning.

Lynedale, Lord, a liberal-minded and intelligent peer; *Alton Locke*, C. Kingsley.

Lycidas, a shepherd youth whose untimely death is lamented in this famous elegy; *Lycidas*, Milton.

Lydgate, a talented young doctor, thwarted at every turn by professional jealousy and ignorant prejudice; *Middlemarch*, G. Eliot.

Lyndon, Barry, an amusing Irishman whose story, told by himself, is full of humour and adventure; *Barry Lyndon*, Thackeray.

McAndrews, the dour Scottish engineer, the lover of his engines, deeply religious though irreverent in speech; *McAndrews' Hymn*, Kipling.

Macbeth, dominated by his own mad ambition and spurred on by his wife, murders King Duncan; *Macbeth*, Shakespeare.

Macbeth, Lady, a woman of iron will and boundless ambition, who ends by losing her reason and killing herself; *Macbeth*, Shakespeare.

Mac Flecknoe, represents the poet Shadwell in the satire that bears this name; *Mac Flecknoe*, Dryden.

Macheath, captain of a band of highwaymen, marries Polly Peachum; *Beggars' Opera*, Gay.

Mc Intyre, Capt. Hector, nephew of Oldbuck, famous for his adventure with the "phoca"; *Antiquary*, Scott.

Mac Ivor, Fergus and Flora, the famous brother and sister in Waverley, who befriended "Prince Charlie"; *Waverley*, Scott.

Mackage, Sandy, a second-hand bookseller, sagacious adviser of the young tailor; *Alton Locke*, C. Kingsley.

Mackenzie, Mrs., "The Campaigner," who gets her pretty, empty-headed daughter, Rosa, married to Clive Newcome; *The Newcomes*, Thackeray.

Mac Stinger, Mrs., the termagant landlady of Captain Cuttle, who finally marries Captain Busby; *Dombey and Son*, Dickens.

Madge Wildfire, ruined and discarded by her lover, and her babe destroyed by its grandmother, she lost her wits; *Heart of Midlothian*, Scott.

Maggy, aged twenty-eight, but thinks she is ten, at which age she had a fever that has arrested her intellect; *Little Dorrit*, Dickens.

Malagrowther, Sir Mungo, from having been king's "whipping-boy" became crabbed and censorious; *Fortunes of Nigel*, Scott.

Malaprop, Mrs., famous for her mutilations of the King's English; *The Rivals*, Sheridan.

Malvolio, Olivia's faithful but pompous and conceited major-domo, who is hated and flouted by the rest of the household; *Twelfth Night*, Shakespeare.

Mammon, the money god, who dwells in the underworld with the evil spirits of covetousness and ambition; *Faerie Queene*, Spenser.

Manfred, sells himself to the Evil One, who gives him seven demons to do his bidding for a season; *Manfred*, Byron.

Mannering Guy, hero of a novel so-named; *Guy Mannering*, Scott.

Mantalini, Madame, the fashionable milliner who supports her worthless, foppish husband; *Nicholas Nickleby*, Dickens.

Marcella, an impulsive girl with socialistic tendencies; *Marcella*, Mrs. H. Ward.

March, Ursula, a girl of gentle birth who becomes the wife of *John Halifax, Gentleman*, Mrs. Craik.

Marchioness, The, the little "slavey" who nurses Dick Swiveller in his illness, and becomes his wife; *Old Curiosity Shop*, Dickens.

Marguerite (Gretchen) is betrayed by Faust and reduced to great misery through her sin; *Faust*, Goethe.

Maria, the witty and diminutive waiting-maid of Olivia, who devises the plan for the humbling of Malvolio; *Twelfth Night*, Shakespeare.

Marlow, the man who is bashful with ladies, but much "at home" with bar-maids; *She Stoops to Conquer*, Goldsmith.

Marmion, a haughty English knight, slain at Flodden; *Marmion*, Scott.

Marner, Silas, the weaver whose heart was healed of many sorrows by a foundling child; *Silas Marner*, G. Eliot.

Mason, Bertha, Rochester's lunatic wife, who burns the mansion; *Jane Eyre*, C. Brontë.

Matty, Miss, a gentle, old-fashioned maiden lady in straitened circumstances; *Cranford*, Mrs. Gaskell.

Maud, "Faultily faultless, icily regular, splendidly null"; *Maud*, Tennyson.

Mauprat, Adrien de, "the wildest, gallant and bravest knight of France"; *Richelieu*, Lytton.

Mawworm, an admirer of Dr. Cantwell, and a vulgar edition of that hypocrite; *The Hypocrite*, Bickerstaff.

Mazeppa was bound to the back of a wild horse and sent on a terrible death-ride. His sufferings are vividly portrayed in *Mazeppa*, V. Hugo and Byron.

Medora, the faithful and beloved wife of the Corsair; *Corsair*, Byron.

Meg Merrilies, gipsy, thief, smuggler, and kidnapper; *Guy Mannering*, Scott.

Meister, Wilhelm, one who, like Saul, "went out to find his father's asses and found a kingdom"; *Wilhelm Meister*, Goethe.

Melnotte, Claude, hero of the play, a gardener's son who passes himself off as a prince and marries the proud beauty of Lyons; *Lady of Lyons*, Lytton.

Mephistopheles, an impersonation of the spirit of evil, the jeering, sneering attendant of Faust; *Faust*, Goethe.

Mercutio, a "gentleman that loves to hear himself talk"; *Romeo and Juliet*, Shakespeare.

Merlin, the mighty bard and wizard of Arthur's Court; *Idylls of the King*, Tennyson.

Mertoun, Earl, guilty lover of Mildred Tresham, killed by her brother, Earl Tresham; *A Blot in the Scutcheon*, Browning.

Micawber, improvident, impecunious, grandiloquent, and always "waiting for something to turn up"; *David Copperfield*, Dickens.

Middleton, Rev. Dr., a worldly, port-loving, grandiloquent ecclesiastic; *The Egoist*, Meredith.

Miggs, Miss, a shrewish maidservant who continually stirred up strife in the Varden household; *Barnaby Rudge*, Dickens.

Mignon, becomes insane when with all her charms her love is unreturned; *Wilhelm Meister*, Goethe (tr., Carlyle).

Millwood, Sarah, the wanton by whom George Barnwell was ruined; *George Barnwell*, Lillo.

Miranda, lives with her father, Prospero, on a spirit-haunted island, seeing no other man but the savage Caliban; *The Tempest*, Shakespeare.

Mirza, a holy man of Bagdad who has a vision of the Bridge of Life; *Vision of Mirza*, Addison.

Modred, the traitor knight slain by Arthur with the last stroke of Excalibur; *The Passing of Arthur*, Tennyson.

Mohun, Lord, a fashionable rake of Queen Anne's time, a gambler, a roué; *Esmond*, Thackeray.

Monaldeschi, Marquis, the grand equerry and treacherous lover of Queen Cristina of Sweden, who had him executed; *Cristina and Monaldeschi*, Browning.

Moniplies, Ritchie, the pertinacious and patriotic Scot, who never yielded to an Englishman any superiority of England over Scotland; *Fortunes of Nigel*, Scott.

Monkbarns, Laird of, Mr. Jonathan Oldbuck, the antiquary whose supposed house, Hospitalfield, stands near Arbroath; *Antiquary*, Scott.

Monte Cristo, the Count whose adventures are most wonderful; *Monte Cristo*, Dumas.

Morgan, valet to Major Pendennis, to whom he is invaluable as a collector of gossip; *Pendennis*, Thackeray.

Morgiana, the female slave of Ali Baba, "crafty, cunning, and fertile in devices"; *Arabian Nights*.

Morris, Dinah, the earnest preacher of excellent gifts, whose life exemplifies her words; *Adam Bede*, G. Eliot.

Mould, Mr., an undertaker whose facial expression denotes both melancholy and smirk satisfaction; *Martin Chuzzlewit*, Dickens.

Moucher, Miss, a dwarf, but a very useful person, deals in cosmetics, and practises hairdressing; *David Copperfield*, Dickens.

Muddle, the carpenter under Captain Savage; *Peter Simple*, Marryat.

Mulvaney, the Irish type of a private soldier — humorous, good-tempered, reckless, convivial; *Soldiers Three*. Kipling.

Muxworthy, Betty, servant and friend in the Ridd family, held many quaint and original opinions; *Lorna Doone*, Blackmore.

Naddo, the Philistine critic of a poet's function; *Sordello*, Browning.

Nancy, the poor, degraded, faithful paramour of Bill Sikes; *Oliver Twist*, Dickens.

Nathan der Weise, a wealthy Jewish merchant, teaches Saladin the lesson of religious toleration; *Nathan der Weise*, Lessing.

Newcome, Barnes, a contemptible cad and snob, but a keen man of business; *The Newcomes*, Thackeray.

Newcome, Col., no finer specimen of an English gentleman in fiction, answered death's summons with the word "Adsum"; *The Newcomes*, Thackeray.

Nickleby, Mrs., mother of Nicholas, whose rambling and mazy talk makes her ridiculous but amusing; *Nicholas Nickleby*, Dickens.

Nipper, Susan, a sharp-tongued young woman who gives Mr. Dombey a piece of her mind; *Dombey and Son*, Dickens.

Noggs, Newman, clerk to old Ralph Nickleby, tall, red-nosed, with joints that cracked, honest and courageous; *Nicholas Nickleby*, Dickens.

Norna, a weird, uncanny prophetess; *Pirate*, Scott.

Norval, the hero of the tragedy; *Douglas*, Home.

Nubbles, Kit, devoted to Little Nell, dismissed by her grandfather, imprisoned on a false charge; *Old Curiosity Shop*, Dickens.

Nydia, the blind girl of the *Last Days of Pompeii*, by Bulwer Lytton.

Nym, a coward and boon companion of Bardolph and Pistol, "sworn brothers in filching"; *Henry V.*, Shakespeare.

Ochiltree, Edie, a king's bedesman or "blue-gown," a walking newspaper, honest, sagacious, and garrulous; *Antiquary*, Scott.

Oenone, daughter of a river-god, beloved by Paris, but deserted by him for Helen; *Oenone*, Tennyson.

Ogniben, the legate who suppressed the insurrection at Faenza; one of Browning's finest creations; *A Soul's Tragedy*, Browning.

Oldbuck, Jonathan, see *Monkbarns*.

Oliver, one of the most renowned of Charlemagne's paladins. His name is associated with Roland as his equal in prowess.

Olivia, (1) the daughter of Dr. Primrose, who eloped with her worthless lover; *Vicar of Wakefield*, Goldsmith. (2) The Countess Olivia, who has for her steward the pompous Malvolio; *Twelfth Night*, Shakespeare.

Ophelia, loving yet weak, cast off by Hamlet she becomes insane, and drowns herself; *Hamlet*, Shakespeare.

Ophelia, Miss, the worthy lady who tries to train Topsy; *Uncle Tom's Cabin*. Mrs. H. B. Stowe.

Orgoglio, the giant, Pride, who overpowers the Red Cross Knight; *Faerie Queene*, Spenser.

Orlando, (1) The same as *Roland* (which see). (2) Rosalind's lover in *As You Like It*, Shakespeare.

Ortheris, a private soldier of the Cockney type; *Soldiers Three*, Kipling.

Osborne, Capt. George, a conceited, empty-headed coxcomb, killed at Waterloo; *Vanity Fair*, Thackeray.

O' Shanter, Tam, the hero of a story told in verse, in which witches play an exciting part; *Tam O'Shanter*, Burns.

Othello, a brave Moor in command of the Venetian forces, the victim of jealousy aroused by the villain Iago, and the murderer of his suspected wife, Desdemona; *Othello*, Shakespeare.

O' Trigger, Sir Lucius, a fortune-hunting Irishman, always ready for a fight; *The Rivals*, Sheridan.

Oxenford, Clerk of, bears the hall-mark of the true scholar, since "Gladly would he learn and gladly teche"; *Canterbury Tales*, Chaucer.

Overreach, Sir Giles, his name is sufficiently descriptive of himself, but in the end he is himself over-reached; *A New Way to Pay Old Debts*, Massinger.

Pacchiarotto, painter, and reformer of things in general; *How he Worked in Distemper*, Browning.

Page, Mrs., one of the women who by their practical jokes punished Falstaff for his unwelcome attentions; *Merry Wives of Windsor*, Shakespeare.

Palamon and Arcite, the heroes of a tale of chivalry told by "The Knight"; *Canterbury Tales*, Chaucer.

Pamela, the virtuous domestic who resists the vicious advances of her master, and ultimately becomes his wife; *Pamela*, Richardson.

Pangloss, Dr. (1) a ridiculous, literary prig; *Heir-at-Law*, Colman. (2) An optimistic philosopher; *Candide*, Voltaire.

Pantagruel, son of Gargantua, and like his father of colossal dimensions; *Gargantua and Pantagruel*, Rabelais.

Panza, Sancho, a Spanish peasant, squire to Don Quixote, famous for his practical good sense, mother-wit, and knowledge of Spanish proverbs; *Don Quixote*, Cervantes.

Paracelsus, student in search of the highest truths about God and man; *Paracelsus*, Browning.

Parolles, Bertram's cowardly servant, whom Helena justly calls "a notorious liar and a fool"; *All's Well that Ends Well*, Shakespeare.

Partington, Mrs., an imaginary old lady who, according to Sydney Smith, tried to sweep back the Atlantic with a broom; also a humorous character noted for her misuse of words; *Mrs. Partington*, P. B. Shillaber.

Partridge, Mr., half barber, half schoolmaster, whose criticisms on Hamlet have become proverbial; *Tom Jones*, Fielding.

Paul and Virginia, the central figures of a charming idyll containing exquisite descriptions of nature; *Paul and Virginia*, Bernadin de St. Pierre.

Paul, son and heir of Mr. Dombey, the story of whose short life is most pathetic; *Dombey and Son*, Dickens.

Paul, The Professor, the ruling spirit at Madame Beck's pensionnat; *Villette* and *The Professor*, C. Brontë.

Pauline, redeems the poet by the highest love; *Pauline*, Browning.

Pawkins, Major, a New York politician, who "runs a moist pen slick through everything and starts afresh"; *Martin Chuzzlewit*, Dickens.

Pecksniff, Seth, the prince of canting hypocrites, with two daughters after his own heart; *Martin Chuzzlewit*, Dickens.

Peebles, Peter, principal in a suit in which he pleads *in forma pauperis*; *Redgauntlet*, Scott.

Peerybingle, John and Mary, the sturdy, good-humoured carrier and his little wife, "Dot"; *Cricket on the Hearth*, Dickens.

Peggotty, Clara, a faithful servant to Mrs. Copperfield and nurse to David, marries Barkis; Daniel, a rough, leal-hearted fisherman of Yarmouth; Ham, engaged to Daniel's adopted niece, Em'ly; *David Copperfield*, Dickens.

Pelagia, a famous courtesan at Alexandria; *Hypatia*, C. Kingsley.

Pelleas, see *Ettarre*.

Pendennis, Arthur, the historian of the Newcomes, and the writer of the autobiography of Pendennis; *Pendennis*, Thackeray.

Pendennis, Helen, Arthur's mother, an earthly saint, but not altogether free from jealousy and prejudice; *Pendennis*, Thackeray.

Pendennis, Major, a club habitué *par excellence*, on terms of intimacy with the whole peerage; *Pendennis*, Thackeray.

Pendragon, King Arthur's predecessor, whom some believed to be his father; *Coming of Arthur*, Tennyson.

Percivale, one of the few knights that saw the Holy Grail; *Holy Grail*, Tennyson.

Perdita, daughter of Leontes, exposed to death in her infancy by her father, rescued and brought up by a shepherd; *Winter's Tale*, Shakespeare.

Persoun, The Poore, a type of the good parish priest, who not only taught the right way, but followed it himself; *Canterbury Tales*, Chaucer.

Petit André, the executioner who tried to cheer his victim with merry quips on the scaffold; *Quentin Durward*, Scott.

Petruchio weds Katherine the Shrew, and makes her a submissive wife; *The Taming of the Shrew*, Shakespeare.

Phèdre, or Phaedra, the victim of an ancestral curse, the effect of which is marvellously described in *Phèdre*, Racine.

Philip, a self-satisfied prig with insufferable airs of superiority; *The Heir of Redcliffe*, C. Yonge.

Piccolomini, Max, a soldier betrothed to Wallenstein's daughter, dies in a wild charge against the Swedes; *Wallenstein*, Schiller.

Pickle, Peregrine, spendthrift, fonder of playing jokes upon others than of bearing them himself; *Peregrine Pickle*, Smollett.

Pickwick, Samuel, the immortal founder of the Pickwick Club, the embodiment of simplicity and benevolence; *Pickwick Papers*, Dickens.

Pied Piper, the mysterious Piper who, by the sound of his magic flute, could draw anyone after him; *Pied Piper*, Browning.

Piers Plowman, the central figure of a political allegory, published about 1370; *Piers Plowman*, Langland.

Pinch, Tom, Pecksniff's assistant, whose simplicity leads him to put perfect trust in his hypocritical employer, who treats him as a drudge; *Martin Chuzzlewit*, Dickens.

Pip, enriched by a convict, brought up by Joe Gargery, who married Pip's sister; *Great Expectations*, Dickens.

Pipchin, Mrs., the cross old boarding-house keeper, drained dry of the milk of human kindness; *Dombey and Son*, Dickens.

Pippa, a silk-winder at Asolo, whose songs work moral miracles on the passers-by; *Pippa Passes*, Browning.

Pistol, a pothouse bully and braggart, who is forced by Fluellen to eat the leek; *Henry V.*, Shakespeare.

Pleydell, Mr. Paulus, an advocate and sheriff with considerable social qualities; *Guy Mannering*, Scott.

Plummer, Caleb, toymaker, wholly devoted to Bertha, his blind daughter; *Cricket on the Hearth*, Dickens.

Podsnap, Mr., a self-satisfied, narrow-minded person, who dissolves all difficulties with a magnificent sweep of his arm; *Our Mutual Friend*, Dickens.

Polonius, Ophelia's father, pompous and self-complacent, with an eye, as he thinks, for searching out truth, though really blind as a bat; *Hamlet*, Shakespeare.

Pompilia, murdered along with her putative parents by her husband, Guido; *Ring and the Book*, Browning.

Ponto, Major, a retired officer whose wife leads him to play a snobbish part, from her ambition to associate only with "county families"; *Book of Snobs*, Thackeray.

Poole, Mrs., the gin-loving nurse whose carelessness allows her charge, Mrs. Rochester, to set fire to the house; *Jane Eyre*, C. Brontë.

Portia, the lady disguised as a doctor of law, who saves Antonio from paying to Shylock the pound of flesh; *Merchant of Venice*, Shakespeare.

Poyser, Mrs., the inimitable critic of life and people with her caustic tongue and strong common sense; *Adam Bede*, G. Eliot.

Prig, Betsy, the woman who "nusses turn and turn about" with Sairey Gamp; *Martin Chuzzlewit*, Dickens.

Primrose Family: (1) father, the good old Vicar of Wakefield, (2) his wife, a good housekeeper, but worships at the shrine of gentility, (3) Moses, the simple-minded youth, who sold the Vicar's horse for a gross of spectacles, (4) Olivia, whose head was turned with grand notions. She eloped with the young Squire; *Vicar of Wakefield*, Goldsmith.

Prometheus steals fire from heaven, and as a punishment is chained to a rock and tortured by a vulture; *Prometheus*, Shelley.

Prospero, through devotion to the study of magic he lost his dukedom of Milan, and by his magical arts he regained it; *The Tempest*, Shakespeare.

Proudie, Mrs., emphatically the "grey mare" in the palace and diocese of Barchester; *Barchester Towers*, A. Trollope.

Pry, Paul, a busybody in other people's business, a most diverting character; *Paul Pry*, John Poole.

Puck, a mischievous sprite, who acts as jester to King Oberon, and delights in playing pranks; *Midsummer Night's Dream*, Shakespeare.

Puff, Dangle, and Sneer: Puff writes a play, Dangle produces it, Sneer criticises it; *The Critic*, Sheridan.

Pumblechook, Mr., obsequious to wealth and a bully to misfortune; *Great Expectations*, Dickens.

Pure, Simon, a Quaker from America, who is jockeyed out of a rich wife by Colonel Feignwell, who passes himself off as the Quaker before the real Simon Pure arrives; *A Bold Stroke for a Wife*, Mrs. Centlivre.

Pycroft, Emanuel, a naval petty officer, quick-witted and humorous; *Their Lawful Occasions*, Kipling.

Quickly, Mrs., hostess of the Boar's Head Tavern, frequented by Falstaff and his boon companions; *Henry IV.*, *Henry V.*, *Merry Wives*, Shakespeare.

Quilp, a dwarf, ferocious and fiendish; *Old Curiosity Shop*, Dickens.

Quiverful, Rev. Mr., rector of Puddingdale, with fourteen children; *Barchester Towers*, A. Trollope.

Quixote, Don., the hero of a most diverting novel, which tells the story of his adventures as a Knight-errant; *Don Quixote*, Cervantes.

Rab, a mastiff "as mighty in his own line as Julius Cæsar or the Duke of Wellington"; *Rab and his Friends*, Dr. J. Brown.

Ralpho, squire of Sir Hudibras, whom he attends in his adventures; *Sir Hudibras*, Butler.

Random, Roderick, unscrupulous, sensual, and callous; *Roderick Random*, Smollett.

Raphael, an "affable angel" who plays a considerable part in Milton's great epic; *Paradise Lost*, Milton.

Rasselas, Prince of Abyssinia, who goes in search of a Paradise in this world; *Rasselas*, Dr. Johnson.

Ravenshoe, Charles, a generous and high-spirited youth who, after dire distress, inherits the family estates; *Ravenshoe*, H. Kingsley.

Ravenswood, Master of, the melancholy, misunderstood, persecuted hero of *The Bride of Lammermoor*, Scott.

Rebecca, the beautiful, gifted, and unhappy daughter of Isaac the Jew, *Ivanhoe*, Scott.

Red Cross Knight, The, better known as "St. George of Merry England," who for the sake of Una (Truth) slays the dragon; *Canterbury Tales*, Chaucer.

Redgauntlet, name of a family in the interest of Prince Charles Edward; *Redgauntlet*, Scott.

Redlaw, Mr., a learned chemist who tries to obliterate his many sorrows from his memory, with the consequent loss of the power to sympathize; *The Haunted Man*, Dickens.

Regan and Goneril, the undutiful daughters of *King Lear*, Shakespeare.

Reineke Fuchs (Reynard the Fox), hero of a satirical poem in which the characters are animals. There are many versions of the story.

Ridd, John, a Devonshire yeoman of gigantic build and phenomenal strength, the hero of the tale; *Lorna Doone*, Blackmore.

Riderhood, Rogue, a desperate waterside villain, who meets his death in a struggle, fatal to both, with Bradley Headstone; *Our Mutual Friend*, Dickens.

Riel, Herve, a simple Breton pilot, who saved a French fleet from the English; *Herve Riel*, Browning.

Robert of Sicily, for his pride was punished with the temporary loss of reason; *Tales of a Wayside Inn*, Longfellow.

Robsart, Amy, wife of the Earl of Leicester, secretly married, supposed to be murdered to gain Leicester's favour; *Kenilworth*, Scott.

Rochester, Mr., husband of mad Bertha Mason, and finally of Jane Eyre; *Jane Eyre*, Brontë.

Roderick Dhu, a half savage Highland chieftain and freebooter; *Lady of the Lake*, Scott.

Roister Doister, hero of the earliest English comedy, 1556; *Roister Doister*, Udall.

Roland, one of Charlemagne's paladins, a hero of romance and Italian epic (see *Oliver*).

Romeo, wedded the youthful Juliet in spite of an ancestral feud; *Romeo and Juliet*, Shakespeare.

Romola, lived at Florence in the time of Savonarola, and married Tito, a subtle and perfidious Greek; *Romola*, G. Eliot.

Roland, Lord, the noble lover of Lady Clare; *Lady Clare*, Tennyson.

Rosalind, the witty daughter of the banished Duke, whom she seeks in the Forest of Arden; *As You Like It*, Shakespeare.

Rowena, The Lady, a Saxon lady, ward of Cedric, married to Wilfrid of Ivanhoe; *Ivanhoe*, Scott.

Rudge, Barnaby, the half-crazed son of the murderer of Reuben Haredale; *Barnaby Rudge*, Dickens.

Sabrina, nymph of the Severn, is invoked to release the lady from the spell of Comus; *Comus*, Milton.

Saddletree, Bartoline, the pedantic saddler who affects law terms, which he misunderstood, misapplied, misquoted, and mispronounced; *Heart of Midlothian*, Scott.

St. Cecilia, the patron saint of music; *Ode to St. Cecilia's Day*, Dryden.

Saladin, the Saracen Sultan, who visited Cœur de Lion disguised as a doctor; *Talisman*, Scott.

Salterne, Rose, deserted by her jealous husband, Don Guzman, and burnt by the Inquisition as a heretic and witch; *Westward Ho!* C. Kingsley.

Saltire, Lord, under a cynical and worldly exterior he hid a warm heart and a great sorrow; *Ravenshoe*, H. Kingsley.

Sampson, Dominie, "a stickit minister," and so became private tutor and librarian; his favourite expression was "prodigious"; *Guy Mannering*, Scott.

Sampson, Parson, the horse-racing, wine-drinking domestic chaplain of Lord Castlewood; *The Virginians*, Thackeray.

Samson Agonistes, "Samson the Wrestler," the blind hero of a poem written by one who was old and blind; *Samson Agonistes*, Milton.

Sangrado, Dr., the physician whose invariable prescriptions were bleeding and hot water; *Gil Blas*, Lesage.

Sansfoy (Unbelief), the first enemy with whom the Red Cross Knight has to fight after deserting Una (Truth); *Canterbury Tales*, Chaucer.

Saracinesca, a fine type of the old Roman nobility—sturdy and proud; *Saracinesca*, Marion Crawford.

Sarchedon, hero of the fine novel so named; *Sarchedon*, Whyte Melville.

Sawyer, Bob, the hilarious surgeon, host of Mr. Pickwick, who tried to start a practice at Bristol; *Pickwick Papers*, Dickens.

Scapin, a wily, scheming valet; *Les Fourberies de Scapin*, Molière.

Schehezerade, "that empress of tale-tellers," as Sir Walter Scott calls her, who saves her life by relating a fresh story each night; *The Arabian Nights.*

Scrooge, Ebenezer, converted by three visions on Christmas Eve from being a covetous, hard, grinding man into a benevolent character; *Christmas Carol*, Dickens.

Sedley, Amelia, the gentle, feeble, somewhat characterless heroine, much given to weeping; *Vanity Fair*, Thackeray.

Sedley, Joseph, a coarse type of Indian Collector, a lazy gourmand, vain and selfish; *Vanity Fair*, Thackeray.

Sentry, Capt., the representative of the army in the select club to which "the spectator" belongs; *The Spectator*, Addison.

Serjeant of Law, The, a busy man, but always seemed busier than he was; *Canterbury Tales*, Chaucer.

Shallow, Justice, a foolish and consequential country magistrate; *Merry Wives of Windsor*, Shakespeare.

Sharp, Becky, an adventuress, brilliant, fascinating, unprincipled; *Vanity Fair*, Thackeray.

She, a weird, mysterious being dwelling in the wilds of South Africa; *She*, Rider Haggard.

Shirley, a warm-hearted, noble-minded girl; *Shirley*, C. Brontë,

Short, see *Codlin and Short.*

Shylock, consumed by two evil passions—the love of money and a desire for revenge, the latter of which prevails; *The Merchant of Venice*, Shakespeare.

Siddartha, Prince, the incarnation of Buddha, whose gentle life, self-sacrifice, and noble teaching form the subject of *The Light of Asia*, Edwin Arnold.

Sigurd (or **Siegfried**), a mighty warrior, who marries Gudrun and is slain by the jealous wiles of Brynhild; *Volsunga Saga and Niebelungenlied.*

Sikes, Bill, the burglar who murdered his paramour, Nancy; *Oliver Twist*, Dickens.

Simple, Peter, hero of the novel so named; *Peter Simple*, Marryat.

Sindbad the Sailor, one who made seven fortunate voyages in which he experienced many surprising adventures; *Arabian Nights.*

Sintram, a youthful warrior who suffers from fits of demoniacal rage; *Sintram*, La Motte Fouqué.

Skimpole, Harold, a thriftless and selfish grown-up child; *Bleak House*, Dickens.

Slender, a foolish cousin of Justice Shallow; *Merry Wives of Windsor*, Shakespeare.

Slick, Sam, an American pedlar, who makes his way by his acuteness, drollery, and "soft sawder"; *Sam Slick*, Judge Haliburton.

Slope, Rev. Obadiah, the odious chaplain of Bishop Proudie "with always an anathema in the corner of his eye"; *Barchester Towers*, A. Trollope.

Slowboy, Tilly, a foundling nurse to "Dot's" baby, quaint, awkward, well-meaning; *Cricket on the Hearth*, Dickens.

Sludge, the medium who in the act of cheating is detected by his dupe; *Dramatis Personæ*, Browning.

Smike, son of Ralph Nickleby, who places him at Dotheboys Hall; *Nicholas Nickleby*, Dickens.

Snagsby, a law stationer, mild and timid, his favourite phrase—"Not to put too fine a point on it"; *Bleak House*, Dickens.

Snowe, Lucy, the heroine and relator of the story; *Villette*, C. Brontë.

Sohrab and Rustum, two great warriors, father and son, who meet in battle, unknown to each other, when Rustum kills his son; *Sohrab and Rustum*, M. Arnold.

Sordello, an Italian minstrel and forerunner of Dante; *Sordello*, Browning.

Sorrel, Hetty, Mrs. Poyser's niece, who falls through her vanity and inexperience, condemned to death for child-murder, but reprieved; *Adam Bede*, G. Eliot.

Spenlow and Jorkins, proctors, the latter keeping in the background served as bogie to the firm; *David Copperfield*, Dickens.

Squeers, a schoolmaster of incredible barbarity and ignorance, who rules over Dotheboys Hall; *Nicholas Nickleby*, Dickens.

Stalky, the master-spirit of three outrageous school boys, whose main purpose in life was to outwit authority; *Stalky and Co.*, Kipling.

Standish, Miles, sailed to New England in the Mayflower and became one of the leading colonists there; *Miles Standish*, Longfellow.

Staunton, George, seducer and then husband of Effie Deans, shot by a gipsy boy who proves to be his own natural son; *Heart of Midlothian*, Scott.

Stella (1) the heroine of the sonnets in which Sir Philip Sidney celebrates his early love; (2) the name under which Dean Swift alludes to his friend, Esther Johnson.

Steyne, Marquis of, "The Wicked Nobleman," patron of Becky Sharp; *Vanity Fair*, Thackeray.

Stiggins, Shepherd, a self-indulgent, Dissenting minister in great favour with Mrs. Weller; *Pickwick Papers*, Dickens.

Strap, Hugh, the ill-rewarded but faithful follower of Roderick Random; *Roderick Random*, Smollett.

Strickland, an Indian police officer well acquainted with native life and much inclined to believe in "the occult"; *Life's Handicap*, Kipling.

Strong, Dr., "the idol of the whole school . . . . the kindest of men, with a simple faith in him"; *David Copperfield*, Dickens.

Surface, Charles and Joseph, the former good at heart with evil on the surface, the latter just the reverse; *School for Scandal*, Sheridan.

Svengali, a Polish Jew of great musical and hypnotic powers; *Trilby*, Du Maurier.

Sweedlepipe, Paul, a bird-fancier and hairdresser, with many resemblances to the birds he loved; *Martin Chuzzlewit*, Dickens.

Swiveller, Dick, a complex character of self-indulgence and generosity, who was put to many shifts to avoid his creditors; *Old Curiosity Shop*, Dickens.

Syntax, Dr., a pious clergyman and an excellent scholar in search of the picturesque; *The Tour of Dr. Syntax*, W. Coombe.

Tackleton, toymaker, a domestic Ogre, who hated children; *Cricket on the Hearth*, Dickens.

Tadpole and Taper, two electioneering agents; *Coningsby*, Disraeli.

Tamberlaine, the great Tartar, Timur the Great, Conqueror of Central Asia; *Tamberlaine*, Marlowe.

Tam o' Shanter, who "saw an unco' sight, warlocks and witches in a dance"; *Tam o' Shanter*, Burns.

Tapley, Mark, tries to be "jolly under all circumstances," fights against adversity with a cheerful countenance; *Martin Chuzzlewit*, Dickens.

Tartarin of Tarascon, a typical Gascon boaster, who can draw the long bow most skilfully; *Tartarin*, Daudet.

Tartuffe, a hypocrite unsurpassable; *Tartuffe*, Molière.

Teazle, Lady, married to Sir Peter, old enough to be her grandfather. Ignorant of the world she acts imprudently, and becomes the subject of scandal; *School for Scandal*, Sheridan.

Telemaque, the hero of a romance founded on the wanderings of Telemachus in search of his father, Ulysses; *Télémaque*, Fénelon.

Teufelsdrockh, an eccentric German philosopher, hero of the satire in which he makes war on all shams; *Sartor Resartus*, Carlyle.

Thalaba, the destroyer of evil spirits by means of magical power which he ultimately loses by an act of folly; *Thalaba the Destroyer*, Southey.

Thornhill, Sir William, *alias* Mr. Burchell (which see); *Vicar of Wakefield*, Goldsmith.

Thornhill, Squire, a libertine who eloped with Olivia Primrose, and found to his surprise that the "false marriage" was valid; *Vicar of Wakefield*, Goldsmith.

Tiny Tim, Bob Cratchit's little lame boy, to whom he was tenderness itself; *Christmas Carol*, Dickens.

Titania, Queen of the Fairies and wife of Oberon. Puck contrives by his magic juice that she shall fall in love with Bottom, the weaver; *Midsummer Night's Dream*, Shakespeare.

Todgers, Mrs., keeper of a commercial boarding-house where the demand for gravy is the sorrow of her life; *Martin Chuzzlewit*, Dickens.

Toots, Mr. P., "thick-headed," by his own avowal, hopelessly in love with Florence Dombey. Everything "is of no consequence"; *Dombey and Son*, Dickens.

Topsy, slave-girl, who could give no other account of her origin than "I 'spects I growed"; *Uncle Tom's Cabin*, Mrs. H. B. Stowe.

Torquil of the Oak, chief of the clan Quhele, gifted with second sight; *Fair Maid of Perth*, Scott.

Touchstone, the Court jester whose wise sayings win the admiration of the melancholy Jaques; *As You Like It*, Shakespeare.

Touchy, Tom, "A fellow for taking the law of everybody"; *Spectator*, Addison.

Traddles, Thomas, "the merriest and most miserable of the boys" at Salem House, draws skeletons to solace himself; *David Copperfield*, Dickens.

Tregarva, Paul, gamekeeper to Squire Lavington, a radical and a poet; *Yeast*, C. Kingsley.

Trilby, a Parisian artists' model; *Trilby*, Du Maurier.

Trinculo, a jester cast on Prospero's island; *The Tempest*, Shakespeare.

Trim, Corporal, the faithful, voluble, and devoted servant of "My Uncle Toby"; *Tristram Shandy*, Sterne.

Tristram, Sir. See *Iseult.*

Troil, Magnus, a well-to-do Shetlander with two charming daughters, Minna and Brenda; *The Pirate*, Scott.

Troop, Disco, captain of the fishing-boat on which the millionaire's son is made a man; *Captains Courageous*, Kipling.

Trotter, Job, the canting, cunning, clever servant of Alfred Jingle; *Pickwick Papers*, Dickens.

Trotwood, Betsy, David Copperfield's imperious and kind-hearted great-aunt, well known for her cry of "Janet! Donkeys!"; *David Copperfield*, Dickens.

Troy, Sergeant, a wretch who married and deserted Bathsheba Everdene, and was shot by Farmer Boldwood; *Far from the Madding Crowd*, Hardy.

Trulliber, Parson, a gross and ignorant cleric, a contrast to Parson Adams; *Joseph Andrews*, Fielding.

Trunnion, Commodore, the one-eyed naval officer who, when retired, equips and manages his house like a ship; *Peregrine Pickle*, Smollett.

Tug, Tom, a hearty young waterman; *The Waterman*, Dibdin.

Tulkinghorn, Mr. a cold-blooded, subtle lawyer," a tight, unopenable oyster of the old school"; *Bleak House*, Dickens.

Tulliver, Mr. and Mrs., father and mother of the hero and heroine; the former dies from excitement in a tussle with Wakem; the latter was a shrewd woman with remarkable powers of dialectic speech; *Mill on the Floss*, G. Eliot.

Tulliver, Tom and Maggie, the hero and heroine, who at the end of the story are both drowned together in the Floss; *Mill on the Floss*, G. Eliot.

Tupman, Mr. Tracy, a member of the Pickwick Club, a bit of a dandy, and an admirer of the fair sex; *Pickwick Papers*, Dickens.

Turveydrop, Mr., teacher of deportment, who modelled himself on the Prince Regent; *Bleak House*, Dickens.

Twist, Oliver, a boy of good parentage, brought up in a workhouse, and afterwards thrown among thieves; *Oliver Twist*, Dickens.

Twitcher, Jemmy, a rascally highwayman, who at last "peaches" on his leader, the gentlemanly highwayman, "Captain Macheath"; *Beggars' Opera*, Gay.

Tybalt, nephew to Lady Capulet, who kills Mercutio and is killed by Romeo; *Romeo and Juliet*, Shakespeare.

Udeschini, Cardinal, an excellent ecclesiastic, much addicted to snuff-taking; *Cardinal's Snuffbox*, Harland.

Una (the *One* True Faith, or Truth), is guarded in her wanderings by a lion; *Faerie Queene*, Spenser.

Uncle Toby, the inimitable hero of many of his own stories; *Tristram Shandy*, Sterne.

Uncle Tom, a slave of sterling Christian character, the hero of the novel depicting the evils of slavery; *Uncle Tom's Cabin*, Mrs. H. B. Stowe.

Undine, a gentle water-spirit that gains a human soul and much sorrow therewith; *A German Story.*

Urgan, an elf restored to human form by the tri-signature of the Cross; *Lady of the Lake*, Scott; *Undine.*

Uriel, the great archangel, "regent of the sun"; *Paradise Lost*, Milton, and *Golden Legend*, Longfellow.

Valentine, a gallant gentleman of Verona, who marries Silvia; *Two Gentlemen of Verona*, Shakespeare.

Valentine and Orson, twin nephews of King Pepin, the former brought up at court, the latter carried away and suckled by a bear; *Legends of Charlemagne.*

Vanessa, Swift's name for his young friend Esther Vanhomrigh; *Cadenus and Vanessa*, Swift.

Varden, Mr. and Mrs., the former a locksmith, bluff, hale, and hearty; the latter the most exasperating woman since the time of Job's wife; *Barnaby Rudge*, Dickens.

Varden, Dolly, the sweet, fresh, and pretty daughter of the above; *Barnaby Rudge*, Dickens.

Vathek, an eastern monarch, in league with demons. He perpetrates the most horrible crimes and is at last plunged into Eblis (hell); *Vathek*, Beckford.

Veck, Trotty, the ticket porter who invested church bells with thought and speech; *The Chimes*, Dickens.

Veiled Prophet of Khorassan. He claims to have magical powers, and wears a veil, as he pretends, to conceal the excessive brightness of his face, but in reality to hide his ugliness; *Lalla Rookh*, Moore.

Venus, Mr., articulator of human bones, bird-stuffer and animal preserver; *Our Mutual Friend*, Dickens.

Verges, a foolish old constable, who helps Dogberry to keep the peace of the city; *Much Ado About Nothing*, Shakespeare.

Verisopht, Lord. He bears a name descriptive of his character as a pupil and admirer of Sir Mulberry Hawk; *Nicholas Nickleby*, Dickens.

Vernon, Diana, the beautiful mistress of Osbaldistone Hall, a secret adherent of the Stuarts; *Rob Roy*, Scott.

Vicar of Wakefield. See *Primrose.*

Vincy, Rosamund, a heartless, extravagant girl, a failure both as a sister and as a wife; *Middlemarch*, G. Eliot.

Viola, a beautiful type of unselfish loyalty and courage; *Twelfth Night*, Shakespeare.

Virgil, the great Roman poet who is Dante's guide through the Inferno and the Purgatorio; *The Divine Comedy*, Dante.

Vivien, the wily enchantress who ensnared the wise Merlin; *Idylls of the King*, Tennyson.

Volpone, "the Fox," the type of a crafty hypocrite; *Volpone*, Ben Jonson.

Wadman, Widow, pursues "my Uncle Toby" with matrimonial intentions; *Tristram Shandy*, Sterne.

Wagg and Wenham, two despicable characters employed by the Marquis of Steyne to do his dirty work; *Vanity Fair*, Thackeray.

Wallenstein, an idealised portrait of the great Austrian general in the Thirty Years' War; *Wallenstein*, Schiller.

Wamba, jester of Cedric the Saxon; *Ivanhoe*, Scott.

Warrington, George, a barrister living by his pen, the life-long friend of Pendennis, a rugged, manly, genuine fellow; *Pendennis*, Thackeray.

Warrington, Madam Esmond, mother of the Virginians, an imperious dame, a queen in her colony; *The Virginians*, Thackeray.

Waverley, Captain Edward, hero of the novel so named; *Waverley*, Scott.

Wegg, Silas, ballad-monger and fruit seller, engaged by Mr. Boffin to read to him, proves a scoundrel; *Our Mutual Friend*, Dickens.

Weller, Sam, Mr. Pickwick's servant, one of the most original, amusing, and sterling characters ever depicted; *Pickwick Papers*, Dickens.

Weller, Tony, a misogynist when a widow was in question; *Pickwick Papers*, Dickens.

Wemmick, John, confidential clerk of Mr. Jaggers, fortifies his house as a mimic fortress; *Great Expectations*, Dickens.

Werther, a sentimental lover; *The Sorrows of Werther*, Goethe.

Western, Squire, ignorant of literature, irascible, generous, unpolished, convivial; *Tom Jones*, Fielding.

Western, Sophia, virtuous, beautiful, and amiable, marries and reforms Tom Jones; *Tom Jones*, Fielding.

Wickfield, Agnes, the charming, amiable, and sensible young lady who becomes David Copperfield's second wife; *David Copperfield*, Dickens.

Wildfire Madge, a young woman whose brain has been turned, in consequence of the murder of her illegitimate child; *Heart of Midlothian*, Scott.

Wild, Jonathan, a villain who had ten maxims and six wives; executed; *Jonathan Wild*, Defoe and Fielding.

Wildrake, Roger, a dissipated Royalist with many good parts; *Woodstock*, Scott.

Wilfer, Bella, wayward, playful, affectionate, giddy for want of some sustaining purpose, which love at length supplies; *Our Mutual Friend*, Dickens.

Wilfer, Mr. and Mrs., the former a poor, hen-pecked clerk with a large family; the latter famous for her headgear and indoor gloves; *Our Mutual Friend*, Dickens.

Willet, John and Joe, father and son, the former landlord of the Maypole, stolid, ruminative, and obstinate; the latter a fine young fellow who enlists and finally marries Dolly Varden; *Barnaby Rudge*, Dickens.

Willoughby, Sir Patterne, the unconsciously selfish and self-deluding baronet —"the Egoist"; *The Egoist*, Meredith.

Wimble, Will, a country Squire "well versed in all the little handicrafts of an idle man"; *Spectator*, Addison.

Witherington, the famous hero who "when his legs were smitten off did fight upon his stumps"; *Ballad of Chevy Chase.*

Wren, Jenny, the deformed child of a drunken father. The parts of father and child are reversed. She has to think and work for both of them; *Our Mutual Friend*, Dickens.

Yasodhara, the gentle bride of Prince Siddartha (Buddha); *The Light of Asia*, Edwin Arnold.

Yeo, Salvation, a sailor of Clovelly; "a tall man and black, and sweareth awfully in his talk"; *Westward Ho!* C. Kingsley.

Yorick, (1) Jester to the King of Denmark in Shakespeare's *Hamlet*; (2) Stands for Sterne himself in his *Tristram Shandy* and *Sentimental Journey.*

Zambullo, can see into every private dwelling; *Devil on Two Sticks*, Lesage.

Zanoni, alchemist, hero of the story; *Zanoni*, Bulwer Lytton.

Zelica, betrothed to Azim, who finally kills her, mistaking her for the "Veiled Prophet"; *Lalla Rookh*, Moore.

Zimri, (i.e. Buckingham), "stiff in opinions, always in the wrong, was everything by starts and nothing long"; *Absalom and Achitophel*, Dryden.

Zuleika, daughter of the pasha of Abydos, who shoots Selim, her lover, which causes her death; *Bride of Abydos*, Byron.

FAMILIAR QUOTATIONS.

ABSENCE.—Absence makes the heart grow fonder.
Isle of Beauty. Bayly.

ACTS.—
Our acts our angels are, or good or ill,
Our fatal shadows that walk by us still.
An Honest Man's Fortune. Beaumont and Fletcher.

ADVERSITY.—Sweet are the uses of adversity.
As You Like It. Shakespeare.
Adversity's sweet milk, philosophy.
Romeo and Juliet. Shakespeare.
The good are better made by ill,
As odours crushed are sweeter still.
Samuel Rogers.
Certainly virtue is like precious odours, more fragrant when they are incensed or crushed.
Of Adversity. Bacon.

AGE.—
The soul's dark cottage, battered and decayed,
Lets in new light through chinks which time has made;
Stronger by weakness, wiser men become,
As they draw near to their eternal home.
Waller.
Age cannot wither her, nor custom stale
Her infinite variety.
Antony and Cleopatra. Shakespeare.

ALCOHOL.—Crime may almost be said to be concentrated alcohol. *The Use of Life.* Lubbock.

ALLURED.—
And, as a bird each fond endearment tries,
To tempt her new-fledged offspring to the skies,
He tried each art, reproved each dull delay,
Allured to brighter worlds, and led the way.
The Deserted Village. Goldsmith.

ALONE.—They are never alone that are accompanied with noble thoughts. *Arcadia.* Sir P. Sidney.
I am never less at leisure than when at leisure, nor less alone than when alone.
Publius Scipio Africanus.

AMBITION.—
When that the poor have cried, Cæsar hath wept,
Ambition should be made of sterner stuff.
Julius Cæsar. Shakespeare.
Cromwell, I charge thee, fling away ambition;
By that sin fell the angels.
Henry VIII. Shakespeare.
Wild ambition loves to slide, not stand,
And fortune's ice prefers to virtue's land.
Absalom and Achitophel. Dryden.

ANGELS.—But sad as angels for the good man's sin,
Weep to record, and blush to give it in.
Pleasures of Hope. Campbell.
Like angel visits, few and far between.
Pleasures of Hope. Campbell.

ARGUE—Not to know me, argues yourselves unknown,
The lowest of your throng.
Paradise Lost. Book IV. Milton.
In arguing, too, the parson owned his skill,
For e'en though vanquished, he could argue still.
The Deserted Village. Goldsmith.

ART.—Art is long and time is fleeting.
A Psalm of Life. Longfellow.
One science only will one genius fit;
So vast is art, so narrow human wit.
An Essay on Criticism. Pope.
Art was given for that;
God uses us to help each other so,
Lending our minds out.
Fra Lippo Lippi. R. Browning.

ASHES.—Even in our ashes live their wonted fires.
Elegy. Gray.

BARREN.—I pity the man who can travel from Dan to Beersheba, and cry "'Tis all barren."
Sentimental Journey. L. Sterne.

BEAUTY.—
A thing of beauty is a joy for ever.
Endymion, Keats.
'Tis beauty calls and glory leads the way.
Alexander the Great. Lee.
Fair tresses man's imperial race insnare,
And beauty draws us with a single hair.
Rape of the Lock. Pope.
Beauty is truth, truth beauty,—that is all
Ye know on earth, and all ye need to know.
Ode on a Grecian Urn. Keats.

BEST THINGS.—
A man's best things are nearest him,
Lie close about his feet.
The Men of Old. Lord Houghton.

BIRTH.—Our birth is nothing but our death begun.
Night Thoughts. Young.
Death borders upon our birth, and our cradle stands in the grave. *Epistles.* Bishop Hall.
Our birth is but a sleep and a forgetting.
(See under *Soul.*)

BOOKS.—Some books are to be tasted, others to be swallowed, and some few to be chewed and digested.
Essays. Bacon.
Deep vers'd in books, and shallow in himself.
Paradise Regained. Book IV. Milton.
Books cannot always please, however good;
Minds are not ever craving for their food.
Schools. Crabbe.
'Tis pleasant, sure, to see one's name in print;
A book's a book, although there's nothing in't.
English Bards and Scotch Reviewers. Byron.
The mighty minds of old;
My never-failing friends are they,
With whom I converse day by day.
Occasional Pieces. Southey.
And this our life exempt from public haunt,
Finds tongues in trees, books in the running brooks,
Sermons in stones, and good in everything.
As You Like It. Shakespeare.
A good book is the precious life-blood of a master-Spirit, embalmed and treasured up on purpose to a life beyond life. *Areopagitica.* Milton.
Learning hath gained most by those books by which the printers have lost. *Of Books.* Fuller.

BORROWER.—Neither a borrower nor a lender be,
For loan oft loses both itself and friend.
Hamlet. Shakespeare.

BOURN.—
The undiscover'd country from whose bourn
No traveller returns. *Hamlet.* Shakespeare.

BRAVE.—None but the brave deserve the fair.
Alexander's Feast. Dryden.

BREAD.—Bread is the staff of life.
Tale of a Tub. Swift.

BUILDERS.—
In the elder days of Art
Builders wrought with greatest care
Each minute and unseen part,
For the gods see everywhere.
The Builders. Longfellow.
He builded better than he knew,
The conscious stone to beauty grew. Emerson.

CAKE.—Wouldst thou both eat thy cake and have it?
The Size. Herbert.

CANDLE.—
How far that little candle throws its beams,
So shines a good deed in a naughty world.
Merchant of Venice. Shakespeare.

CAVIARE.—'Twas caviare to the general.
Hamlet. Shakespeare.

CHAIN.—
From Nature's chain whatever link you strike,
Tenth or ten thousandth, breaks the chain alike.
Essay on Man. Pope.

CHANCE.—
All nature is but art, unknown to thee;
All chance, direction, which thou canst not see.
Essay on Man. Pope.
And grasps the skirts of happy chance,
And breaks the blows of circumstance.
In Memoriam. Tennyson.
A lucky chance, that oft decides the fate of mighty monarchs.
Summer. Thomson.

CHANGE.—Let the great world spin for ever down the ringing grooves of change.
Locksley Hall. Tennyson.
What, have fear of change from Thee
Who art ever the same!
Abt Vogler. Browning.
The old order changeth, yielding place to new,
And God fulfils Himself in many ways,
Lest one good custom should corrupt the world.
The Passing of Arthur. Tennyson.

CHARACTER.—Character is destiny. Novalis.
That inexorable law of human souls, that we prepare ourselves for sudden deeds by the reiterated choice of good or evil which gradually determines character.
Romola. George Eliot.

CHARITY.—
In Faith and Hope the world will disagree,
But all mankind's concern is charity.
Essay on Man. Pope.

CHARMER.—
How happy could I be with either,
Were t'other dear charmer away.
Beggars' Opera. Gay.

CHARMS.—
Charms strike the sight, but merit wins the soul.
The Rape of the Lock. Pope.

CHICKENS.—
To swallow gudgeons ere they're catched,
And count their chickens ere they're hatched.
Hudibras. Butler.

CHIEL.—A chiel's amang you takin' notes,
And, faith, he'll prent it.
Captain Grose's Peregrinations. Burns.

CHILDHOOD.—The childhood shows the man,
As morning shows the day.
Paradise Regained. Book IV. Milton.

COMMENTATORS.—
Give me Commentators plain,
Who with no deep researches vex the brain;
Who from the dark and doubtful love to run,
And hold their glimmering tapers to the sun.
Parish Register. Book IV. Crabbe.

CONCEALMENT.—
She never told her love,
But let concealment, like a worm in the bud,
Feed on her damask cheek.
Twelfth Night. Shakespeare.

CONFUSION.—With ruin upon ruin, rout on rout,
Confusion worse confounded.
Paradise Lost. Book II. Milton.

CONSCIENCE.—Thus Conscience does make cowards of us all. *Hamlet.* Shakespeare.
A peace above all earthly dignities,
A still and quiet conscience.
Henry VIII. Shakespeare.
I made them lay their hands in mine and swear
To reverence their king, as if he were
Their Conscience, and their Conscience as their king.
The Round Table. Tennyson.

CONSTABLE.—Thou hast
Outrun the constable at last.
Hudibras. Butler.

CONSUMMATION.—
'Tis a consummation
Devoutly to be wished. *Hamlet.* Shakespeare.

CONVERSE.—
Form'd by thy converse, happily to steer
From grave to gay, from lively to severe.
Essay on Man. Pope.
There studious let me sit,
And hold high converse with the mighty dead.
Winter. Thomson.

COUNTRY.—God made the country and man made the town. *The Task.* Cowper.

COURAGE.—Life is mostly froth and bubble, &c.
(See under *Kindness*).

COURTESY.—I am the very pink of courtesy.
Romeo and Juliet. Shakespeare.

CRITICAL.—I am nothing if not critical.
Othello. Shakespeare.

CROWN. Uneasy lies the head that wears a crown.
King Henry IV. Part II. Shakespeare.

CRUEL.—I must be cruel, only to be kind.
Hamlet. Shakespeare.

CUCKOO.—O cuckoo! shall I call thee bird,
Or but a wandering voice?
To the Cuckoo. Wordsworth.

CULTURE.—The great law of culture is: Let each become all that he was created capable of being.
Essays. Carlyle.

CUP.—Life's enchanted cup but sparkles near the brim.
Childe Harold. Byron.

CUSTOM.— It is a custom
More honour'd in the breach than the observance.
Hamlet. Shakespeare.
The tyrant custom, most grave senators,
Hath made the flinty and steel couch of war
My thrice-driven bed of down.
Othello. Shakespeare.
The slaves of custom are the sport of time.
Novum Organum. Bacon.
Men think according to nature, speak according to precept, but act according to custom.
Novum Organum. Bacon.
Lest one good custom should corrupt the world.
(See under *Change*).

CUT.—This was the most unkindest cut of all.
Julius Cæsar. Shakespeare.

CYNOSURE.—The Cynosure of neighbouring eyes.
L'Allegro. Milton.

DANGER.—Out of this nettle, danger, we pluck this flower, safety. *King Henry IV. Part I.* Shakespeare.

DARKNESS.—
Yet from those flames
No light but rather darkness visible.
Paradise Lost. Book I. Milton.

DEATH.—How wonderful is Death!
Death and his brother Sleep.
Queen Mab. Shelley.
Death came with friendly care (see under *Sin*).
The sense of death is most in apprehension.
Measure for Measure. Shakespeare.
Knowledge by suffering entereth,
And life is perfected by death.
A Vision of Poets. E. B. Browning.
'Tis not the whole of life to live,
Nor all of death to die.
The Issues of Life and Death. Montgomery.
Cowards die many times before their deaths;
The valiant never taste of death but once.
Julius Cæsar. Shakespeare.
Dear beauteous Death, the jewel of the just.
H. Vaughan.
And like the hand which ends a dream,
Death with the might of his sunbeam,
Touches the flesh and the soul awakes.
The Flight of the Duchess. R. Browning.

DEATH.—
There is no Death! What seems so is transition;
This life of mortal breath
Is but a suburb of the life Elysian,
Whose portal we call Death.
Resignation. Longfellow.

Death is the veil which those who live call life;
They sleep, and it is lifted.
Prometheus Unbound. Shelley.

Who could have thought such darkness lay concealed
Within thy beams, O Sun! or who could find,
Whilst flower and leaf and insect stood revealed,
That to such countless orbs thou mad'st us blind!
Why do we then shun Death with anxious strife?
If Light can thus deceive, wherefore not Life?
To Night. Blanco White.

DEGREES.—Fine by degrees and beautifully less.
Henry and Emma. Prior.

DESPAIR.—Shall I, wasting in despair,
Die because a woman's fair?
The Shepherd's Resolution. Whittier.

DEVIL. The Devil can cite Scripture for his purpose.
The Merchant of Venice. Shakespeare.

He will give the Devil his due.
King Henry IV. Part I. Shakespeare.

The Devil hath power
To assume a pleasing shape.
Hamlet. Shakespeare.

Devil take the hindmost.
Bonduca. Beaumont and Fletcher.

He must needs go that the Devil drives.
All's Well That Ends Well. Shakespeare.

DIFFICULTY.—Difficulty adds to result, as the ramming of the powder sends the bullet further.
R. Falconer. G. Macdonald.

DISEASES.—
Diseases, desperate grown,
By desperate appliance are relieved,
Or not at all. *Hamlet.* Shakespeare.

DISTANCE.—
'Tis distance lends enchantment to the view,
And robes the mountain in its azure blue.
Pleasures of Hope. Campbell.

DITCH, THE LAST.—"There is one certain means," replied the prince, "by which I can be sure never to see my country's ruin, I will die in the last ditch."
Saying of William of Orange, quoted by HUME.

DIVINITY.—
There's a divinity that shapes our ends,
Rough hew them how we will.
Hamlet. Shakespeare.

Why shrinks the soul
Back on herself, and startles at destruction?
'Tis the divinity that stirs within us.
Cato. Addison.

DOCTORS.—
Who shall decide, when doctors disagree,
And soundest casuists doubt like you and me?
Moral Essays. Pope.

DOUBTS.—
Our doubts are traitors,
And make us lose the good we oft might win
By fearing to attempt.
Measure for Measure. Shakespeare.

DREAMS.—
We are such stuff
As dreams are made of, and our little life
Is rounded with a sleep.
The Tempest. Shakespeare.

DRUDGERY.—A servant with this clause
Makes drudgery divine;
Who sweeps a room as for Thy laws
Makes that and the action fine.
The Elixir. George Herbert.

DUST.—To the vile dust from whence he sprung
Unwept, unhonoured, and unsung.
The Lay of the Last Minstrel. Scott.

DUST.—
Can honour's voice provoke the silent dust,
Or flattery soothe the dull cold ear of death?
Elegy in a Country Churchyard. Gray.

DUTY.—He holds no parley with unmanly fears;
Where duty bids, he confidently steers.
Wordsworth.

When I'm not thanked at all, I'm thanked enough;
I've done my duty and I've done no more.
Tom Thumb the Great. Fielding.

The primal duties shine aloft, like stars;
The charities that soothe, and heal, and bless,
Are scattered at the feet of man, like flowers.
The Excursion. Wordsworth.

Stern daughter of the voice of God!
Ode to Duty. Wordsworth.

Never can anything be amiss
When simpleness and duty tender it.
Midsummer Night's Dream. Shakespeare.

Not once or twice in our rough island-story
The path of duty was the way of glory.
Duke of Wellington. Tennyson.

EARTH.—For so the whole round earth is every way
Bound by gold chains about the feet of God.
The Passing of Arthur. Tennyson.

EDUCATION.—
'Tis education forms the common mind;
Just as the twig is bent the tree's inclined.
Moral Essays. Pope.

We advocate education, not merely to make the man the better workman, but the workman the better man.
The Use of Life. Lubbock.

ENEMY.—O that men should put an enemy in their mouths to steal away their brains. *Othello.* Shakespeare.

ENGLAND.—
Nought shall make us rue,
If England to itself do rest but true.
King John. Shakespeare.

This royal throne of kings, this sceptred isle,
This earth of majesty, this seat of Mars,
This other Eden, demi-paradise,
This fortress built by Nature for herself
Against infection and the hand of war,
This happy breed of men, this little world,
This precious stone set in the silver sea.
King Richard II. Shakespeare.

Slaves cannot breathe in England: if their lungs
Receive our air, that moment they are free;
They touch our country and their shackles fall.
The Task. Cowper.

ENSLAVED.—
All spirits are enslaved that serve things evil.
Prometheus Unbound. Shelley.

EPITOME.—
A man so various that he seemed to be
Not one, but all mankind's epitome;
Stiff in opinions, always in the wrong,
Was everything by starts, and nothing long,
Absalom and Achitophel. Dryden.

ERR.—To err is human, to forgive divine.
Essay on Criticism. Pope.

EVENTS.—
'Tis the sunset of life gives me mystical lore,
And coming events cast their shadows before.
Lochiel's Warning. Campbell.

EVERYONE. Everyone is as God made him, and oftentimes a great deal worse. *Don Quixote.* Cervantes.

Everyone can master a grief, but he that has it.
Much Ado About Nothing. Shakespeare.

EVIL.—There is some soul of goodness in things evil,
Would men observingly distil it out.
King Henry V. Shakespeare.

The evil that men do lives after them,
The good is oft interred with their bones.
Julius Cæsar. Shakespeare.

EVIL.—
But evil is wrought by want of thought
As well as want of heart.
The Lady's Dream. Hood.

FACE.—If to her share some female errors fall,
Look on her face, and you'll forget them all.
Rape of the Lock. Pope.

FACTS.—Facts are stubborn things.
Gil Blas (translated by) Smollett.

FAILURE.—How far high failure overleaps the bound
Of low successes. *Marsyas.* Lewis Morris.
Better to have failed in the high aim, as I,
Than vulgarly in the low aim succeed.
The Inn Album. R. Browning.

FAITH.—Perplext in faith, but pure in deeds
At last he beat his music out.
There lives more faith in honest doubt
Believe me, than in half the creeds.
In Memoriam. Tennyson.
For modes of faith let graceless zealots fight;
His can't be wrong whose life is in the right.
Essay on Man. Pope.
We have but faith; we cannot know;
For knowledge is of things we see;
And yet we trust it comes from Thee,
A beam in darkness; let it grow.
In Memoriam. Tennyson.

FAME.—
Fame is the spur that the clear spirit doth raise
(That last infirmity of noble mind)
To scorn delights, and live laborious days;
Lycidas. Milton.
Who builds a church to God, and not to fame,
Will never mark the marble with his name.
Moral Essays. Pope.
Fame makes a quick messenger but a rash judge.
Novum Organum. Bacon.
Fame, like a river, buoys up things light and swollen, but drowns those that are weighty.
Novum Organum. Bacon.

FASHION.—The glass of fashion and the mould of form,
The observed of all observers.
Hamlet. Shakespeare.
The fashion wears out more apparel than the man.
Much Ado About Nothing. Shakespeare.
Thou art not for the fashion of these times
Where none will sweat, but for promotion.
As You Like It. Shakespeare.

FATE.—
Heaven from all creatures hides the book of fate,
All but the page prescribed—their present state;
From brutes what men, from men what spirits know;
Or who could suffer being here below?
Essay on Man. Pope.

FEARS.—
He either fears his fate too much,
Or his deserts are small,
Who dares not put it to the touch
To win or lose it all. Montrose.

FEET.—
Her feet have touched the meadows
And left the daisies rosy.
Quoted in *Sesame and Lilies.* RUSKIN.

FLATTERY.—Flattery is the varnish of vice.
Novum Organum. Bacon.
'Tis an old maxim of the schools,
That flattery's the food of fools;
Yet now and then your men of wit
Will condescend to take a bit.
Cadenus and Vanessa. Swift.

FLOWER.— But through all this tract of years
Wearing the white flower of a blameless life.
Idylls of the King (*Dedication*). Tennyson.
Flowers to these "spirits in prison" are all
They can know of the Spring,
They freshen and sweeten the wards like
The waft of an angel's wing.
Flowers in a Hospital. Tennyson.

FLOWER.—None of all the flowers ye prize
But was nursed by weeping skies.

Full many a flower is born to blush unseen,
And waste its sweetness on the desert air.
Elegy. Gray.

FOOL.—The fool doth think he is wise, but the wise man knows himself to be a fool.
As You Like It. Shakespeare.
Be wise with speed;
A fool at forty is a fool indeed.
Love of Fame. Young.
For fools rush in where angels fear to tread.
Essay on Criticism. Pope.
No creature smarts so little as a fool.
Epistle to Dr. Arbuthnot. Pope.
A fool must now and then be right by chance.
Conversation. Cowper.
Truth from his lips prevailed with double sway:
And fools, who came to scoff, remained to pray.
The Deserted Village. Goldsmith.
They fool me to the top of my bent.
Hamlet. Shakespeare.

FORCE.— Who overcomes
By force, hath overcome but half his foe.
Paradise Lost. Milton.

FORGET (Lest we).—
God of our fathers, known of old,
Lord of our far-flung battle line,
Beneath whose awful hand we hold
Dominions over palm and pine—
Lord God of Hosts, be with us yet,
Lest we forget! lest we forget!
Recessional. Rudyard Kipling.

FRIEND.—The friends thou hast, and their adoption tried,
Grapple them to thy soul with hooks of steel.
Hamlet. Shakespeare.
But of all plagues, good Heaven, thy wrath can send,
Save, save, oh save me from the candid friend.
The New Morality. Canning.
Old friends are best. *Judgments.* Selden.
For he that wrongs his friend
Wrongs himself more, and ever bears about
A silent court of justice in his heart;
Himself the judge and jury, and himself
The prisoner at the bar, ever condemned.
Sea Dreams. Tennyson.

FRIENDSHIP.—
Friendship is constant in all other things,
Save in the office and affairs of love.
Much Ado About Nothing. Shakespeare.
Friendship redoubleth joys and cutteth griefs in halves.
Of Friendship. Bacon.
They seem to take away the sun from the world who withdraw friendship from life.
On Friendship. Cicero.

GENIUS.—Genius is an infinite capacity for taking pains.
Frederick the Great. Carlyle.
The true genius is a mind of large general powers accidentally determined to some particular direction.
Johnson.

GIVE, GIFT.—Give every man thine ear, but few thy voice.
Hamlet. Shakespeare.
Rich gifts wax poor, when givers prove unkind.
Hamlet. Shakespeare.
Give an inch he'll take an ell.
Sir Thomas Wyatt. Webster.
Do not look a gift horse in the mouth.
Hudibras. Butler.

GLOBE, THE GREAT.—
And, like the baseless fabric of this vision,
The cloud-capp'd towers, the gorgeous palaces,
The solemn temples, the great globe itself,
Yea, all which it inherit, shall dissolve;
And, like this insubstantial pageant faded,
Leave not a rack behind.
The Tempest. Shakespeare.

GLORY.—But trailing clouds of glory do we come.
(See under *Infancy.*)

Who pants for glory, finds but short repose,
A breath revives him, or a breath o'erthrows.
Epistles of Horace. Pope.

The ways of glory. (See under *Duty.*)

GODS.—Whom the gods love die young.
Don Juan. Byron.

Take the good the gods provide thee.
Alexander's Feast. Dryden.

GOLD.—To gild refined gold, to paint the lily,
To throw a perfume on the violet.
King John. Shakespeare.

GOOD.—Do good by stealth, and blush to find it fame.
The Satires. Pope.

And learn the luxury of doing good.
The Traveller. Goldsmith.

O yet we trust that somehow good
Will be the final goal of ill. *In Memoriam.* Tennyson.

Behold, we know not anything.
I can but trust that good shall fall
At, last far off, at last, to all,
And every winter turn to spring.
In Memoriam. Tennyson.

GRATITUDE.—The gratitude of a place expectants is a lively sense of future favours. *Walpoliana.* Walpole.

I've heard of hearts unkind, kind deeds
With coldness still returning;
Alas! the gratitude of men
Hath oftener left me mourning.
Simon Lee. Wordsworth.

GRAVE.—Life is real! life is earnest!
And the grave is not its goal.
Psalm of Life. Longfellow.

The grave itself is but a covered bridge
Leading from light to light through a brief darkness.
Golden Legend. Longfellow.

GREAT, GREATNESS.—Some are born great, some achieve greatness, and some have greatness thrust upon them.
Twelfth Night. Shakespeare.

None think the great unhappy, but the great.
Love of Fame. Young.

And in me there dwells
No greatness, save it be some far-off touch
Of greatness to know well I am not great.
Lancelot and Elaine. Tennyson.

GRIEF.—In all the silent manliness of grief.
The Deserted Village. Goldsmith.

GUEST.—Welcome the coming, speed the parting guest.
Odyssey. (Pope's translation of) Homer.

GUIDE.—Thou wert my guide, philosopher, and friend.
Essay on Man. Pope.

HABITS.—Ill habits gather by unseen degrees,
As brooks make rivers, rivers run to seas.
Metamorphoses. (Dryden's translation of) Ovid.

Small habits well pursued betimes
May reach the dignity of crimes.
Florio. H. Moore.

Sow an action, reap a habit; sow a habit, reap a character; sow a character, reap a destiny.
Boardman.

HANDSOME.—Handsome is that handsome does.
Vicar of Wakefield. Goldsmith.

HAPPINESS.—That action is best which procures the greatest happiness for the greatest number.
Inquiry Concerning Moral Good and Evil. Hutcheson.

All who joy would win
Must share it,—happiness was born a twin.
Don Juan. Bryon.

Domestic Happiness! thou only bliss
Of Paradise that has surviv'd the fall!
The Garden. Cowper.

O happiness! our being's end and aim!
Good, pleasure, ease, content! whate'er thy name:
That something still which prompts th' eternal sigh,
For which we bear to live, or dare to die.
Essay on Man. Pope.

HARMONY.—
Look how the floor of heaven
Is thick inlaid with patines of bright gold;
There's not the smallest orb that thou beholds't
But in his motion like an angel sings,
Still quiring to the young-eyed cherubims:
Such harmony is in immortal souls;
But, whilst this muddy vesture of decay
Doth grossly close it in, we cannot hear it.
Merchant of Venice. Shakespeare.

HEAD.—
And still they gazed and still the wonder grew
That one small head could carry all he knew.
The Deserted Village. Goldsmith.

HEALTH, HEALTHY.—
Better to hunt in fields for health unbought,
Than fee the doctor for a nauseous draught.
The wise for cure on exercise depend;
God never made his work for man to mend.
Cymon and Iphigenia. Dryden.

A healthy body is the tabernacle, but a sickly one the prison of the soul. *Essays.* Bacon.

HEART.—
It is the secret sympathy,
The silver link, the silken tie,
Which heart to heart, mind to mind,
In body and in soul can bind.
The Lay of the Last Minstrel. Scott.

Faint heart ne'er won fair lady.
Love Laughs at Locksmiths. Colman.

And many a word at random spoken.
May soothe, or wound, a heart that's broken!
The Lord of the Isles. Scott.

Never morning wore
To evening, but some heart did break.
In Memoriam. Tennyson.

A merry heart goes all the day,
Your sad tires in a mile-a.
Winter's Tale. Shakespeare.

Thou Lord hast made us for Thyself: therefore our hearts are restless until they rest in Thee.
St. Augustine.

HEAVEN.—
If God hath made this world so fair,
Where sin and death abound,
How beautiful beyond compare
Will heaven itself be found.
God's Goodness. Montgomery.

Bubbles we buy with a whole soul's tasking;
'Tis heaven alone that is given away,
'Tis only God may be had for the asking,
No price is set on the lavish summer;
June may be had by the poorest comer.
The Vision of Sir Launfal. Lowell.

I have been there and still would go,
'Tis like a little heaven below.
Divine Songs. Watts.

HEROES.—Heroes, it would seem, exist always, and a certain worship of them! We will also take the liberty to deny altogether that of the witty Frenchman, that no man is a hero to his valet-de-chambre. Or, if so, it is not the heroe's blame but the valet's.
Hero Worship. Carlyle.

HIGHEST.—We needs must love the highest when we see it.
Guinevere. Tennyson.

HOME.—
'Mid pleasures and palaces though we may roam,
Be it ever so humble there's no place like home.
Home, Sweet Home. Payne.

Home-keeping youth have ever homely wits.
Two Gentlemen of Verona. Shakespeare.

Such is the patriot's boast, where'er we roam,
His first, best country ever is at home.
The Traveller. Goldsmith.

From God, who is our home.
(See under *Infancy.*

HONEST, HONESTY.—An honest man's the noblest work of God. *Essay on Man.* Pope.
Honest labour bears a lovely face.
Patient Grissell. Dekker.

HONOUR.—
Honour and shame from no condition rise;
Act well your part, there all the honour lies.
Essay on Man. Pope.
War, he sung, is toil and trouble,
Honour but an empty bubble.
Alexander's Feast. Dryden.
I could not love thee, dear, so much,
Loved I not honour more.
To *Lucasta.* Lovelace.
Mine honour is my life.
(See under *Reputation*).

HOPE.—Hope springs eternal in the human breast,
Man never is but always to be blest.
Essay on Man. Pope.
True hope is swift, and flies with swallow's wings;
Kings it makes gods, and meaner creatures kings.
King Richard III. Shakespeare.
All hope abandon—ye who enter here.
Inferno. Dante.
While there is life there's hope, he cried.
The Sick Man and The Angel. Gay.

HOSTAGES.—He that hath wife and children hath given hostages to fortune; for they are impediments to great enterprises, either of virtue or mischief.
Essay on Marriage. Bacon.

HOUSE.—For a man's house is his castle.
Third Institute. Sir Edward Coke.

HYPOCRISY.—Hypocrisy is a sort of homage that vice pays to virtue. *Maxims.* Duc de Rochefoucauld.

IDEA.—
Delightful task, to rear the tender thought,
To teach the young idea how to shoot.
The Seasons (Spring). Thomson.

IDEALS.—Still through our paltry stir and strife
Glows down the wished Ideal,
And longing moulds in clay what life
Carves in the marble Real;
To let the new life in we know
Desire must ope the portal;
Perhaps the longing to be so
Helps make the soul immortal.
J. R. Lowell.

IDLER, IDLENESS.—
An idler is a watch that wants both hands,
As useless if it goes as if it stands.
Retirement. Cowper.

IF.—Your If is the only peacemaker; much virtue in If.
As You Like It. Shakespeare.

IGNORANCE.—Where ignorance is bliss
'Tis folly to be wise.
On a distant prospect of Eton College. Gray.

ILLS.—And makes us rather bear those ills we have,
Than fly to others that we know not of?
Hamlet. Shakespeare.

IMPEACHMENT.—I own the soft impeachment, pardon my blushes. *Rivals.* Sheridan.

IMPERFECTION.—But, accurately speaking, no good work whatever can be perfect, and the demand for perfection is always a misunderstanding of the ends of art.
Stones of Venice. Ruskin.
On earth the broken arcs; in heaven a perfect round.
Abt Vogler. Browning.

INEBRIATE.— The cups
That cheer but not inebriate.
The Task. Cowper.

INFANCY.— Not in entire forgetfulness,
And not in utter nakedness,
But trailing clouds of glory do we come
From God, who is our home.
Heaven lies about us in our infancy!
Intimations of Immortality. Wordsworth.

INFANT.— But what am I?
An infant crying in the night:
An infant crying for the light:
And with no language but a cry.
In Memoriam. Tennyson.

INGRATITUDE.—Blow, blow, thou winter wind,
Thou art not so unkind
As man's ingratitude.
As You Like It. Shakespeare.

JEALOUSY.—
O, beware, my lord, of jealousy;
It is the green-eyed monster which doth mock
The meat it feeds on. *Othello.* Shakespeare.

JEST.—Of all the griefs that harass the distrest,
Sure the most bitter is a scornful jest.
London. Johnson.
The Right Honourable gentleman is indebted to his memory for his jests, and to his imagination for his facts. *In Reply to Mr. Dundas.* Sheridan.
He jests at scars that never felt a wound.
Romeo and Juliet. Shakespeare.

JEWEL.—And I as rich in having such a jewel,
As twenty seas, if all their sand were pearl,
The water nectar, and the rocks pure gold.
Two Gentlemen of Verona. Shakespeare.

JUNE.—
And what is so rare as a day in June?
Then, if ever, come perfect days;
Then heaven tries the earth if it be in tune,
And over it softly her warm ear lays.
The Vision of Sir Launfal. Lowell.

JUSTICE.— Yet I shall temper so
Justice with mercy. . . .
Paradise Lost. Book X. Milton.
Though justice be thy plea, consider this,—
That in the course of justice none of us
Should see salvation.
The Merchant of Venice. Shakespeare.

KIND.— Be to her virtues very kind;
Be to her faults a little blind.
An English Padlock. Matthew Prior.
A fellow-feeling makes one wondrous kind.
Prologue on Quitting the Stage. Garrick.

KINDNESS.—
That best portion of a good man's life,
His little, nameless, unremembered acts
Of kindness and of love.
Tintern Abbey. Wordsworth.
Life is mostly froth and bubble;
Two things stand like stone—
Kindness in another's trouble
Courage in your own.
Bush Ballads. A. L. Gordon.

KNOWLEDGE.—Knowledge is power.
Meditationes Sacræ. Bacon.
Knowledge is proud that he hath learn'd so much;
Wisdom is humble that he knows no more.
Winter Walk at Noon. Cowper.
Let knowledge grow from more to more,
But more of reverence in us dwell;
That mind and soul according well,
May make one music as before.
In Memoriam. Tennyson.
To be conscious that you are ignorant is a great step to knowledge. *Sybil.* Disraeli.
Knowledge is now no more a fountain sealed:
Drink deep, until the habits of the slave,
The sins of emptiness, gossip and spite
And slander, die. Better not be at all
Than not be noble. *The Princess.* Tennyson.

LADDER.—
Alas! we make
A ladder of our thoughts, where angels step,
But sleep ourselves at the foot: our high resolves
Look down upon our slumbering acts. Landon.

LAND.—They love their land, because it is their own,
And scorn to give aught other reason why.
Connecticut. Halleck.

Breathes there the man with soul so dead,
Who never to himself hath said,
This is my own, my native land!
Whose heart has ne'er within him burned
As home his footsteps he hath turned
From wandering on a foreign strand?
Lay of the Last Minstrel. Scott.

LANGUAGE.—
Where nature's end of language is declined,
And men talk only to conceal the mind.
Love of Fame. Young.

LARK.—"Up, up, up," called the watchman lark,
In his clear réveillée: "Hearken, oh hark!
Press to the high goal, fly to the mark."
The Prince's Progress. C. Rossetti.

The busy lark, the messenger of day,
Saluëth in her song the morrow gray,
And fiery Phœbus riseth up so brightë
That all the orient laugheth of the lightë,
And with his stremës dryeth in the grevës
The silver droppës hanging on the leavës.
The Knight's Tale. Chaucer.

LAUGH.—
And if I laugh at any mortal thing,
'Tis that I may not weep.
Don Juan. Byron.

The watch-dog's voice that bayed the whispering wind,
And the loud laugh that spoke the vacant mind.
The Deserted Village. Goldsmith.

LAW.—Of law there can be no less acknowledged, than that her seat is the bosom of God, her voice the harmony of the world. *Ecclesiastical Polity.* Hooker.

Where law ends, tyranny begins.
Speech, January, 1770. Pitt.

Wise laws and just restraints are to a noble nation not chains, but chain-mail.
The Two Paths. Ruskin.

LEAP.—Look before you ere you leap,
For as you sow, y'are like to reap.
Hudibras. Butler.

LEARN, LEARNING.—With just enough of learning to misquote.
English Bards and Scotch Reviewers. Byron.

A little learning is a dangerous thing;
Drink deep or taste not the Pierian spring.
Pope.

Still achieving, still pursuing,
Learn to labour and to wait.
A Psalm of Life. Longfellow.

LIBERTY.—O liberty! liberty! how many crimes are committed in thy name. Madame Roland.

Liberty's in every blow!
Let us do or die.
Bannockburn. Burns.

Give me again my hollow tree,
A crust of bread and liberty. *Satires.* Pope.

LIE.—Dare to be true, nothing can need a lie;
A fault which needs it most grows two thereby.
The Church Porch. Herbert.

To say that a man lieth is as much as to say that he is brave towards God, and a coward towards men.
Of Truth. Bacon.

A lie which is all a lie
May be met and fought with outright,
But a lie which is part a truth
Is a harder matter to fight.
The Grandmother. Tennyson.

LIFE, LIVES.—
That life is long which answers life's great end.
Night Thoughts. Young.

One crowded hour of glorious life
Is worth an age without a name.
Old Mortality. Scott.

LIFE, LIVES.—
Tell me not, in mournful numbers,
"Life is but an empty dream!"
A Psalm of Life. Longfellow.

Lives of great men all remind us
We can make our lives sublime,
And, departing, leave behind us
Footprints on the sands of time.
A Psalm of Life. Longfellow.

Life, like a dome of many-coloured glass,
Stains the white radiance of eternity,
Until death tramples it to fragments.
Adonais. Shelley.

Life is mostly froth and bubble, &c.
(See under *Kindness*).

After life's fitful fever he sleeps well.
Macbeth. Shakespeare.

To live in hearts we leave behind
Is not to die. *Hallowed Ground.* Campbell.

The morn that ushered thee to life, my child,
Saw thee in tears whilst all around thee smiled.
When summoned hence to thy eternal sleep
O mayst thou smile whilst all around thee weep.
From the Arabic.

Life, we have been long together
Through pleasant and through cloudy weather;
'Tis hard to part when friends are dear,
Perhaps 'twill cost a sigh, a tear.
Then steal away, give little warning
Choose thine own time
Say not "Good night," but in some brighter clime
Bid me "Good morning."
Mrs. Barbauld.

I slept and dreamed that life was beauty,
I woke and found that life was duty.
Life a Duty. E. S. Hooper.

LIGHT.—
He that has light within his own clear breast,
May sit i' the centre, and enjoy bright day;
But he that hides a dark soul and foul thoughts,
Benighted walks under the mid-day sun:
Himself is his own dungeon. *Comus.* Milton.

Storied windows richly dight,
Casting a dim religious light.
Il Penseroso. Milton.

LIPS.—Our spirits rushed together at the touching of the lips. *Locksley Hall.* Tennyson.

LITTLE.—A little fire is quickly trodden out,
Which, being suffered, rivers cannot quench.
King Henry VI. Shakespeare.

Man wants but little here below,
Nor wants that little long.
The Hermit. Goldsmith.

LIVE.—We that live to please must please to live.
Prologue. Dr. Johnson.

All that live must die,
Passing through nature to eternity.
Hamlet. Shakespeare.

LOOK.—To look is much less easy than to overlook.
The Pleasures of Life. Lubbock.

Look before you leap. *Hudibras.* Butler.

LOVE.—O, how this spring of love resembleth
The uncertain glory of an April day!
Two Gentlemen of Verona. Shakespeare.

The course of true love never did run smooth.
A Midsummer Night's Dream. Shakespeare.

Love looks not with the eyes, but with the mind,
And therefore is wing'd Cupid painted blind.
A Midsummer Night's Dream. Shakespeare.

Of one that lov'd, not wisely but too well.
Othello. Shakespeare.

I could not love thee, dear, so much,
Loved I not honour more.
To Lucasta. Lovelace.

Pains of love be sweeter far
Than all other pleasures are.
Tyrannic Love. Dryden.

LOVE.—
To love her was a liberal education.
The Tatler. Steele.
Love took up the harp of life, and
smote on all the chords with might,
Smote the chord of self, which trembling
passed in music out of sight.
Locksley Hall. Tennyson.
But to see her was to love her,
Love but her, and love for ever.
Song. Ae Fond Kiss. Burns.
Man's love is of man's life a thing apart,
'Tis woman's whole existence.
Don Juan. Byron.
'Tis better to have loved and lost,
Than never to have loved at all.
In Memoriam. Tennyson.
'Tis well to be off with the old love
Before you are on with the new.
Bertram. Maturin.
A simple fireside thing, whose quiet smile
Can warm earth's poorest hovel to a home.
J. R. Lowell.
Many waters cannot quench love, neither can the floods drown it. *Song of Solomon.*
There's nothing half so sweet in life
As love's young dream.
Irish Melodies. Moore.
They sin who tell us love can die.
The Curse of Kehama. R. Southey.
Love is indestructible;
Its holy flame for ever burneth,
From heaven it came, to heaven returneth.
The Curse of Kehama. R. Southey.
Love can hope where reason would despair.
Epigram. Lord Lyttleton.

LOVERS.—The falling out of lovers is the renewing of love.
Anatomy of Melancholy. Burton.

LUTE.—
It is the little rift within the lute,
That by and by will make the music mute.
Merlin and Vivien. Tennyson.

MADNESS.—Though this be madness, yet there's method in't. *Hamlet.* Shakespeare.
O, that way madness lies; let me shun that.
King Lear. Shakespeare.
Great wits are sure to madness near allied,
And thin partitions do their bounds divide.
Absalom and Achitophel. Dryden.
Now see that noble and most sovereign reason
Like sweet bells jangled, out of tune and harsh.
Hamlet. Shakespeare.

MAIDEN.—Standing with reluctant feet, where the brook and river meet. *Maidenhood.* Longfellow.
A maiden hath no tongue but thought.
Merchant of Venice. Shakespeare.

MAN.—I dare do all that may become a man;
Who dares do more, is none.
Macbeth. Shakespeare.
He was a man, take him for all in all,
I shall not look upon his like again.
Hamlet. Shakespeare.
He thought as a sage, though he felt as a man.
The Hermit. Beattie.
Then, gently scan your brother man,
Still gentler, sister woman;
Though they may gang a kennin' wrang,
To step aside is human.
Address to the Unco Guid. Burns.
The rank is but the guinea's stamp,
The man's the gowd for a' that.
For a' That. Burns.
The child is father of the man.
My Heart Leaps Up. Wordsworth.
A man he seems of cheerful yesterdays
And confident to-morrows.
The Excursion. Wordsworth.

MAN.—
Know then thyself, presume not God to scan;
The proper study of mankind is man.
Essay on Man. Pope.
Virtuous and vicious every man must be,
Few in th' extreme, but all in the degree.
Essay on Man. Pope.
Created half to rise and half to fall;
Great lord of all things, yet a prey to all;
Sole judge of truth, in endless error hurl'd;
The glory, jest, and riddle of the world!
Essay on Man. Pope.
I could have better spared a better man.
King Henry IV. Part I. Shakespeare.
These little things are great to little man.
The Traveller. Goldsmith.
Before man made us citizens, great Nature made us men. *The Capture.* Lowell.
Man proposeth, God disposeth.
Jacula Prudentum. Herbert.
What a piece of work is man! How noble in reason! how infinite in faculties! In form and moving how express and admirable! in action, how like an angel! in apprehension, how like a god!
Hamlet. Shakespeare.

MANNERS.—Manners makyth man.
William of Wykeham.
Manners are not idle, but the fruit
Of loyal nature and of noble mind.
Guinevere. Tennyson.

MARRY, MARRIED, MARRIAGE.—
Thus grief still treads upon the heels of pleasure;
Married in haste, we may repent at leisure.
The Old Bachelor. Congreve.
Choose not alone a proper mate,
But proper time to marry.
Pairing Time Anticipated. Cowper.
A young man married is a man that's marr'd.
All's Well That Ends Well. Shakespeare.
Soft eyes looked love to eyes which spake again,
And all went merry as a marriage-bell.
Childe Harold's Pilgrimage. Byron.

MARTYRS.—The blood of the martyrs is the seed of the Church. Tertullian.

MASTER-PASSION.—
And hence one master-passion in the breast
Like Aaron's serpent, swallows up the rest.
Essay on Man. Pope.

MEMORY.—
Canst thou not minister to a mind diseas'd,
Pluck from the memory a rooted sorrow, . . .
Macbeth. Shakespeare.

MEN.—Men were deceivers ever.
Much Ado About Nothing. Shakespeare.
For men must work and women must weep.
The Three Fishers. C. Kingsley.
Men may rise on stepping-stones
Of their dead selves to higher things.
In Memoriam. Tennyson.
Men at some time are masters of their fates.
Julius Cæsar. Shakespeare.
Men are but children of a larger growth.
All for Love. Dryden.
All men think all men mortal but themselves.
Night Thoughts. Young.

MERCY.—Who will not mercie unto others show,
How can he mercie ever hope to have?
Faerie Queen. Spenser.
The quality of mercy is not strain'd;
It droppeth as the gentle rain from heaven
Upon the place beneath; it is twice bless'd;
It blesseth him that gives and him that takes.
The Merchant of Venice. Shakespeare.

MILL.—God's mill grinds slow but sure.
Jacula Prudentum. Herbert.

MILL.—
Though the mills of God grind slowly,
Yet they grind exceeding small;
Though with patience He stands waiting,
With exactness He grinds all.
Retribution. Longfellow.

MIND.—And out of mind as soon as out of sight.
Sonnet LVI. Brooke.

The mind is its own place, and in itself
Can make a heaven of hell, a hell of heaven.
Paradise Lost. Book I. Milton.

The mind's the standard of the man.
Horæ Lyricæ. Watts.

Absence of occupation is not rest,
A mind quite vacant is a mind distress'd.
Retirement. Cowper.

It is best to have the orbits of the mind concentric with those of the universe.
Novum Organum. Bacon.

'Tis the mind that makes the body rich,
And, as the sun breaks through the darkest clouds,
So honour peereth through the meanest habit.
The Taming of the Shrew. Shakespeare.

Canst thou not minister to a mind diseased?
Macbeth. Shakespeare.

My mind to me a kingdom is.
Sir E. Dyer.

MISERY.—Misery acquaints a man with strange bed-fellows. *Tempest.* Shakespeare.

MISTRESS.—And mistress of herself, though china fall.
Moral Essays. Pope.

MONARCH.—I am monarch of all I survey,
My right there is none to dispute;
From the centre all round to the sea
I am lord of the fowl and the brute.
Cowper.

MORAL.—To point a moral, or adorn a tale.
Vanity of Human Wishes. Johnson.

MOTHER.—
A mother is a mother still
The holiest thing alive.
The Three Graves. Coleridge.

Unhappy is the man for whom his own mother has not made all other mothers venerable. J. P. Richter.

MUSIC.—
The man that hath no music in himself,
Nor is not mov'd with concord of sweet sounds,
Is fit for treasons, stratagems, and spoils.
The Merchant of Venice. Shakespeare.

Music hath charms to soothe the savage breast,
To soften rocks, or bend a knotted oak.
The Mourning Bride. Congreve.

NAME.—Who steals my purse steals trash.
* * * * * *
But he that filches from me my good name,
Robs me of that which not enriches him,
And makes me poor indeed.
Othello. Shakespeare.

What's in a name? that which we call a rose
By any other name would smell as sweet.
Romeo and Juliet. Shakespeare.

NATURE.—One touch of nature makes the whole world kin.
Troilus and Cressida. Shakespeare.

All are but parts of one stupendous whole,
Whose body Nature is, and God the soul.
Essay on Man. Pope.

Slave to no sect, who takes no private road,
But looks through Nature up to Nature's God.
Essay on Man. Pope.

Nature, the vicar of the Almightie Lord.
The Assembly of Foules. Chaucer.

Accuse not Nature, she hath done her part;
Do thou but thine.
Paradise Lost. Book VIII. Milton.

Come forth into the light of things,
Let Nature be your teacher.
The Tables Turned. Wordsworth.

NATURE.— And Nature's living motion lent
The pulse of hope to discontent.
The Two Voices. Tennyson.

To the solid ground
Of Nature trusts the mind that builds for aye.
Miscellaneous Sonnets. Wordsworth.

By the deep sea, and music in its roar:
I love not man the less, but Nature more.
Childe Harold's Pilgrimage. Byron.

And Nature, the old nurse, took
The child upon her knee,
Saying, "Here is a story-book
Thy Father has written for thee."
"Come, wander with me," she said,
"Into regions yet untrod,
And read what is still unread
In the manuscript of God."
Address to Agassiz. Longfellow.

Knowing that Nature never did betray
The heart that loved her.
Tintern Abbey. Wordsworth.

NECESSITY.— Necessity, the mother of invention.
The Twin Rivals. Farquhar.

And with necessity
The tyrant's plea, excus'd his devilish deeds.
Paradise Lost. Book IV. Milton.

Necessity is the argument of tyrants, it is the creed of slaves. *Speech, November,* 1783. Pitt.

NEW.—Be not the first by whom the new are tried,
Nor yet the last to lay the old aside.
Essay on Criticism. Pope.

NIGHT.—
Night, sable goddess! from her ebon throne,
In rayless majesty, now stretches forth
Her leaden sceptre o'er a slumbering world.
Night Thoughts. Young.

'Tis now the very witching time of night.
Hamlet. Shakespeare.

The day is done, and the darkness
Falls from the wings of Night,
As a feather is wafted downward
From an eagle in his flight.
* * * * * *
And the night shall be filled with music
And the cares that infest the day
Shall fold their tents like the Arabs
And as silently steal away.
The Day is Done. Longfellow.

How beautiful is night!
In full orbed glory, yonder moon divine
Rolls through the dark blue depths.
Beneath her steady ray
The desert-circle spreads,
Like the round ocean, girdled with the sky.
Thalaba. Southey.

NOBLE, NOBILITY.—Sweet mercy is nobility's true badge.
Titus Andronicus. Shakespeare.

Howe'er it be, it seems to me,
'Tis only noble to be good.
Kind hearts are more than coronets
And simple faith than Norman blood.
Lady Clara Vere de Vere. Tennyson.

Never yet
Was noble man, but made ignoble talk,
He makes no friend who never made a foe.
Lancelot and Elaine. Tennyson.

OBEY, OBEDIENCE.—Obey, and you shall be free in time, but in minor things, as well as in greater, it is only right service which is perfect freedom. Ruskin.

He did God's will, to Him all one
If on earth or in the sun.
The Boy and the Angel. R. Browning.

The power and glory of all creatures, and all matter, consists in their obedience, not in their freedom. The sun has no liberty—a dead leaf has much.
The Two Paths. Ruskin.

OLD.—I love everything that's old. Old friends, old times, old manners, old books, old wine.
She Stoops to Conquer. Goldsmith.
Old friends are best. King James used to call for his old shoes; they were easiest for his feet.
Friends. J. Selden.

OPINION.—He that complies against his will
Is of his own opinion still.
Hudibras. Butler.

ORACLE.—
I am Sir Oracle,
And when I ope my lips let no dog bark.
Merchant of Venice. Shakespeare.

ORDER.—
Order is heaven's first law; and this confest,
Some are, and must be, greater than the rest,
More rich, more wise; but who infers from hence
That such are happier, shocks all common sense.
Essay on Man. Pope.

ORTHODOXY.—Orthodoxy is my doxy. Heterodoxy is another man's doxy. *Memoirs.* Priestley.

PAIN.—One fire burns out another's burning,
One pain is lessen'd by another's anguish.
Romeo and Juliet. Shakespeare.
Sweet is pleasure after pain.
Alexander's Feast. Dryden.
Alas! by some degree of woe
We every bliss must gain;
The heart can ne'er a transport know
That never feels a pain. *Song.* Lyttelton.

PATIENT, PATIENCE.—Beware the fury of a patient man.
Absalom and Achitophel. Dryden.
She sat, like Patience on a monument,
Smiling at grief. *Twelfth Night.* Shakespeare.
The worst speak something good; if all want sense
God takes a text and preacheth Pa-ti-ence.
The Church Porch. Herbert.

PAUPER.—Rattle his bones over the stones!
He's only a pauper whom nobody owns!
The Pauper's Ride. Noel.

PEACE.—Peace hath her victories
No less renowned than war.
To the Lord General Cromwell. Milton.
Still in thy right hand carry gentle peace,
To silence envious tongues: be just, and fear not.
Let all the ends thou aimest at be thy country's,
Thy God's and truth's.
King Henry VIII. Shakespeare.

PEN.—Beneath the rule of men entirely great
The pen is mightier than the sword.
Richelieu. Lytton.

PERFECT, PERFECTION.—The very pink of perfection.
She Stoops to Conquer. Goldsmith.
Perfect I call Thy plan:
Thanks that I was a man!
Maker, remake, complete—
I trust what Thou shalt do.
Rabbi Ben Ezra. Browning.

PHILOSOPHY.—
There are more things in heaven and earth, Horatio,
Than are dreamt of in your philosophy.
Hamlet. Shakespeare.
A little philosophy inclineth a man's mind to atheism, but depth in philosophy bringeth men's minds about to religion. *Essay on Atheism.* Bacon.

PHYSIC.—Throw physic to the dogs; I'll none of it.
Macbeth. Shakespeare.

PITY.—Pity's akin to love. *Oroonoka.* Southerne.
Careless their merits or their faults to scan,
His pity gave ere charity began.
The Deserted Village. Goldsmith.
Of all the paths that lead to woman's love,
Pity's the straightest.
Knight of Malta. Beaumont and Fletcher.

PLAIN LIVING.—
Plain living and high thinking are no more.
Sonnets. Wordsworth.

PLEASURE.—But pleasures are like poppies spread,
You seize the flower, its bloom is shed.
Tam O'Shanter. Burns.
A man of pleasure is a man of pains.
Night Thoughts. Young.

POETS.—And as imagination bodies forth
The forms of things unknown, the poet's pen
Turns them to shapes, and gives to airy nothing
A local habitation and a name.
Midsummer Night's Dream. Shakespeare.
Poets are all who love, who feel great truths,
And tell them; and the truth of truths is love.
Festus. Bailey.

POISON.—What's one man's poison, signor,
Is another's meat and drink.
Love's Cure. Beaumont and Fletcher.

POVERTY.—Slow rises worth by poverty depress'd.
London. S. Johnson.

PRAISE.—Praise undeserved is scandal in disguise.
Epistles of Horace. Pope.
Damn with faint praise, assent with civil leer,
And without sneering teach the rest to sneer;
Willing to wound and yet afraid to strike,
Just hint a fault, and hesitate dislike.
Epistle to Dr. Arbuthnot. Pope.

PRAY.—He prayeth well who loveth well
Both man and bird and beast.

He prayeth best who loveth best
All things both great and small.
The Ancient Mariner. Coleridge.
Whate'er is good to wish that ask of heaven;
But if for any wish thou dar'st not pray,
Then pray to God to cast that wish away.
Hartley Coleridge.

PRAYER.—More things are wrought by prayer
Than this world dreams of. Wherefore, let thy voice
Rise like a fountain for me night and day.
The Passing of Arthur. Tennyson.
When prayer delights thee least, then learn to say,
"Soul, now is greatest need that thou shouldst pray."
Trench.
Say, what is prayer, when it is prayer indeed?
The mighty utterance of a mighty need.
The man is praying who doth press with might
Out of his darkness into God's own light.
Trench.

We, ignorant of ourselves,
Beg often our own harms, which the wise Powers
Deny us for our good; so find we profit
By losing of our prayers.
Antony and Cleopatra. Shakespeare.

PREACHER, THE VILLAGE.—
A man he was to all the country dear,
And passing rich with forty pounds a year.
* * * * * *
Pleased with his guests the good man learned to glow,
And quite forgot their vices in their woe;
Careless their merits or their faults to scan,
His pity gave ere charity began.
The Deserted Village. Goldsmith.

PRESENT (LIVING).—
Trust no future, howe'er pleasant,
Let the dead past bury its dead;
Act, act, in the living present,
Heart within and God o'erhead.
Psalm of Life. Longfellow.

PRIMROSE.—
Himself the primrose path of dalliance treads,
And recks not his own rede.
Hamlet. Shakespeare.

PRISON.—Stone walls do not a prison make,
Nor iron bars a cage.
To Althea from Prison. Lovelace.

PROVERB.—A proverb is one man's wit and all men's wisdom. *Memoirs of Mackintosh.* Russell.

PURPOSE.—Yet I doubt not through the ages
one increasing purpose runs,
And the thoughts of men are widen'd
with the process of the suns.
Locksley Hall. Tennyson.

QUARRELS.—Those who in quarrels interpose
Must often wipe a bloody nose.
Fables. Gay.

READING.—Reading maketh a full man, conference a ready man, and writing an exact man.
Essays. Bacon.

REASON.—The feast of reason and the flow of soul.
Satire I. Pope.

I have no other but a woman's reason: I think him so, because I think him so.
Two Gentlemen of Verona. Shakespeare.

REPUTATION.—Seeking the bubble reputation
Even in the cannon's mouth.
As You Like It. Shakespeare.

The purest treasure mortal times afford
Is spotless reputation: that away,
Men are but gilded loam or painted clay.
A jewel in a ten times barr'd up chest
Is a bold spirit in a loyal breast.
Mine honour is my life; both grow in one;
Take honour from me, and my life is done.
King Richard II. Shakespeare.

REVENGE.—Certainly in taking revenge a man is but even with his enemy, but in passing it over he is superior: for it is a prince's part to pardon. . . . A man that studieth revenge keeps his own wounds green, which otherwise would heal and do well.
Of Revenge. Bacon.

RHETORIC.—For all a rhetorician's rules
Teach nothing but to name his tools.
Hudibras. Butler.

RHYME.—Neither rhyme nor reason can express how much.
As You Like It. Shakespeare.

RICHES.—I cannot call riches better than the baggage of virtue; the Roman word is better "impedimenta"; for as baggage is to an army, so is riches to virtue; it cannot be spared nor left behind, but it hindereth the march; yea, and the care of it sometimes loseth or disturbeth the victory. *Of Riches.* Bacon.

SAD WORDS.—
For of all sad words of tongue or pen,
The saddest are these: "It might have been!"
Maud Muller. Whittier.

SCHEMES.—The best laid schemes o' mice and men
Gang aft agley. *To a Mouse.* Burns.

SEE.—O wad some power the giftie gie us,
To see oursels as others see us!
To a Louse. Burns.

SELF.—
Love took up the harp of life, and smote on all the chords with might,
Smote the chord of self that, trembling, passed in music out of sight. *Locksley Hall.* Tennyson.
Self reverence, self knowledge, self control,
These three alone lead life to sovereign power.
Œnone. Tennyson.

SERMONS.—Sermons in stones, and good in everything.
(See under *Books.*)

SERPENT.—The trail of the serpent is over them all.
Paradise and the Peri. Moore.

SERVE.—Thousands at His bidding speed,
And post o'er land and ocean without rest;
They also serve who only stand and wait.
Sonnets. Milton.

SILENCE.—Silence is like sleep, it refreshes wisdom.
Novum Organum. Bacon.

SILENT, SILENCE.—
There was silence deep as death,
And the boldest held his breath
For a time. *Battle of the Baltic.* Campbell.

Spires whose "silent finger points to heaven."
The Excursion. Wordsworth.

SIN.—Compound for sins they are inclined to,
By damning those they have no mind to.
Hudibras. Butler.

Ere sin could blight or sorrow fade,
Death came with friendly care;
The opening bud to heaven conveyed,
And bade it blossom there.
Epitaph on an Infant. Coleridge.

I am a man
More sinned against than sinning.
King Lear. Shakespeare.

For a good man's sin.
(See under *Angels.*)

SLEEP.—
To sleep perchance to dream: ay, there's the rub.
Hamlet. Shakespeare.

Tired Nature's sweet restorer, balmy sleep!
Night Thoughts. Young.

We are such stuff
As dreams are made of; and our little life
Is rounded with a sleep.
The Tempest. Shakespeare.

Sleep that knits up the ravelled sleave of care,
The death of each day's life, sour labour's bath,
Balm of hurt minds, great nature's second course.
Macbeth. Shakespeare.

O sleep, O gentle sleep,
Nature's soft nurse, how have I frighted thee?
Henry IV. Part II. Shakespeare.

SMILES.—Eternal smiles his emptiness betray,
As shallow streams run dimpling all the way.
Epistle to Dr. Arbuthnot. Pope.

Smiles from reason flow,
To brute deny'd, and are of love the food.
Paradise Lost. Book IX. Milton.

He chilled the popular praises of the King
With silent smiles of slow disparagement.
Guinevere. Tennyson.

SOLITUDE.—
O Solitude! where are the charms
That sages have seen in thy face?
Cowper.

How sweet, how passing sweet is solitude!
But grant me still a friend in my retreat,
Whom I may whisper, solitude is sweet.
Retirement. Cowper.

He makes a solitude, and calls it—peace.
The Bride of Abydos. Byron.

The worst solitude is to want friendship.
Novum Organum. Bacon.

For solitude sometimes is best society,
And short retirement urges sweet return.
Paradise Lost. Book X. Milton.

SORROW.—The path of sorrow, and that path alone,
Leads to the land where sorrow is unknown.
To an Afflicted Lady. Cowper.

Give sorrow words; the grief that does not speak,
Whispers the o'er-fraught heart, and bids it break.
Macbeth. Shakespeare.

When sorrows come, they come not single spies,
But in battalions. *Hamlet.* Shakespeare.

Never to blend our pleasure or our pride
With sorrow of the meanest thing that feels.
Hart-Leap Well. Wordsworth.

A sorrow's crown of sorrow is remembering happier things. *Locksley Hall.* Tennyson.

'Tis sorrow builds the shining ladder up,
Whose golden rounds are our calamities,
Whereon our firm feet planting, nearer God
The spirit climbs, and hath its eyes unsealed.
On the Death of a Friend's Child. J. R. Lowell.

SORROW.—
Ere sin could blight or sorrow fade.
(See under *Sin.*)

SOUL.—
There is some soul of goodness in things evil,
Would men observingly distil it out.
King Henry V. Shakespeare.
Breathes there the man with soul so dead.
(See under *Land.*)
Our birth is but a sleep and a forgetting:
The soul that rises with us, our life's star,
Hath had elsewhere its setting,
And cometh from afar.
Intimations of Immortality. Wordsworth.
A fiery soul, which, working out its way,
Fretted the pigmy body to decay,
And o'er-informed the tenement of clay.
Absalom and Achitophel. Dryden.
A healthy soul, imprison it as you will, in squalid garrets, shabby coat, bodily sickness, or whatever else, will assert its heaven-granted indefeasible freedom, its right to conquer difficulties, to do work, even to feel gladness.
Essay on Johnson. Carlyle.

SPIRITUAL CREATURES.—
Millions of spiritual creatures walk the earth
Unseen, both when we wake and when we sleep.
Paradise Lost. Milton.

STAR.—A violet by a mossy stone
Half hidden from the eye;
Fair as a star when only one
Is shining in the sky. *Lucy.* Wordsworth.
At whose sight all the stars
Hide their diminish'd heads.
Paradise Lost. Book IV. Milton.
The fault, dear Brutus, is not in our stars
But in ourselves that we are underlings.
Julius Cæsar. Shakespeare.
Silently, one by one, in the infinite meadows of heaven
Blossomed the lovely stars, the forget-me-nots of the angels. *Evangeline.* Longfellow.

STRENGTH, STRONG.—
O! it is excellent
To have a giant's strength; but it is tyrannous
To use it like a giant.
Measure for Measure. Shakespeare.

SUBLIME.—The sublime and the ridiculous are often nearly related. *Age of Reason.* Paine.
Know how sublime a thing it is
To suffer and be strong.
The Light of Stars. Longfellow.

SUCCESS.—
'Tis not in mortals to command success,
But we'll do more, Sempronius; we'll deserve it.
Cato. Addison.

SUFFERANCE.—Sufferance is the badge of all our tribe.
Merchant of Venice. Shakespeare.

SUFFERING.—
Most wretched men
Are cradled into poetry by wrong,
They learn in suffering what they teach in song.
Julian and Maddalo. Shelley.

SYSTEMS.—Our little systems have their day;
They have their day and cease to be;
They are but broken lights of Thee,
And Thou, O Lord, art more than they.
In Memoriam. Tennyson.

TASKS.—
We cannot kindle when we will
The fire which in the heart resides;
The spirit bloweth and is still,
In mystery our soul abides,
But tasks in hours of insight willed
Can be through hours of gloom fulfilled.
Morality. Matthew Arnold.

TAUGHT.—
Men must be taught as if you taught them not,
And things unknown propos'd as things forgot.
Essay on Criticism. Pope.

TEACH.—I can easier teach twenty what were good to be done than be one of the twenty to follow mine own instructions.
The Merchant of Venice. Shakespeare.

TEAR.—So bright the tear in beauty's eye,
Love half regrets to kiss it dry.
Bride of Abydos. Byron.

TEMPLE.—No sooner is a temple built to God, but the devil builds a chapel hard by.
Jacula Prudentum. Herbert.
Then towered the palace, then in awful state,
The Temple reared its everlasting gate,
No workman's steel, no ponderous axes rung:
Like some tall palm the mystic fabric sprung.
Palestine. R. Heber.
The solemn temples, &c. (See under *Globe*).

THINKETH.—
As a man thinketh, so is he.
Essays. Emerson.

THOUGHT.—Thought is deeper than all speech;
Feeling deeper than all thought.
Stanzas. Cranch.
And Thought leapt out to wed with Thought
Ere Thought could wed itself with Speech.
In Memoriam. Tennyson.
To me the meanest flower that blows can give
Thoughts that do often lie too deep for tears.
Intimations of Immortality. Wordsworth.
Thoughts that breathe, and words that burn.
Progress of Poesy. Gray.
Thoughts hardly to be packed
Into a narrow act,
Fancies that broke through language and escaped:
All I could never be,
All, men ignored in me,
This was I worth to God, whose wheel the pitcher shaped. *Rabbi Ben Ezra.* R. Browning.

THRONE.—In that fierce light which beats upon a throne
And blackens every blot.
Idylls of the King (*Dedication.*) Tennyson.

TIDE.—There is a tide in the affairs of men,
Which, taken at the flood, leads on to fortune.
Julius Cæsar. Shakespeare.

TIME.—In records that defy the tooth of time.
Love of Fame. Young.
Procrastination is the thief of time.
Night Thoughts. Young.
We take no note of time
But from its loss. *Night Thoughts.* Young.
We live in deeds, not years; in thoughts, not breaths;
In feelings, not in figures on a dial.
We should count time by heart throbs.
Festus. Bailey.
The time is out of joint; O cursed spite!
That ever I was born to set it right.
Hamlet. Shakespeare.
Come what come may;
Time and the hour runs through the roughest day.
Macbeth. Shakespeare.

TO-MORROW.—
Defer not till to-morrow to be wise,
To-morrow's sun to thee may never rise.
Letter to Cobham. Congreve.

TRADE.—In every age and clime we see
Two of a trade can never agree.
Fables. Gay.

TREASON.—
Treason doth never prosper, what's the reason?
Why if it prosper, none dare call it treason.
Epigrams. Sir John Harrington.

TRIFLE. TRIVIAL.—What mighty contests rise from trivial things. *The Rape of the Lock.* Pope.
Since trifles make the sum of human things,
And half our misery from our foibles springs.
Sensibility. H. More.
Think naught a trifle, though it small appear;
Small sands the mountain, moments make the year,
And trifles life. *Love of Fame.* Young.
Trifles make perfection, and perfection is no trifle.
Michael Angelo.

TRUE, TRUTH.—
—To thine own self be true;
And it must follow, as the night the day,
Thou canst not then be false to any man.
Hamlet. Shakespeare.
For truth has such a face and such a mien,
As to be lov'd needs only to be seen.
The Hind and Panther. Dryden.
And spite of pride, in erring reason's spite,
One truth is clear, whatever is, is right.
Essay on Man. Pope.
Dare to be true, nothing can need a lie;
A fault which needs it most grows two thereby.
The Church Porch. Herbert.
No pleasure is comparable to the standing upon the vantage-ground of truth. *Essays.* Bacon.
He is the freeman whom the truth makes free.
Winter Morning Walk. Cowper.
'Tis strange—but true; for truth is always strange!
Stranger than fiction. *Don Juan.* Byron.
And the truth of truths is love.
(See under *Poets.*)
True as the dial to the sun
Although it be not shined upon.
Hudibras. Butler.
Tell the truth and shame the devil.
King Henry IV. Shakespeare.
Truth is as impossible to be soiled by any outward touch as the sunbeam.
The Doctrine and Discipline of Divorce. Milton.
Who ever knew truth put to the worse in a free and open encounter? *Areopagitica.* Milton.

UNSEEN.—
Full many a flower is born to blush unseen,
And waste its sweetness on the desert air.
Elegy in a Country Churchyard. Gray.

VALOUR.—The better part of valour is discretion.
King Henry IV. Part I. Shakespeare.

VANITY.—Where doth the world thrust forth a vanity.
So it be new, there's no respect how vile.
Richard II. Shakespeare.

VARIETY.—Variety's the very spice of life
That gives it all its flavour.
The Task. Cowper.

VICE.—Vice is a monster of so frightful mien,
As, to be hated, needs but to be seen;
Yet seen too oft, familiar with her face,
We first endure, then pity, then embrace.
Essay on Man. Pope.
The gods are just, and of our pleasant vices
Make instruments to plague us.
King Lear. Shakespeare.
Vice in its own pure native ugliness.
Tales of the Hall. Crabbe.

VILLAGE MASTER, THE.—
There in his noisy mansion skilled to rule,
The village master taught his little school;
A man severe he was and stern to view;
I knew him well, and every truant knew,
Well had the boding tremblers learned to trace
The day's disasters in his morning face.
The Deserted Village. Goldsmith.

VIRTUE.—
Know then this truth (enough for man to know)
"Virtue alone is happiness below."
Essay on Man. Pope.

VIRTUE.—
To maken vertue of necessite.
The Knighte's Tale. Chaucer.
Negative virtues argue innocence not merit.
Novum Organum. Bacon.
Virtue is its own reward.
Imitations of Horace. Prior.
Men's evil manners live in brass; their virtues
We write in water.
King Henry VIII. Shakespeare.
Virtue could see to do what virtue would
By her own radiant light, though sun and moon
Were in the flat sea sunk.
Comus. Milton.
I cannot praise a fugitive and cloistered virtue, unexercised and unbreathed, that never sallies out and seeks her adversary. Milton.

WAIT.—All things come round to him who will but wait.
Tales of a Wayside Inn. Longfellow.

WALNUTS.—In after-dinner talk
Across the walnuts and the wine.
The Miller's Daughter. Tennyson.

WAR.—But war's a game which, were their subjects wise.
Kings would not play at.
Winter Morning Walk. Cowper.
To be prepared for war is one of the most effectual means of preserving peace.
Speech to Congress. Washington.
The sinews of war. *Life of Cleomenes.* Plutarch.

WAX.—
His heart was one of those which most enamour us—
Wax to receive and marble to retain.
Beppo. Byron.

WEALTH.—
His best companions, innocence and health,
And his best riches, ignorance of wealth.
The Deserted Village. Goldsmith.
Can wealth give happiness? Look around and see
What gay distress, what splendid misery;
I envy none their pageantry and show,
I envy none the gilding of their woe. Young.

WEB.—The web of our life is of a mingled yarn, good and ill together.
All's Well that Ends Well. Shakespeare.
O what a tangled web we weave
When first we practise to deceive.
Marmion. Scott.

WEEDS.—
Small herbs have grace, great weeds do grow apace.
Richard III. Shakespeare.

WIFE.—
She thrives, God's blessed husbandry;
Most like a vine which full of fruit
Doth cling and lean and climb toward heaven,
While earth still binds its root.
The Lowest Room. C. Rossetti.

WIND.—God tempers the wind to the shorn lamb.
The Sentimental Journey. Sterne.

WISE, WISDOM.—
Type of the wise who soar, but never roam;
True to the kindred points of Heaven and Home.
To a Skylark. Wordsworth.
Wisdom is ofttimes nearer when we stoop
Than when we soar.
The Excursion. Wordsworth.
A sadder and a wiser man,
He rose the morrow morn.
The Ancient Mariner. Coleridge.
Full of wise saws and modern instances.
As You Like It. Shakespeare.

WISH.—Thy wish was father, Harry, to that thought.
Henry IV. Part II. Shakespeare.

WIT.—Brevity is the soul of wit. *Hamlet.* Shakespeare.
True Wit is Nature to advantage dress'd,
What oft was thought, but ne'er so well express'd.
Essay on Criticism. Pope.

WOMAN.—Frailty, thy name is woman.
Hamlet. Shakespeare.

The woman that deliberates is lost. *Cato.* Addison.

He is a fool who thinks by force or skill
To turn the current of a woman's will.
Adventures of Five Hours. Tuke.

Blessing she is; God made her so.
And deeds of week-day holiness
Drop from her, noiseless as the snow.
My Love. Lowell.

A creature not too bright or good
For human nature's daily food;
For transient sorrows, simple wiles,
Praise, blame, love, kisses, tears and smiles.
She was a phantom of delight. Wordsworth.

The path of a good woman is indeed strewn with flowers, but they rise behind her steps, not before them. *Sesame and Lilies.* Ruskin.

Do you not know I am a woman? When I think I must speak. *As You Like It.* Shakespeare.

O woman! in our hour of ease,
Uncertain, coy, and hard to please, . . .
When pain and anguish wring the brow,
A ministering angel thou. *Marmion.* Scott.

Her voice was ever soft,
Gentle and low,—an excellent thing in woman.
King Lear. Shakespeare.

When lovely woman stoops to folly,
And finds too late that men betray,
What charms can soothe her melancholy,
What art can wash her guilt away?
Vicar of Wakefield. Goldsmith.

WORDS.—For words are wise men's counters, they do but reckon by them; but they are the money of fools.
The Leviathan. Hobbes.

Words are like leaves; and where they most abound,
Much fruit of sense beneath is rarely found.
Essay on Criticism. Pope.

But words are things, and a small drop of ink
Falling, like dew, upon a thought, produces
That which makes thousands, perhaps millions, think.
Don Juan. Byron.

My words fly up, my thoughts remain below;
Words without thoughts never to Heaven go.
Hamlet. Shakespeare.

Immodest words admit of no defence;
For want of decency is want of sense.
Lord Roscommon.

WORK.—For there is a perennial nobleness, and even sacredness in Work. Were he never so benighted, forgetful of his high calling, there is always hope in a man that actually and earnestly works: in Idleness alone is there perpetual despair.
Past and Present. T. Carlyle.

WORLD.—
I hold the world but as the world, Gratiano;
A stage, where every man must play a part.
The Merchant of Venice. Shakespeare.

All the world's a stage,
And all the men and women merely players:
As You Like It. Shakespeare.

If God hath made this world so fair.
(See under *Heaven.*)

The world is too much with us; late and soon,
Getting and spending, we lay waste our powers:
Little we see in Nature that is ours;
We have given our hearts away, a sordid boon.
Sonnets. Wordsworth.

The year's at the Spring
And day's at the morn, . . .
God's in His heaven
All's right with the world.
Pippa Passes. R. Browning.

You have too much respect upon the world;
They lose it that do buy it with much care.
Merchant of Venice. Shakespeare.

WORM.—The smallest worm will turn, being trodden on.
King Henry VI. Shakespeare.

A worm is in the bud of youth,
And at the root of age.
Bill of Mortality. Cowper.

WRATH.—
Gathering her brows like gathering storm,
Nursing her wrath to keep it warm.
Tam O' Shanter. Burns.

WROTH.—
And to be wroth with one we love
Doth work like madness in the brain.
Christabel. Coleridge.

WRITING.—
True ease in writing comes from art, not chance,
As those move easiest who have learn'd to dance.
Essay on Criticism. Pope.

Hard writing makes easy reading.
The Pleasures of Life. Lubbock.

You write with ease to show your breeding,
But easy writing's curst hard reading.
Life of Sheridan. Moore.

YOUNG, YOUTH.—
In gallant trim the gilded vessel goes,
Youth on the prow and pleasure at the helm.
The Bard. Gray.

Bliss was it in that dawn to be alive,
But to be young was very heaven.
The Prelude. Wordsworth.

He wears the rose of youth upon him.
Antony and Cleopatra. Shakespeare.

ENGLISH AUTHORS.

(British and American).

À Beckett Gilbert A., 1811–56, comic historian.
Abbott, John Stevens Cabot, 1805–1877, Amer. historian.
Abbott, Lyman, 1835, Amer. religious writer.
Adams, Wm., 1814–1848, sacred allegory.
Adamson, Robert, 1852, philosophical writer.
Adeler, Max (*see* Clark).
Addison, Joseph, 1672–1719, poet, essayist dramatist.
Ady, Mrs. Henry (née Julia Cartwright), art critic, biographer.
Aelfric, c. 1000, sacred writer, translator.
Aflalo, F. G., 1870, writer on British coasts and fishing.
Agassiz, Louis, 1807–1873, Amer. naturalist.
Aidé, Hamilton, dramatist, novelist.
Aikin, Lucy, 1781–1864, historian.
Ainger, Canon Alfred, 1837–1904, literary critic, editor, preacher.
Ainsworth, W. Harrison, 1805–1882, novelist.
Airy, Sir G. B., 1801–1892, astronomer.
Airy, Osmund, 1845, historian.
Akenside, Mark, 1721–1770, poet, essayist.
Alcott, Louisa M., 1832–1888, Amer. novelist.
Alcuin, 733–804, theologian.
Aldhelm, 656–709, hagiologist.
Aldrich, Dr. H., 1647–1710, scholar and divine.
Alexander, Mrs., *see* Hector.
Alford, Henry, Dean, 1810–1871, editor, translator, theologian.
Alfred, King, 849–901, translator.
Alfred of Beverley, c. 1130, chronicler.
Alison, Sir Archibald, 1792–1867, historian.
Allen, Grant, 1848–1899, novelist, scientist.
Allen, James Lane, 1849, Amer. novelist.
Allingham, William, 1824–1889, poet, editor.
Allison, Thomas, c. 1697, arctic voyager.

A.L.O.E., *see* Maria Charlotte Tucker.
Andrewes, Lancelot (Bishop), 1555–1626, theologian.
Anselm (Archbishop), 1034–1109, theologian.
Anstey, F., *see* T. A. Guthrie.
Arber, Edward, literary historian.
Arbuthnot, Dr. John, 1667–1735, satirist.
Archer, William, 1856, dramatic critic.
Argyll, Duke of, 1823–1900, philosopher and controversialist.
Armstrong, John (Physician), 1709–1779, medical writer.
Armstrong, Sir Walter, 1850, art critic.
Arnold, Sir Edwin, 1832–1904, orientalist, poet, journalist.
Arnold, Edwin L., novelist.
Arnold, Matthew, 1822–1888, critic, essayist, poet.
Arnold, Dr. Thomas (Headmaster of Rugby), 1795–1842, historian.
Arnold-Forster, H. O., 1855, historian, military critic.
Ascham, Roger, 1515–1568, educationalist.
Ashby-Sterry, Joseph, humorous poet, editor.
Ashmole, Elias, 1617–1692, diarist, antiquarian, scientist.
Asser, c. 900, chronicler.
Atherton, Gertrude Franklin, Amer. novelist.
Atterbury, Francis (Bishop), 1662–1732, theologian.
Aungerville (Bishop), Richard of Bury, 1281–1345, librarian.
Austen, Jane, 1775–1817, novelist.
Austin, Alfred (Poet Laureate), 1835, poet, descriptive writer.
Avebury, Lord, 1834, naturalist, antiquarian, geologist, ethical writer.
Avesbury, Robert de, c. 1356, chronicler.
Aytoun, William, E., 1813–1865, poet.
Babbage, Charles, 1792–1871, mathematician.
Bacon, Francis (Lord Verulam), 1561–1626, philosopher, essayist.
Bacon, Roger, 1214–1292, metaphysician, scientist.
Baden Powell, Major-Gen., 1857, military writer.
Bagehot, Walter, 1826–1877, essayist, historian.
Bailey, Philip James, 1816–1902, poet.
Baillie, Joanna, 1762–1851, dramatist.
Bain, Alexander, 1818–1903, philosopher, grammarian.
Baker, Sir Richard, 1568–1645, chronicler.
Baker, Sir Samuel, W., 1821–1893, traveller.
Bale, John (Bishop), 1495–1563, chronicler.
Balfour, Andrew, 1873, medical writer, novelist.
Balfour, Arthur J. (statesman), 1848, philosophical and theological writer.
Ball, Sir Robert, 1840, astronomer.
Ball, Walter W. R., 1850, mathematician.
Ballantyne, R. M., 1825–1894, writer of boys' books.
Bancroft, George, 1800–1891, Amer. historian.
Banks, Mrs. G. L., 1821. novelist.
Barbauld, Anna Letitia, 1743–1825, poetess.
Barbour, John (Archdeacon), 1316–1396, chronicler in verse.
Barclay, Alexander, 1476–1552, poet.
Barclay, Robert, (Quaker), 1648–1690, apologetic writer.
Barclay, Sir Thomas, international trade.
Barham, Richard H., 1788–1845, humorous poet (see "Ingoldsby").
Baring-Gould, Rev. Sabine, 1834, novelist and miscellaneous writer.
Barlow, Joel, 1755–1812, Amer. poet, politician.
Barnes, Albert, 1798–1870, Amer. religious writer.
Barnes, William, 1800–1886, Dorsetshire poet.
Barnet. Percy A., 1858, educationalist.
Barnfield, Richard, 1574–1627, poet.
Barr, Robert, 1850, novelist, journalist.
Barrett, Frank, 1848, novelist.
Barrie, James M., 1860, novelist, dramatist.
Barrow, Isaac, 1630–1677, theologian.
Bate, Percy, 1868, art critic.
Batson, Mrs. Stephen, novelist, writer.
Baxter, Richard, 1615–1691, theologian.
Bayliss, Sir Wyke (artist), writer on art.
Bayly, Ada Ellen, (Edna Lyall), *d.* 1903, novelist.
Beaconsfield, Earl of, *see* Disraeli.
Beattie, James, 1735–1803, poet.
Beaumont, Francis, 1586–1615, dramatist.
Becke, Geo. L., 1848, novelist.
Beckford, William, 1760–1844, art connoisseur, author.
Beddoes, Thomas L., 1803–1849, poet.
Bede or Beda, 673–735, (Latin) poet, historian, theologian.
Bede, Cuthbert, *see* Rev. Edward Bradley.
Beecher, Henry Ward, 1813–1887, Amer. essayist, religious writer.
Beeching, Rev. H. C., 1859, poet, literary critic.
Begbie, Harold, 1871, novelist, journalist.
Behn, Mrs. Aphra, 1640–1689, poetess, dramatist.
Bell, Mrs. Arthur, art critic, miscellaneous writer.
Bell, C. Moberly, 1847, manager of the "Times."
Bell, Currer, *see* C. Brontë.
Bell, H. T. Mackenzie, 1856, poet, biographer.
Belloc, Hilaire, 1870, poet, misc. writer.
Belsham, William, 1753–1828, historian.
Benham, Rev. Canon William, 1831, theologian, antiquarian, biographer.
Benson, Arthur C., 1862, poet, biographer,
Benson, Ed. Frederick, 1867, novelist.
Bent, Mrs. Theodore, Arabian travel.
Bentham, Jeremy, 1748-1832, ethical philosopher, economist.
Bentley, Dr. Richard, 1662–1742, scholar and controversial writer.
Berkeley, George (Bishop), 1684–1753, philosopher.
Berners, Lord John, 1467–1533, translator of Froissart.
Berners, Juliana (Prioress), c. 1470, descriptive poetess.
Besant, Mrs. Annie, 1847, theosophist.
Besant, Sir Walter, 1836–1901, novelist, antiquarian, historian.
Bickerdyke, John (C. H. Cook), 1858, novelist, writer on sports.
Bigelow, Poulteney, 1855, Amer. modern history.
Birrell, Augustine, 1850, essayist, critic.
Bishop, Mrs. Isabella, 1832–1904, traveller, writer.
Black, William, 1841–1898, novelist.
Blackie, John Stuart (Professor), 1809–1895, Greek scholar, misc. writer.
Blackmore, Sir Richard, 1650–1729, poet.
Blackmore, Richard D., 1825–1900, novelist.
Blackstone, Sir Wm., 1723–1780, writer on law.
Blaikie, William G., 1820–1899, editor, biographer.
Blair, Hugh, 1718–1800. poet, lecturer.
Blair, Robert, 1699–1746, poet.
Blake, William, 1757–1827, poet, painter.
Blatchford, Robert, 1851, socialistic journalist.
Blind, Mathilde, writer on women's rights.
Bloomfield, Robert (shoemaker), 1766–1823, poet.
Blunt, Wilfred Scawen, 1840, poet.
Bodley, J. E. Courtenay, 1853, writer on France, historian of the coronation of Edward VII.
Boker, George H., 1823–1890, Amer. poet, dramatist.
Boldrewood, Rolf, *see* Browne, T. A.
Bolingbroke, St. John, Lord, 1678-1751, political writer, philosopher.
Bond, R. Warwick, 1857, poet, editor.
Bonney, Rev. T. G., 1833, geologist, mountaineer.
Booth, Charles, 1840, philanthropist, statistician.
Boothby, Guy N., 1867–1905, novelist.
Borroughs, John, 1837, farmer, author.
Borrow, George, 1803–1881, novelist, traveller.
Boswell, James, 1740–1795, biographer of Dr. Johnson.
Bowles, W. Lisle, 1762–1850, poet, antiquary.
Boyd, Rev. A. K. H., 1825– , essayist, miscellaneous writer.
Boyle, Charles, Earl of Orrery, 1676–1731, translator, controversialist.
Boyle, Robert, 1627–1691, philosopher, essayist.
Boyle, Roger, Earl of Orrery, 1621–1679, poet, dramatist.
Brackenridge, Hugh H., 1748–1816, Amer. legist.
Braddon, Mary E. (Mrs. J. Maxwell), 1837, novelist.
Bradley, Rev. Ed, (Cuthbert Bede), 1827–1889, author of "Verdant Green."
Bradley, Henry, 1845, philologist, lexicographer, critic.
Brainard, John G. C., 1796–1828, Amer. poet, editor.
Brandes, George, 1842, critic, man of letters.
Brassey, Lord, 1836, economist, naval writer.
Brassey, Lady, *d.* 1887, writer on voyages.
Breitmann, Hans, *see* Leland.
Brewer, Ebenezer C., compiler of dictionaries.
Brewster, Sir D., 1781–1868, natural philosopher.
Bridges, Robert, 1844, poet.
Bright, Mrs. Golding (Egerton, George), novelist.
Brightwen, Eliza, writer on natural history.
Brome, William, 1689–1745, poet, translator.
Brontë, Anne, 1819–1849, novelist, poetess.
Brontë, Charlotte (Currer Bell), 1816–1855, novelist, poetess.
Brontë, Emily, 1818–1848, novelist, poetess.
Brooke, Fulke Greville, Lord, 1554–1628, poet (tragedies), biographer.
Brooke, Stopford, A., 1832, poet, biographer, critic.
Brooks, Charles, S. 1816–1874, novelist.
Brooks, Phillips (Bishop), 1835–1893, Amer. theologian, sermons.
Broughton, Rhoda, 1840, novelist.
Brown, Charles Brockden, 1771–1810, Amer. poet, novelist.
Brown, G. B., art critic.
Brown, Horatio R. F., 1854, historian (Venice), biographer.
Brown, John, 1715–1766, essayist, poet, theologian.
Brown, John, 1810–1882, essayist, miscellaneous writer.
Brown, Peter Hume, 1850, historian.
Brown, Dr. Thomas, 1778–1820, philos.
Browne, Charles Farrar (Artemus Ward). 1834–1867, Amer. humorist.
Browne, John R., 1817–1875, Amer. writer on travel (China).
Browne, Sir Thomas, 1605–1682, philosophical writer, antiquarian.
Browne, T. A., 1826, novelist.
Browne, William, 1590–1645, pastoral poet.
Browning, Elizabeth Barrett, 1809–1861, poetess.
Browning, Oscar, 1837, historian.
Browning, Robert, 1812–1889, poet.
Bruce, Michael, 1746–1767, poet.
Bryant, Mrs. Sophie, D.Sc., educationalist.
Bryant, William Cullen, 1794–1878, Amer. poet, editor.
Bryce, Rt. Hon., James, 1838, historian, essayist.

Buchanan, George, 1506–1581, historical writer.
Buchanan, Robert, 1841–1901, poet, novelist.
Buckland, Frank, 1826–1880, natural historian.
Buckle, Henry, T., 1822–1862, historian.
Buckley, Arabella, writer on natural history.
Budge, Dr. E. Wallace, F.S.A., Assyrian and Egyptian antiquities.
Bullen, Frank Thomas, 1857, writer of nautical tales.
Bulwer Lytton, *see* Lytton, Lord.
Bunyan, John, 1628–1688, author of Pilgrim's Progress.
Burgin, Geo. B., 1856, novelist.
Burke, Edmund, (statesman), 1729–1797, political writer, essayist.
Burnaby, Col. F., 1842–1885, traveller.
Burnand, Sir F. C., 1836, editor of Punch, dramatist.
Burnet, Gilbert (Bishop), 1643–1715, ecclesiastical historian.
Burnett, Mrs. Frances H., 1849, Amer. novelist, dramatist.
Burney, Fanny (Madame D' Arblay), 1752–1840, novelist, diarist.
Burns, Robert, 1759–1796, poet.
Burritt, Elihu (the learned blacksmith), 1810–1879, Amer. social reformer.
Burrows, Montagu, 1819–1905, historian, biographer.
Burton, John Hill, 1809–1882, historian.
Burton, Sir Richard, 1821–1890, traveller and translator.
Burton, Robert, 1576–1640, philosopher.
Bury, Professor J. B., 1861, historian.
Butcher, Prof. Samuel H., 1850, Greek scholar.
Butler, Joseph (Bishop), 1692–1752, theologian.
Butler, Samuel, 1612–1680, satirist, poet.
Butler, William A., 1825–1902, Amer. poet, satirist.
Butler, Sir William Francis, 1838, military biography, writer on Canada.
Byron, George Gordon, Lord, 1788–1824, poet.
Cædmon, 680, Anglo-Saxon poet.
Caffyn, Mrs. Mannington ("Iota"), novelist.
Caine, T. H. Hall, 1853, novelist.
Caird, Edward, 1835, philosophical writer.
Caird, Mrs. Mona, novelist.
Calverley, Charles Stuart, 1831–1884, translator, poet, and humorist.
Camden, William, 1551–1623, antiquarian, historian.
Cameron, Mrs. Lovett, novelist.
Campbell, Thomas, 1777–1844, poet.
Canning, A. S. G., 1832, essayist, philosopher.
Canning, George (statesman), 1770–1827, satirist, poet.
Capes, Bernard E. J., novelist.
Carew, Thomas, 1598–1639, poet.
Carey, Rosa Nouchette, novelist.
Carleton, Will, 1845, Amer. writer of ballads.
Carleton, William, 1789–1896, Irish descriptive writer.
Carlyle, Thomas, 1795–1881, philosopher, historian, essayist.
Carpenter, W. Benjamin, 1813–1885, naturalist, microscopist.
Carpenter, W. Boyd (Bishop), 1841, theological writer.
Carr, Joseph W. Comyns, 1849, art critic, dramatist.
Carroll, Lewis, *see* Dodgson, C. L.
Carton, R. C., *see* Critchett, R. D.
Cartwright, William, 1610–1643, poet, dramatist.
Cary, Alice, 1820–1871, Amer. poetess, novelist.
Cary, Henry Francis, 1772–1844, translator of Dante.
Castle, Egerton, 1858, novelist, playwright.
Caxton, William, c. 1422–1491, printer, translator.
Chalmers, Alexander, 1759–1834, biographer (Dictionary).
Chalmers, Dr. Thomas, 1780–1847, economist, theologian.
Chambers, Charles Haddon, 1860, dramatist.
Chambers, G. F., 1841, meteorology, public works, etc.
Chambers, Robert (Publisher), 1802–1871, compiler of the "Book of Days."
Chambers, William (Publisher), 1800–1883, miscellaneous writer.
Channing, William E. (senior), 1780–1842, Amer. theologian.
Channing, William E. (junior), 1818–1901, Amer. poet, essayist, editor.
Chapman, George, 1557–1634, poet, dramatist.
Chatterton, Thomas, 1752–1770, poet.
Chaucer, Geoffrey, 1340–1400, poet.
Chesterfield, Lord, 1694–1773, letter-writer.
Chesterton, Gilbert K., 1873, biographer, critic, novelist.
Cheyne, Rev. Thomas K., D.D., 1841, biblical critic.
Chillingworth, William, 1602–1644, theologian.
Cholmondeley, Mary, novelist.
Church, Rev. R. W. (Dean), 1815–1890, historian and miscellaneous writer.
Church, Rev. A. J., 1829, translator, historian, novelist.
Churchill, Charles, 1731–1764, satirist, poet.
Churchill, Winston, 1871, Amer. novelist.
Churchill, Winston L. Spencer, M.P., 1874, war correspondent, miscellaneous writer.
Churchyard, Thomas, 1520–1604, translator.
Cibber, Colley, 1671–1757, actor, dramatist.
Clarendon, Edward Hyde, Earl of, 1609–1674, historian, biographer.
Clark, Charles Heber (Max Adeler), 1841, Amer. humorist.
Clarke, Charles Cowden, 1787–1877, literary critic and Shakespearian.
Clarke, James F., 1810–1888, Amer. theologian.
Clarke, Mrs. Mary Cowden, 1809–1898, author of "Concordance to Shakespeare."
Clay, Henry, 1777–1852, Amer. orator, politician.
Cleeve, Lucas, *see* Kingscote, Mrs. Howard.
Clemens, Samuel Langhorne (Mark Twain), 1835–1910, Amer. humorist.
Clifford, Dr. John, 1836, controversialist, miscellaneous writer.
Clifford, W. K., 1845–1879, mathematician.
Clifford, Mrs. W. K., novelist, dramatist.
Clough, Arthur H., 1819–1861, poet.
Cobb, Thomas, 1854, novelist.
Cobban, James M., 1849–1903, journalist, novelist.
Cobbe, Frances Power, 1822–1904, journalist, essayist, philanthropist.
Cobbett, William, 1762–1835, political writer.
Coke, Sir Edw., 1551–1633, legist.
Colenso, J. W. (Bishop), 1814–1883, commentator, mathematician.
Coleridge, Christabel, 1843, editor, novelist.
Coleridge, Ernest Hartley, 1846, editor, critic.
Coleridge, Hartley, 1796–1849, poet.
Coleridge, Samuel Taylor, 1772–1834, poet, philosopher, critic.
Coleridge, Hon. Stephen, 1854, antivivisectionist.
Collier, Jeremy, 1650–1726, divine, essayist, historian.
Collins, Anthony, 1676–1729, theologian, deist.
Collins, Wilkie, 1824–1889, novelist.
Collins, William, 1720–1759, poet.
Colman, George (elder), 1732–1794, dramatist.
Colman, George (younger), 1762–1836, dramatist.
Colquhoun, Archibald R., 1848, essayist.
Colvin, Sidney, 1845, biographer, art critic.
Combe, William, 1741–1823, misc. writer.
Congreve, William, 1670–1729, poet, dramatist.
Connor, Ralph, *see* Gordon, C. W.
Conrad, Joseph, novelist.
Constable, Henry, 1562–1613, poet.
Conway, Dr. Moncure D., 1832, Amer. biographer, essayist.
Conway, Sir William M., 1856, art critic, mountaineer.
Conybeare, Fredk. C., 1856, orientalist, (Armenia), historian.
Cook, Captain James, 1728–1779, navigator.
Cook, Eliza, 1818–1889, poetess.
Cook, Theodore A., 1867, literary and art critic, journalist.
Cooke, John Esten, 1830–1886, Amer. novelist.
Cooke, Rose Terry, 1827–1892, Amer. poetess, humorist.
Cooper, James Fenimore, 1789–1851, Amer. novelist.
Corbet, Richard (Bishop), 1582–1635, poet.
Corbett, Julian St. John, 1854, novelist, naval historian.
Corelli, Marie, novelist.
Cornwall, Barry, *see* Proctor.
Cottle, Joseph (publisher), 1770–1853, critic, poet.
Cotton, Sir Robert Bruce, 1571–1631, antiquarian, collector of MSS., etc.
Courthope, William John, 1842, literary historian.
Courtney, William L., 1850, editor, philosopher.
Coverdale, Miles (Bishop), 1488–1568, translator of Bible.
Cowley, Abraham, 1618–1667, poet.
Cowper, William, 1731–1800, poet.
Crabbe, George, 1754–1832, poet.
Craddock, C. E., *see* Murfree.
Craigie, Mrs., *see* John Oliver Hobbes.
Craik, Mrs. (Mulock, D. M.), 1826–1887, novelist.
Crane, Walter, 1845, art critic.
Cranmer, Thomas (Archbishop), 1489–1556, theologian.
Crashaw, R., 1616–1650, poet.
Crawford, F. Marion, 1845–1909, novelist.
Crawfurd, Oswald, essayist, novelist, poet.
Creasy, Sir E. S., 1811–1878, military historian.
Creighton, Mandell, (Bishop) 1843–1901, historian.
Creighton, Mrs., 1850, history, biography.
Crespigny, Mrs., novelist.
Critchett, R. D. (Carton, R. C.), dramatist.
Crockett, Samuel R., 1860, novelist.
Crookes, Sir William, 1832, natural philosopher.
Crosland, T. W. H., 1868, satirist.
Crowest, Fred. I., 1856, editor, mus. critic.
Cruden, A., 1700–1771, author of Biblical Concordance.
Cudlip, Mrs. Pender, *see* Thomas, Annie.
Cudworth, Ralph, 1617–1688, philosopher.
Cumberland, Rich., 1732–1811, novelist.
Cummins, Maria Susanna, 1827–1866, Amer. novelist.
Cunningham, Allan, 1784–1842, poet, biographer.
Cunningham, Dr. William, 1849, economist.
Currie, Lady, *see* Fane, Violet.
Curtis, George W., 1824–1892, Amer. novelist, editor.
Curzon of Kedleston, Lord, *see* Kedleston.
Cust, Robert, N. 1821, essayist, linguist, poet.
Cust, Lionel, 1859, art critic.
Cutts, Edward Lewes, 1824–1901, archæologist, Church historian, past. theol.
Cynewulf, c. 750, Anglo-Saxon poet.
Dale, R. W., D.D., 1829–1895, theologian.

Dalton, John, 1767–1844, chemist.
Dana, Richard, H., 1815–1882, Amer. writer on sea-travel.
Daniel, Samuel, 1562–1619, poet, historian.
D'Arblay, Madame, see Burney, Fanny.
Darmesteter, Mdme. (Agnes Robinson), essayist (French).
Darwin, Charles R., 1809–1882, natural philosopher, evolutionist.
Darwin, Erasmus, 1731–1802, botanist, poet.
Darwin, Francis, 1848, biographer, botanist.
Davenant, Sir Wm., 1606–1668, poet.
Davidson, John, 1857, poet.
Davies, Sir John, 1570–1626, poet, essayist.
Davis, Richard, H., *b.* 1864, Amer. war correspondent, novelist.
Davy, Sir Humphry, 1778–1829, chemist, physicist.
Dawe, Carlton, *b.* 1865, novelist.
Dawkins Wilton Boyd, *b.* 1838, anthropologist, geologist.
Dawson, Alec John, *b.* 1871, novelist.
Dawson, William, *b.* 1860, economist.
Dawson, William, *b.* 1854, poet.
Day, Thomas, 1748–1789, author of Sandford and Merton.
Dearmer, Rev. Percy, 1867, ritualistic history, guide books.
Defoe, Daniel, 1661-1731, novelist, essayist.
Dekker, Thomas, 1570–1638, dramatist, poet.
De Morgan, Augustus, 1806–1871, mathematician.
Denham, Sir John, 1615–1668, poet.
Dennis, John, 1657–1734, critic, essayist.
De Quincey, Thomas, 1785–1859, essayist, critic.
Derby, Earl of, 1799–1869, translator of Homer.
De Vere, Aubrey, 1814–1902, poet.
Devine, Rev. Arthur, *b.* 1849, theologian.
Dewar, George A. B., naturalist, sporting writer.
De Windt, Harry, *b.* 1856, traveller.
Dibdin, Charles, 1745–1814, writer of sea-songs and operas.
Dibdin, Lewis T., 1852, historian.
Dicey, Albert V., 1835, writer on law.
Dick, Cotsford, 1846, author, dramatist.
Dickens, Charles, 1812–1870, novelist.
Dilke, Sir Charles W., 1843, politician, historian, critic.
Dilke, Lady, 1840–1904, art critic.
Diosy, Arthur, 1856, orientalist (Japan).
Disraeli, Benjamin (Lord Beaconsfield), 1804–1881, novelist.
Disraeli, Isaac, 1766–1848, literary hist.
Ditchfield, Rev. P. H., 1854, local historian, antiquarian.
Dixie, Lady Florence, 1858–1905, "reform" writer.
Dixon, Charles, 1858, ornithologist.
Dixon, W. Hepworth, 1821–1879, historian, traveller.
Dobell, Sidney, 1824-1874, poet, critic.
Dobson, H. Austin, 1840, poet, editor.
Doddridge, Philip, 1702–1751, theologian, expositor.
Dodgson, Charles Lutwidge (Lewis Carroll), 1838–1898, humorous writer for children.
Dods, Rev. Marcus, D.D., 1834, theologian.
Donne, Dr. John, 1573-1631, theologian, poet.
Dooley, Mr., *see* Dunne.
Doudney, Sarah, 1843, novelist.
Dougall, Lily, 1858, novelist.
Douglas, Gawain (Bishop), 1474–1522, poet, translator.
Douglas, Sir Geo. B., 1856, novelist, historian.
Douglas, Sir Robt. K., 1838, orientalist (China).
Doveton, Fred. B., 1841, poet, author.
Dowden, Edward, 1843, poet, literary critic.
Downey, Edmund, 1856, novelist.
Doyle, Sir A. Conan, 1859, novelist, poet.
Doyle, Sir Francis H., 1810–1888, poet.
Drake, Joseph Rodman, 1795–1820, Amer. poet.
Draper, John W., 1811–1882, Amer. historian, scientist.
Drayton, Michael, 1563–1631, poet.
Driver, Rev. S. R., 1846, Biblical critic.
Drummond, Henry, 1851–1897, writer on science and religion.
Drummond, William, 1585–1649, poet.
Dryden, John, 1631–1700, poet, dramatist.
Dudeney, Mrs. Henry, *b.* 1866, novelist.
Duff, Rev. Archibald, *b.* 1845, theologian.
Duff, Sir M. E. Grant, *see* Grant-Duff.
Dufferin, Lord, 1826–1902, traveller, diplomatist.
Duffy, Sir Charles G., 1816-1903, journalist, editor.
Dugdale, Sir Wm., 1605–1686, antiquarian (monasteries).
Du Maurier, George, 1834–1896, artist and novelist.
Dunbar, William (works, 1503–1508), poet.
Duncan, Sarah J., novelist.
Dunne, Finley Peter (Mr. Dooley), 1857, Amer. humorist.
D'Urfey, Thomas, 1630–1723, dramatist, wit.
Dutt, R. C., 1848, orientalist (India).
Dyce, A., 1798–1869, critic, editor.
Dyer, John, 1700–1758, poet.
Eadmer, *d.* 1124, Anglo-Saxon chronicler.
Eardley-Wilmot, Admiral S. M., *b.* 1847, naval writer.
Earle, Mrs. C. W., novelist.
Earle, John (Professor), 1824–1903, Anglo-Saxon scholar.
Eastlake, Charles L., art critic.
Edgeworth, Maria, 1767–1849, novelist.
Edmunds, Lewis H., 1860, writer on law.
Edwards, Amelia B., 1831–1892, novelist, Egyptian explorer.
Edwards, Jonathan, 1703–1758, Amer. metaphysician, theologian.
Edwards, Richard, 1523–1566, poet, dramatist.
Egerton, George, see Mrs. Golding Bright.
Eggleston, Edward, 1837–1902, Amer. pastor, writer of tales, historian.
Eliot, George (Marian Evans), 1820–1881, novelist.
Elkington, E. W., 1872, novelist.
Elliott, Ebenezer, 1781–1849, poet.
Ellis, Robinson, 1834, classical scholar.
Ellis, Thos. M., 1850, novelist, journalist.
Ellwood, Thomas, 1639–1713, autobiographer.
Emerson, Ralph Waldo, 1803–1882, Amer. poet, essayist.
Escott, T. H. S., 1844, lecturer, author.
Esmond, Henry V., actor, dramatist.
Etheridge, Sir Geo., 1634–1694, dramatist.
Evans, Daniel S., 1818–1903, Celtic scholar.
Evans, Sir John, 1823, historian, antiquarian.
Evans, Marian, *see* George Eliot.
Evelyn, John, 1620–1706, diarist.
Everett-Green, E., 1856, novelist.
Everett, Edward, 1794–1865, Amer. orator, editor, scholar.
Everett, Joseph D., 1831–1904, physicist.
Ewart, James C., 1851, natural historian.
Ewing, Mrs. Julia Horatia Orr (née Gatty), 1842–1885, stories for children.
Eyre-Todd, George, 1862, editor (Scottish works).
Faber, Frederick W., 1814–1863, writer of hymns.
Fairbairn, Rev. A. M., 1838, theologian.
Falconer, William, 1730–1769, nautical poet.
Fane, Violet (Lady Currie), *d.* 1905, novelist, poetess.
Faraday, Michael, 1791–1867, natural philosopher.
Fargus, F., 1810–1885, novelist.
Farmiloe, Mrs. E. C., novelist.
Farquhar, George, 1678–1707, dramatist.
Farrar, Rev. Fred. W. (Dean), 1831–1903, novelist, theologian.
Farrow, George E., 1866, humorist.
Fawcett, Mrs. M. G., 1847, political economist, biographer.
Fayrer, Sir Joseph, 1824, physician.
Fea, Allan, *b.* 1860, novelist.
Felkin, Mrs., *see* Fowler.
Fenn, G. Manville, 1831, novelist.
Fenton, Ferrar, 1832, orientalist, theologian.
Ferguson, Robert, 1750–1774, poet, satirist.
Fergusson, James, 1808–1886, architectural writer.
Field, Dr. Richard, 1561–1616, theologian.
Fielding, Henry, 1707–1754, dramatist, novelist.
Fields, James T., 1817–1881, Amer. editor, literary historian.
Filmer, Sir Robert, *d.* 1653, political scientist.
Findlater, Jane Ellen } sisters, novelists.
Findlater, Mary W. }
Finlay, George, 1799–1875, historian.
Firth, Chas. H., 1857, historian, biographer.
Fiske, John, 1842–1901, Amer. historian, philosopher.
Fitzgerald, P. H., 1834, theatrical history.
Fitz Gerald, Edward, 1809–1883, poet, translator of Omar.
Fitzmaurice, Lord E. J., *b.* 1846, biographer.
Fletcher, Banister, *b.* 1866, historian, architect.
Fletcher, John, 1576–1625, poet, dramatist, the literary partner of Beaumont.
Fletcher, Phineas, 1582–1650, poet.
Florio, John, 1553–1625, translator of Montaigne.
Foote, Samuel, 1719–1777, dramatist, actor.
Forbes, Archibald, 1838–1900, war correspondent.
Ford, John, 1586–1640, dramatist.
Forman, H. B., 1842, editor and critic.
Forster, John, 1812–1876, biographer and historian.
Foster, Sir Michael, *b.* 1836, physiologist.
Foster, Stephen Collins, 1826–1864, Amer. writer of popular songs.
Foster, Sir Walter, medical and sanitary writer.
Fowler, Ellen Thorneycroft (Mrs. A. Laurence Felkin), novelist and poet.
Fowler, Rev. Joseph T., 1833, antiquarian, historian.
Fowler, Rev. Thomas, 1832–1904, philosopher, logician.
Foxe, John, 1517–1587, martyrologist.
Frances, M. E. (Mrs. Frances Blundell), novelist.
Francis, Sir Philip, 1740–1818, political writer.
Franklin, Benjamin, 1706–1790, Amer. statesman, philosopher, diplomatist.
Fraser, Alex. C., 1819, philosopher, logician.
Fraser, James George, 1854, archæologist.
Fraser, Mrs. Hugh, novelist.
Freeman, Edward A., 1823-1892, historian.
Frere, John H., 1769–1846, satirist, poet.
Freshfield, Douglas W., 1845, mountaineer, Asiatic explorer.
Froude, James A., 1818–1894, historian, biographer.
Fry, Sir Edward, *b.* 1827, naturalist.
Fuller, Sarah M., 1810–1850, Amer. miscellaneous writer.
Fuller, Thomas, 1608–1661, theologian, historian.
Fuller-Maitland, J. A., 1856, musical critic and historian.
Furness, Horace Howard, 1833, Amer. Shakespearean editor.
Furnivall, Frederick James, 1825, literary historian, philologist.
Fyfe, Hamilton, 1869, editor, misc. writer.
Gairdner, James, 1828, historian.
Gale, Norman, 1862, poet, novelist.
Gale, Thomas, 1628–1702, historian, scholar.
Gallienne, Richard Le, 1866, poet, misc. writer.

Gallon, Tom, 1866, novelist.
Galt, John, 1779–1839, novelist, biographer.
Galton, Francis, *b.* 1822, traveller.
Galton, Francis, 1853, statistician.
Gardiner, Samuel R., 1829–1902, historian.
Gardner, Ernest A., *b.* 1862, archæologist.
Gardner, Percy, *b.* 1846, archæologist.
Garland, Hamlin, *b.* 1860, novelist.
Garnett, Richard, *b.* 1835, poet, essayist, editor, critic.
Garrick, David, 1716–1779, actor, dramatist.
Garth, Sir Samuel, 1660–1718, poet.
Gascoigne, George, 1540–1577, poet, dramatist.
Gaskell, Elizabeth, 1810–1866, novelist, biographer.
Gasquet, Rev. F. A., historian.
Gatty, Mrs., 1809–1873, juvenile stories.
Gay, John, 1688–1732, dramatist, poet.
Geikie, Sir Archibald, b. 1835, geologist.
Geikie, Rev. Cunningham, b. 1824, theologian.
Geikie, James, *b.* 1839, geologist.
Geoffrey of Monmouth, c. 1154, chronicler.
George, Henry, 1849, Amer. political economist.
Gerard, Morice, (Rev. J. J. Theague), *b.* 1856, novelist.
Gibbon, Edward, 1737–1794, historian.
Giberne, Agnes, popular scientist.
Gifford, William, 1757–1826, poet, satirist.
Gilbert, Henry, *b.* 1868, editor, novelist.
Gilbert, Wm. S., *b.* 1836, dramatist, humorous poet, librettist.
Gilbey, Sir Walter, *b.* 1831, writer on horses.
Gilchrist, Robert M., 1868, novelist.
Gildas, c. 550, Anglo-Saxon historian.
Gilder, Richard Watson, 1844, Amer. poet, editor.
Giraldus de Barri, 1147–1210, Norman historian.
Gissing, Algernon, 1860, novelist.
Gissing, George, 1857–1903, novelist.
Gladstone, Wm. Ewart (statesman), 1809–1898, scholar, translator.
Gleig, Charles, novelist.
Glover, Richard, 1712–1785, poet.
Godley, A. D., 1856, humorous poet.
Godwin, Parke, 1816, Amer. journalist, historian, biographer.
Godwin, William, 1756–1836, novelist, social theorist.
Goldsmith, Oliver, 1728–1774, poet, playwright, novelist, historian.
Gollancz, Israel, 1864, Shakespearean editor.
Gomme, George L., 1853, editor, antiquarian.
Goodrich, Samuel G. (Peter Parley), 1793–1860, Amer. writer of miscellaneous information for children.
Googe, Barnaby, 1540–1594, poet.
Gordon, Rev. Charles William (Ralph Connor), 1860, novelist.
Gordon-Cumming, C. F., 1837, traveller, artist.
Gore, Charles (Bishop), 1853, theologian, essayist.
Gore, Mrs. C. G. F., 1799–1861, dramatist, novelist.
Gore, John E., 1845, astronomer.
Gosse, Edmund, *b.* 1849, literary historian, critic.
Gosse, Philip H., 1810–1888, zoological writer.
Gould, Fred. J., 1855, secularist writer.
Gould, Nathaniel, *b.* 1857, novelist (sporting).
Gow, Rev. Dr. James, 1854, educational writer.
Gower, John, 1320–1402, poet.
Gowing, Mrs. A., novelist, poetess.
Graham, Winifred, novelist.
Grahame, Kenneth, novelist.
Grand, Mdme. Sarah (Frances E. MacFall), novelist.
Grant, James, 1822–1887, novelist.
Grant-Duff, Sir Montstuart, 1829, diarist.
Graves, Alfred P., 1846, poet (Father O'Flynn, etc.).
Gray, Annabel, 1853, novelist.
Gray, Maxwell (Miss M. G. Tuttiett), novelist, poetess.
Gray, Thomas, 1716–1771, poet.
Greeley, Horace, 1811–1872, Amer. essayist, autobiographer.
Green, J. Reynolds, botanist.
Green, John Richard, 1837–1883, historian.
Green, Mrs. A. Stopford, historian.
Green, Thomas Hill, 1836–1882, philosopher.
Greene, Robert, 1560–1593, dramatist, poet.
Greenwell, Rev. Dr. William, archæologist.
Greenwood, Grace, *see* Lippincott.
Gribble, Francis, novelist.
Grierson, George A., *b.* 1851, orientalist (India.)
Griffith, George C., novelist, journalist.
Griffiths, Major Arthur G., *b.* 1838, novelist, criminologist.
Grote, George, 1794–1871, historian of Greece.
Grove, Sir George, 1820–1901, writer of dictionary of music.
Grundy, Sydney, *b.* 1848, dramatist.
Guthrie, Thomas Anstey, novelist, humorist.
Gwilliam, Rev. G. H., 1846, orientalist (Palestine).
Gwynn, Stephen, 1864, author, poet, essayist.
Habberton, John, 1842, Amer. humorous novelist.
Habington, William, 1605–1654, poet, historian.
Haeckel, Ernest, 1834, a German scientist.
Haggard, H. Rider, 1856, novelist, agricultural writer.
Hakluyt, Richard, 1553–1616, writer of sea-discoveries.
Hales, Prof. John Wesley, 1836, editor, literary historian.
Haliburton, Thomas Chandler (Sam Slick), 1796–1865, Amer. humorist and miscellaneous writer.
Halliburton, William Dobinson, 1860, physiologist, pathologist.
Hall, Edward, 1499–1547, chronicler.
Hall, John R. C., 1855, Anglo-Saxon scholar.
Hall, Joseph (Bishop), 1574–1656, theologian.
Hall, Samuel Carter, 1800–1889, miscellaneous writer.
Hall, Mrs. Samuel Carter 1800–1881, novelist.
Hallam, Henry, 1777–1859, historian.
Halleck, Fitz-Greene, 1790–1867, poet.
Halpine, Charles G., 1829–1868, Amer. journalist, humorist.
Hamerton, Philip G., 1834–1894, art critic, misc. writer.
Hamilton, Alexander, 1757–1804, Amer. statesman, political writer.
Hamilton, Edwin, 1849, poet.
Hamilton, Sir William, 1788–1856, philosophical writer.
Harcourt, Sir William Vernon, 1827–1904, Letters on International Law.
Hardy, Thomas, 1840, novelist.
Hare, Augustus, J. C., 1834–1903, biographer, historical writer.
Harland, Henry, 1861, novelist.
Harraden, Beatrice, 1864, novelist.
Harrington, Sir John, 1561–1612, translator, poet.
Harris, Joel Chandler (Uncle Remus), 1848, Amer. humorist.
Harrison, Frederic, 1831, positivist, historian, literary critic.
Harrison, Jane Ellen, 1850, writer on Greek art.
Harte, Francis Bret, 1839–1902, Amer. novelist, writer of tales, poet.
Harting, James E., 1841, ornithologist.
Harvey, Gabriel, 1545–1630, poet, critic.
Hasluck, Paul, 1854, editor, scientist.
Hassall, Arthur, 1853, historian, biographer.
Hatton, Joseph, 1840, editor, novelist.
Havergal, Frances Ridley, 1836–1879, devotional writer.
Haweis, Rev. Hugh R., 1839–1901, lecturer, miscellaneous writer.
Hawker, Robert S., 1805–1875, poet.
Hawkesworth, John, 1715–1773, writer, biographer.
Hawkins, Anthony Hope, 1863, novelist.
Hawthorne, Nathaniel, 1804–1864, Amer. novelist.
Hay, John, (statesman), 1838, Amer. poet, humorist.
Hayens, Herbert, 1861, novelist, educationalist.
Hayes, Isaac I., 1832–1881, Amer. writer on Arctic exploration.
Hazlitt, William C., 1834, historian, writer of memoirs.
Hazlitt, William, 1778–1830, critic, essayist, lecturer.
Headlam, Cecil, 1872, novelist, poet.
Hearn, Lafcadio, 1850–1904, writer on Japan.
Hearne, Thomas, 1678–1735, antiquarian.
Heber, Reginald (Bishop), 1783–1826, poet.
Hector, Mrs. Annie French. 1825, novelist.
Helps, Sir Arthur, 1817–1875, essayist.
Hemans, Felicia D., 1794–1835, poetess.
Hemsley, William B., 1843, botanist.
Henley, William E., 1849–1903, poet, essayist, miscellaneous writer.
Henniker, Hon. Mrs. A., novelist.
Henson, Canon H. Hensley, 1863, theologian, controversialist.
Henty, Geo. A., 1832–1902, writer for boys.
Herbert, George, 1593–1632, poet.
Herford, Prof. Charles Harold, literary historian.
Herrick, Robert, 1591–1674, poet.
Herschel, Sir John, 1790–1871, astronomer.
Hervey, Rev. James, 1714–1758, devotional writer.
Hewlett, Maurice H., 1861, novelist.
Heylin, Peter, 1600–1662, historian, biographer.
Heywood, John, 1506–1565, playwright, poet.
Heywood, Thomas, 1640, playwright.
Hickey, Emily, poetess, translator.
Hickson, Sydney J., 1859, naturalist.
Higginson, Thomas Wentworth, 1823, Amer. anti-slavery writer.
Hill, Alexander, 1856, scientist, physiologist.
Hill, George Birkbeck, 1835–1903, literary editor and critic.
Hill, Rowland, 1745–1833, theologian.
Hillard, George Stillman, 1808–1879, Amer. journalist, miscellaneous writer.
Hillhouse, James A., 1789–1841, Amer. poet.
Hissey, James J., writer on travel.
Hobbes, John Oliver (Mrs. Craigie), 1867, novelist.
Hobbes, Thomas, 1588–1679, political scientist.
Hobhouse, Rev. Walter, 1862, editor (Guardian), scholar.
Hobson, John A., 1858, essayist, biographer.
Hocking, Joseph, novelist.
Hocking, Rev. Silas K., 1850, novelist.
Hodder, Edwin, 1837, novelist, historian.
Hodgkin, Thomas, 1831, historian, biographer.
Hodgson, Geraldine, 1865, novelist.
Hoffman, Charles F., 1806–1884, Amer. poet, novelist.
Hogarth, David G., 1862, explorer.
Hogg, James, 1772–1835, poet (Ettrick Shepherd).
Hole, Rev. Samuel R. (Dean), 1819–1904, horticulturist (roses).
Holinshed, Raphael, *d.* 1580, historian.

Holland, Clive, 1866, novelist, playwright.
Holland, Josiah Gilbert, 1819–1881, Amer. editor, poet, miscellaneous writer.
Holland, Rev. Canon Scott, 1847, theologian.
Holmes, Fred. M., *b.* 1851, novelist.
Holmes, Oliver Wendell, 1809–1894, Amer. poet, miscellaneous writer, novelist.
Holmes, Thomas R. E., 1855, historian.
Holyoake, George J., 1817, socialist, journalist.
Home, Andrew, novelist.
Hood, Capt. Basil, 1854, dramatist.
Hood, Thomas, 1798–1845, poet, humorist.
Hook, Theodore E., 1788–1841, editor, novelist, wit.
Hook, Walter Farquhar (Dean), 1798–1875, "Lives of the Archbishops of Canterbury."
Hooker, Richard, 1553–1600, theologian.
Hope, Anthony, *see* Hawkins, A. H.
Hopkins, Tighe, 1856, novelist.
Hopkinson, Francis, 1737–1791, Amer. essayist, poet.
Hornung, Ernest W., 1866, novelist.
Horton, Rev. Robert F., D.D., 1855, theologian, biographer.
Houghton, Richard Monckton Milnes, Lord, 1809–1885, poetry, memorials, etc.
Housman, Laurence, 1867, novelist, dramatist.
How, Fred. D., 1853, biographer.
Howard, Sir Robert, 1626–1698, playwright.
Howe, Mrs. Julia W., 1819, Amer. essayist, poet.
Howells, William D., 1837, Amer. novelist.
Howitt, Mary, 1800–1880, novelist.
Howitt, Wm., 1792–1879, poet, miscellaneous writer.
Hudson, Henry Norman, 1815–1857, Amer. Shakespearean editor.
Hughes, Thomas (Judge), 1822–1896, novelist, author of "Tom Brown."
Huish, Marcus B., 1845, writer on art.
Hulme, F. E., 1841, heraldry, natural history.
Hume, David, 1711–1776, historian, essayist.
Hume, Major Martin, 1847, historian (Spain), biographer.
Humphreys, Mrs. Desmond ("Rita"), novelist.
Humphry, Mrs. C. E. (Madge), books on social behaviour.
Hungerford, Mrs. M. Wolfe, 1855–1897, Irish novelist.
Hunt, Jas. H. Leigh, 1784–1859, poet, critic.
Hunt, Violet, novelist.
Hunter, Sir W. Wilson, 1840, history and languages of India.
Huntley, Lydia, *see* Sigourney.
Hutcheson, Francis, 1694–1746, moralist, essayist.
Hutchings, Ven. William H., 1835, devotional writer.
Hutton, Rev. A. W., 1848, theologian, biographer.
Hutton, Fred. W., 1836, geologist.
Hutton, Richard Holt, 1826–1897, philosophical (editor of "Spectator").
Hutton, Rev. William H., 1860, biographer, historian.
Huxley, Thomas H., 1825–1895, scientist.
Hyde, Douglas, Irish dramatist and poet.
Hyde Edward, Earl of Clarendon, 1608–1674, historian, biographer.
Hyne, Chas. J. C. W., 1866, novelist.
Inchbald, Elizabeth, 1753–1821, editor, dramatist, novelist.
Ingelow, Jean, 1820–1897, poetess.
"Ingoldsby," *see* Barham, R. H.
Ingram, John K., 1823, historian, essayist.
Innes, A. Taylor Innes, 1833, historian, biographer.
"Iota," *see* Caffyn, Mrs. Mannington.
Irving, Washington, 1783–1859, Amer. humorist, novelist.
Irving, Edward, 1792–1832, theological writer.
Jackson, Mrs. Helen H., 1831–1885, Amer. poetess, novelist, miscellaneous writer.
Jacobs, John, 1854, editor, translator.
Jacobs, Wm. Wymark, 1863, novelist.
James, I., 1566–1625, theologian, moralist.
James I. of Scotland, 1391–1437, poet.
James, George, P. R., 1801–1860, novelist.
James, Henry (senior), 1811–1882, Amer. theologian.
James, Henry (jun.), 1843, Amer. novelist.
James, William, 1843, Amer. psychologist.
Jameson, Mrs. Anna, 1797-1860, art critic, historian.
Jane, Fred, T., 1865, tactician, novelist.
Jeaffreson, John C., 1831–1901, biographer.
Jebb, Sir Richard C., 1841 Greek scholar.
Jefferies, R., 1848–1887, naturalist, novelist.
Jeffrey, Francis L., 1773–1850, editor, essayist.
Jenks, Edw., 1861, lawyer, misc. writer.
Jerome, Jerome K., 1860, novelist.
Jerrold, Douglas, 1803–1857, playwright, humorist, wit.
Jerrold, Walter, 1865, editor, biographer.
Jessopp, Rev. Augustus, 1824, historian.
Jewel, John (Bishop), 1522–1571, theologian.
Jewett, Sarah Orne, 1849, Amer. novelist, miscellaneous writer.
Johnson, Dr. Samuel, 1709–1784, lexicographer, essayist, biographer.
Johnston, Sir H. H., 1858, administrator (Uganda), scientist.
Jones, Henry A., 1851, dramatist.
Jonson, Benjamin, 1573–1637, dramatist, satirist.
Jowett, Benjamin, 1817–1895, Greek scholar, philosopher.
Julian, Rev. John, 1839, hymnologist.
Kane, Elisha K., 1820–1857, Amer. Arctic explorer, scientist.
Kavanagh, Julia, 1824–1877, novelist, essayist.
Kaye, Sir John W., 1814–1876, historian.
Keane, A. H., 1833, geographer.
Kearton, Richard, 1862, ornithologist.
Keary, Annie, 1825–1879, novelist, writer for children.
Keary, Charles F., novelist, historical writer.
Keats, John, 1795–1821, poet.
Keble, John, 1792–1866, poet, biographer.
Kedleston, Visct. (Lord Curzon), 1859, oriental traveller.
Keene, Henry G., 1825, historian.
Keith, Leslie (G. L. Keith Johnson), novelist.
Kelvin, Lord (Sir W. Thomson), 1824, philosopher, scientist.
Ken, Thomas (Bishop), 1637–1711, theologian, hymn writer.
Kennard, Mrs. Edward, novelist.
Kenworthy, John C., 1861, novelist, pamphleteer.
Ker, William Paton, 1855, literary historian.
Kernahan, Coulson, 1858, novelist, poet.
Kidd, Benjamin, 1858, political economist.
Killigrew, Thomas, 1611–1682, dramatist.
Kinglake, Alex. W., 1809–1891, historian, writer on travel.
Kingscote, Mrs. Howard (Lucas Cleeve), novelist.
Kingsley, Rev. Charles, 1818–1875, novelist, essayist.
Kingsley, George Henry, 1827–1892, writer on sport and travel.
Kingsley, Henry, 1830–1876, novelist.
Kingsley, Mary Henrietta, *d.* 1900, writer on travel (Africa).
Kipling, Rudyard, 1865, novelist, poet.
Kirk, John Foster, 1824, Amer. historian.
Kitchin, Rev. G. W. (Dean), 1827, historian, linguist.
Knight, Charles, 1791–1873, editor, misc. writer.
Knight, Joseph, 1829, biographer, editor.
Knight, William Angus, 1836, philosopher, essayist.
Knowles, James Sheridan, 1784–1862, dramatist.
Knox, John, 1505–1572, controversial theologian.
Krauth, Charles P., 1823–1883, Amer. theological writer.
Ladd, George T., 1842, psychologist, philosopher.
Lamb, Charles, 1775–1835, critic, essayist, poet.
Landon, Letitia E., 1802–1838, poetess.
Landor, Walter S., 1775–1864, poet, orientalist.
Lane-Poole, Stanley, 1854, historian, essayist (folk-lore).
Lang, Andrew, 1844, historian, miscellaneous writer.
Langbridge, Rev. F., 1849, poet, novelist.
Langland, William, c. 1332–1400, old English poet.
Lanier, Sidney, 1842–1881, Amer. poet, novelist.
Larcom, Lucy, 1826–1893, Amer. poetess, editor.
Lardner, Dr. Nathaniel, 1684–1768, theologian.
Latimer, Hugh (Bishop), 1491–1555, theologian.
Laud, William (Archbishop), 1573–1645, theologian.
Lawrence, G. A., 1827–1876, novelist.
Layard, Sir Henry Austen, 1817–1894, Assyrian explorer.
Layamon, 13th century poet.
Lecky, William E. H., 1838–1903, historian.
Lee, Rev. Albert, 1855, novelist.
Lee, Nathaniel, 1655–1692, dramatist.
Lee, Sidney, 1859, biographer, Shakespearean critic.
Le Gallienne, Richard, *see* Gallienne.
Lehmann, Rudolph C., 1856, prose and verse (humorous), editor, writer on rowing.
Leighton, Marie C., novelist.
Leith, Mrs. Adams, novelist.
Leland, Charles Godfrey (Hans Breitmann), 1824–1903, Amer. humorist, writer on legends.
Leland, John, c. 1506–1552, antiquary.
Lemon, Mark, 1809–1870, dramatist.
Le Queux, William, 1864, novelist.
L'Estrange, Sir Roger, 1616–1704, poet, pamphleteer.
Lethbridge, Sir R., 1840, historian.
Lever, Charles J., 1809–1872, novelist.
Lewes, George H., 1817–1878, philosopher, essayist.
Lewis, Matthew G., 1775–1818, novelist.
Liddon, Henry P. (Dean), 1829–1890, biographer, theologian.
Lightfoot, Joseph B. (Bishop), 1828–1889, theologian, historian.
Lilly, W. S. 1840, historian, essayist.
Lindsay, Sir David, 1490–1555, poet.
Lindsay, Wallace M., 1858, classical scholar.
Lingard, Dr. John, 1771–1851, historian.
Linton, Mrs. Eliza Lynn, 1822, novelist.
Lippincott, Sara J. (Grace Greenwood), 1823, Amer. poetess, writer of romance.
Locke, John, 1632–1704, philosopher.
Locker-Lampson, Fred., 1821–1895, poet.
Lockhart, John G., 1794–1854, biographer.
Lockyer, Sir Norman, 1836, astronomer.
Lodge, Sir Oliver J., 1851, scientist, theological writer.
Lodge, Thomas, c. 1558–1625, poet, dramatist.
Logan, John, 1748–1788, poet.
London, Jack, 1876, novelist.
Longfellow, Henry Wadsworth, 1807–1882, Amer. poet.
Lorimer, G. H., novelist.
Lovelace, Richard, 1618–1658, poet.
Lover, Samuel, 1797–1868, novelist, dramatist.
Lowe, Charles, biographer, novelist.

Lowell, James Russell, 1819–1891, Amer. poet, essayist.
Lucas, Edward V., 1868, editor, poet.
Lucy, Henry W. (Toby, M.P.), 1845, humorist.
Ludlow, Fitzhugh, 1837–1870, Amer. poet, writer on travel.
Lyde, Lionel W., 1863, geographer.
Lydgate, John, 1375–1430, poet, translator.
Lyall, Edna, *see* Bayly, Ada Ellen.
Lyell, Sir Charles, 1797–1875, geologist.
Lyly, John, 1554–1603, Elizabethan novelist, dramatist.
Lyttleton, Lord George, 1709–1773, poet.
Lytton, Lord E. Bulwer, 1803–1873, novelist.
Lytton, E. R. Bulwer, Earl (Owen Meredith), 1831–1891, poet.
Maartens, Maarten J., 1858, novelist.
Macaulay, T. B., Lord, 1800–1859, historian, poet, essayist.
Macdonald, George, 1824–1905, novelist.
Macdonnell, Arthur A., *b.* 1854, orientalist (Sanskrit).
MacFall, Frances E., *see* Sarah Grand.
Mackarness, Ven. Charles C., *b.* 1850, theologian.
Mackay, Charles, 1812–1880, poet.
Mackenzie, Henry, 1745–1831, novelist.
Mackie, John, 1862, novelist.
Mackintosh, Sir James, 1765–1832, historian, philosopher.
Maclaren Ian, *see* John Watson.
Macleod, Rev. Donald, *b.* 1831, editor, theologian.
Macleod, Fiona, novelist.
Macleod, Rev. Norman, 1812–1872, editor, miscellaneous writer.
Macpherson, James, 1738–1796, poet.
Macquoid, Katherine S., novelist, traveller.
M'Carthy, Justin, 1830, historian.
M'Carthy, Justin Huntly, 1860, dramatist, novelist.
Magnus, Sir Philip, 1842, scientist.
Mahaffy, John P., 1839, Greek scholar, historian.
Maine, Sir Henry J. S., 1822–1888, writer on primitive institutions.
Maitland, Fred. W., 1850, historian (legal).
Mallock, Wm. H., critic, philosopher.
Malmesbury, William of, c. 1140, chronicler.
Malone, Edmund, 1741–1820, Shakespearean editor.
Malory, Sir Thomas, 15th century, compiler of "Morte d'Arthur."
Malthus, Thomas R., 1766–1834, political economist.
Mandeville, Bernard, 1670–1733, poet.
Mandeville, Sir John, 14th century, "voyages and travel."
Manning, H. E. (Cardinal), 1808–1892, theologian.
Marchbank, Agnes, *see* Marshall.
Marchmont, Arthur W., 1852, novelist.
Markham, Admiral A. H., 1841, biographer, naval writer.
Markham, Gervase, 1570–1655, poet.
Markham, Sir Clements R., 1830, geographer, historian.
Marlowe, Christopher, 1564–1593, dramatist, poet.
Marryat, Captain F., 1792–1848, novelist.
Marryat, Florence, 1838–1899, novelist.
Marsh, George P., 1801–1882, Amer. philologist, politician.
Marsh, Richard, novelist.
Marshall, Mrs. (Marchbank Agnes), novelist.
Marshall, Captain R., 1863, dramatist, novelist.
Marston, John, c. 1575–1633, dramatist, satirist.
Marston, Philip Bourke, 1850–1887, poet.
Martin, Sir Theodore, 1816, translator, biographer, poet.
Martineau, Harriet, 1802–1876, historian, miscellaneous writer.
Martineau, Dr. James, 1805–1900, philosopher, theologian.
Marvell, Andrew, 1621–1678, poet, satirist.
Marzials, Frank T., 1840, biographer, poet.
Mason, Alfred E. W., 1865, novelist.
Massey, Gerald, 1828, poet.
Massinger, Philip, 1584–1640, dramatist.
Masson, Prof. David, 1822, biographer, literary critic.
Mather, Cotton, 1663–1728. Amer. Religious History of America.
Mathers, Helen, 1853, novelist.
Matheson, Rev. Geo., 1842–1906, theologist.
Maurice, Major-Gen., 1841, biographer.
Maurice, Rev. F. D., 1805–1872, philosopher, theologian.
Maury, Matthew F., 1806–1873, Amer. marine geography.
Maxwell, Mrs. John, *see* Braddon, M. E.
Maxwell, Sir Herbert, 1845, biographer, naturalist.
Maxwell, Mrs. Heron, novelist.
May, Sir Thomas Erskine, 1815–1886, jurist.
Meade, L. T., novelist.
Melville, *see* Whyte Melville.
Melville, Herman, 1819–1891, Amer. nautical adventure.
Menpes, Mortimer, artist, illustrator.
Meredith, George, 1828–1909, poet, novelist
Meredith, Owen, *see* Lytton.
Merivale, Charles, 1808–1893, historian.
Merivale, Herman C., *b.* 1839, poet, essayist, author.
Merrick, Leonard, 1864, novelist, dramatist.
Merriman, H. Seton, *see* Hugh S. Scott.
Meynell, Mrs. Alice, poetess, editor.
Middleton, Thomas, 1570–1627, dramatist, poet.
Miles, Alfred H., *b.* 1848, journalist.
Mill, James, 1773–1863, philosopher, political economist.
Mill, John Stuart, 1806–1873, political economist, logician.
Millais, John J., *b.* 1865, biographer.
Miller, Hugh, 1802–1856, geologist.
Milman, Henry H., 1791–1868, historian.
Milner, Alfred, Lord, "England in Egypt."
Milton, John, 1608–1674, poet.
Mitford, Bertram, novelist.
Mitford, Mary R., 1786–1866, novelist, memoirs.
Mitford, William, 1744–1827, historian.
Mitton, G. E., editor, novelist.
Mivart, St. George, 1827–1900, scientist, philosopher.
Moir, D. M., 1798–1851, poet, novelist.
Mogridge, George (Old Humphrey), 1787–1854, writer for juveniles.
Molesworth, Mrs. Mary L., novelist.
Montagu, Lady Mary Wortley, 1689–1762, poetess, letter-writer.
Montgomery, Florence, 1843, novelist.
Montgomery, James, 1771–1854, poet.
Moore, Frank Frankfort, 1855, novelist, dramatist.
Moore, George, poet, novelist.
Moore, Thomas, 1779–1852, poet, biographer.
More, Hannah, 1745–1833, poetess, novelist.
More, Sir Thomas, 1480–1535, historian, political philosopher.
Morgan, Lady, 1783–1837, novelist.
Morgan, Benj. H., 1874, engineer.
Morgan, Conway L., *b.* 1852, biologist, psychologist.
Morley, Henry, 1822–1894, literary historian.
Morley, John, 1838, biographer, historian, essayist.
Morris George P., 1802–1864, Amer. journalist, poet.
Morris, Sir Lewis, *b.* 1833, poet.
Morris, Judge W. O'Connor, 1824–1904, biographer, essayist.
Morris, William, 1834–1896, poet.
Morrison, Arthur, 1863, novelist.
Moscheles, Felix, 1833, painter, writer.
Motley, John Lothrop, 1814–1877, Amer. historian.
Muddock, J. E. P., *b.* 1843, novelist.
Müller, F. Max, 1823–1900, philologist, orientalist.
Mullinger, J. Bass, 1837, historian.
Mulock, D. M., *see* Craik, Mrs.
Munro, Neil, 1864, novelist.
Munro, Robert, 1835, archæologist, anthropologist.
Murfree, Mary Noailles, (Charles Egbert Craddock), 1850, Amer. novelist.
Murray, David Christie, 1847, novelist.
Murray, Dr. James A. H., 1837, lexicographer, philologist.
Murray, John, 1778–1843, publisher.
Murray, John, 1808–1892 (son of above), publisher, "Murray's Guide Books."
Murray, Sir John, 1841, scientist.
Murray, Lindley, 1745–1826, Amer. grammarian, philosopher.
Myers, Ernest, 1844, poet, author.
Myers, F. W. H., 1843–1901, writer on psychical research.
Napier, Sir Wm., 1785–1860, historian.
Nash, Thomas, 1564–1601, pamphleteer, dramatist.
Neal, Daniel, 1678–1743, historian.
Neal, John, 1793–1876, Amer. journalist, novelist, miscellaneous writer.
Neale, Rev. John Mason, 1818–1866, writer of hymns, church historian.
Nesbit, E., poet, novelist.
Nettleship, Henry, 1839–1893, scholar and editor.
Newbolt, Henry John, 1862, poet, novelist.
Newbolt, Canon W. C. E., 1844, theologian.
Newcastle, Marg., Duchess of, 1624–1673, poetess.
Newman, Geo., medical writer (bacteriology).
Newman, Cardinal John Henry, 1801–1890, theologian, poet.
Newton, Sir Isaac, 1642–1727, natural philosopher.
Nichol, John, 1833–1894, man of letters.
Nicholl, W. Robertson, 1851, editor, critic.
Nicholson, Edward W. B., 1849, poet, theologian.
Nisbet, Hume, 1849, novelist.
Noel, Hon. Roden, 1834–1894, poet.
Norman, H., travels, economics.
Norris, Wm. Ed., 1846, novelist.
North, Christopher, *see* John Wilson.
North, Sir Thomas, 1535–1601, translator (Plutarch).
Norton, Caroline, 1809–1877, poetess, novelist.
Norton, Charles Eliot, 1827, Amer. translator (Dante), history.
Norton, Thomas, 1532–1584, dramatist, poet.
O'Brien, Richard B., 1847, historian, biographer.
Ockley, Simon, 1678–1720, historian.
O'Connor, Thos. P., 1848, editor, critic.
O'Keeffe, John, 1747–1833, dramatist.
O'Leary, Arthur, 1729–1802, theologian, essayist.
Oldham, John, 1653–1683, satirist.
Oldmixon, John, 1673–1742, historian.
Oldys, William, 1696–1761, biographer.
Oliphant, L., 1829, novelist, traveller.
Oliphant, Margaret, 1820–1897, novelist, biographer.
Oman, John Campbell, 1841, orientalist (India).
Oman, Chas. W. C., 1860, historian.
Opie, Amelia, 1769–1853, novelist.
Oppenheim, Edward P., 1866, novelist.
Orr, Mrs. Sutherland, writer on Browning.
O'Shaughnessy, A. W. E., 1844–1881, poet.
Otway, Thomas, 1651–1685, dramatist.
Ouida (de la Ramée), 1840–1908, novelist.
Overbury, Sir Thomas, 1581–1613, poet.

Owen, Robert D., 1804–1877, Amer. spiritualist, social reformer.
Owen, Robert, 1771–1858, socialist.
Owen, Sir Richard, 1804–1892, zoologist, anatomist.
Oxenham, John, novelist.
Pain, Barry, novelist.
Paine, Thomas, 1737–1809, nationalist and revolutionist writer.
Paley, William, 1745–1805, philosopher, theologian.
Palgrave, Sir Francis, 1788–1861, historian.
Palgrave, Sir Francis Turner, 1824–1897, poet, editor of poetry.
Palmer, E. H., 1840–1882, orientalist.
Parker, John Henry, 1806–1884, archæologist, church historian.
Parker, Sir Gilbert, M.P., 1862, novelist, historian.
Parker, Matthew, 1504–1575, theologian, biographer.
Parker, Theodore, 1810–1900, Amer. theological writer.
Parkman, Francis, 1823–1893, Amer. historian.
Parley, Peter, *see* Goodrich.
Parton, James, 1822–1891, Amer. biographer, miscellaneous writer.
Pater, Walter H., 1839–1894, critic, humanist.
Patmore, Coventry, 1823–1896, poet.
Pattison, Mark, 1813–1884, philosopher, literary critic.
Paulding, James Kirke, 1779–1860, Amer. poet, novelist.
Payn, James, 1830–1898, novelist.
Payne, John, 1842, novelist, poet.
Payne, John Howard, 1792–1852, Amer. dramatist, writer of "Home, Sweet Home."
Peacock, Thomas Love, 1785–1866, novelist, poet.
Peard, Frances M., novelist.
Pearson, John (Bishop), 1612–1686, expositor.
Pearson, Karl, 1857, mathematician, statistician.
Peele, George, c. 1558–1598, poet, dramatist.
Pemberton, Max, 1863, editor, novelist.
Pennell, H. Cholmondeley, 1837, writer on angling and sport.
Pennell, Joseph, 1860, book illustrator.
Pepys, Samuel, 1632–1703, diarist.
Percival, James G., 1795–1856, Amer. scholar, poet.
Percy, Thomas, 1728–1811, collector of ballads.
Perry, Nora, 1841–1896, Amer. poetess.
Petrie, W. M. Flinders, 1853, Egyptologist, archæologist.
Petty, Sir William, 1623–1687, political economist.
Phelps, Elizabeth Stuart (Mrs. Ward), 1844, Amer. novelist.
Philips, Ambrose, 1671–1749, poet.
Phillips, Stephen, 1868, poet.
Phillpotts, Eden, 1862, novelist.
Piatt, John James, 1835, Amer. poet, journalist.
Pinero, Sir Arthur W., 1855, dramatist.
Piozzi, Hester Lynch (previously Thrale), 1739–1821, anecdotes of Dr. Johnson.
Planché, J. R., 1796–1880, herald, playwright.
Poe, Edgar Allan, 1811–1849, Amer. metaphysician.
Pollard, A. W., 1859, literary critic and historian.
Pollock, Sir Fred., 1845, editor and author (law-books).
Pollok, Robert, 1799–1827, poet.
Pope, Alexander, 1688–1744, poet, satirist, translator.
Porson, Richard, 1759–1808, classical scholar.
Porter, Anna M., 1781–1832 } sisters,
Porter, Jane, 1776–1850 } novelists.
Powell, F. York, 1850–1904, historian.
Poynter, Sir E. J., P.R.A., 1836, writer on art and painting.
Praed, Mrs. Campbell, 1825, novelist.
Praed, W. M., 1802–1839, poet.
Prescott, William Hickling, 1796–1859, Amer. historian.
Preston, Margaret J., 1825–1897, Amer. poetess.
Prichard, H. Hesketh, 1876, novelist.
Priestley, Joseph, 1733–1804, scientist, philosopher.
Prior, Matthew, 1666–1721, poet.
Procter, Adelaide A., 1825–1864, poetess.
Proctor, Bryan W. (Barry Cornwall), 1787–1874, poet.
Prothero, R. E., 1852, biographer.
Prynne, William, 1600–1669, Puritan satirist.
Pugin, Augustus W., 1811–1852, writer on architecture.
Purchas, Samuel, 1577–1626, compiler of travels and voyages.
Pusey, Dr. Edward B., 1800–1882, High Church theologian.
Quarles, Francis, 1592–1644, poet.
Quiller-Couch, A. T. ("Q"), 1863, novelist, poet, knighted 1910.
Radcliffe, Ann, 1764–1823, novelist.
Raleigh, Sir Walter, 1552–1618, historian, poet.
Raleigh, Walter, 1861, literary historian.
Ramsay, Allan, 1685–1758, poet.
Ramsay, Wm. Mitchell, 1851, New Testament critic, explorer.
Randolph, Thomas, 1605–1634, poet.
Rawlinson, G. (Canon), 1812–1902, historian, orientalist.
Rawlinson, Sir Henry, 1810–1895, Assyriologist.
Rawnsley, H D. (Canon), 1850, poet, essayist.
Reade, Charles, 1814–1884, novelist.
Reid, Captain Mayne, 1818–1883, novelist.
Reid, Dr. Thomas, 1710–1796, philosopher, psychologist.
Reid, Sir T. Wemyss, 1842, biographer.
Remus, Uncle, *see* Harris.
Reynolds, Sir Joshua, 1723–1792, discourses on painting.
Ricardo, David, 1772–1823, political economist.
Richardson, Samuel, 1689–1761, novelist.
Riddell, Mrs. J. H., 1832, novelist.
Ridge, W. Pett, novelist.
Rigg, Rev. James H., *b.* 1821, theologian, biographer.
Rita, *see* Humphreys, Mrs. D.
Ritchie, Mrs., *see* Thackeray.
Ritson, Joseph, 1752–1803, balladist.
Robert of Gloucester, c. 1280, chronicler.
Roberts, Earl, 1852, military history.
Robertson, Rev. Fred. W., 1816–1853, preacher.
Robertson, Tom, 1829–1871, dramatist.
Robertson, William, 1721–1793, historian.
Robinson, G. (Canon), 1812, Old Testament critic, orientalist.
Rochester, John W., Earl of, 1647–1680, poet, satirist.
Rogers, J. E. Thorold, 1823–1890, economic historian.
Rogers, Samuel, 1763–1855, poet.
Rolfe, Fred. Wm., novelist.
Romanes, Prof. G. J., 1848–1894, naturalist.
Roosevelt, Theodore (Pres. U.S.A.), 1858, naval hist., adventure, ethics.
Ropes, Arthur R., 1859, librettist, poet.
Rose, J. Holland, 1855, historian.
Rosebery, The Earl of, *b.* 1847, biographer, essayist, critic.
Rossetti, Christina G., 1830–1894, poetess.
Rossetti, Dante Gabriel, 1828–1882, poet.
Rossetti, Wm. Michael, 1829, poet, biographer, critic.
Round, John Horace, 1854, historian.
Rowe, Nicholas, 1673–1718, poet, dramatist.
Rowley, William, c. 1620, dramatist.
Royce, Josiah, Amer. philosophical writer.
Rush, Benjamin, 1745–1813, Amer. physician.
Ruskin, John, 1819–1900, art critic, philosopher.
Russell, John, Earl, 1792–1878, biographer
Russell, Dr. William, 1746–1794, historian.
Russell, William Clark, 1844, novelist (sea-stories).
Russell, Sir William H., *b.* 1821, journalist, war correspondent.
Rutherford, Mark, *see* W. H. White.
Sackville, Thomas, Lord, 1536–1608, poet.
Saintsbury, Geo. E. B., 1845, literary historian and critic.
Sala, George Augustus, 1828–1895, misc. writer.
Sale, George, 1680–1736, translator.
Salmon, Rev. Geo., 1819–1904, mathematics, theology.
Sanday, Rev. Wm., 1843, Biblical critic.
Savage, Richard, 1698–1743, poet.
Savage-Armstrong, G. F., 1845, poet, dramatist.
Saxe, John Godfrey, 1816–1887, Amer. humorous poet.
Sayce, Archibald H., 1846, philologist, orientalist.
Schoolcraft, Henry R., 1793–1864, Amer. writer on Red Indian legends.
Scott, Clement, 1841–1904, dramatic critic.
Scott, Hugh S. (H. Seton Merriman), *d.* 1904, novelist.
Scott, Michael, 1789–1835, novelist.
Scott, Sir Walter, 1771–1832, poet, novelist.
Seaman, Owen, 1861, parodist, humorist.
Seccombe, Thomas, 1866, literary historian.
Sedgwick, Catherine M., 1789–1867, Amer. novelist.
Sedley, Sir Charles, 1639–1701, poet, dramatist.
Seeley, Henry G., 1839, geologist.
Seeley, Sir John R., 1834–1895, historian, essayist, theologian.
Selden, John, 1584–1654, antiquarian, historian.
Selous, Fred. C., 1851, sporting writer.
Sergeant, Adeline, 1851–1904, novelist.
Seth, Prof. Jas., philosophical writer.
Seton-Thompson, Ernest, 1860, Amer. artist, writer on wild animals.
Settle, Elkanah, 1648–1724, poet, dramatist.
Seward, William H., 1801–1872, Amer. orator, essayist, statesman.
Sewell, Elizabeth M., *b.* 1815, novelist.
Shadwell, Thomas, 1640–1692, poet, dramatist.
Shairp, J. C., 1819–1885, scholar, literary critic.
Shakespeare, William, 1564–1616, poet, dramatist.
Sharp, William, 1856, novelist, biographer, critic.
Shaw, George Bernard, 1856, essayist, dramatist.
Shelley, Mrs. Mary W., 1797–1851, novelist, editor.
Shelley, Percy Bysshe, 1792–1822, poet.
Shenstone, William, 1714–1763, poet.
Sheridan, Richard Brinsley, 1751–1816, dramatist, wit.
Sherlock, Dr. Wm., 1641–1707, theologian.
Shiel, M. P., 1865, novelist.
Shirley, James, 1596–1666, dramatist, poet.
Shorter, Clement K., editor, essayist.
Shorthouse, J. H., 1834–1903, novelist.
Sidgwick, Arthur, *b.* 1840, classical scholar.
Sidgwick, Henry, 1838–1900, philosopher, political economist.
Sidney, Algernon, 1622–1683, political scientist.
Sidney, Sir Philip, 1544–1586, poet.
Sigourney, Mrs. (Lydia Huntley), 1791–1865, Amer. poetess, miscellaneous writer.

Simms, William Gilmore, 1806–1870, Amer. poet, novelist, historian.
Sims, George R., 1847, editor, dramatist, poet.
Skeat, Rev. W. W., *b.* 1835, philologist, lexicographer.
Skelton, John, c. 1460–1529, poet, satirist, dramatist.
Skrine, John H., 1848, poet, theologian.
Sladen, Douglas (Brooke Wheelton), b. 1856, editor, traveller, novelist, poet.
Smedley, F. E. 1818–1864, novelist.
Smiles, Samuel, 1812–1904, philosopher, biographer.
Smith, Adam, 1723–1790, philosopher, political economist.
Smith, Alexander, 1830–1867, poet.
Smith, Goldwin, 1823, historian, biographer, essayist.
Smith, Rev. J. Gregory, philosophical writer.
Smith, Horace, 1779–1849 } joint authors,
Smith, James, 1775–1839 } etc.
Smith, Horace and James, c. 1775–1850, joint authors of "Rejected Addresses."
Smith, Sydney, 1771–1845, humorist, political writer.
Smith, W. Robertson, 1846–1894, biblical critic, editor Ency. Brit.
Smith, Sir William, 1813–1894, editor of Classical Encyclopædia.
Smollett, Tobias G., 1721–1771, novelist, satirist, historian.
Somerville, Mrs., 1780–1872, scientific writer.
Somerville, William, 1692–1742, poet.
South, Robert, 1633–1716, theologian.
Southern, Thomas, 1660–1746, poet, dramatist.
Southey, Robert, 1774–1843, poet, historian.
Southwell, Robert, 1560–1595, poet.
Sparks, Jared, 1789–1866, Amer. biographer, historian.
Speed, John, 1552–1629, historian.
Spence, Rev. H. D., 1836, historian, commentator.
Spencer, Herbert, 1820–1903, philosopher.
Spenser, Edmund, 1553–1599, poet.
Spielmann, Marion H., *b.* 1858, editor, art critic, biographer.
Spofford, Harriet P., 1835, Amer. poetess, novelist.
Sprague, Charles, 1791–1875, Amer. poet.
Sprat, Thomas, 1635–1713, historian, biographer.
Spurgeon, Charles H., 1834–1892, sermons.
Staley, Rev. Vernon, church ceremonial, theology.
Stanhope, Philip D., Earl, 1805–1875, historian.
Stanley, Arthur P. (Dean), 1815–1881, historian, biographer.
Stanley, Sir H. M., 1841, African traveller.
Stannard, Mrs. (John Strange Winter), 1856, novelist.
Stead, William T., 1849, journalist, topical writer, editor ("Review of Reviews").
Stebbing, Rev. T. R., 1835, naturalist, zoologist.
Stedman, Edmund Clarence, 1833, Amer. editor, poet, critic.
Steel, Mrs. Flora A., 1847, novelist.
Steele, F. M., novelist.
Steele, Sir Richard, 1671–1729, dramatist, essayist.
Steevens, G. W., 1870–1900, journalist, war correspondent.
Stephen, Sir Leslie, 1832–1904, critic, biographer.
Stephens, Riccardo, 1860, novelist.
Sterling, John, 1806–1844, essayist.
Sterne, Laurence, 1713–1768, novelist, divine.
Stevenson, Robert Louis, 1850–1894, novelist, essayist, poet.
Stewart, Dugald, 1753–1828, philosopher.
Stillingfleet, Edward (Bishop), 1635–1699, theologian, controversialist.
St. John, Henry, Viscount, 1678–1751, philosopher, essayist.
Stirling-Maxwell, Sir William, 1818–1878, historian, biographer.
Stockton, Frank Richard, 1834–1902, Amer. journalist, novelist.
Stoddard, Richard Henry, 1825–1903. Amer. critic, poet.
Stoker, Bram, novelist.
Stokes, Whitley, 1830, philologist (Celtic).
Storr, Francis, 1839, educationalist, literary critic.
Stout, George F., 1860, psychologist.
Stow, John, 1525–1605, chronicler.
Stowe, Harriet Beecher, 1812–1896, Amer. novelist (Uncle Tom's Cabin).
Street, Alfred B., 1811–1881, Amer. poet, librarian.
Strickland, Agnes, 1806–1874, historian.
Strype, John, 1643–1737, annalist, biographer.
Strange, E. F., 1862, writer on Japanese art.
Stubbs, Rev. Chas. W., 1845, Christian socialist.
Stubbs, William, (Bishop), 1825–1901, historian.
Suckling, Sir John, 1609–1641, poet, dramatist.
Sully, James, 1842, psychologist.
Sumner, Charles, 1811–1874, Amer. orator, statesman.
Surrey, Henry Howard, Earl of, 1516–1547, poet.
Sutcliffe, Halliwell, 1870, novelist.
Sutro, Alfred, dramatist.
Swan, Annie S., novelist.
Sweet, Henry, 1845, philologist.
Swift, Jonathan, 1667–1745, satirist, pamphleteer.
Swinburne, Algernon C., 1837–1909, poet, critic, essayist.
Symonds, John A., 1840–1893, historian, poet, critic.
Symons, Arthur, 1865, poet, critic.
Tanner, Thomas, 1674–1735, historian.
Taylor, Bayard, 1825–1878, Amer. writer, poet, naturalist.
Taylor, Sir Henry, 1805–1886, dramatic poet.
Taylor, Rev. Isaac, 1829–1901, philologist.
Taylor, Jeremy, 1613–1667, theologian.
Taylor, Tom, 1817–1880, dramatist.
Tegetmeier, Wm. B., 1816, natural historian.
Temple, Sir Wm., 1628–1698, essayist.
Tennyson, Alfred, Lord, 1809–1892, poet.
Tennyson, Charles (brother of above), 1808–1879, poet.
Tennyson, Frederick, 1807 (brother of above), poet.
Thackeray, Anne Isabel (Mrs. Ritchie), 1838, novelist, miscellaneous writer.
Thackeray, Wm. Makepeace, 1811–1863, novelist, essayist, satirist.
Theague, Rev. J. J., *see* Gerard.
Thomas, Annie, novelist.
Thompson, Sir E. Maunde, 1840, Director British Museum.
Thomson, J A., natural history.
Thomson, James, 1700–1748, poet.
Thomson, James, 1834–1882, poet.
Thomson, Sir William, *see* Lord Kelvin.
Thoreau, Henry David, 1817–1862, Amer. on travel, poet, novelist.
Thornbury, Walter, 1828–1876, novelist, poet.
Thornton, Percy M., 1841, historian.
Thrale, Mrs., *see* Piozzi.
Thurston, Kath. C., novelist.
Tickell, Thomas, 1686–1740, poet.
Tiddiman, Lizzie E., novelist, writer for children.
Tillotson, John (Archbishop), 1630–1694, theologian.
Todhunter, John, 1839, poet, critic.
Tooke, J. Horne, 1736–1812, philologist.
Torrey, Reuben Archer, 1856, revivalist preacher, theologian.
Tourgee, Albion Winegar, 1838, Amer. novelist.
Tout, Thomas Fred., 1855, historian.
Toynbee, Paget J., *b.* 1855, modern linguist.
Toynbee, William, 1849, poet.
Traill, Henry D., 1842–1900, literary critic, miscellaneous writer.
Trench, Richard C., 1807–1886, philologist, theologian.
Trevelyan, Sir Geo. O., 1838, biographer.
Trevelyan, George M., 1876, historian.
Tristram, Canon H. B., 1822, traveller, naturalist.
Trollope, Anthony, 1815–1882, novelist.
Trollope, Mrs. F., 1779–1863, novelist.
Trotter, Captain L. J., 1827, historian, biographer.
Trowbridge, John Townsend, 1827, Amer. writer for boys, poet, editor.
Tucker, Abraham, 1705–1774, metaphysician.
Tucker, Maria Charlotte (A.L.O.E.), 1821–1893, writer for children.
Tullock, Rev. W. W., 1846, biographer.
Tupper, Martin F., 1810–1889, philosopher, poet.
Turberville, George, c. 1530–1595, poet.
Turner, Chas. Tennyson, 1808–1879, poet.
Turner, Sharon, 1768–1847, historian.
Tuttiett, M. G., *see* Gray, Maxwell.
Twain, Mark, *see* Clemens.
Tweedie, Mrs. Alec., traveller.
Tylor, Edward B., 1832, anthropologist.
Tynan, Katharine, 1861, novelist, poetess.
Tyndale, William, c. 1485–1536, translator of Bible.
Tyndall, John, 1820–1893, scientist.
Tyrrell, Prof. R. Y., 1844, classical scholar.
Tytler, Sarah, 1827, novelist.
Udall, Nicholas, 1506–1564, dramatist, translator.
Urquhart, Sir Thomas, 1605–1660, translator, poet.
Usher, James (Archbishop), 1580–1656, theologian.
Vachell, Horace A., 1861, novelist, traveller.
Vanbrugh, Sir John, 1672–1726, dramatist.
Vane, Frank S., 1847, novelist.
Vaughan, Rev. C.T., 1816–1897, theologian.
Vaughan, Henry, 1614–1695, poet.
Vernham, Miss K. E., 1858, writer of children's books.
Verplanck, Gulian C., 1786–1870, Amer. legist, literary editor.
Vincent, Sir Howard, 1849, military critic.
Visger, Mrs. J. A. Owen, journalist.
Voysey, Charles, 1828, theistic writer.
Wace, Rev. Henry D.D. (Dean), *b.* 1838, theologian, ecclesiastical historian.
Wace, Robert, c. 1170, chronicler.
Wagner, Leopold, 1858, miscellaneous writer (drama, names, etc.).
Waldstein, Charles, 1856, art critic and essayist.
Walford, Lucy B., 1845, novelist.
Walker, Archibald S., 1869, biographer, essayist.
Walker, Hugh, 1855, literary critic.
Walkley, A. B., 1855, dramatic critic.
Wallace, Lewis (Lew), 1827–1905, Amer. novelist.
Wallace, Alfred Russel, 1823, scientist, natural historian.
Waller, Edmund, 1605–1687, poet.
Wallis, John, 1616–1703, philosopher, logician.
Walpole, Horace, 1717–1797, satirist, historian.
Walsingham, Thomas, 1440, historian.
Walton, Isaak, 1593–1683, naturalist (angling), biographer.
Warburton, Eliot, 1810–1852, traveller.
Warburton, William, 1698–1779, theologian.
Ward, Adolphus W., 1837, historian, biographer.
Ward, Artemus, *see* Browne.

Ward, Mrs. Humphry, 1851, novelist.
Ward, Wilfred, 1856, biographer.
Ware, William, 1797–1852, Amer. novelist, miscellaneous writer.
Warden, Florence, 1857, novelist.
Warner, Charles Dudley, 1829–1900, Amer. editor, humorist, miscellaneous writer.
Warner, Susan (Elizabeth Wetherall), 1818–1885, Amer. novelist.
Warner, William, 1558–1609, poet.
Warren, Samuel, 1807–1877, novelist.
Warren, Thomas H., 1853, classical scholar, poet, biographer.
Warton, Thomas, 1729–1790, essayist, historian.
Waterton, Charles, 1782–1865, naturalist, traveller.
Watson, Henry B. M., 1863, novelist.
Watson, John ("Ian Maclaren"), 1850–1907, novelist.
Watson, William, 1858, poet.
Watt, Francis, 1849, historian, biographer.
Watts, Dr. Isaac, 1674–1748, hymn writer.
Watts-Dunton, Theodore, 1832, critic, novelist, poet.
Waugh, Arthur, 1866, biographer, editor.
Webb, Sidney, 1859, writer on economics.
Webster, Daniel, 1782–1852, Amer. orator, statesman, lawyer.
Webster, John, c. 1620, dramatist.
Webster, Noah, 1758–1843, Amer. lexicographer, miscellaneous writer.
Wedmore, Fred., 1844, art critic.
Wells, H. G., 1866, novelist, scientist.
Wesley, Chas. W., 1708–1788, hymnist.
Wesley, John, 1703–1791, theologian, poet.
Westcott, Brooke Foss (Bishop), 1825–1901, theologian.
Westcott, Edward Noyes, 1846–1898, Amer. author of "David Harum."
Wetherall, Elizabeth, *see* Susan Warner.
Weyman, Stanley J., 1855, novelist.
Whateley, Richard, 1787–1863, logician.
Wheelton, *see* Sladen.
Whewell, William, 1794–1866, natural philosopher.
Whibley, Charles, critic, reviewer.
Whipple, Edward P., 1819–1886, Amer. essayist, critic.
Whistler, James McNeill, 1834–1903, Amer. artist, controversial writer.
White, Arnold H., 1848, writer on social problems.
White, Gilbert, 1720–1793, naturalist.
White, Henry Kirke, 1785–1806, poet.
White, Percy, novelist, journalist.
White, Richard Grant, 1822–1885, Amer. Shakespearean scholar.
White, W. Hale (Mark Rutherford), novelist, man of letters.
Whiteing, Richard, 1840, novelist, journalist.
Whitlock, Bulstrode, 1605–1676, historian.
Whitman, Walt., 1819–1892, Amer. poet, essayist.
Whitney, Mrs. Adeline Dutton Train, 1824, Amer. poet, novelist, writer for children.
Whitney, William Dwight, 1827–1894, Amer. lexicographer, philologist.
Whittier, John Greenleaf, 1807–1892, Amer. reformer, poet, essayist.
Whymper, Edward, 1840, mountaineer, critic, writer of travels.
Whyte-Melville, Geo. J., 1821–1878, novelist.
Wiclif, John, c. 1324–1384, translator of Bible, theologian, translator.
Wilberforce, Samuel (Bishop), 1805–1873, theologian.
Wiggins, Kate Douglas, 1857, Amer. novelist.
Wilde, O. O., 1856–1900, dramatist, novelist, poet.
Wilkins, John, 1614–1672, theologian.
Wilkins, Mary E., Amer. novelist.
Wilkinson, Henry Spencer, *b.* 1858, military critic.
William of Malmesbury, 1095–1142, Amer. chronicler.
Williams, Ernest E. G., 1866, economist.
Williams, Henry S., scientist.
Williams, James, 1851, poet and writer on law.
Williams, Sir M. Monier, 1819, orientalist (India).
Williamson, Alice Muriel, novelist.
Williamson, Geo. C., 1858, editor, biographer.
Willis, Nathaniel Parker, 1806–1867, Amer. poet, writer on travel.
Willock, John, 1853, commentator, biographer.
Wilson, Alexander, 1766–1813, Amer. writer on birds, editor.
Wilson, Andrew, 1852, biologist, hygienist.
Wilson, John (Christopher North), 1785–1854, essayist, editor.
Winter, John Strange (Mrs. Stannard), 1856, novelist.
Winthrop, Theodore, 1828–1861, Amer. novelist, soldier.
Wirt, William, 1772–1834, Amer. orator, essayist.
Wither, George, 1588–1667, poet, satirist.
Wolcot, Dr. John (Peter Pindar), 1738–1819, satirist, poet.
Wolfe, C., 1791–1823, "Burial of Sir John Moore and other poems."
Wolseley, Viscount, b. 1833, biographer, military writer.
Wood, Anthony â, 1632–1695, historian.
Wood, Mrs. Henry, 1814–1887, novelist.
Wood, Rev. J. Geo., 1827-1889, naturalist.
Wood, Rev. Theodore, 1862, biologist, zoologist.
Woods, Mrs. M. L., 1856, poetess, novelist.
Woodworth, Samuel, 1785–1842, Amer. poet.
Woolsey, T. Dwight, 1801–1889, Amer. essayist and classical scholar.
Wordsworth, Christopher, 1807–1884, (Bishop), historian, theologian.
Wordsworth, Rev. Christopher, *b.* 1848, editor, classical scholar.
Wordsworth, William, 1770–1850, poet.
Worsley, P., 1831–1866, translator, poet.
Wotton, Sir Henry, 1568–1639, poet.
Wright, Thomas, b. 1859, biographer.
Wright, W. Aldis, 1862, editor, scholar, author.
Wyatt, Sir Thomas, 1503–1542, poet.
Wycherley, William, 1640–1715, dramatist, poet.
Wynne, Chas. W., 1869, poet.
Wyntoun, Andrew, *d.* 1420, Scottish chronicler.
Yates, Edmund, 1831–1894, novelist.
Yeats, William B., *b.* 1865, Irish poet, dramatist.
Yonge, Charlotte M., 1823–1901, novelist, historian, biographer.
Yorke, Curtis (Mrs. S. R. Lee), novelist.
Young, Arthur, 1741–1820, traveller, agriculturalist.
Young, Edward, 1681–1765, theologian.
Younghusband, Col. F. E., 1863, Asiatic explorer.
Yoxall, James H., 1857, novelist, educationalist.
Zangwill, Israel, 1864, novelist, dramatist.
Zangwill, Louise, *b.* 1869, novelist.

PSEUDONYMS.

Pseudonyms (fictitious names) are often assumed by a writer for securing greater freedom to express his opinions. It has not always been safe to write frankly on religious or political subjects, and in times when no personal danger is incurred by the expression of unorthodox or subversive opinions on such subjects, the use of a pseudonym affords a convenient cover under which to attack long-established customs and beliefs. A young writer may also think it expedient to assume a *nom de plume* or "pen-name" to conceal his identity in case of failure. If, on the other hand, his work is favourably received he generally finds it to his advantage to continue to use the name associated with his writings in the minds of the public. "George Eliot," for instance, soon became a household word among the reading public, but a new work by Marian Evans (the author's real name) would have had to work its way to the front at a comparatively slow pace. Authors have also sometimes stuck to a pseudonym, or preserved their anonymity, to whet the curiosity of the public and to provoke discussion as to the authorship of the book so many are reading. The author of "Waverley" launched his first novel into the world anonymously, because he regarded it as a doubtful experiment, but he probably kept on his mask to obviate all personal discussions as to his productions and to stimulate interest and curiosity therein. The talk about the "Great Unknown" must also have afforded him much secret enjoyment. Many authors having published their first successful work anonymously have continued to withhold their name by speaking of themselves as the author of so-and-so; thus Mrs. Craik (*née* Muloch) appeared on the title page of her subsequent works as the author of "John Halifax, Gentleman"; G. A. Lawrence, as the author of "Guy Livingstone"; Mrs. Charles as the author of "Chronicles of the Schönberg-Cotta Family"; and F. W. Robinson as the author of "Grandmother's Money." The pseudonyms of authors are sometimes transposed forms, more or less exact, of their names; thus Bryan Waller Proctor becomes "Barry Cornwall, poet"; Henry Rogers, "R. E. H. Gregson." It may be noted, however, that these two pseudonyms are not perfect anagrams as an "r" has been left out in both cases. The most remarkable pseudonym of this class is the name "Voltaire," which the celebrated philosopher assumed instead of his family name "François Marie Arouet," and which is now generally allowed to be an anagram of Arouet L. J., that is, Arouet the Younger. The following list of pseudonyms contains chiefly the best known of those adopted by British and American authors.

Adeler, Max	Chas. Heber Clark
Agapida, Friar Antonio	Washington Irving
A. K. H. B.	Dr. A. K. H. Boyd
A. L. O. E.	Charlotte M. Tucker
Alexander, Mrs.	Mrs. A. F. Hector
Amateur Casual	Jas. Greenwood
Anglicanus	Dean Stanley
Anstey, F.	F. Anstey Guthrie
Ape ("Vanity Fair")	Carlo Pellegrini
Atlas ("The World")	Edmund Yates
Aunt Judy	Mrs. Alfred Gatty
Bab	W. S. Gilbert
Balfour, Clara	Mrs. Hemans
Bede, Cuthbert	Rev. Edw. Bradley
Bell, Acton	Annie Brontë
Bell, Currer	Charlotte Brontë
Bell, Ellis	Emily Brontë
Berwick, Mary	Adelaide Anne Procter
Bickerstaff, Isaac	Dean Swift
Bickerstaff, Isaac	Sir Richard Steele
Biglow, Hosea	J. Russell Lowell
Blacksmith, The Learned	Elihu Burritt
Boldrewood, Rolf	T. A. Browne
Bon Gaultier	W. E. Aytoun
Bon Gaultier	Sir Theo. Martin
Bostonian	Edgar Allan Poe
Boz	Charles Dickens
Brietmann, Hans	C. Godfrey Leland
Brown, Mrs.	George Rose
Brown, Pisistratus	William Black
Brown, Tom	Thomas Hughes
Burchell, Old	Elihu Burritt
Bystander	Goldwin Smith
Carmen, Sylva	Elizabeth, Queen of Roumania
Carroll, Lewis	Rev. C. L. Dodgson
Cavendish	Henry Jones
Caxton, Pisistratus	Lord Lytton
Cleeve, Lucas	Mrs. Kingscote
Cleishbotham, Jedediah	Sir Walter Scott
Coffin, Joshua	H. W. Longfellow
Conway, Hugh	F. Fargus
Cornwall, Barry	B. W. Proctor
Country Parson	Dr. A. K. H. Boyd
Crayon, Geoffrey	Washington Irving
C. S. C.	C. S. Calverley
Dagonet	G. R. Sims
Dangerfield, John	Oswald Crawford
Delta	D. M. Moir
Democritus, Junior	Robert Burton
Donovan Dick	J. E. P. Muddock
Dunshunner Augustus	W. E. Aytoun
Elia	Charles Lamb
Eliot, George	Mrs. Cross (née Marian Evans)
Ettrick Shepherd	James Hogg
Fairlegh, Frank	Frank E. Smedley
Fane, Violet	Lady Currie
Fern, Fanny	Mrs. Sarah Parton
Graduate of Oxford	John Ruskin
Graham, Ennis	Mrs. Molesworth
Gray, Maxwell	Miss M. G. Tuttiett
Greenwood, Grace	Mrs. Lippincott
H. H.	Mrs. Helen Hunt Jackson
Historicus	Sir William Vernon Harcourt
Hobbes, John Oliver	Mrs. Craigie
Hope, Anthony	A. Hope Hawkins
Hornem, Horace	Lord Byron
Iconoclast	Charles Bradlaugh
Ingoldsby, Thomas	Rev. R. H. Barham
Iron, Ralph	Olive Schreiner
Jean, Paul	J. P. F. Richter
Junius	Sir Philip Francis
Knickerbocker, Diedrich	Washington Irving
Latouche, John	Oswald Crawford
Laurence, Slingsby	Geo. H. Lewes
L. E. L.	Letitia E. Landon
Limner, Luke	Sir John Leighton
Little, Thomas	Thomas Moore
Ludlow, Johnny	Mrs. Henry Wood
Lyall, Edna	Ada Ellen Bayly
Maclaren, Ian	Rev. John Watson
Macleod, Fiona	William Sharp
Maitland, Thomas	R. Buchanan
Malet, Lucas	Mrs. W. Harrison (d. of C. Kingsley)
Malgrowther Malachi	Sir Walter Scott
Meredith, Owen	Lord Lytton
Merriman, H. Seton	Hugh Stowell Scott
New Writer, A	Sir Lewis Morris
North, Christopher	Prof. John Wilson
O'Dowd, Cornelius	Charles J. Lever
Ogilvie, Gavin	J. M. Barrie
Old Humphrey	G. Mogridge
Old Merry	E. Hodder
Opium Eater	T. De Quincey
O' Rell, Max	Paul Blouet
Ouida	Louise de la Ramée
Painter, A	Sir Noel Paton
Parley, Peter	S. G. Goodrich and others
Person of Quality	Dean Swift
Phiz	Hablot K. Browne
Pindar, Peter	Dr. John Wolcot
Plymley, Peter	Sydney Smith
Poor Richard	Benjamin Franklin
Power, Cecil	Grant Allen
Prendergast, Paul	Douglas Jerrold
Q.	A. T. Quiller-Couch
Quiz	Charles Dickens
Rita	Mrs. D. Humphreys
Roslyn, Guy	Joseph Hatton
St. Aubyn, Allan	Mrs. Marshall
Sand, George	Madame Dudevant
Scriblerus Martinus	Arbuthnot, Pope, Swift
S. G. O.	Lord Sydney. Godolphin Osborne
Sharp, Luke	Robert Barr
Shirley	John Skelton
Sketchley, Arthur	Rev. George Rose
Slick, Sam	Hon. T. C. Haliburton
Slingsby, Philip	N. P. Willis
Sloper, Ally	C. H. Ross
Spectator	A. B. Walkley
Syntax, Dr.	William Combe
Teufelsdröckh	Thomas Carlyle
Tirebuck, W.	William Sharp
Titcomb, Timothy	J. G. Holland
Titmarsh, Michael Angelo	W. M. Thackeray
Toby, M.P.	Henry W. Lucy
Twain, Mark	S. L. Clemens
Uncle Remus	J. C. Harris
Vacuus Viator	Thomas Hughes
Voltaire	François M. Arouet
Ward, Artemus	C. F. Browne
Wetherall, Elizabeth	Susan Warner
Wilson, J. Arbuthnot	Grant Allen
Winter, John Strange	Mrs. Stannard
Zadkiel	Capt. R. J. Morrison

FORMATION OF A PRIVATE LIBRARY.

It will be understood that the intention of the compiler of the appended list of books is not to supply a professional man with the technical implements of his profession, but to give to an intelligent book-lover some light and guidance in the gradual stocking of his home-shelves. Much money is wasted in early life by the purchase of inferior literature. We trust we are not flattering a vain hope when with some confidence we recommend the annexed list as one likely to place in the hands of the intelligent reader the best of its kind in each department of literature. We have limited our selection to 500 books, but of course the number of volumes will considerably exceed this; and if the purchaser feels that he must stop far short of our list, he will no doubt find some assistance by its guidance in drawing upon the contents of the Public Library in his neighbourhood. When we cannot buy, it is a great thing if we can borrow.

PHILOSOPHY.

Adamson	Development of modern philosophy.
Hoffding	History of modern philosophy.
Jowett	Dialogues of Plato.
Kant	Philosophy of, (Edward Caird).
Lecky	European morals.
Lloyd-Morgan.	Int. to comparative psychology
Luthardt	History of Christian ethics.
Martineau	Study of Spinoza.
Masson	British philosophy.
Mill	Comte and positivism.
Müller	Six systems of Indian philosophy.
Myers	Human personality.
Royce	Outlines of psychology.
Saisset	Essay on Religious Philosophy. English translation, T. and T. Clark, Edinburgh.
Seth	A study of ethical principles.
Sidgwick	History of ethics.
Smith	Ethics of Aristotle.
Spencer	First principles.
„	Principles of ethics.
Stout	Manual of psychology.
Veitch	Method, meditations of Descartes.

THEOLOGY.

The Bible	Revised Version.
Augustine, St.	Confessions.
Butler	Analogy of religion
Carpenter	Popular history of the Church of England.
Church	The Oxford movement.
Creighton	History of the Papacy.
Driver	Introduction to Old Testament.
Fairbairn.	The philosophy of the Christian religion.
Farrar	Life of Christ.
Julian	Dictionary of hymnology.
Keele	Christian year and sermons.
Kempis, T. à	Imitation of Christ.
Lightfoot.	Biblical essays.
Lux Mundi	Theological Essays.
Martineau	Study of religion.
Maurice	Theological essays.
Muller	Origin and growth of religion.
Newman	Apologia pro vita sua, and parochial sermons.
Pascal	Letters.
Ramsay	The Church in the Roman Empire.
Robertson of Brighton,	Sermons.
Salmon	Introduction to New Testament.
Sanday	The Gospels in the second century.
Sayce	Races of the Old Testament.
„	Religions of ancient Egypt and Babylonia.
Smith G.A.	Isaiah (2 vols).
Smith, W. R.	The religion of the Semites.
Smith	Dictionary of the Bible.
Taylor, Jer.	Holy living and holy dying.
Westcott.	History of the English Bible.

PHILOLOGY and CLASSICS.

Bardsley, C. W.	English surnames.
Clodd, E	The story of the alphabet.
Müller, Max.	Lectures on the science of language.
Sayce	Introduction to the science of language.
Skeat	Principles of English etymology.
Sweet	The history of language.
Ten Brink, B.	Language and metre of Chaucer.
Thompson, E. M.	Greek and Latin palæography.
Wagner, L.	Names and their meaning.
Yonge, C. M.	History of Christian names.
Æschylus.	Tragedies.
Æsop	Fables.
Aristotle.	Metaphysics.
Cicero	Orations.
Demosthenes	Orations.
Herodotus	Works.
Homer	Iliad.
Homer	Odyssey.
Horace	Odes.
Martial	Epigrams.
Plato.	Republic
Pliny.	Letters.
Plutarch.	Lives.
Tacitus	Annals.
Virgil	Aeneid.

All these can be had in English translations; the poets often in English verse.

SCIENCE.

Aflalo	Natural history of the British Isles.
Avebury	Scenery of England.
Ball	The earth's beginnings.
„	Story of the heavens.
„	Story of the sun.

BONNEY . Volcanoes.
BUCKLAND. Natural history of British Fishes.
CARPENTER The microscope and its revelations
CHAMBERS, G. F. The weather.
DARWIN . Descent of man.
„ . Origin of species.
DENIKER . Races of man.
DIXON . British birds.
„ . Our favourite song birds.
GEIKIE . Scenery of Scotland.
HAMMER . Radium and other radio-active substances.
HUXLEY . Man's place in nature.
JEFFERIES . Life of the fields.
„ . Wild Life.
KEARTON, R. With Nature and a camera.
KELVIN, LORD Molecular dynamics.
LOCKYER . Astronomy.
MAETERLINCK The life of the bee.
MARR, J. E. Scientific study of scenery.
NEWMAN . Bacteria.
SCHARFF . History of European fauna.
SERVISS . Pleasures of the telescope.
STORY . . Story of wireless telegraphy.
THOMSON, J. A. Outlines of zoology.
TYNDALL . Glaciers of the Alps.
WHITE . Natural history of Selborne.
WILLIAMS . Story of 19th century science.

FINE ARTS.

ANDERSON & SPIERS Architectures of Greece and Rome.
BATE, PERCY. The English Pre-Raphaelite painters.
BROWN, G. B. Arts in early England.
„ The fine arts.
COLLIGNON. Manual of mythology in relation to Greek art.
COLLINGWOOD, W. G. The art teaching of John Ruskin.
CONWAY, SIR W. M. Artistic development of Reynolds and Gainsborough.
The dawn of art in the ancient world.
„ Early Tuscan art.
CRANE. . Bases of design.
„ . . The claims of decorative art.
„ . . Decorative illustration of books.
FERGUSSON History of architecture in all countries.
„ Illustrated handbook of architecture.
FITZGERALD. History of the English stage.
„ Romance of the English stage.
FLAXMAN . Lectures on sculpture.
FLETCHER, B. History of architecture.
HAMERTON, P. G. Drawing and engraving.
HARRISON, JANE E. Introductory study in Greek art.
HULME, F. E. The history of symbolism in Christian art.
JAMESON, MRS. Legends of the Monastic Orders as represented in the fine arts.
„ Sacred and legendary art.
LEGGE, H. G. Short history of ancient Greek sculpture.
LETHABY, W. R. Architecture, mysticism and myth.
PENNELL, Jos. Modern illustration.
PETRIE, W. M. F. Egyptian decorative art.
PHYTHIAN, J. E. The story of art in the British Isles.
POYNTER . Lectures on art.
RUSKIN . Aratra Pentelici: lectures on sculpture.
„ . Ariadne Florentina: lectures on wood and metal engraving.
„ . Lectures on architecture and painting.
„ . Lectures on art.
„ . Modern painters.
„ . Seven lamps of architecture.
„ . Stones of Venice.
„ The two paths: lectures on art.
STRANGE, E. F. Japanese illustration.
WALPOLE . Anecdotes of painting.
WITT, R. C. How to look at pictures.

HISTORY.

ALISON History of Europe.
ARNOLD . The Roman Empire.
BANCROFT . History of the United States.
BROWN, H. F. Venice.
BRYCE . The American commonwealth.
„ . The Holy Roman Empire.
BUDGE, E. A. W. Babylonian life and history.
BURTON, J. H. History of Scotland.
CARLYLE . The French Revolution.
„ . History of Frederick the Great.
CLARENDON History of the rebellion and civil wars in England.
DOYLE, A. C. The great Boer War.
FREEMAN . General sketch of European history.
FROUDE . History of England.
„ . The Spanish story of the Armada.
GARDINER . History of the Commonwealth and Protectorate.
History of the great civil war.
GIBBON . The decline and fall of the Roman Empire.
GREEN . Short history of the English people.
GREY, J. G. Australasia, old and new.
GROTE . History of Greece.
HAZLITT . The Venetian Republic: its rise, its growth, and its fall.
HUNTER . History of British India.
JEBB . . Modern Greece.
KINGLAKE . The invasion of the Crimea.
LANG . . A history of Scotland from the Roman occupation.
M'CARTHY . A history of our own times.
MACAULAY . A history of England.
MICHELET . History of France.
MILMAN . Latin Christianity.
„ . History of the Jews.
MOTLEY . Rise of the Dutch Republic.
PRESCOTT . The conquest of Mexico.
„ . History of the reign of Ferdinand and Isabella.
SAYCE . Assyria; its princes, priests, and people.
„ . The "Higher Criticism," and the verdict of the monuments.
STANLEY . Historical memorials of Westminster Abbey.
STUBBS Constitutional History.
THEALE . History of South Africa.
THIERS History of the French Revolution.

BIOGRAPHY.

AINGER, CANON. Letters of Charles Lamb.
BOSWELL . Life of Samuel Johnson.
BROWNING. Letters of Robert and E. B. Browning.
CARLYLE, J. W. Letters and memorials.
CARLYLE . Life of John Sterling.
„ . Oliver Cromwell's letters.
CHURCHILL W. Life of Lord Randolph Churchill.
COWPER . Letters.
DARWIN, F. Life and letters of C. Darwin.
DOWDEN . Life of Shelley.
EVELYN . Diary.
FIRTH, C. H. Oliver Cromwell.
FORSTER . Life of Charles Dickens.
FROUDE . Life and letters of Erasmus.
„ . Thomas Carlyle.
GASKELL, MRS. Life of Charlotte Brontë.
KNIGHT, W. Journals of Dorothy Wordsworth.
„ . Life of Wordsworth.
LEE, SYDNEY. Life of Shakespeare.
LOCKHART . Life of Burns.
„ . Life of Sir Walter Scott.
MACKAIL . Life of William Morris.
MAURICE, F. Life of Frederick Denison Maurice.
MOORE . Letters and journals of Lord Byron.
MORLEY . Life of Gladstone.
PEPYS . Diary.
PROTHERO AND BRADLEY. Life and correspondence of Dean Stanley.
ROSE, J. H. Napoleon.
ROSEBERY . Napoleon: the last phase.
„ . Pitt.
ROSSETTI, W. M. Pre-Raphaelite diaries and letters.
RUSKIN . Letters.
„ . Praeterita.
SOUTHEY, C. C. Life and correspondence of Robert Southey.
SOUTHEY, ROB. Life of Nelson.
STANLEY . Life of Thomas Arnold.
SYMONDS, J. A. Life of Benvenuto Cellini.
TENNYSON, HALLAM. A memoir of Lord Tennyson.
TREVELYAN, G. O. Life and letters of Lord Macaulay.
VILLARI . Life and times of Savonarola.
WRIGHT, W. A. Letters and literary remains of Edward Fitzgerald.

TRAVELS.

ALLEN, GRANT. Paris.
„ Venice.
BENT, THEO. Tent work in Arabia.
BISHOP, MRS. Korea and her neighbours.
The Yangtze Valley and beyond.
„
BORROW . The Bible in Spain.
BRASSEY . Voyage in the "Sunbeam."
BURNABY . Through Asia Minor.
CONWAY . The Alps from end to end.
„ . The first crossing of Spitsbergen.
DE WINDT. The new Siberia.
DU CHAILLU The world of the great forest.
FOUNTAIN, PAUL. Great deserts and forests of North America.
FREEMAN . Studies of travel: Greece.
„ . Studies of travel: Italy.
GORDON, LADY DUFF. Letters from Egypt.
HARE . . Cities of Italy.
„ . Walks in Rome.
HEDIN, SVEN. Through Asia.
JOHNSON, SIR HARRY. Uganda Protectorate.
KINGSLEY, MARY. Travels in West Africa.
MILNER . England in Egypt.
PORTAL, GERALD. My mission in Abyssinia.
RAMSAY . Everyday life in Turkey.
SELOUS . Sport and travel.
„ Travel and adventure in Africa.
STANLEY . Sinai and Palestine.
STEEVENS . With Kitchener to Khartoum.
SYMONDS . Sketches in Italy and Greece.
WALLACE . Malay Archipelago.
WELLBY, CAPT. Twixt Sirdar and Menelik.
WHYMPER . Ascent of the Matterhorn.
„ . The great Andes.
„ . Scrambles among the Alps.
WORDSWORTH. Tour in Scotland.
YOUNGHUSBAND. Philippines and round about.

FICTION.

AUSTEN, JANE. Northanger Abbey.
„ Pride and prejudice.
„ Sense and sensibility.
BALZAC . Père Goriot.
BARRIE . Auld Licht idylls.
„ . Little Minister.
„ . Sentimental Tommy.
BLACK, W. Princess of Thule.
„ . White heather.
BLACKMORE. Lorna Doone.
BOCCACCIO. Decameron.
BRONTE, C. Jane Eyre.
„ . Shirley.
„ . Villette.
BRONTE, E. Wuthering Heights.
CERVANTES. Don Quixote.
CORELLI, MARIE. Thelma.
„ The Master Christian.
„ God's Good Man.
CAINE, HALL. Deemster
„ Manxman.
„ Prodigal son.
CROCKETT . Lilac sunbonnet
„ . Stickit minister.
DAUDET Tartarin de Tarascon
DICKENS . David Copperfield.
„ . Old Curiosity shop.
„ . Oliver Twist
„ . Pickwick Papers.
DUMAS . Monte Cristo.
„ . Three musketeers.
ELIOT . . Adam Bede.
„ . Daniel Deronda.
„ . Felix Holt.
„ . Romola.
„ . Silas Marner.
FIELDING . Tom Jones.
GASKELL . Cranford
GOETHE . Wilhelm Meister.
GOLDSMITH Vicar of Wakefield.
HARDY, T. . Far from the madding crowd.
„ . Tess of the D'Urbervilles.
HARTE, BRET. Luck of Roaring Camp.
HAWTHORNE, N. Scarlet letter.
HUGHES. . Tom Brown's schooldays.
HUGO . Hunchback of Notre-Dame.
„ . . Les misérables.
HEWLETT . Queen's quhair.
KINGSLEY, C. Alton Locke.
„ Westward Ho!
KIPLING . Kim.
„ . Light that failed.
„ . Plain tales from the hills.
„ . Soldiers three.
LE SAGE . Gil Blas.
LYTTON. Last days of Pompeii.
MACDONALD, G. David Elginbrod.
„ Robert Falconer.
MACLAREN, IAN. Beside the bonnie brier bush.
MAUPASSANT. The odd number.
MEREDITH . Egoist.
„ . Richard Feverel.
READE, C. . Cloister and the hearth.
RUTHERFORD, M. Autobiography of Mary Rutherford.
SCOTT . . Antiquary.
„ . . Guy Mannering.
„ . . Heart of Midlothian.
„ . . Ivanhoe.
„ . . Legend of Montrose.
„ . . Old Mortality.
„ . . Waverley.
SHORTHOUSE. John Inglesant.
STEVENSON. Kidnapped.
„ Master of Ballantrae.
„ Strange case of Dr. Jekyll
„ Treasure Island.
„ Weir of Hermiston.
STOWE . Uncle Tom's cabin.
SWIFT . Gulliver's travels.
THACKERAY. Henry Esmond.
„ The Newcomes.
„ Pendennis.
„ Vanity Fair.
„ Virginians.
TOLSTOI . Anna Karenina.
„ . Resurrection.
„ . War and peace.
TWAIN, M. Tramp abroad.
WEYMAN, S. J. Gentleman of France.
WOOD, MRS. East Lynne.

GENERAL LITERATURE.

(Including Poetry and Drama).

ADDISON . The Spectator.
ARNOLD, M. Essays in criticism.
„ Literature and dogma.
AVEBURY, LORD. Pleasures of life.

BACON . Essays.
BIRRELL . Collected essays.
BRADLEY . Tennyson's "In Memoriam."
BRANDES, G. Shakespeare.
BREWER . Dictionary of phrase and fable.
BROOKE, STOPFORD. Poetry of Robert Browning.
" Primer of English literature.
" Tennyson: his art in relation to modern life.
BROWN . Horae subsecivae.
BRUNETIERE, F. Essays in French literature.
BURROUGHS, J. Pepacton.
" Winter sunshine.
BURTON . The book hunter.
CARLYLE . Critical and miscellaneous essays.
" . Heroes and hero worship.
CHAMBERS . Cyclopædia of English literature.
CHESTERFIELD. Letters.
CHESTERTON. Twelve types.
CORBETT, F. ST. J. History of British poetry.
COURTHOPE. History of English poetry.
" Life in poetry, law in taste.
DARMESTETER. Selected essays.
DE QUINCEY. Confessions of an opium eater.
DOBSON . 18th century essays.
DOWDEN . Shakespeare: critical study of his mind and art.
" . Sonnets of Shakespeare.
DUNNE . Mr. Dooley in peace and war.
" . . Mr. Dooley's philosophy.
EMERSON . Essays.
FROUDE . Short studies in great subjects.
GOSSE . . Critical Kit-Kats.
" . . Questions at issue.
HAZLITT . Essays.
HENLEY, W. E. Views and reviews: art.
" Views and reviews: literature.
HOLMES . Autocrat of the breakfast table.
" . Over the tea-cups.
" . Poet at the breakfast table.
" . Professor at the breakfast table.
HUNT . . Essays.
" . Men, women, and books.
HUTTON, R. H. Literary essays.
HUXLEY . Lay sermons.
IRVING, W. Sketch book.
JOHNSON . Lives of the English poets.
JUSSERAND, J. J. English essays from a French pen.
LAMB . . Essays of Elia.
" . . Tales from Shakespeare.
LANDOR . Imaginary conversations.
LANG, A. . Essays in little.
LORIMER . Letters from a self-made merchant to his son.
LOWELL . Among my books.
LUTHER . Table Talk.
MACAULAY . Critical and historical essays.
MACKAIL, J. W. Latin literature.
MAHAFFY . Greek literature.
MALORY . Morte d'Arthur.
MASSON . Life and times of Milton.
" . Select essays of De Quincey.
MONTAIGNE. Essays.
MORLEY, J. Critical miscellanies.
" . Studies in literature.
" . Voltaire.
MÜLLER . Chips from a German workshop.
" . Selected essays.
MYERS . Classical essays.
" . Modern essays.
" . Wordsworth.
ORR, MRS. . Handbook to Robert Browning.
PATER . . Appreciations.
" . Greek studies.
PATTISON, M. Essays.
PERCY . Reliques of ancient English poetry
RALEIGH, W. Milton.
" Wordsworth.
RAMSAY, DEAN. Scottish life and character.
RUSKIN . Crown of wild olive.
" . Ethics of the dust.
" . Sesame and lilies.
SAINTE-BEUVE. Essays.
SAINTSBURY. Essays.
" French literature.
" A history of criticism.
" Short history of English literature.
SCHOPENHAUER. Essays.
SECCOMBE, T. Age of Johnson.
" Age of Shakespeare.
SMITH, SYDNEY. Essays.
STEELE . Essays.
STEPHEN, L. Studies of a biographer.
STEVENSON. Familiar studies of men and books.
" . Memories and studies.
" . Virginibus puerisque.
SWANWICK. Poets the interpreters of their age.
SYMONDS, J. A. In the key of blue, and other prose essays.
" Italian literature.
" Renaissance in Italy.
" Shakespeare's predecessors in the English drama.
TEN BRINK. History of early English literature.
THACKERAY. Roundabout papers.
THOREAU . Essays.
" . Walden.
WALKER . Age of Tennyson.
WARD, A. W. History of English dramatic literature.
WATSON, W. Excursions in criticism.
WHITMAN . Complete prose works.

POETRY.

ARNOLD, M. Works.
BLAKE, W. Selections.
BROWNING, MRS. Poems.
BROWNING, ROB. Works.
BURNS . Works.
BYRON . Works.
CHAUCER . Canterbury Tales.
COLERIDGE. Works.
COWPER . Works.
DANTE . Divine comedy.
DRYDEN . Works.
FITZGERALD, E. Omar Khayyám.
GOETHE . Faust.
GOLDSMITH. Poems and plays.
GRAY . . Poetical works.
HOOD . . Poems.
KEATS. . Works.
KEBLE . Christian year.
KIPLING . Barrack room ballads.
LONGFELLOW. Works.
LOWELL . Poems.
MACAULAY. Lays of Ancient Rome.
MILTON . Poetical Works.
MOLIERE . Works.
MORRIS . Earthly Paradise.
PFEIFFER, EMILY. Sonnets.
POPE . . Works.
SCHILLER . Dramas.
SCOTT . . Poetical Works.
SHAKESPEARE. Works.
SHELLEY . Poetical works.
SOUTHEY . Works.
SPENSER . Works.
SWINBURNE, Poems and ballads.
TENNYSON . Works.
WATSON, W. Collected works.
WHITMAN . Leaves of grass.
WHITTIER . Works.
WORDSWORTH. Works (including Prelude).
YEATS, W. B. Poems.

We append a list of one hundred books selected by Lord Avebury, as those which have been most frequently recommended as best worth reading, and generally known as:—

SIR JOHN LUBBOCK'S ONE HUNDRED BEST BOOKS.

(Works by Living Authors are omitted.)

The Bible.
The Meditations of Marcus Aurelius.
Epictetus.
Aristotle's Ethics.
Analects of Confucius.
St. Hilaire's "Le Bouddha et sa religion."
Wake's Apostolic Fathers.
Thomas à Kempis's Imitation of Christ.
Confessions of St. Augustine.
The Koran (portions of).
Spinoza's Tractatus Theologico-Politicus.
Pascal's Pensées.
Butler's Analogy of Religion.
Taylor's Holy Living and Dying.
Bunyan's Pilgrim's Progress.
Keble's Christian Year.

Plato's dialogues: Apology, Crito and Phædo.
Xenophon's Memorabilia.
Aristotle's Politics.
Demosthenes' De Coronâ.
Cicero's De Officiis, De Amicitia, and De Senectute.
Plutarch's Lives.
Berkeley's Human Knowledge.
Descarte's Discours sur la Méthode.
Locke's On the Conduct of the Understanding.

Homer.
Hesiod.
Virgil.
Maha Bharata.
Ramayana.
The Shahnameh.
The Nibelungenlied.
Malory's Morte d' Arthur.

The Sheking.
Kalidasa's Sakuntala, or The Lost Ring.
Æschylus's Prometheus and the Trilogy of Orestes.
Sophocles' Œdipus.
Euripides' Medea.
Horace.

Chaucer's Canterbury Tales (perhaps in Morris's edition; or if expurgated in C. Clarke's or Mrs. Haweis's).
Shakespeare.
Milton's Paradise Lost, Lycidas, Comus, and the shorter poems.
Dante's Divina Commedia.
Spenser's Faërie Queen.
Dryden's Poems.
Scott's Poems.
Wordsworth (Mr. Arnold's selection).
Pope's Essay on Criticism, Essay on Man, and Rape of the Lock.
Burns.
Byron's Childe Harold.
Gray's Poems.
Tennyson's Idylls and smaller poems.

Herodotus.
Xenophon's Anabasis.
Thucydides.
Tacitus's Germania.
Livy.
Gibbon's Decline and Fall.
Hume's History of England.
Grote's History of Greece.
Carlyle's French Revolution.
Green's Short History of England.
Lewes's History of Philosophy.

Arabian Nights.
Swift's Gulliver's Travels.
Defoe's Robinson Crusoe.
Goldsmith's Vicar of Wakefield.
Cervantes' Don Quixote.
Boswell's Life of Johnson.
Molière.
Schiller's William Tell.
Sheridan's The Critic, School for Scandal and The Rivals.
Carlyle's Past and Present.

Bacon's Novum Organum.
Smith's Wealth of Nations.
Mill's Political Economy.
Cook's Voyages.
Humboldt's Travels.
White's Natural History of Selborne.
Darwin's Origin of Species and Naturalist's Voyage.
Mill's Logic.

Bacon's Essays.
Montaigne's Essays.
Hume's Essays.
Macaulay's Essays.
Addison's Essays.
Emerson's Essays.
Burke's Select Works.
Smiles's Self Help.

Voltaire's Zadig and Micromegas.
Gœthe's Faust and Autobiography.
Thackeray's Vanity Fair and Pendennis.
Dickens's Pickwick and David Copperfield.
Lytton's Last Days of Pompeii.
George Eliot's Adam Bede.
Kingsley's Westward Ho!
Scott's Novels.

GLOSSARIES.

1. TERMS USED IN ART, ARCHITECTURE, AND HERALDRY.

(H=Heraldry).

Abacus : A rectangular slab of marble, etc., forming the uppermost member or division of a capital.

Abutment : The solid part of a pier or wall, forming a support to an arch or other structure.

Acanthus : a plant (bear's breech) the leaves of which are imitated in Corinthian capitals.

Accessories (H) : All the paraphernalia of an heraldic achievement other than the shield, such as the helm, crest, badge, scroll, wreath, &c.

Accosted : (H) ; Placed side by side ; *addorsed*, back to back.

Accidental Colour :=Complementary Colour ; e.g., Orange is the complement of blue ; green of red ; purple of yellow.

Accidental Light : Such lights as that of the sun darting through a cloud, or through the trees in a glade ; moonlight and candle-light effects ; e.g., in Gerard Dow's pictures.

Achievement (H) : The shield and accessories fully represented. See also *Hatchment*, which is a corrupt form of "Achievement."

Acroteria : Pedestals for statues on the apex and lower angles of a pediment.

Aerial Perspective : The interposition of the atmosphere between the object and the eye, so as to produce the appearance of distance.

Aisle : The division of a church on either or both sides of the nave.

Alla-prima : Application of the pigments all at once to the canvas.

Allerion. (H) A young eagle without beak or feet.

Almery, Aumery, Aumbry, Ambry : The niches or cupboards formed in the thickness of a wall, to contain the altar vessels and other valuables.

Alto-relievo : "High-relief," a term applied to sculptured forms that stand out from the background on which they are carved by at least half their thickness.

Amphisbæna. (H) A serpent having a head at each end of its body.

Ambulatory : The promenade either behind the altar or in the cloisters.

Ancones : Brackets supporting the cornice of Ionic doorways.

Annealing : Leaving glass in an oven after the fire has been withdrawn, to render it less brittle ; reheating metals after hammering.

Ante-chapel : The outer part of a chapel at the west end running north and south.

Appaumé : (H) with open hand showing the palm.

Appliqué : Enrichments "applied" to the main object after separate manufacture.

Apse : The semi-circular or polygonal termination to the choir or aisles of a church.

Aqua-tint : An effect like that of a wash of Indian ink, produced by mastic upon the copper-plate.

Arabesque (Moresque) : Fanciful combinations in design of plants, trees, flowers, and fruit.

Arcade : A series of arches, open or closed, supported by columns or piers.

Arch : May be semi-circular, segmental, elliptical, stilted, horse-shoe, pointed, trefoiled, cinquefoiled, or ogee.

Architrave : In classical architecture, the lowest division of the entablature resting immediately on the abacus of the capital. Also the ornamental mouldings round the openings of doors, windows, etc.

Archivolt : The under curve or surface of an arch from impost to impost.

Ashlar : Hewn or squared stone used in building.

Astragal : A small semi-circular moulding or bead.

Atlantes and Caryatides : Male and female figures respectively, supporting entablatures.

Atrium : The entrance hall in the houses of the ancients, generally open to the sky and frequently with a fountain in the centre.

Attired (H) Applied (instead of "armed") to a deer with horns, the points of which are called cors.

Attitude : Immobile pose, opposed in Art to gesture and action.

Badge (H) : Also called cognizance. A distinctive of high families who wore it upon sleeves, etc. ; not to be confounded with the crest.

Bailey : The courts of a castle formed by the spaces between the defences and the keep.

Baldachin or **Baldachino :** A canopy over altars, thrones, beds, etc.

Ballistraria : A cruciform aperture in the walls of a fortress for the discharge of arrows.

Ball-flower : An ornament resembling a ball placed in a circular flower, the three petals of which form a cup round it.

Balustrade : A parapet formed by a range of small balusters supporting a coping or cornice.

(1) **Bar ;** (2) **Barrulet ;** (3) **Barruly ;** (4) **Barry-bendy ;** (5) **Bar-wise** (H) : (1) is a diminutive of the fess, covering $\frac{1}{5}$ of the field ; (2)=$\frac{1}{10}$ of the field ; (3) the field divided by horizontal lines into four, six, or more equal parts counterchanged ; (4) Field divided into lozenges ; (5)=Placed in a horizontal direction.

Barbican : Any outwork at a short distance from the main works of a castle, etc.

Barge-board or **Verge-board :** The external gable-board of a house, often decorated with elaborate wood-carvings.

Bartizan : The small overhanging turrets which project from the angles on the top of a tower.

Basilica : A Roman law-court. Many were converted into churches, apsidal and rectangular. Early churches built on the same lines were called *basilicas*.

Bas-relief : "Low-relief," a form of relief in which the figures project slightly from the background on which they are carved.

Bastion : A rampart or bulwark projecting from the face of a fortification.

Batter : Walls gently sloping inwards are said to batter.

Battlement : An indented parapet on fortresses or churches.

Belvidere : A room built above the roof of an edifice to give a wide view of the country around.

Bema : The chancel of a church.

(1) **Bend ;** (2) **Bend Sinister ;** (3) **Bendy ;** (4) **Bendlet** (H) : (1) An ordinary running diagonally from the dexter chief to the sinister base ; (2) Runs the reverse way ; (3) Describes a field divided bend-wise into any number of equal portions ; (4)=half the breadth of the Bend.

Billet : A Norman moulding ornament resembling thick cartridges, arranged in alternating rows.

Biting-in : the action of *aqua fortis* upon the bared parts of the copper or steel plates.

Body-colour : The measure of consistence, substance, and tinging power of the pigments employed in oil-painting.

Border or **Bordure** (H) : Runs round a shield, and = $\frac{1}{8}$ of its extent.

Bosses : Projecting ornaments, usually of foliage, placed at the intersections of the ribs of ceilings.

Botonny (H) : Ending in a trefoil shape (crosses, etc.).

Braces : Timbers which strut or prop the principal rafters. Also called Struts.

Bracket : An ornamental projection from the face of a wall to support a statue.

Breadth : The effect of spaciousness produced by the skilful use of colour and shading.

Burin : A prismatically shaped tempered steel instrument used for engraving on copper.

(1) **Burnt Paper ;** (2) **Burnt Sienna ;** (3) **Burnt Terra Verde ;** (4) **Burnt Umber ;** (1) Yields a black pigment ; (2) a transparent orange-red ; (3) a fine warm brown ; (4) a russet brown.

Buttress : A projection from a wall to create additional strength and support.

Byzantine Art : The style of art and architecture that arose in Byzantium, after Constantine made that city the capital of the Eastern Roman Empire.

Cabossed or **Caboshed** (H) : Describes a head cut off clean from the neck.

Cadency (H) : The rank in order of the members of the same family and is thus distinguished :—Eldest son, a label of three points placed in chief ; second son, a crescent ; third son, a mullet ; fourth son, a martlet ; fifth son, an annulet ; sixth son, a fleur de lis ; seventh son, a rose ; eighth son, the cross moline ; ninth son, the octofoil.

Caltrop : Radiated spikes of metal, thrown upon the ground to lame cavalry.

Cameo : gems cut in relief.

Campanile : A bell-tower sometimes attached to, sometimes detached from, the main building.

Canopy : In Gothic architecture an ornamental projection over doors, etc.

Canting Arms (H) : Have a punning reference to the name of the bearer.

Canton : (H) A corner sub-ordinary, either dexter or sinister : =$\frac{1}{9}$ of the chief.

Capital : The head of a column, pilaster, etc, abounding in variety of shape.

Cap of Maintenance : A crimson velvet cap, lined and turned up with ermine.

Caricature : A satirical image ; an extravagant representation.

Cartouche : An oval shield ; in Egyptian inscriptions the ovals enclosing the names of kings, &c.

Cenotaph : A monument which does not contain the remains of the deceased.

Chamfer : The surface formed by cutting away the rectangular edge of wood or stonework.

Chantry: A chapel often containing the tomb of the founder in which masses are said for his soul.

Charge (H): A figure borne on the field in a coat of arms.

Chequy (H): Divided into rectangular pieces of alternate tinctures.

(1) Chevron; (2) Chevronel; (3) Chevronny (H): (1) An Ordinary representing the two rafters of a house, $=\frac{1}{5}$ of the field; (2) $=\frac{1}{2}$ chevron; (3) Divided into several equal portions chevron-wise.

Chiaro-oscuro: The management of light and shade in pictorial art.

Chief (H): The upper horizontal third of a shield.

Ciborium: The Sacrament-house or tabernacle in which the Reserved Sacrament is kept; also the baldachino over an altar.

Cinquefoil: "Five-leaved," an ornament much used in Gothic architecture in the tracery of windows, &c. It somewhat resembles five leaves around a common centre. It is also a common bearing in Healdry representing a flower with five petals.

Clerestory: An upper story of a church standing above adjacent roofs, and pierced by a row of windows to give increased light.

Cloister: A covered ambulatory running round a cathedral quadrangle.

Cognizance: See *Badge*.

Colonnade: One row (Monostyle), or many rows (Polystyle) of columns supporting a building or roof.

Colossus: A statue much larger than natural size, e.g., that of Rhodes, 100 feet high.

Columbarium: Holes left in walls for the insertion of pieces of timber; also sepulchral chambers having niches all round to receive the urns of the dead.

Complement, In her (H): A term applied to the full moon.

Composition: The creation of a whole artistic idea out of several parts.

Console: A bracket.

Corbel: A projecting stone or piece of timber to support a superincumbent weight.

Cornice: In architecture, a series of mouldings forming the uppermost member of the entablature just above the frieze.

Cortile: A courtyard or area, which in Italian houses was frequently ornamented with statues and frescoes.

Couchant (H): A beast lying down with its head up; *dormant*, if the head is down.

Couped (H): Head or limb cut off clean is couped; if with a jagged edge, *erased*.

Crancelin (H) A wreath of peculiar shape placed in bend (see Prince Consort's arms).

Crined (H): Bearing a mane (chevelé is said of a human being with hair).

Crockets: Projecting leaves, flowers, foliage used to decorate the angles of spires, etc.

Cross (H): An ordinary compounded of the *fess* and *pale*.

Dado: In architecture, the cubic block which forms the body of a pedestal.

Dancetty (H): Indented with the larger sort of vandyke, with never more than three points.

Debruised (H): Said of an animal over whose body is placed a bend, etc., *defamed* if the tail has been cut off.

Device (H): A motto and a pictorial design emblematic thereof. The term is often, though improperly, applied to any heraldic figure.

Dexter (H): The right hand side.

Disclosed, Displayed (H): With wings expanded: (the latter refers to birds of prey).

Diptych: Double folding tablets made of beautifully carved ivory.

Dormer: A gabled window pierced through a sloping roof.

Double tressure flory counterflory (H): Two small orles one within the other, ornamented with *fleur de lis*, whose heads and stalks point alternately outwards and inward.

Echinus: The egg and anchor ornament in Classical architecture.

Embowed (H): Crooked like a bow (said of a bent arm, etc.).

Endorse (H): A diminutive of the pale. It is only used in pairs.

Engraving: the art of producing designs by lines incised on metal or wood; the print obtained by filling the lines with ink and impresing them on paper.

Ensigned (H): Adorned, ornamented; e.g., A man's heart gules, ensigned with a crown or. (Douglas)

Entablature: Consists of architrave, frieze and cornice, and is the superstructure which lies horizontally upon the columns in Classic architecture.

Entasis: The swelling outline given to the shaft of a column.

Escutcheon of Pretence (H): The small shield borne upon his own achievement, and bearing the arms of the heiress he has married.

Etching: Scratching away the ground of the metal plate which has been covered with wax by a fine steel needle. An acid is then poured over the plate to eat away the metal exposed by the lines, thus scratched through. An *etching*, the print obtained by filling the lines thus formed, with ink and taking off an impression.

Faience: All kinds of glazed earthenware and porcelain.

Fan tracery vaulting: (Late Perpendicular). All the ribs rise fan-like from the springing of the vault, have the same curve, and diverge equally in every direction.

(1) Fess; (2) Fess Point; (3) Party per Fess (H); (1) The broad belt ($=\frac{1}{3}$ of the field) drawn horizontally across the shield; (2) The central point of an escutcheon; (3) Field divided equally by an horizontal line (H).

Field (H): The surface of the shield upon which the charges are depicted.

Fimbriated (H): Having a narrow bordure or hem.

Finial: In Gothic architecture, an ornament usually resembling foliage, which forms the termination of gables, pinnacles, spires, &c.

Fitché (H): Having a sharp point to pierce the earth.

Flamboyant: Tracery with flame-like wavings; a French style contemporary with the English Perpendicular.

Flutings: Channels cut perpendicularly in the shafts of Classical columns.

Foreshortened: Represented at an oblique angle.

Fret: In Classical architecture an ornament formed by small fillets intersecting each other at right angles. In Heraldry a saltire interlaced within a mascle.

Frieze (see Entablature).

Galilee: a porch or chapel at the entrance of a church (Lincoln, Ely, Durham).

Gamb (H): The whole fore-leg of a beast.

Garb (H): A sheaf of grain, generally banded of another tincture.

Gardant (H): A beast looking straight at the spectator: Regardant: looking over its shoulder.

Gargoyle: A projecting spout, grotesquely carved, used to throw off the water from the gutter of a building.

Genre-painting: Pictures of common, every-day life and manners, grave or gay.

Gorged (H): Wearing a crown round its neck said of a lion, etc.).

Gules (H): The colour red, said to be derived from Persian *gul*, a rose.

Gyron: Gyronny (H): A triangular division of the field into figures resembling the sails of a windmill.

Hatching: Lines laid on an engraving side by side by the crayon or graver to give uniform tint.

Hatchment (H): A lozenge-shaped frame or panel, placed outside the house of a person lately deceased, on which are painted the arms of the deceased.

Impaled (H): Two coats of arms conjoined pale-wise, e.g., a Bishop's personal arms placed side by side with those of his see.

Impost: Horizontal mouldings on the summit of a pillar or pier, from which an arch springs.

In pride (H): Said of a peacock with outspread tail.

Intaglio: Figures cut into the materials used for seals, matrices, etc.

Invecked (H): A partition line the reverse of "engrailed."

Isometrical Perspective: Dispenses with a vanishing point; hence everything is perfectly cubical in form and does not diminish in size according to distance.

Jamb: The side of a window, door, chimney, etc.

Jambe (H): The whole fore-leg of a beast.

Jesse, Tree of: Represents the descent of Christ from Jesse, whose descendants appear on scrolls of foliage branching out of the tree.

Jessed (H): Having straps or throngs.

"Kept down": Subdued in tone or tint in favour of another part of the picture intended to rivet the eye of the spectator.

King-post: The middle post of a roof, standing on the tie-beam and reaching up to the ridge.

Knop: A boss, a round bunch of leaves or flowers.

Line of beauty: A curve, combining a kind of concave and convex termination.

Lithography: Lines are not cut into the stone, but drawn upon it with an unctuous material to which the printing-ink adheres, and is imparted to the paper in the process of printing.

Langued (H): The giving a different tincture to the tongue from that of the body of the beast.

Lacunar; Laquear: A ceiling.

Lady-Chapel: A chapel dedicated to the Blessed Virgin Mary, dating from the 13th century, variously placed (e.g., at Ely, Rochester, Oxford, Bristol, Durham, etc.).

Lantern: A small structure or open erection placed on the top of domes or towers for the purpose of admitting light.

Lich-gate (i.e., Corpse gate): A shed over the entrance of a church-yard, where the coffin rested a short while.

Louvre: A small turret on the roof to allow smoke to escape.

Lymphad (H): An old-fashioned, one-masted ship rowed with oars.

Mantlings (H): Ornamented foliage-work for the adorning of helmets.

Martlet (H): Heraldic swallow, generally represented without feet.

Mascle (H): A hollow square placed diamond-wise; in other words, a voided lozenge.

Mausoleum: A sepulchre of extraordinary magnificence, named after Mausolus, King of Caria, whose sepulchre was one of the wonders of the world.

Merlon: The solid part of an embattled parapet, standing up between the embrasures.

Mezzo-tinto (Middle-tint): The whole plate is first scratched by a "cradle"; then the drawing is traced and the

strongest lights are scraped and burnished until the effect resembles the old style of Indian-ink drawings.

Monochrome: In one colour, the outline giving the varied expression by tint, light, and shade.

Motive: That which produces conception, invention, or creation in the mind of the artist, combined with his own spirituality.

Mouldings: In Classical architecture, the fillet, the astragal, the cyma reversa (ogee), the cyma recta; the cavetto; the ovolo (quarter-round); the scotia (casement); the torus (or round). A general term for all the varieties of outline given to the angles of subordinate parts of buildings.

Mullet (H): A five-pointed star supposed to represent the rowel of a spur, and generally pierced; in fact, Woodward makes the piercing the distinction between a star (estoile) and a mullet.

Mullions: The stone divisions in Gothic windows.

Naiant (H): Fish swimming horizontally; hauriant, fish erect sucking in the air.

Narthex: An ante-chapel at the west end of Italian churches for catechumens and penitents.

Nave: The main body of a church westward of the choir, often flanked by aisles.

Niche: A recess in a wall for a statue, vase, or other erect ornament.

Ogee: A moulding combining a round and a hollow, part being concave and part convex; also used of arches.

Oillettes: Small openings, or loop-holes, sometimes circular, through which missiles were discharged by those in the fortress.

Or (H): Gold.

Ordinaries (H): Certain heraldic devices of common occurrence, viz., the Chief, the Pale, the Fess, the Bend, (and the Bend Sinister), the Chevron, the Cross, and the Saltire. (All these have their diminutives).

Orle (H): A narrow border within the shield but removed from its edge.

Outlines: Contours such as are to be found in Flaxman's works, wherein much effect is produced by the skilful use of the scanty light and shade.

Over-all (H): When any charge is borne over another.

(1) **Pale**; (2) **Pallet**; (3) **Paly** (H): (1) Two perpendicular lines drawn from the top to the base of the shield, $=\frac{1}{3}$ of the middle part of the field; (2) $=\frac{1}{2}$ breadth of Pale; (3) The field is divided into four or more even number of parts by Pales alternating in tincture.

Parapet: A low wall to protect the ramparts of military structures and the roofs of churches, mansions, etc.

Parclose or **Perclose:** The screen protecting a tomb or chantry.

Passant-Gardant (H): said of a beast walking and looking ahead.

Passant-Regardant (H): said of a beast walking and looking behind.

Passe-par-tout: An engraving with an ornamental border, the centre of which is cut out to allow another engraving to be inserted.

Pendants: Hanging ornaments on ceilings and roofs.

Pedestal: The substructure of Classical columns containing (1) the foot or base next the ground, (2) the dado, the main body (3) the cornice at the top.

Pediment: The triangular gable which crowns the portico of a classical building; also the small gables and triangular decorations over niches, doors, and windows in Gothic architecture.

Pelican in her piety (H): A pelican vulning her breast from which drops of blood are distilled for the nourishment of her young beneath her in the nest.

Pheon (H): The broad head of a dart or javelin pointed downward.

Pietra dura: Ornamental work in coloured stone representing birds, fruit, etc., used for the decoration of coffers or panels of cabinets.

Pietre commesse: Inlaying precious stones, exclusively natural, in the surface of caskets, cabinets, etc. Thus a sumptuous decoration of birds, flowers, etc., is produced by thin veneers of agates, jaspers, lapis-lazuli, etc.

Piqué: Pricked or dotted; inlaid work in the form of small ornaments in metal.

Piazza (Place): An open area surrounded by houses, whose upper stories are supported by pillars, forming a vaulted promenade beneath.

Pier: The solid mass between doors, windows, and other openings in buildings; the support of a bridge etc., on which arches rest.

Pilaster: The square column generally attached to a wall as an ornamental support to an arch.

Piscina: The stone basin, supplied with a drain pipe, into which the cleansing water is poured when the chalice is washed.

Plaque: A flat plate of metal, upon which enamels are painted.

Plates: In engraving the impressions from an engraved copper or steel plate are called *copper-plates*, *steel-plates*. The term cannot be used for wood-cuts, and only by accommodation for lithograph impressions.

Plinth: The lower projecting base of a column, pedestal, or wall.

Polychromy: The art of colouring statuary to imitate nature; or the use in architecture of prismatic or compound tints.

Powdered (H): (French *semé*) Covered all over with the same charge, e.g, the shield of St. Margaret of Scotland is *powdered* with martlets; the banner of old France with *fleur-de-lis*.

Pre-Raphaelites: A school of modern artists who adhere rigidly to natural forms and effects like the painters who flourished before Raphael.

Portico: A range of columns in front of a building (if four, called tetrastyle; if six, hexastyle, if eight, octostyle; if ten, decastyle).

Postern: a private entrance to a castle, town, monastery, etc.

Presbytery: The eastern termination of a choir where stands the High Altar.

Predella: The step on the top of the altar, forming the base of the altar-piece.

Pronaos: The vestibule or portico in front of the cella of a Greek temple.

Purpure (H): Purple.

Quatrefoil: "Four-leaved," an ornament much used in Gothic architecture, resembling a four-leaved or cruciform flower.

Quoin: The external angle of a building, commonly of ashlar.

Quarterings (H): The partitions of a shield containing many coats of arms.

Raguled (H): Ragged like the trunk of a tree, showing only the stumps of the branches which have been lopped off.

Rampant (H): Said of a beast standing upright on his hind legs. If he is looking backward he is described as rampant-regardant.

Reredos: The wall or screen at the back of an altar.

Rebus (H): A coat allusive to the name of the bearer, e.g., three salmons for Salmon, a pine tree for Pines a bolt piercing a tun for Bolton, etc., etc.

Renaissance: A term applied to the style of decoration revived by Raphael as the result of his discoveries of the paintings in the then recently exhumed Thermæ of Titus, and in the Septizonia.

Repoussé: Chasing: The former strikes up metal from behind with a punch until the forms are produced roughly in relief on the surface; the latter finishes the process.

Rococo: Baroque: A medley of incongruous objects in decoration.

Romanesque; A general term for all the debased styles of architecture which flourished in Europe from the fall of the Roman power to the introduction of Gothic architecture.

Rood-beam: Rood-loft: The beam over the entrance to the chancel upon which stands the large cross often flanked by the figures of the Blessed Virgin Mary and Saint John.

Rose Window: A circular window such as adorns the transepts of Westminster Abbey.

Rotunda: A temple, church, or other building, circular within and without.

Sable (H): Black.

Sacellum: Classically, a small unroofed enclosure containing an altar. Ecclesiastically, a chapel with a tomb enclosed, used as an altar for masses to be said on behalf of the deceased.

Saltire or **Saltier** (H): A St. Andrew's Cross.

Sanguine (H): Blood-colour.

Sarcophagus ("flesh eating"): Anciently a tomb made of a pumice-stone found near Troas, said to be able to destroy all but the teeth of the body in forty days.

Sedilia: Seats on the south side of the chancel for the priests and attendants.

Segreant (H): A griffin erect on its hind legs ready to fly.

Shrine: A feretory or repository for relics.

Sinister (H): The right hand *facing you* of the shield.

Slipped (H): A flower or branch plucked from the stock.

Soffit: The under side of an arch or cornice presenting a flat surface.

Spandrel: The triangular spaces between the arch of a doorway and a rectangular formed by the outer mouldings over it.

Still Life: A term applied to pictures of fruit, flowers, furniture, and other inanimate objects.

Stipple: Dots instead of lines used in engravings in imitation of chalk drawings.

Strap-work: An enrichment consisting of a narrow fillet or band, folded, crossed, and elaborately interlaced.

Stanchion: The upright iron bar between the mullions of a window.

String-course: A projecting horizontal band or line of mouldings in a building.

Systyle: A Classical arrangement of columns where the interspaces=diameter of column doubled.

Tænia: The fillet on the top of the Doric frieze.

Tenny (H): Orange.

Tooth ornament: Early English ornament—a square four-leaved flower with the centre projecting in a point.

Transom: A horizontal cross-bar in a window or panel.

Triforium: A gallery or arcade between the vaulting and the roof of the aisles of a church.

Triptych: A tablet in three divisions, to open and shut, the two outer folding over the centre when closed.

Truss: The collection of timbers forming one of the principal supports in a roof, framed together so as to give mutual support to each other.

Vert (H): Green.

Vesica piscis: An oval figure formed by two equal circles cutting each in their

centres; the vesica is often used in episcopal seals.

Vignette: Ornaments of vine-leaves, tendrils, and grapes used in Gothic architecture; also woodcuts and engravings which are not enclosed within a definite border.

Voided (H): When an ordinary has nothing but an edge to show its form so that the field appears through, it is said to be voided.

Volute: In architecture, the scroll or spiral ornament forming the characteristic feature of the Ionic capital.

Wood Engraving: The art of cutting designs on wood so as to leave the pattern in relief. *A wood-cut*, a print in ink from a wood engraving.

Wyvern (H): A kind of flying serpent, the upper part resembling a dragon, and the lower an adder or snake.

2. MUSICAL TERMS.

Alla Capella.—In the church style.

Accelerando.—Gradually increasing the speed.

Accidental.—An alteration of the pitch of a note by sharp, flat, or natural.

Acciacatura.—An ornamental note of very short duration, immediately preceding its principal note and one degree from it.

Adagio.—Very slowly.

Ad libitum.—The speed and expression according to the pleasure of the performer.

Al fine.—To the end.

Alla breve.—Counting twice (two minims) to the bar.

Allegro.—Quickly, cheerfully.

Allegretto.—Not so quickly as Allegro.

Allemande.—A dance of German origin; also a movement in a Suite.

Andante.—Rather slowly.

Andantino.—A little slower than Andante. Sometimes means a little less slowly.

Animato.—With spirit.

Anthem.—A musical setting of words generally selected from Holy Scripture.

Appogiatura.—An auxiliary note, struck immediately before the principal note and taking from it half its duration.

Aria.—A somewhat extended solo in an opera. It is of special form and often brilliant in style.

Arpeggio.—The notes of a chord spread and played in succession instead of simultaneously.

Assai.—Enough, very.

A tempo.—In time.

Aubade.—Originally a morning song. The term is also applied to some pianoforte pieces of no special form.

Ballad.—Originally a dance, or a pastoral song. Later, a song in which the music is the same for each verse.

Ballet.—Formerly a simple song or dance. Now consists of an elaborate arrangement of dances illustrating a story.

Barcarolle.—A gondolier's song. The time, which is characteristic of the movement of boat and oars, is six quavers to the bar, and the style smooth, graceful, and melodious.

Bassoon (Fagotto).—A wooden instrument played with a double reed. It is the natural bass of the oboe.

Bass Tuba (Tuba).—A large brass instrument of purer tone than the Ophicleide. It has a practical compass of three octaves upwards from second F below bass stave.

Bombardon.—A large brass instrument; the lowest of the Saxhorns.

Bolero.—A Spanish dance of a dignified character in 3—4 time; a modification of the seguidilla and fandango.

Bourrée.—A French or Spanish dance in duple or common time. Its peculiarity is a graceful gliding movement.

Breve.—A note equal in value to two semibreves; nearly obsolete.

Cachuca.—A Spanish dance in 3—4 time.

Cadence (or Close).—The last two chords of a phrase or movement arranged to satisfy the ear in suggesting a feeling of repose.

Cadenza.—A passage in the "ad libitum" style, introduced towards the close of an instrumental solo, but not forming any part of the rhythmical structure. It sometimes recapitulates in a free manner the melodies previously heard.

Calando.—Diminishing in force and speed.

Canon.—A form of music in which the voices or instruments imitate strictly the leading part at an interval above or below, the parts entering a few beats after one another.

Cantabile.—In a singing manner.

Cantata.—A sacred or secular work of the oratorio kind, but shorter.

Canto fermo.—Ancient church melody.

Capriccio.—A light and bright instrumental piece, the form exhibiting the ingenuity of the composer.

Catch.—A round, the words so arranged as to produce a humorous effect.

Cavatina.—An aria or song of a short description and without repetition.

Chaconne.—A dance of Spanish origin. A "ground bass" (q.v.) is its chief characteristic.

Chord.—A combination of three or more sounds. The simplest is the common chord consisting of the first, third, and fifth of the scale.

Chorale.—A German hymn-tune.

Chromatic Scale.—A scale in semitones.

Clarinet.—A wooden instrument played with a single reed. There are three varieties:—C, A, and B flat; the first is little used, being inferior in tone (See *Transposing Instruments*).

Clavichord.—A precursor of the pianoforte The keys operated on quills which plucked the strings.

Clef.—A sign affixed to the staff of five lines to show the absolute pitch of the notes written.

Coda (A tail).—The last section of a movement, generally designed to contain in a shortened or suggestive manner what has gone before, and to form a suitable conclusion.

Common time.—Time in which two or four are counted to the bar.

Compound time.—Time in which each division of a bar is equivalent to a dotted note, and therefore divisible into three parts. Its signatures are $\frac{6}{4}$, $\frac{6}{8}$, $\frac{9}{8}$, etc.

Con brio.—With life; lively.

Con fuoco.—With fire, energy.

Con moto.—With motion; moving.

Con spirito.—With spirit.

Concerto.—A composition designed to display the skill of the performer and the capabilities of his instrument; it is accompanied by the full orchestra. A concerto consists of three movements of different character, its form being derived from the Sonata.

Concord.—A simple combination of sounds satisfactory to the ear.

Cor Anglais.—An alto or tenor oboe with a range one fifth lower than the ordinary variety. It is very seldom used.

Cornet.—A brass instrument fitted with pistons which, being depressed either singly, or in combination, produce with the natural notes of the tube a complete scale.

Corno di Bassetto (Basset Horn).—A tenor or baritone clarinet with a compass extending down to F below bass stave. It is a beautiful but neglected instrument.

Counterpoint.—The art of combining melodic parts in strict accordance with certain rules. In Counterpoint the parts are considered *horizontally* and the smooth melodic flow of sounds for each voice is the object aimed at. Music written in this style is termed *contrapuntal.* (cf. "Harmony.").

Courante.—A dance of French and Italian origin. In the Suite it is generally found with "doubles" or variations.

Crescendo.—Growing louder.

Da Capo.—Repeat from the beginning.

Dal Segno.—Repeat from the Sign. (𝄋).

Diatonic.—Relating to the normal intervals of the scale. (See *Chromatic Scale*).

Diminuendo.—Decreasing in loudness.

Discord.—A combination of sounds not satisfactory of itself to the ear, and requiring another chord—the chord of resolution—to follow it.

Divertimento.—A composition of a light character and generally simple construction; the subjects are sometimes operatic airs.

Dominant.—The fifth note in the diatonic scale.

Doppio movimento.—Doubling the rate of movement.

Double Bass.—The largest of the violin family. It generally "doubles" the bass part in playing an octave below.

Double Counterpoint.—A melody in counterpoint so contrived as to be available either above or below its "subject."

Drums.—The kinds in use are:—(a) *Kettle-drum* (Tympani). Tuned by screws on the rims. Two are generally employed in the orchestra. (b) *Bass-drum.* This is not tuned to any particular note, and is used only for rhythmic effect. (c) *Side-drum.* Chiefly used in military bands—seldom in the orchestra.

Enharmonic Change.—A change of notation without change of sound, e.g., C sharp to D flat.

Euphonium.—A large brass instrument—the bass of the Saxhorn group.

Fanfare.—A flourish of trumpets.

Fantasia.—An instrumental composition in which the author gives free rein to his fancy. The term was formerly applied to movements only partially irregular in form.

Flute.—The old English flute (flute-à-bec) had a mouthpiece and was held like a clarinet. The instrument now in use (flauto traverso)(1720)is held crossways, and has an orifice instead of a mouthpiece. The natural key is D with a compass of three octaves upwards from middle C. It is made in ebony, cocoa-wood, boxwood, and silver.

Forte.—Loud.

Fortissimo.—Very loud.

French Horn.—A brass instrument, circular in shape and of considerable compass. Its normal key is C; crooks have to be employed for music written in other keys. Horns are generally used in pairs in the orchestra. (See *Transposing Instruments*).

Fugue.—A complex form of music practically developed from a "subject." This "subject" has its "answer," both being furnished with an accompaniment

in double counterpoint. The principal parts of a fugue are the exposition of the subject and answer, the episodes, stretto, pedal point, and coda. The subject, either in its original or altered form, appears and re-appears constantly throughout the piece.

Galliard (Romanesca). An old Italian dance of lively character.

Galop.—An old form of dance still popular. It is in 2—4 time and of rather quick rate of movement.

Gamut.—The scale of sounds.

Gavotte.—A dance of French origin in common time. It is somewhat similar to the Bourrée.

Gigue (Jig).—An old Italian dance written in various rhythms.

Glee.—A vocal conposition for at least three voices, unaccompanied and containing solos. The form originated in the 18th century when the finest examples were written, Generally, as its name implies, it is of a cheerful character, but there are many "serious" examples.

Grave.—In a slow and solemn style

Gregorian Modes.—These modes or scales, consisting of eight natural notes each, date probably from the time of St. Ambrose (4th century). St. Gregory (6th century) collated them and defined their form.

Ground Bass.—A bass melody or figure, repeated with varied harmonies in the accompaniment.

Guitar.—An instrument of the lute species. It has a flat back and the sides resemble in shape those of a violin. There are six strings—three of gut and three of silver wire woven over silk. The sounds are produced by plucking the strings with the fingers.

Harmonics (Partials).—When a string, or other sonorous body, is set vibrating, it not only does so as a whole, but its aliquot parts (half, third, etc.) are also set in motion, and each part produces a tone higher in pitch but of decreasing intensity. These tones are called harmonics and can be heard in most instruments.

Harmony.—The art of combining sounds according to certain rules, which govern the construction of the chords and their progression.

Harp.—An instrument of very ancient origin. The frame is triangular, thus allowing an arrangement of strings gradually increasing in length and differing in pitch. By the invention of pedals (1720), and the double-action pedals (Erard, 1810), the strings can be shortened and semitiones produced.

Harpischord.—An instrument like the clavichord in principle, but in shape similar to a grand pianoforte. It was supplied with two or three strings to each note, and had sometimes two rows of keys.

Hautboy.—See *Oboe.*

Horn.—See *French Horn.*

Hornpipe.—An old English dance, lively in character, in triple or duple time.

Impromptu.—A kind of composition which suggests improvisation. It is somewhat free from prescribed forms.

Intermezzo. Interlude.—A short piece played between other and larger movements, or between the acts of a play, or the verses of a hymn.

Intrada.—Introduction.

Key.—The particular scale of sounds in which a piece is written; also certain mechanical contrivances in musical instruments.

Larghetto.—Similar to Largo in style, but hardly as slow.

Largo.—In a solemn stately style; slower than *Adagio.*

Ledger lines.—The small auxiliary lines used above and below the staff when the notes extend beyond its compass.

Legato.—In a smooth, connected manner, the notes following each other closely without the slightest gap.

Leggiero.—Lightly (in quick passages).

Lento.—Slow.

L'istesso tempo.—The same time.

Lute.—A stringed instrument of Eastern origin introduced into Europe by the Crusaders. It resembles a guitar except that it has an oval back, and was played by plucking the strings with or without a plectrum.

Lyre.—An ancient Greek instrument. It had fewer strings than a harp and was played with a plectrum.

Madrigal.—The term originally signified a poem, and, afterwards, the music to which it was sung. A Madrigal is a song for three or more voices, written in the contrapuntal style without accompaniment. English Madrigals are unsurpassed. (See *Counterpoint*).

Maestoso.—In a majestic style.

Mandoline.—An instrument of the lute kind but smaller, and with a more rounded back. It has either four pairs (Neapolitan) or five pairs (Milanese) of strings, and is played with a plectrum.

Manual.—A set or row of keys.

Marcato.—In a marked manner to attract attention to the melody.

March.—A form of music chiefly used for military purposes. The time is duple or quadruple, and the style bold, melodious and attractive.

Masque.—An old English drama with music. Ben Jonson was famous as an author of masques which were frequently performed at Court.

Mazurka.—Formerly only a Polish national dance, but now also Russian. The rhythm, in 3—4 time, is often peculiar, the accent being on the second beat. The style is sentimental.

Mediant.—The third note of the scale, midway between tonic and dominant.

Melody.—A rhythmic arrangement of single sounds pleasing to the ear.

Meno mosso.—Less movement, slower.

M. D. (Ital. mano destra). With the right hand.

Metronome.—An instrument used for indicating the rate at which a movement is to be performed.

Minuet.—A graceful dance, in 3—4 time, of French origin. In its present form it consists of two strains or phrases each repeated, and a trio, after which the two strains are heard again. Formerly it was composed of two eight-bar phrases only.

Modulation.—Generally understood to mean changing the key by means of intermediate chord or chords. Some musicians call this change "Transition" and hold that "Modulation" means passing from one mode to another—major to minor, minor to major.

Mordent.—An instrumental embellishment somewhat similar to a trill though shorter, having the additional note below the principal one.

Motet.—A sacred composition—originally in contrapuntal form only—for three or more voices, with or without accompaniment.

Motif.—The principal theme of a musical composition. As the piece proceeds it is heard again and again on one or other of the instruments, either entire or in part.

Musette.—An old French bagpipe with two "drones"; also a kind of small Oboe with a very penetrating tone.

Mute.—A small piece of metal or wood made to fit on the bridge of a stringed instrument. Its effect is to lessen the volume and also to modify the character of the sound.

Natural Notes (Open notes).—The natural notes produced by the open tube of a brass instrument, without the use of valves or pistons, are the octave, fifth, double-octave, major third, octave fifth, seventh, etc. They are obtained by varying the force of the air in blowing.

Nocturne.—A form of composition invented by Field, who wrote many graceful and attractive specimens. Subsequently Chopin adopted the form, but his marked individualism considerable altered its character.

Notturno.—A piece for several instruments, or orchestra, of somewhat light and dainty character.

Obbligato.—Necessary. The term is generally used when an instrument is supplying an accompaniment which is indispensible.

Oboe (Hautboy).—A wooden instrument played with a double reed. With the exception of the mouthpiece the shape resembles that of the clarinet, but its tone is more penetrating.

Octave.—The eighth note above or below a given sound; or the series of the eight notes of the scale.

Octett.—A piece of music written for eight instruments.

Opera.—A drama in which all the words are sung. The music is usually arranged for full orchestra.

Ophicleide.—A large brass instrument fitted with keys like a bassoon. It was invented about a century ago and superseded the old wooden "serpent."

Oratorio.—A sacred subject, or drama, written principally for chorus interspersed with solos, duets, etc. The form is more massive and important than the Cantata.

Orchestra.—A combination of instruments forming a band. A well constituted orchestra includes violins, violas, violoncellos, double-basses, flutes (2), oboes (2), clarinets (2), bassoons (2), horns (2 or 4), trumpets (2), and kettle-drums (2), with, as occasion may require, piccolo, harp, ophicleide, bass-tuba, bass drum, cymbals, triangle. The total number of instruments in such an orchestra would be from 70 to 100, the strings largely predominating.

Organum.—The primitive accompaniment to Plain Song.

Ottavino.—The "octave flute" or piccolo.

Overture.—The instrumental opening movement of an opera or oratorio. The kind known as "Concert" overture is not associated with either, but is generally illustrative or suggestive of some particular idea (e.g., Mendelssohn's "Meerestille"). Operative overtures are more free in form and also of lighter texture.

Partita.—See *Suite.*

Partition (Partitur).—Full orchestral score.

Part Song.—A composition for three or more voices and generally of simple construction.

Passacaglia or **Passecaille.**—Originally a Spanish dance. The form was developed by composers of the 17th and 18th centuries. It is very similar in construction to a chaconne.

Passepied.—An old French dance of the 16th century in triple time; sometimes included in the Suite where it preceded the minuet.

Passing Notes.—Unessential notes forming a bridge between essential notes. Though discordant their effect is not unpleasant owing to their brief duration.

Pasticcio.—A name applied t a kind of opera which was made up of favourite but disconnected numbers from various sources.

Pastorale.—A simply constructed instrumental movement of a quiet pastoral character, generally in 6–8 or 12–8 time.

Pavan.—A slow and stately dance and song of either Italian or Spanish origin.

Pedalier.—A pedal board fitted to a pianoforte, the pedals either acting on the keys of the latter, or on an independent mechanism with its own set of strings.

Pedal point.—A point in a movement where one part holds or sustains a note while the others supply varied harmonies. The pedal note must be either tonic or dominant, and the first and last chords of the point must be in harmony with the note sustained.

Perdendosi.—Lessening the sound ; dying away.

Pesante.—The notes to be played heavily and in a marked manner.

Phrasing.—The grouping of the sounds into definite phrases. The notes become more linked together and the melody more apparent.

Piacevole.—Agreeably, pleasantly.

Piano.—Soft. **Pianissimo.**—Very soft.

Pianoforte.—The strings of the harpsichord were plucked, those of the pianoforte are struck by felt-covered hammers. This device made it possible, by varying the force, to produce loud or soft tones —hence the name *Pianoforte*. The invention of the hammer was the work of Cristofori (18th century).

Pibroch.—An air and variations for the Gaelic bagpipe.

Piccolo.—An octave flute. Its upper notes are powerful and piercing, the lower ones are comparatively weak.

Più.—More.

Pitch.—The acuteness or gravity of a musical sound. The higher the rate of vibration the higher the pitch.

Plagal Modes.—The four ancient Church modes or scales arranged, as it were, across the four original or authentic modes. They are ascribed to St. Gregory.

Plain Song.—The tunes or melodies of the Ancient Church.

Plectrum.—A small piece of wood, metal, or other material for plucking the strings of certain instruments.

Poco.—A little, somewhat. **Poco adagio.** —Somewhat slow.

Point d'Orgue.—Either the " pedal-point" (q.v.), or the point in a concerto where the Cadenza is introduced.

Polacca.—The Italian form of the Polish polonaise. It is less sentimental and more brilliant than the latter.

Polka.—A favourite dance having its origin in Bohemia in the middle of the last century. It is written in 2—4 time and is of a bright and lively character.

Polonaise.—A Polish dance in 3—4 time and well marked rhythm. The emphasis is frequently placed on a weak accent. In the famous Polonaises of Chopin, melancholy and tender strains alternate with passages of massive grandeur.

Pomposo.—Pompously.

Ponticello.—The bridge of a stringed instrument, " Sul ponticello "—play close to the bridge.

Portamento.—A gliding from one note to another—only really possible by the voice or a stringed instrument. Occasionally applied to music for a keyed instrument. but the effect is naturally quite different.

Positions (Shifts).—The various positions of the left hand in playing a stringed instrument.

Positive (Organ).—The " choir " organ. The term " positif " is still used in France to indicate the " choir " manual. The name was originally given to the instrument *fixed* in the chancel and used to accompany the choir, to distinguish it from the *movable* organ (" portative ") used in processions.

Postlude, Postludium.—A concluding organ voluntary.

Pot-Pourri.—An instrumental arrangement of operatic or popular airs. Beyond a few short interludes by way of modulation there is no attempt at construction.

Prelude.—An introductory movement to a church service, oratorio, cantata, etc.

Presto.—Quickly, more so than Allegro. The term Prestissimo is reserved for the highest rate of movement.

Psaltery.—An ancient trapezium-shaped instrument of the harp or dulcimer kind. It is uncertain whether it was played by the fingers or by a plectrum.

Purfling.—The narrow strip of ornament round the edge of the body of a stringed instrument. It properly consists of very thin slips of wood inserted with great care, which serve not only to beautify the instrument but also to prevent the spreading of cracks at the edges.

Quadrille.—A " square " dance originated in France about the beginning of last century.

Quartet.—A composition for four solo voices or instruments. The string quartet—consisting of two violins, viola, and violoncello—is generally considered the most beautiful instrumental combination.

Quasi.—As if.

Quick Step.—A quick march.

Quintet.—A composition for five solo performers, vocal or instrumental.

Quodlibet.—A humorous vocal or instrumental composition of the 18th century, often consisting of an interweaving of subjects having not the slightest connection with each other.

Rallentando, Ritenuto.—A gradual decrease in speed.

Rebec.—The precursor of the violin. Its body was pear-shaped and, for the most part, solid, the only hollow portions being at the head and broad end. The latter was roughly scooped out and covered with a thin pine-wood belly. Its three strings were bowed. The tone was powerful but rather harsh.

Recitative.—Invented at Rome at the close of the 16th century. A recitative is a declamatory passage, without bars or well defined rhythm, thus allowing considerable freedom of speed and expression. The accompaniment is of the simplest kind.

Recorder.—A kind of flute, now obsolete, held like a flageolet. Near the mouthpiece was a small hole covered with a bladder of skin, which modified the tone. Shakespeare mentions it in Hamlet (Act III., Sc. 2).

Redowa.—A Bohemian dance in 3—4 time, appearing in Western Europe about 1850.

Reed.—A small flat piece of material used as a vibrator. It is made of metal in the organ, harmonium, and concertina, and of a species of reed in the oboe, clarinet, and bassoon. In the clarinet and organ the reed beats against or towards the aperture, but in the harmonium it is free. The oboe and bassoon have double reeds.

Reel.—An ancient dance in common time (sometimes found in 6—4 time). Probably of Celtic origin. It is danced by couples who perform a series of " figures of eight." It is still found in Scotland and Ireland, and occasionally in Yorkshire.

Regal.—A very small portable organ with generally not more than one set of reeds, in use in the 15th and 16th centuries. The bellows were usually worked by the performer.

Resolution.—The process in Harmony of passing from a discord to a concord. The note forming the discord generally " resolves " by falling one degree.

Rests.—Characters which denote the duration of silence in music. Each note has its own corresponding form of rest

Resultant Tones.—When two sustained sounds are produced in sufficient strength, another or resultant tone can be heard. The vibration number of this tone is found to be equal to the difference between the vibration numbers of the generators. For instance, if the latter are 256 and 384 then the resultant tone will be 128. Helmholz discovered that yet another tone was produced equal in vibrations to the sum of the generators. This tone is exceedingly faint and cannot usually be heard without the aid of a resonator.

Retardation.—A kind of suspension (q.v.) in which the retarded note resolves *upwards*.

Rhythm.—The symmetrical arrangement of music into bars, each of the same duration and containing the same accents.

Ricercare.—A fugue without episodes. The devices of Augmentation and Diminution of the Subject, etc., are developed to their utmost, ingenuity being the aim of the writer. A ricercare is purely a scholar's fugue.

Rigadon.—An old French dance introduced into England in the 17th century. It is written in 2—4 or common time, and is of a broad but lively character.

Rinforzando.—A sudden and short increase in sound as in Sforzando.

Ripieno.—This term was applied formerly to certain instruments in the orchestra which re-inforced the principals of the same kind in passages where more tone was required. The method is not now practised.

Risoluto.—Resolutely ; in a bold manner.

Ritardando.—Decreasing the speed.

Ritornello.—A " return " or repetition of a melody at the end of a movement, or between the verses of a song ; or a short interlude played at an opera during the shifting of the scenes.

Romance.—A composition in which sentimental expression rather than any particular form plays a prominent part. In France Mendelssehn's *Lieder ohne Worte* are known as " Romances."

Rondo.—A form of composition consisting of a principal subject or melody—which recurs several times—and episodes. The return of the original subject is always in the same form giving the effect of a round. There is also a second subject which, unlike the principal one, may modulate into different keys.

Root.—The foundation note of a chord, i.e., the fundamental note from which the others are derived.

Roulade.—A brilliant vocal phrase.

Round.—A canon (q.v.) in the unison, that is, the answering voices begin on the same note as the leader. instead of at an interval above or below as in strict canon.

Rubato.—This term refers to the time of certain passages where, for the purpose of emphasizing the expression, the performer is allowed a little licence as to the relative values of the notes.

Sackbut.—A kind of trombone or slide trumpet now obsolete, The sackbut of the Bible was probably a stringed instrument.

Saltarello.—A lively Italian dance in which there is a characteristic jump or leap. It is generally in common time.

Saraband.—A slow dignified dance in triple time. It came from Spain, but by way of Italy, where it was considerably modified. It is generally the slow movement of the Suite.

Saxhorn.—The family of brass instruments as improved in valve ,construction, etc., by Sax, with the exception of two kinds they do not blend well with strings, and are therefore more in evidence in military bands than in the ordinary orchestra.

Saxophone.—A brass instrument fitted with a reed and made in all sizes. Invented by Sax.

Scale.—The series of eight notes of a key is called the diatonic scale; when divided into semitones it is termed chromatic.

Scena.—An operatic solo ; an accompanied recitative ; or a recitative and aria.

Scherzando.—In a playful manner.

Scherzo.—Properly, a composition of a humorous kind, but the term is often wrongly applied.

Schottische.—A dance introduced into England about the middle of last century, when it was called the German Polka. The music resembles that of the Polka, but the step is slower, and the movement different.

Seguidilla.—A Spanish national dance in 3—4 time.

Semplice.—In a simple manner.

Senza.—Without.

Septet.—A composition for seven solo voices or instruments.

Sequence.—The repetition of a figure, melody, phrase, or group of chords, on different degrees of the scale.

Serenade, Serenata.—Evening music in the open air. The term is variously applied to instrumental music, a secular cantata, or the song of the lover. The style is always light, melodious, and sentimental.

Serpent.—An instrument now seldom seen or used. The body is made of wood covered with leather and fitted with a brass mouthpiece. The tone is coarse and the instrument gradually disappeared from the orchestra on the introduction of the ophicleide.

Sextet. Sestet.—A composition for six solo voices or instruments.

Sforzando.—A sudden increase of force on a particular note or chord.

Shake (Trill).—The rapid repetition of a principal note alternating with the one above it. One of the most effective of musical ornaments.

Shawm.—An early reed instrument, probably of the clarinet type.

Siciliana.—An old Sicilian dance in 6—8 time, resembling somewhat a slow pastorale.

Slur.—A curved line placed over a passage to signify that the notes are to be played smoothly and as one phrase. But when it is used to connect two notes of the same pitch it is called a "tie," or "bind," and the second note is not struck, but made a continuation of the first.

Smorzando.—Dying away.

Sonata.—A composition in three or four movements and for either one or two instruments. Its model was practically fixed by Emanuel Bach (1714–1788). The first movement is generally an allegro, the second a slow movement, the third a minuet, or scherzo, and the fourth most often a rondo. Quartets, symphonies, and concertos are largely written on this plan. The first movement has a well defined form. It consists of three sections. The first contains two subjects,—the principal one in the tonic key, and the second in the dominant key—unless the principal subject is in the minor, in which case its subordinate is in the relative major. This first division ends in a double bar and is usually repeated. In the second division these two subjects are developed in various ways. In the third section they are recapitulated, and this time *both* are in the tonic key. The movement ends with a coda. Many overtures are written on this plan.

Sonatina.—A little Sonata—of the same form but shorter in length of movement and simpler in construction.

Sotto voce.—Softly, in an undertone.

Spianato.—In an even simple manner.

Spinet.—A keyboard instrument; the keys acted on jacks fitted with plectra, which plucked the strings. Spinetti of Venice made improvements in form.

Spiritoso.—In a spirited manner.

Staccato.—The notes struck and smartly left, thus leaving a very short rest after each. The signs of the staccato are dots or dashes over the notes to be so played.

Stave.—The system of parallel horizontal lines on which are represented the sounds, the actual pitch of which is fixed by the clef.

Strathspey.—A Scottish dance similar to the reel—a little slower but requiring greater exertion in the movements.

Stretto.—The section of a fugue where the subject is introduced at closer intervals —one part will commence so shortly after another that the subject is partly combined with itself. Più stretto signifies, in vocal music, an increase in speed.

Stringendo.—Accelerating the speed and increasing the tone.

Subdominant.—The note below the dominant—the 4th of the scale.

Suite.—A cyclical form. It consists of various dances arranged with a view to contrast in time and expression. The following are the chief dances found in the Suite :—Allemande, Bourrée, Chaconne, Courante, Gavotte, Gigue, Minuet, Passacagha, Rigadon, Sarabande. When other forms were interpolated—such as prelude, aria, fugue,—the series was called a Partita.

Supertonic.—The second note of the scale.

Suspension.—The holding over of a note of one chord—to which it is consonant —to another chord to which it is dissonant. The dissonant note then falls one degree to its resolution. (See also *Retardation*).

Symphony.—The most fully developed form in instrumental music. In structure it closely resembles the sonata, but is broader in plan, more distinctive in character and purpose, and, on account of richer colour afforded by instrumentation, more attractive to the multitude. It is a "Sonata for orchestra," and something more—according to the genius and individuality of the composer.

Syncopation.—The alteration of the usual position of the accent in a bar by placing the emphasis on the weak division. For this purpose two similar notes are tied.

Tanto.—Too much ; *non tanto*—not too much.

Tarantella.—A graceful song-dance with tambourine. It has a rather quick movement in 6—8 time. The name is supposed by some to have been derived from *tarantula*—a spider, whose bite was believed to be rendered harmless by the dance. But it is more likely to have been named after Tarento, where it was originally danced.

Tempo.—Rate of movement.

Teneramente.—Tenderly.

Terzetto.—A composition for three voices.

Theorbo (Arch-lute).—A large kind of lute with a double neck.

Toccata.— A composition written to display the performer's skill or "touch" on his instrument.

Transposing Instruments.—On account of the difficulty or impossibility of playing in certain keys on some instruments, different devices are used. The clarinet is made in three sizes,—C, A, and B♭. In the trumpet and horn additional pieces of tube called "crooks" are fitted, thus raising or lowering the scale of sounds. It follows therefore that if a piece of music is in the key of C and a B flat clarinet is employed, the part must be written in D—a tone higher in order to be in harmony with the other instruments; if clarinet in A, then the part must be written a minor third higher. The same method has to be employed with all transposing instruments. The horn part is always *written* in the key of C, the notes themselves being transposed higher or lower.

Trio.—A composition for three voices or instruments.

Trombone.—A brass instrument with a sliding tube. Each position of the slide, by lengthening the instrument, gives a different fundamental note, and as the series of natural notes belongs to each fundamental, a complete scale is available.

Troppo.—Too much.

Trumpet.—A brass instrument producing the natural notes as in the horn. Other notes are obtained by valves, but they are not of the same power and quality. (See *Transposing Instruments.*)

Tuba.—See *Bass Tuba.*

Violin, Viola, Violoncello.—Stringed instruments played with the bow. They each have four strings tuned in fifths. The violin is the highest in range, the viola is the tenor (or alto), and the violoncello the bass, the lowest string of which gives C below the bass stave.

Virginal.—An obsolete keyboard instrument, resembling a spinet.

Vivace.—In a lively manner.

Volti Subito.—Turn over quickly.

Waltz.—A popular dance in triple time.

Zither.—A development of the ancient kithara. It has two modern forms. One consists of a flat, shallow resonance box, across the top of which are stretched metal and catgut strings which are played by a plectrum and the fingers. The other kind is shaped like a viola, and played with a bow.

3. NAUTICAL TERMS.

Al.—See p. 629 under "Lloyd's Register."

A.B.—"Able bodied," applied to fully-qualified seamen.

Aback.—A term given to the condition of the sails when through shift of wind, or bad steering, the wind presses upon the fore-side of the sails, and so impedes the vessel or brings it to a stand still.

Abaft.—On the after side of. This term is used when referring the position of one object to another, or to points of land; that which is nearer to the stern, in position or bearing, is said to be abaft the one nearer to the bow.

Abeam.—The bearing of an object when it is at right angles to the fore-and-aft line of the ship. It is used in defining the direction of the wind.

Afore.—The opposite of **Abaft.** It is used to define the bearing of an object, or the direction of the wind when it is on the fore-part of the vessel.

Aft.—The after part or stern of the vessel. Looking in the direction of the stern of the vessel when standing on board is "Looking Aft."

Against the Sun.—In a direction opposite to that in which the sun apparently moves. Hence if a rope is coiled upon the deck from right to left, it is said to be coiled "against the sun."

A-lee.—When the helm is put down so as to bring the ship's head to the wind, it is said to be *a-lee*. "Hard a-lee" refers to the position of the helm when it is so placed that it cannot be moved further in that direction.

All Hands. Every one on board connected with the working of the ship. When anything has happened that would require the muster of all the working power possible, the officer's order would be "All hands on deck," and then everyone from officer to cabin boy must obey the summons.

Amidships.—In or towards the middle or the middle line of a vessel; also middle of the vessel.

Anchor Watch.—When riding at anchor it is the custom of seamen to take turns on deck throughout the night in watching the safety of the vessel and to report to the officers any circumstance that may require attention.

A-peek.—When heaving in the cable, and immediately before the anchor is lifted from the sea-bottom, the cable will be straight up and down. It is then said to be *a-peek*.

Arming.—At the lower end of the lead, used for ascertaining the depth of water, is a cavity, and this cavity is filled or "Armed" with tallow or soap, as a means of ascertaining the nature of the sea-bottom.

Articles.—Agreement between the master mariner and his crew binding the latter to obey all lawful commands of the former throughout the voyage.

Athwart.—Across the vessel, in a direction at right angles to the fore-and-aft line of the ship. To fire "Athwart the bow" is to fire in front of a vessel across the line of direction in which it is moving.

Auxiliary Ships.—See *Ships Auxiliary*.

Avast or Vast.—The word of command to stop. "Avast heaving" is the command to stop heaving or hauling.

Aye-Aye.—An acknowledgment given by a seaman that he has heard and understands an order given to him.

Back-stays.—Wire ropes leading from the heads of the masts to the deck on each side of the masts and slanting aft. They give the main support to the masts from the after part.

Back-Water (*to*).—To stop a boat's way by pushing the oars in an opposite direction to that taken when rowing.

Bale.—To throw water out of a boat.

Bank fires.—To cover up the fires in a furnace with ashes so that they may smoulder without going out.

Bare poles.—The condition of a ship, when lying-to in a storm, or running before the gale, with no sails set.

Barque or Bark.—A vessel having three masts—fore-mast, main-mast, and mizen-mast, with yards on the first two similar to those of a "ship." She has fore-and-aft sails consisting of spanker and gaff topsail on the mizen or after mast. The mizen-mast consists of lower-mast, top-mast, and top-gallant-mast, the latter two being one spar. A barque is sometimes four-masted, having yards fitted to the fore-mast, main-mast, and mizen-mast, with a spanker and gaff-topsail on the jigger or after-mast. Jibs and stay-sails are also set.

Barquentine.—A vessel with three masts having yards on the fore-mast only. The main-mast and mizen-mast are fitted in the same manner as the mizen-mast of a barque, and she sets the same kind of spanker and gaff-topsail. Jibs and staysails are also carried.

Battens.—Iron laths wedged along the outside of the hatches to keep the tarpaulins down and prevent water from getting into the hold.

Beacon.—A post placed on shoals or rocks to warn mariners of danger; also similar posts on shore to make land-marks for the safe guidance of vessels.

Beam.—A vessel's beam is her breadth measured at right angles to the fore-and-aft line.

Beam-ends.—A vessel is "on her beam-ends" when she is lying over so far that the sides of the vessel are almost horizontal. The lee side will then be under water. This position may be due to a squall having caught the vessel when under canvas, or to the shifting of cargo.

Beating.—The manœuvreing of a ship to get towards a position to windward by alternate tacks, thus making her way onward by a series of zigzags.

Belay.—To make fast a rope.

Bend —To make fast. To bend a sail is to make it fast to the yards or stays.

Berth.—A room or cabin where one or more seamen sleep; also the position allotted to a vessel when at anchor or alongside a quay.

Bilges. Bilge-water.—The iron bottom of a vessel is riveted to strong iron frames that run athwartships (across the vessel) from side to side. On these frames rests the floor (termed ceiling) upon which the cargo is stowed. The space between the flooring and the bottom of the vessel is the "bilges." Drainage from the cargo or water that has entered the vessel makes its way to this compartment and takes the name of "bilge-water."

Bill-of-Health.—Refer to p. 614.

Bill-of-Lading.—Refer to p. 614.

Binnacle.—A brass case with a glass front in which the compass is placed to protect it from injury.

Blue-Peter.—A blue flag with a white square in the centre. It is hoisted at the fore-mast head to give notice that the vessel leaves the port within twenty-four hours.

Blue-Pidgeon.—The nickname given by seamen to the deep-sea lead used for sounding the depth of water.

Bluff.—A term descriptive of a vessel's bow when it is more inclined to be round than pointed.

Boatswain.—A petty officer on board a ship who is supposed to be a thorough seaman. He receives the orders from the deck officer, and then sees them carried out by the seamen. He has charge of the ropes and cordage, and is in general a leader of the men.

Boom.—A stout spar, usually about six feet from the deck, leading from a mast towards aft in a horizontal direction. The foot or lower part of the spanker in a barque, also the mainsail of any fore-and-aft rigged vessel, is hauled aft along it.

Boot-topping.—The band of paint on a vessel "between wind and water."

Bowline.—A rope leading from the weather leech of a sail for hauling it forward so that the wind may act upon it with greater effect.

Bowse.—To haul hard upon a tackle to set tant the body that it is fast to.

Bowsprit.—A large boom or spar that projects over the bow of a vessel.

Box.—A word used principally in reference to learning the points and degrees of the mariner's compass. "To box a compass" is to know any point or quarter point and its reverse bearing at sight.

Brace.—A rope leading from the deck of a ship to the arm of a yard so as to enable the seamen to haul it about in a horizontal direction and get the best position for deriving the full benefit of the wind.

Brig.—A vessel with two masts having yards on both but not setting either royals or skysails. She carries jibs and staysails.

Brigantine.—A vessel with two masts having yards on the fore-mast only. She sets fore-and-aft sails on the main-mast similar to that of a barque's mizen-mast. She carries jibs and stay-sails.

Broach-to.—When running before a heavy gale there is always a danger of the ship "broaching-to," or of deviating so far from her right course as to bring wind and sea on the side, thus imperilling the vessel.

Broken-backed.—A ship if grounding upon a mud or sand bank will, owing to her build, receive more support amidships than near the bow or stern. Should the water fall there would be a danger of the two ends of the ship sinking into the mud, and the middle of the ship, not being able to withstand the strain, "would break her back."

Bulwarks.—The vertical sides of a vessel rising above the level of the main deck, and serving as protection from the waves.

Bum-Boat.—A boat which, fitted as a floating store or shop, comes alongside of ships at anchor in a harbour and, with the captain's permission, retails such goods to the seamen as are generally unprocurable on board during the passage at sea.

Cables-length.—A measure of about 100 fathoms in length (one fathom=6 ft.).

Capstan.—A machine of drum-like shape on the fore-castle head which, by means of a chain or rope wound round it, is used for raising heavy weights and more particularly for heaving in the cable chains.

Cast.—This word is a familiar one with seamen when expressing such actions as "Cast adrift." "Cast the lead."

Cat-Head.—A baulk of timber projecting over the bow of a vessel through which is rove the tackle for lifting up the anchor to the level of the deck.

Cat's-paw.—A slight ruffling of the sea that is otherwise smooth, due to an approaching light breeze.

Caulk.—To force the oakum into the seams between planks of the deck.

Chanties.—Songs with choruses sung by seamen to lighten such arduous duties as heaving in the anchor, or to secure simultaneous action when hauling upon a rope.

Charter-Party.—Refer to p. 617.

Chock-a-Block. The term "chock" means close up. And "Chock-a-block" expresses the state of things when by hauling on the *tackle-fall* (which see) the lower block has reached the upper block and can go no further.

Clap on.—To put on by a sudden movement. "Clap on all sail," set all sail possible.

Clinch.—A hitch, simple but secure, that is made by means of one half hitch round another rope and the end stopped back.

Clipper-Bow.—The bow of a ship that arches well forward over the stem and overhangs the water.

Close-hauled.—Sailing as closely as the sails will allow in the direction from which the wind blows.

Coamings.—That part of the hatch sides which are above the deck to prevent any water from getting into the holds.

Cock-bill.—The position of the anchor when it is hanging in a vertical line from the bow before being let go.

Cockpit.—An apartment in a man of war used by the surgeon for operating upon seamen who have been wounded in action.

Companion.—A wooden protection covering the entrance way from the deck to a cabin.

Companion-ladder.—A ladder leading from the companion to the deck below.

Convoy.—A number of vessels sailing together under the protection of men-of-war.

Crank.—A term applied to a vessel which, either due to her build, insufficient ballast, or bad stowage of cargo, is inclined to heel over to one side or the other.

Crimp.—A man who makes a living by robbing sailors.

Cross-Jack (pron. *croj-jack*).—The lower yard on the mizen or after-mast of a ship.

Cutter.—A one-masted vessel with fore-and-aft sails only. The main-sail is in shape similar to a spanker, and the fore-sail sets on the fore-stay and is similar in shape to a jib.

Davits.—Iron arms projecting over the sides of a vessel to which are fixed tackles for lifting or lowering the boats.

Dead-eye.—A circular piece of hard wood through which the lanyards of the rigging are rove.

Dead-Reckoning (D. R.).—A mode of ascertaining the position of a ship resorted to in thick or cloudy weather. The courses steered are entered in the log-book, and also the distance run on each course. Certain allowances have to be made for the set and drift of the current, and these may sometimes be estimated from the chart although not to be depended upon entirely as they are often affected by the wind.

Deep-sea Lead (pron. *dipsy-lead*). —The heaviest lead used (weight about 28 lbs.) when sounding in deep waters.

Dog-Watch.—The times between 4 p.m. and 6 p.m., and between 6 p.m. and 8 p.m., are respectively the first and second "dog-watch."

Dunnage.—Material placed under cargo to keep it clear of any water that may accumulate at the bottom of the hold, or placed between parcels of cargo to prevent any movement.

Embargo.—Arrest placed upon ships or cargo by any public authority.

Ensign.—See p. 130.

Fag.—The end of a rope that has become teazed out or in a tangled state through lack of a twine whipping which it is the practice of seamen to secure the ends of the yarns with.

Feather.—To lay the blades of the oars parallel to the surface of the water between each stroke when rowing, and thereby reducing the pressure of wind upon them from the fore part.

Fenders.—Proctectors, made of cork, wood, or faggots, hung over the sides of vessels to guard them against injury from contact with other vessels, or with the quay alongside which they may be lying.

Figure-head.—A figure, generally of a man or woman, carved in wood and fixed on to the prow of a ship.

Fore-and-Aft.—In a direction from stem to stern.

Fore-and-Aft Sails.—See *Sails, Fore-and-Aft.*

Fore-and-Aft Schooner.—See *Schooner, Fore-and-Aft.*

Fore-Castle (pron. *fo'-cas-el*).—A house fitted in the bow of the vessel and raised above the level of the deck. The seamen are generally berthed in the Fore-castle although there is a tendency of latter years to berth them aft.

Fore-lock.—A piece of iron driven through a hole in the end of a shackle pin to prevent the latter getting adrift.

Frap.—To bind closely together.

Free-board.—The distance measured in a vertical line from the water's edge to the main deck line amidships. The amount so measured is limited by the Board of Trade.

Furl.—To roll a sail up and make it fast with gaskets (which see).

Gaff.—A spar leading from a lower mast head in an after direction and slanting upwards at an angle of about 45°. The lower part or foot of the gaff-topsail is hauled out upon it on its upper side, and the top part or head of the spanker is hauled out on the lower side.

Gaff Top-sail.—A three-cornered sail the height of which greatly exceeds the breadth. The head or upper part of the sail is hauled up the top-mast and top-gallant-mast, and the foot or lower part is hauled aft to the end of the gaff.

Galley.—A house, generally on the main deck, used as a kitchen.

Garboard-Strake.—The plate next to the keel of the vessel, It is about the strongest plate in the construction of a ship.

Gaskets.—Lengths of rope about half an inch in circumference, used for making sails fast to masts and yards after they have been furled.

General-Average.—A voluntary sacrifice of any part of the ship stores, freight or cargo for the benefit of all concerned.

Give way.—Begin to row; also an order when rowing to pull harder.

Goose-winged.—A square top-sail that has the weather side furled and the lee side set.

Gripe.—The action of a ship that has a tendency to run up into the eye of the wind and against the helm.

Ground-Tackle.—Anchors and cables.

Gunwale (pron. *gun-el*).—The top rail of a vessel which is fitted to the upper part of the bulwarks.

Halliards.—Tackles and ropes used to hoist sails and yards.

Hand-lead.—A leaden instrument about 8 lbs. in weight used for sounding in shallow waters. (See *lead*).

Handsomely.—Carefully. "Lower handsomely" is to lower gently.

Hard-a-lee.—Putting the helm as far down as possible, and so bringing the ship's head up into the direction of the wind.

Harness-Casks.—Casks lashed on the deck and containing sufficient salt meat for present use.

Hatch.—The entrance to a hold of the vessel from the deck.

Hawse-pipe.—The pipe through which the cable passes from windlass to water.

Head-sails.—The forward sails such as jibs.

Heave-Short.—To heave in the anchor cables until there is only sufficient to moor the ship without dragging.

Heave-to.—Placing sails aback sufficiently to deaden the way of the ship, an operation previous to taking the pilot on board or when he is leaving.

Heel.—To lie over. Also the after end of the keel; the lower end of a mast.

Helm.—The gear used for steering the vessel.

Hitch.—A method of making fast a rope.

Hogged.—Similar to "broken-backed." The ends of the vessel dropping through lack of support.

Hoist away.—The order to pull on a rope when raising a yard, sail, etc.

Holiday.—A mariner's expression referring to any patch left unpainted or untarred.

Home.—The anchor is hove "home" when it is close up to the hawse-pipe. The sheets of a sail are "home" when hauled out to the sheave holes.

House.—Any structure that may be fitted above the main deck for use as a store-room, or for living accommodation.

House (to).—To lower a mast about half way down and secure it.

Irons.—A ship is in "irons" when she comes up into the wind, through bad steering, loses her headway, and remains in that position for so long a time as to get out of control.

Jetsam.—Goods cast up on the beach, or goods thrown overboard to lighten the ship when in danger.

Jettison.—The act of throwing goods overboard.

Jib-boom.—A wooden spar the inner part of which rests upon, and is secured to, the bowsprit, the outer part projecting well forward of it. The stays from the head of the fore-royal-mast, top-gallant-mast and top-mast lead to it, inside one another.

Jibing.—When a fore-and-aft rigged vessel is running with the wind nearly aft, the booms of the main sails are out as far as possible to enable the sails set on them to be kept full of wind. If a sudden shift of wind occurs, or through bad steering the wind gets on the other side of the sail, the boom has to be passed to the other side of the vessel. This is termed "jibing."

Jibs.—Triangular sails hoisted up those stays that are on the fore part of the fore-mast and have their sheets hauled aft.

Jigger-mast.—See *Masts.*

Jolly-Boat.—The smallest boat carried on a ship, and used mostly for fetching provisions or running out lines to the shore.

Keelson.—A strengthening plate in the form of a T running fore and aft inside of the vessel. It is directly over and adjacent to the outside keel.

Kink.—A curling twist in a rope which would prevent it running through the sheave of a block.

Kites.—Light sails set only in very moderate breezes.

Knight-Heads.—The upper structure of the stem projecting over from the bow. The bowsprit rests upon it and the figure head is fastened to it.

Knot.—A nautical mile equal to 6,080 feet. Also the distance between two knots on a log line which is used for reckoning the ship's rate of speed.

Labouring.—A ship rolling and plunging badly through stress of weather.

Land-fall.—Sighting the land.

Lanyards.—A piece of rope used for securing objects about the deck to prevent their moving. Rope rove through the dead-eyes for setting taut the rigging.

Larboard.—An expression to represent the port side of a vessel. Now out of date. (See *Port*).

Lay.—A call to "set to," or bestir oneself. It is followed by a word indicating the work to be done, as "Lay aloft"; "Lay aft"; "Lay forward."

Lead.—A conical-shaped piece of lead fastened to a line which is divided into fathoms; used for sounding the depth of water. (See *Arming*).

Lee.—The opposite side to that from which the wind blows. Hence "Under the lee of"=under the shelter of; and "lee shore"=the shore on the lee of the vessel, or that upon which the wind blows.

Leech.—The vertical and after part of a fore-and-aft sail; also the vertical and extreme sides of a square sail.

Leeward (pronounced by seamen *luard*).—On the side opposite to that from which the wind blows. Toward the lee or part to which the wind blows, it is opposed to *windward*.

Leeway.—The distance lost by the vessel being blown to the lee side of her course. It is equal to the difference between that which the ship would make good if sailing straight ahead and that which she actually makes.

Lie-to.—The act of bringing the ship's head as closely to the wind as possible, under small sail in a gale, so that she may ride easily and not take on board large quantities of water.

List.—To heel over on one side or the other. "List to port"; "List to starboard."

Look-out.—The man stationed on the fore part of the vessel to report to the officer in charge anything that he may see.

Log-book.—A book in which a record of events is kept, e.g., state of the weather, passing vessels, courses steered, deaths, accidents, or insubordination amongst the crew.

Long-boat.—The principal boat in the ship.

Luff.—An order to the man at the wheel to put his helm down and thus bring the ship's head more up into the direction of the wind. Also, the forward edge of a fore-and-aft sail.

Lurch.—The heavy roll of a vessel to one side or the other.

Manifest.—An inventory of the cargo.

Marline-spike.—A steel bar about twelve inches long sharpened at one end, used for opening the strands of a rope when splicing. A lanyard is rove through an eye at the blunt end to enable a seaman to hang it round his neck when going aloft.

Masts.—Long, round pieces of timber or hollow pillars of iron or steel, placed upright in a vessel to support the yards, sails, &c. In a four-masted vessel the masts, counting towards aft, are named fore-mast, main-mast, mizen-mast and jigger-mast. In a five-masted vessel the one between main-mast and mizen-mast is named middle-mast. Each mast consists of lower-mast, top-mast, top gallant-mast, royal-mast, and skysail-mast. The last three named generally consist of one long tapering spar. The different parts of the mast are so fixed together ("fidded" is the correct term) that the head of each mast overlaps the foot of the one above it by about eight feet, the two being securely fastened together by an iron frame.

Mates.—The officers of the ship under the master mariner.

Miss-stays.—Failing to come round on the other tack when the helm is put down for tacking.

Mizen.—One of the aft masts of a vessel. (See *Masts*).

Painter.—The rope in the bow of a boat used for making it fast.

Parbuckle.—To roll a barrel or spar up a vessel's side by means of ropes passed round it.

Plimsoll Mark.—On British merchant vessels of 80 tons register and upwards, a circular disc 12 inches in diameter, with a horizontal bar 18 inches long through the centre, is painted on the outside of the vessel amidships, at a distance from the deck specified by the Board of Trade. This mark indicates the load-line below which no British ship when loaded must sink. It derives its name from that of the Member of Parliament who got an Act passed for this purpose.

Poop.—The raised structure at the after end of a vessel.

Port.—The left hand side of a vessel looking forward. To port the helm is to put the upper spokes of the wheel over to starboard. The tiller (if on the fore part of the rudder) comes over to port by mechanical arrangement, and the ship's head alters to starboard or the right hand side of a vessel looking forward.

Quarantine.—Refer to p. 633.

Quarter-Master.—A petty officer on board ship who steers, looks after the binnacles, lead lines, and signalling gear. He also acts as time-keeper by striking the bell at the appointed times. (See *Watches*).

Ratlines.—Lines across the rigging used by the seamen as ladders for going aloft.

Rig.—The number and arrangement of the masts, sails, and yards of a ship.

Rigging.—Wire ropes leading from the upper ends or heads of masts to the sides of the ship for giving the masts support.

Rove.—A word in frequent use among seamen, is another form of "reeved." "To reeve" meaning to pass the end of a rope through any hole in a block, &c.

Royal.—A square sail directly above the top-gallant sail.

Sagged.—Opposite to "Hogged." The vessel amidships sinking and the two ends lifting.

Sails.—Square sails take the same name as the yard upon which they are set. The upper part, or head, of the sail is secured to the yard, and the lower part, or foot, of the sail by hauling it out to the ends, or yard arms, of the next yard beneath it. This operation of setting a sail, as also of taking it in, is performed from the deck by means of tackles, but to furl a sail the seamen must go aloft.

Sails, Fore-and-Aft.—A general term for sails not set upon yards.

Salvage.—Recompense made to those who have assisted in saving ship or cargo.

Schooner, Fore-and-Aft.—A two-masted vessel with fore-and-aft sails only on each mast, rigged similarly to the mizen mast of a barque. She also sets jibs and staysails. There are many three masted fore-and-aft schooners sailing under the British ensign, and on the American coasts, sailing under the Stars and Stripes; four and five masted fore-and-aft schooners are much in favour.

Schooner, Topsail.—A two-masted vessel having topsail yards and fore-yard on the fore-mast, but she does not set a square foresail. The foresail—or properly, driver—is a fore-and-aft sail set on the fore-mast and similar to that of the main-mast and spanker of a barque. She also sets jibs and staysails.

Scud.—Low-lying clouds. Also to run before a gale.

Scuppers.—Channels or gutters at the sides of the ship for carrying off water from the deck. In the bulwarks are holes termed "scupper-holes," through which the water makes its way outside.

Scuttle.—A hole in a vessel's deck, generally for ventilation. Also to cut a hole in the vessel's bottom to sink her.

Sheave.—A small grooved wheel in a block, mast, or yard on which a rope works.

Sheer.—The fore-and-aft curve of a ship's deck.

Sheet-anchor.—The largest anchor carried on board ship.

Ship.—A vessel having three masts, each being fitted with yards on which sails are set. It also carries jibs and staysails. "Ship," it should be noted, is in nautical language not a general name for a vessel, but a vessel of a particular rig, as described above. A "ship," however, is sometimes four-masted, each mast having yards. Masts so fitted are termed square-rigged.

Ships, Auxiliary.—Sailing-ships having a small steam power for use in calms and light head winds.

Shiver.—To slacken a sheet until the sail shivers in the wind.

Snub.—To turn a ship round by letting go an anchor when under way.

Snug.—All secure. Everything ready to meet a gale.

Spanker or **Driver.**—A fore-and-aft sail set on the mizen-mast. The fore part is hoisted up the mast. The head, or upper-part, is hauled aft and in an upward direction along a gaff. The foot, or lower part, is hauled aft along a boom or spar. It is similar to the mainsail set on a one-masted yacht.

Spar.—A general word for masts, yards, booms, &c.

Splice-the-main-brace.—Extra grog served out after additional work.

Square-rigged.—See under *Ship*.

Starboard.—The right hand side of a vessel looking forward. To starboard the helm, opposite to port. (See *Port*).

Stays.—Wire ropes leading from the upper ends or heads of masts forward to the deck. They support the masts from the fore part.

Steamship.—The rig of a steamer takes the same name as that of a sailing-ship similarly rigged.

Steerage.—The between deck forward of the poop. Emigrants are generally housed there.

Stowage.—The placing of cargo in such a manner as to make it immovable, even when the ship is storm-tossed, and so distributing it, in respect to position and weight, as to render the ship seaworthy in all weathers.

Stowaway.—A person who hides himself in a vessel about to sail for the purpose of getting a free passage. Such action is punishable by imprisonment.

Strike.—To lower a mast or a flag.
Surge.—To slack suddenly.
Swab.—A mop made of rope yarns, used for cleaning the decks. Also to wash the decks.
Tack.—The course of a vessel in relation to the wind.
Tack Ship.—To put her about, to go from one tack to another, that is, to change her course so as to have the wind act from the port side instead of the starboard side, or vice versâ. To effect this, the helm is put down in such a manner as to bring the ship's head towards the direction of the wind and to keep the head moving in that direction until the wind is sufficiently on the other side to once more fill the sails.
Tackle and Tackle-fall.—A rope rove through two blocks having one or more sheaves for the purpose of increasing the lifting power is called a *tackle*. The moving part of the rope, namely, that part of the rope in the hands of the seamen is termed the *tackle-fall*.
Taffrail.—A rail round the poop ; the rail farthest aft in a ship.
Tarpaulin.—Canvas covered with tar to make it waterproof.
Tarpaulin-Muster.—A voluntary contribution made by the seamen of a ship towards some charitable object. In former years the money was thrown on the main hatch tarpaulin.
Taut.—Tight, not slack ; applied to a rope or sail.
Tramp-Steamer.—A steamer that does not trade in any particular run but wanders from any one port in the world to any other, wherever a freight of sufficient attraction may be obtainable.
Trick.—A period of time allotted to each seamen for duty at the helm ; generally two hours.
Truck.—Circular caps at the uppermost extremity of each mast. Small sheave holes are furnished in them through which the signal halliards are rove. "From truck to keelson," from the highest to the lowest part of the ship.
Veer.—To change the course in sailing by turning the stern to windward. When the wind changes towards the stern, "it veers" ; when towards the bow, "it hauls."
Wake.—The track of a ship shown by the disturbed water aft.
Watches.—Divisions of time on board a vessel to regulate the turns of on and off duty. Although the hours of duty vary according to the occupation of the mariner, the signalling of the watches by means of the striking of a bell remains constant from day to day. This striking of the bell also records the time at ship with relation to her position of longitude, and such time is recognised by the number of "strikes" or strokes of the bell-tongue.

Starting from noon each half hour is signalled by an additional strike : thus, 0-30 p.m., one strike=one bell ; 1 p.m., two strikes=two bells ; 1-30 p.m., three strikes=three bells ; and so on until 4 p.m. is reached, when eight strikes (termed eight bells) are recorded. The number of strikes then commences again from one at the following half hour to eight at the fourth hour, continuing so throughout the twenty-four hours, making 4 o'clock, 8 o'clock and 12 o'clock each eight bells. A quartermaster performs this duty of time keeping, and having "struck the bell" on a small bell, generally hung amidships in steam vessels and aft in sailing ships, his signal is answered by similar strikes on a larger and deeper toned bell hung forward (*for-rard*), so that all on board may hear.

The seamen in sailing vessels and steamships are divided into two equal companies termed the starboard watch and the port watch. Each watch serves a period of four hours on duty, then four hours off duty, and to prevent either watch from being on duty on the same hours each day, the time between 4 p.m. and 8 p.m. is divided into two watches called "dog watches." In steamships the officers, engineers and firemen—the latter on account of their arduous duties—serve a watch of four hours on duty and eight hours off, having the same watch each day. The helmsman or man at the wheel steers for a "trick" of two hours.
Water-logged.—Condition of a vessel full of water but kept afloat by the buoyant nature of her cargo.
Way.—Progress or motion of a vessel through the water. Hence a vessel "under way" is a vessel in motion.
Wear.—"To wear" is opposed "to tack." It is to bring the wind from one side or tack to the other by way of the stern. This practice is only resorted to when the wind or sea is too heavy to allow of tacking. The helm is put up to move the ship's head away from the direction of the wind, and the ship is kept moving in that direction until her head is on the required course, that is, on the other tack.
Weather-leech.—That leech of the sail which is to windward, or on the side from which the wind is blowing.
Wind-bound.—Said of ships at anchor in a harbour waiting for the wind to change to a suitable direction.
Wind, Close to the.—Sailing in a direction as near to that from which the wind blows as the sails will allow.
Wind, Comes up into the.—A ship sailing with the wind abaft the beam, and much sail set aft, has a tendency "to come up into the wind," that is, to bring her head more in the direction from which the wind is blowing. (See *Gripe* and *Irons*).
Windlass.—A mechanical arrangement strongly built into the forepart of the vessel for the purpose of heaving in the cable chains.
Windward (pron. *windard*).—On that side from which the wind blows. Towards the part from which the wind is blowing. It is opposed to *leeward*.
Yacht.—A vessel of no particular rig, used for pleasure purposes only.
Yards.—Iron or wooden spars which are fixed across the masts and upon which the square sails are set. They are moved in an horizontal direction by means of ropes, named braces. The lower yard on each mast, counting aft, is fore-yard, main-yard, cross-jack-yard (pron. *croj-jack*), the latter being on the mizen-mast. Counting upward from these with the name of the mast prefixed, the yards are named : lower topsail yard, upper topsail yard, lower top-gallant yard, upper top-gallant yard, royal yard, skysail yard.
Yaw.—To deviate from the course through bad steering.

4. LEGAL TERMS.

OBS.—The greater number of Legal Terms are explained just as they occur in the Legal Guide, and are therefore omitted here. They may be found by reference to the General Index.

Ad valorem.—According to the value.
A fortiori.—By so much the stronger (reason).
Affinity.—Relationship by marriage.
Agnates.—Relations by the father's side.
Alias.—Otherwise.
Alibi.—Elsewhere.
Animus furandi.—Intention of stealing.
Appropriation.—Applied to the assignment of tithes to a clerical body.
Appurtenances.—Adjuncts, subsidiary rights passing with the property.
Asesssor.—An expert who sits with a judge to advise him on technical points.
Attach.—To arrest or seize by legal process, e.g., by a judge's order.
Attestation Clause.—The clause in a will or other document signed by witnesses to certify that the document was signed in their presence.
Attested Copy.—The copy of a document attested by a witness to be an exact copy.
Bequest.—A gift of personal property by will.
Bona Fide.—In good faith.
Ca. sa.—*Capias ad satisfaciendum*, that you take so as to satisfy.
Capital Crime.—One punishable with death.
Caveat.—"Let him take heed." Hence *caveat emptor*, let the buyer beware.
Certiorari.—A form of writ.
Chance Medley.—Killing in self-defence.
Charter, Royal.—A grant of special privileges or powers by the Crown.
Chattels.—Movable goods, or interests in land other than freehold.
Codicil.—A document supplementary to a will.
Cognates.—Relations by the mother's side.
Cognovit.—"He has admitted." An admission of liability.
Compos mentis.—Sound in mind.
Consanguinity.—Relationship by blood : *Lineal*, when in a direct line of descent ; *Collateral*, when not.
Corporation.—A body of persons empowered by law to act as an individual. When the body corporate consists of a single person it is called a *Corporation sole*.
Court Baron.—A court held by the lord of a manor, or his steward, for the admission of tenants. Sometimes called a *Court leet*.
Coverture.—Legal state of a married woman.
Crim. Con. (Criminal Conversation).—Adultery.
Curtilage.—A piece of land adjoining a dwelling-house.
De die in diem.—From day to day.
De facto.—In fact, in reality.
De jure.—By right.
Demise.—Transfer of an estate by lease

or will. Also, transfer of a dignity, e.g., "Demise of the Crown."

Deponent.—One who gives testimony under oath, whether orally or by affidavit.

De son tort.—To his own injury or risk.

Devise.—A gift of land, or interest in land, made by Will. See *Bequest.*

Domicile.—One's legal home or place of permament residence.

Donatio mortis causa.—"A gift on account of death." A gift not to be realised until the donor's death.

Dower.—A widow's claim to the profits of the third part of her late husband's freehold estate during her lifetime. See *Jointure.*

Ejusdem generis.—Of the same kind.

Escheat.—The reversion of property to the Crown through forfeiture or the failure of heirs.

Estate Tail.—See *Fee Simple.*

Estoppel, a bar in the course of legal proceedings, frequently caused by a man's own act or previous admission.

Evidence, Hearsay.—A statement made by a witness on the authority of another person.

Ex officio.—By virtue of one's office.

Ex post facto.—"Out of (but) after the deed." Applied to legislation having a retrospective effect.

Faculty.—A licence or authority granted by an ecclesiastical court.

Fee Simple.—An estate in fee simple is a freehold at the absolute disposal of the owner, whereas an estate tail is a freehold under certain limitations.

Felo de se.—"A felon in respect to himself." Applied to a suicide, not being insane.

Ferœ naturæ.—"Of a wild nature." Applied to birds and animals not domesticated.

Fiat.—"Let it be done." An order or warrant for something to be done.

Fi. Fa.—*Fieri facias.* That you cause it to be done.

Flagrante delicto.—In the very act of committing the crime.

Foreclosure.—The action taken by a mortgagee to enforce payment or to gain possession of the mortgaged property.

Habeas corpus.—"That you have the body."

Heir apparent.—The person who is certain to come into possession should he survive the present owner.

Heir presumptive.—The person who would come into possession were the present owner to die at once, but whose right to succeed would lapse on the birth of a child having a prior claim.

Heirloom.—Any personal chattel that descends by custom to the heir.

Heriot.—A fee payable to the lord of a manor on the death of one of the copyholders. Also the right to take the best beast.

High Seas.—The sea beyond the three mile limit. See *Territorial Waters.*

Hilary Sittings.—Sittings of the Court beginning on 11th January.

Hypothec.—In Scotch law, a lien over goods belonging to a debtor.

Impropriation.—Applied to the assignment of tithes to a layman. See *Appropriation.*

In camera.—"In a chamber." Privately.

Infant.—A person under the age of 21.

In forma pauperis.—As a pauper.

In loco parentis.—In the place of a parent.

In re.—In the matter of.

In statu quo.—In the same state as before.

Inter alia.—Among other things.

Interim.—In the meantime. *Interim Order,* an order of a Court of a temporary character.

In transitu.—In course of transit.

Ipso facto.—By the act itself, or as a necessary consequence of it.

Jactitation of Marriage.—Falsely giving oneself out as married.

Jointure.—Provision made by a husband for his widow.

Jury of Matrons.—A jury of women to determine whether or not a prisoner is pregnant, on her pleading to be so.

King's Evidence.—One who, though concerned in the crime himself, has been accepted as a witness against another offender.

Letters Patent.—A grant by the Crown of certain privileges to inventors and others. The term "patent" (from *L. pateo,* to be open) signifies that the letter conveying the grant is open to everyone's inspection.

Lis pendens.—A pending lawsuit.

Locum tenens.—One holding another's place for a time.

Locus in quo.—The place in which.

Locus sigilli.—The place for the seal.

Locus standi.—"A place of standing." The right to appear in Court.

Mala fide.—In bad faith.

Malfeasance.—The doing of something unlawful.

Mandamus.—"We order or direct." A writ requiring a person to do some specified act.

Market overt.—Open market.

Messuage.—A dwelling-house with the adjoining land.

Mortgage.—An assignment of land or house property as a security for a loan of money.

Municipal Law.—The law of a state, whereas *International Law* is the law between one nation and another.

Muniments.—Writings by which claims and rights are defended or maintained.

Nisi prius.—"Unless previously." Refer to *Index.*

Nolle prosequi.—"To be unwilling to prosecute." A formal undertaking by a plaintiff not to proceed further with his action.

Nonsuit.—A stoppage of a suit at law ordered by a judge, or an abandonment of the suit by the plaintiff at the hearing in Court.

Nudum pactum.—"A naked agreement." A contract made without any valuable consideration, and therefore null and void.

Obiter dictum.—Something said by the way; not a decision of the question at issue.

Onus probandi.—The burden of proof, or the responsibility of proving.

Oyer and Terminer.—"To hear and settle." Court of "Oyer and Terminer" is an Assize Court.

Paraphernalia.—A woman's ornaments.

Parol contract.—Originally a contract by word of mouth; now any contract not under seal.

Pendente lite.—While a lawsuit is in progress.

Per capita.—"By heads." By the number of persons concerned.

Posse Comitatus.—"The power of the county." Men on whom the Sheriff might call for assistance.

Post mortem.—"After death." Examination of a corpse to ascertain the cause of death.

Post obitum.—"After death." Hence a post-obit bond is given by an heir to take effect on the death of the present owner.

Prescription.—Title based on long use or custom.

Prima facie.—At the first look; before examining into the matter.

Pur autre vie.—"For the life of another." During another's lifetime.

Qua.—In the character of.

Quamdiu se bene gesserit.—As long as he shall behave well.

Quantum meruit.—As much as he has deserved or earned.

Quantum valeat.—As much as it is worth.

Quasi.—"As if"; hence a quasi-contract is an implied one.

Quid pro quo.—Something for something, an equivalent.

Quo warranto.—"By what authority"; a certain type of writ.

Refresher.—An additional fee paid to counsel when the case is prolonged.

Residuary Devisee.—The person who under a will takes all the *real* property left over after the other devisees have received their shares.

Residuary Legatee.—The person who under a will takes all the *personal* property left over after the other legatees have had their shares.

Res judicata.—A matter on which judgment has been already passed.

Scienter.—Knowingly.

Secus.—Otherwise.

Sine.—Without.

Sine die.—Without a day being fixed.

Sine prole.—Without issue.

Sinecure.—An office without any duty attached to it.

Status.—The position of a person in the eye of the law.

Status quo.—The position in which things are at a certain time.

Sub judice.—"Under the judge." In course of being tried.

Sub pœna.—"Under penalty"; a summons to appear under a penalty.

Surrogate.—The deputy of a bishop or his chancellor.

Terrier.—A register of lands.

Territorial Waters.—The sea within three miles of the coast; this part of the sea is regarded as a part of the adjoining country.

Ultimus Hæres.—"The last heir," namely, the Crown.

Ultra vires.—Beyond the powers or authority (of a person or party).

Venue.—The place of trial.

Versus (v.).—Against.

Viva voce.—With the living voice.

Voire dire=Fr. *vrai dire* to speak truly. Applied to a certain form of oath.

OBS.—The greater number of Legal Terms are explained just as they occur in the Legal Guide, and are therefore omitted here. They may be found by reference to the Index.

N.B.—For MEDICAL TERMS refer to Medical Dictionary pp. 324-423.

For COMMERCIAL TERMS refer to Commercial Dictionary pp. 610-639.

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PLACES OF INTEREST IN LONDON.

1. ART GALLERIES, Etc.

Academy, Royal, Burlington House, Piccadilly, W. Open from 1st Monday in May to 1st Monday in August, from 8 a.m. to 7 p.m. Admission 1s.

Doré Gallery, 35, New Bond Street, W. Private Gallery.

Dulwich Gallery, Dulwich College, S.E. Free. Open every day from 10 a.m. to dusk. Sundays, July to September, from 2 to 5 p.m.

French Gallery, 120, Pall Mall. S.W. Private Gallery.

Goupil Gallery, 5, Regent Street, S.W. Private Gallery.

Grafton Gallery, Grafton Street, Bond Street, W. Private Gallery.

Guildhall Art Gallery, the Guildhall, King Street, Cheapside, E.C. Free. Open daily from 10 a.m. to dusk.

Hanover Gallery, 47, New Bond Street, W. Private Gallery.

Leighton House, 2, Holland Park Road, Kensington, W. Tuesdays and Saturdays free; other days 1s. by ticket. Open 10.30 a.m. to 5.30 p.m.

National Gallery, Trafalgar Square, W.C. Thursdays and Fridays, 6d., 11 a.m. to 4 p.m.; other days free from 10 a.m. to 4, 5, or 6 p.m. Sundays from 2 to 4, 5, or 6 p.m.

National Gallery of British Art (Tate Gallery), Grosvenor Road, Millbank, S.W. Tuesdays and Wednesdays 6d. from 11 a.m. to 4 p.m.; other days free from 10 a.m. to 4, 5, or 6 p.m. Sundays from 2 to 4, 5, or 6 p.m.

National Portrait Gallery, St. Martin's Place, W.C. Thursdays and Fridays, 6d., from 10 a.m. to 4 or 5 p.m.; other days free from 10 a.m. to 4, 5, or 6 p.m. Sundays from 2.30 to 5.30 p.m., or until dusk in winter.

New Gallery, 121, Regent Street, W. Admission 1s.

Royal Institute of Oil Painters, 195, Piccadilly. Admission 1s.

Royal Institute of Painters in Water Colours, 195, Piccadilly, W.

Royal Society of Painters in Water Colours, 5a Pall Mall East, S.W.

Royal Society of British Artists, Suffolk Street, Pall Mall East, S.W. Admission 1s.

Wallace Collection, Hertford House, Manchester Square, W. Tuesdays and Fridays 6d.; other days free. Open from 10 a.m. (excepting Monday 12 noon) to 4, 5, or 6 p.m. Open Sundays from 2 p.m.

2. CATHEDRALS, CHURCHES, Etc.

Brompton Oratory, Brompton Road, South Kensington, W. This well known Roman Catholic Church is a fine example of the Italian Renaissance style of architecture, and is noted for the beautiful musical services held there.

Chapel Royal, Color Court, St. James's Palace, S.W.

Chapel Royal, Savoy, W.C.

City Temple, Holborn Viaduct, E.C. Was built for the late Dr. Joseph Parker. The present minister is the Rev. R. J. Campbell. A service is held every Thursday at 12 noon in addition to the Sunday services.

Great Synagogue, St. James's Place, Aldgate, E.C. Chief Rabbi: Rev. Hermann Adler, D.D.

St. Bartholomew Church, Smithfield, E.C. The oldest and one of the most interesting churches in London. Open daily from 9 a.m. to 5 p.m.

St George's Cathedral, St. George's Road, Southwark, S.E. Roman Catholic.

St. Paul's Cathedral. The main entrance looks down Ludgate Hill, E.C. This magnificent and colossal edifice took thirty-five years to build, and was completed in 1710. It contains the remains of some of our most famous naval and military heroes and other eminent men. The nave and transepts are open free. Admission to view the Whispering Gallery, Stone Gallery, Clock, and Library, 6d.; Crypt, 6d.; Golden Gallery, 1s.; Ball, 1s.

St. Peter's (Italian Church), Clerkenwell Road, E.C. Roman Catholic.

Southwark Cathedral, lately St. Saviour's, Southwark.

Temple (The) Church, situated in The Temple off Fleet Street, celebrated for its musical services.

Westminster Abbey, Old Palace Yard, Westminster, S.W. A magnificent ecclesiastical edifice, founded in the seventh century. From the reign of Edward the Confessor to the present day, without a break, the Sovereigns of England have been crowned in the Abbey; and here also are the tombs and monuments of many of England's monarchs and of numbers of the leading men in English history. Open daily. Ambulatory and Royal Chapels, admission 6d., except Mondays and Tuesdays, which are free days. From November to February the Abbey is closed after the afternoon service.

Westminster Cathedral, Ashley Gardens, S.W. (Roman Catholic.) When completed, this superb cathedral will be one of the finest of its class in existence. The Foundation stone was laid in 1895.

Tabernacle, Metropolitan, Newington Butts (close to Elephant and Castle). In the original building, enormous congregations were attracted by the preaching of the late Rev. C. H. Spurgeon. Burnt down in 1898 and rebuilt in 1900.

3. CLUBS.

Albemarle (Ladies and Gentlemen), 13, Albemarle Street, W.

Alexandra (Ladies'), 12, Grosvenor Street, W.

Almacks, 20, Berkeley Street, W.

Alpine, 23, Savile Row, W.

Army and Navy, 36, Pall Mall, S.W.

Arthur's, 69, St. James's Street, S.W.

Arts, 40, Dover Street, Piccadilly, W.

Athenæum, 107, Pall Mall, S.W.

Authors', 3, Whitehall Court, S.W.

Auxiliary Forces, 2, Whitehall Court.

Bachelors', 8, Hamilton Place, W.

Badminton, 100, Piccadilly, W.

Bath, 34, Dover Street, Piccadilly, W.

Beefsteak, 9, Green St., Leicester Square.

Blenheim, 26, King Street, S.W.

Boodle's, 28, St. James's Street, S.W.

Brooks's, St. James's Street, S.W.

Burlington Fine Arts, 17, Savile Row, W.

Caledonian, 30, Charles Street, St. James's, S.W.

Carlton, 94, Pall Mall, S.W.

Cavalry, 127, Piccadilly, W.

City Carlton, 24, St. Swithin's Lane.

City Liberal, Walbrook, E.C.

City of London, 19, Old Broad Street.

City of London Chess, 7, Grocers' Hall Court, Poultry, E.C.

City University, 53, Cornhill, E.C.

Cobden, Caxton House, Westminster.

Cocoa Tree, 64, St. James's St., S.W.

Conservative, 74, St. James's Street.

Constitutional, Northumberland Avenue.

Crystal Palace, Crystal Palace, S.E.

Devonshire, 50, St. James's St., S.W.

East India United Service, 16, St. James's Square, S.W.

Eccentric, 21, Shaftesbury Avenue.

Eighty, 3, Hare Court, Temple, E.C.

Eldon, 3, Cursitor Street, W.C.

Empress (Ladies'), 35, Dover Street, W.

Garrick, 15, Garrick Street, W.C.

Golfers' 2a, Whitehall Court, S.W.

Gresham, Gresham Place, E.C.

Grosvenor, 68a, Piccadilly, W.

Guards, 70, Pall Mall, S.W.

Hurlingham, Fulham.

Isthmian, 105, Piccadilly, W.

Junior Athenæum, 116, Piccadilly, W.

Junior Carlton, 30, Pall Mall, S.W.

Junior Conservative, 43, Albemarle Street, W.

Junior Constitutional, 101 to 104, Piccadilly, W.

Junior Naval and Military 96 & 97, Piccadilly, W.

Junior United Service, 11, Charles St., St. James's, S.W.

Kennel, 7, Grafton Street, New Bond Street, W.

Ladies' Army and Navy, 2, Burlington Gardens, W.

Ladies' Athenæum, 31, Dover Street, Piccadilly, W.

Ladies' Empire, 69, Grosvenor Street, W.

Ladies' Imperial, 17, Dover Street, W.

Lyceum (Ladies'), 128, Piccadilly, W.

Marlborough, 52, Pall Mall, S.W.

M. C. C. (Lord's), St. John's Wood Rd.

National, 1, Whitehall Gardens, S.W.

National Liberal, Whitehall Place, S.W.

National Sporting, 43, King's Street, Covent Garden, W.C.

Naval and Military, 94, Piccadilly, W.

New, 4, Grafton Street, Piccadilly, W.

New Century (Ladies'), Hay Hill, Berkeley Square, W.

New Victoria (Ladies'), 30a, Sackville Street, W.

New County (Ladies'), 21, Hanover Square, W., and 84, Grosvenor Street, W.

New Oxford and Cambridge, 68, Pall Mall, S.W.

New University, 57, St. James's Street.

Oriental, 18, Hanover Square, W.

Orleans, 29, King Street, St. James's.

Oxford and Cambridge, 71, Pall Mall.

Park (Ladies'), Parkside, Knightsbridge.

Pioneer (Ladies'), 5, Grafton Street, New Bond Street, W.

Portland, 9, St. James's Square, S.W.

Press, 6, Wine Office Court, E.C.

Primrose, 4, Park Place, St. James's, S.W.

Raleigh, 16, Regent Street, S.W.

Reform, 104, Pall Mall, S.W.

Royal Automobile, 119, Piccadilly.

Royal Societies, 63, St. James's Street, S.W.

Royal Thames Yacht, 7, Albemarle Street, W.

St. James's, 106, Piccadilly, W.

St. Stephen's, 1, Bridge Street, Westminster, S.W.

Savage, 6, Adelphi Terrace, W.C.

Savile, 107, Piccadilly, W.

Sesame (Ladies and Gentlemen), 28 & 29, Dover Street, W.

Sports, 8, St. James's Square, S.W.

Thatched House, 86, St. James's Street.

Travellers', 106, Pall Mall, S.W.

Turf, 85, Piccadilly, W.

Union, Trafalgar Square.

United Arts (Ladies and Gentlemen), 10, St. James's Street.

United Service, 116, Pall Mall, S.W.

United Sports, 4, Whitehall Court, S.W.

United University, 1, Suffolk Street, Pall Mall, S.W.

University (Ladies'), 4, George Street, Hanover Square.

Victoria, 18, Wellington Street, W.C.

Victoria (Ladies'), 145, Victoria Street, S.W.

Wellington, 1, Grosvenor Place, S.W.

Westminster, 4, Whitehall Court.

Whitehall, Horse Guards Avenue.

White's, 37, St. James's Street, S.W.

Windham, 13, St. James's Square.

Writers' (Ladies'), 10, Norfolk Street, Strand.

Yorick, 29, Bedford Street, W.C.

4. DOCKS.

East Indian. City Offices: 109, Leadenhall Street, E.C.
London. City Offices: 109, Leadenhall Street, E.C.
Millwall. City Offices: 36, Crutchedfriars, E.C.
Royal Victoria and Albert. City Offices: 109, Leadenhall Street, E.C.
St. Katharine. City Offices: 109, Leadenhall Street, E.C.
Surrey Commercial. City Offices: 106, Fenchurch Street, E.C.
Tilbury. City Offices: 109, Leadenhall Street, E.C.
West Indian. City Offices: 109, Leadenhall Street, E.C.

5. HOSPITALS.

GENERAL.

Bolingbroke, Wandsworth Common.
Charing Cross, Agar St., West Strand, W.C.
French, 172, Shaftesbury Avenue, W.C.
French Protestant, Victoria Park Road, Hackney, N.E.
German, 113, Dalston Lane, N.E.
Gt. Northern Central, Holloway Rd., N.
Guys, St. Thomas' Street, Boro', S.E.
Italian, Queen Square, W.C.
King's College, Portugal St., Lincoln's Inn Fields, W.C.
London, Whitechapel Road, E.
London Homœopathic, Great Ormond Street, W.C.
London Temperance, Hampstead Road, N.W.
Metropolitan, Kingsland Road, N.E.
Middlesex, Mortimer Street, Tottenham Court Road, W.
Mildmay Mission, Austin Street, Shoreditch, E.
North West London, Kentish Town Road, N.W.
Poplar, East India Dock Road, E.
Royal Free, Gray's Inn Road, W.C.
St. Bartholomew's, West Smithfield, E.C.
St. George's, Hyde Park Corner, S.W.
St. Mary's, Cambridge Place, Paddington, W.
St. Thomas', Westminster Bridge Road, S.E.
University College, Gower Street, W.C.
West London, Hammersmith Road, W.
Westminster, Broad Sanctuary, Westminster, S.W.

CANCER.

The Cancer, Fulham Road, Brompton, S.W.
Middlesex (Special wards), Mortimer Street, Tottenham Court Road.

CHILDREN.

Belgrave, 77, Glo'ster St., Pimlico, S.W.
Cheyne, Cheyne-Walk, Chelsea, S.W.
East London, Glamis Road, Shadwell, E.
Evelina, Southwark Bridge Road, S.E.
Hospital for Sick Children, Gt. Ormond Street, W.C.
North Eastern, Bethnal Green, E.
Paddington Green, Paddington Green, W.
Royal Waterloo, Waterloo Bridge Road, S.E.
Victoria, Royal Hospital Road, Chelsea, S.W.

CONSUMPTION AND CHEST.

City of London, Victoria Park, E.
Brompton Hospital, Fulham Road, S.W.
North London, 41, Fitzroy Square, W.
Royal Hospital for Diseases of the Chest, City Road, E.C.

DENTAL.

National Dental, Great Portland St., W.
Royal Dental, Leicester Square, W.C.

EYE.

Central London Ophthalmic, 238a, Gray's Inn Road, W.C.
Royal Eye, St. George's Circus, S.E.
Royal London Ophthalmic, City Road, E.C.
Royal Westminster Ophthalmic, 19, King William Street, E.C.
Western Ophthalmic, Marylebone Road, N.W.

FEVER.

London Fever, Liverpool Road, Islington, N.
South Eastern, New Cross Road, S.E.
South Western Fever, Landor Road, Stockwell, S.W.
Western Fever, Seagrave Road, Fulham, S.W.

FISTULA.

Gordon, Vauxhall Bridge Road, S.W.
St. Mark's, City Road, E.C.

HEART.

National, Soho Square, W.

HOMŒOPATHIC.

Brompton, 68, Fulham Road, S.W.
London Homœopathic, Great Ormond Street, W.C.

LOCK.

Lock Hospital, Harrow Road, W.

LYING-IN.

British, Endell Street, St. Giles', W.C.
City of London, City Road, E.C.
General, York Road, Lambeth, S.E.
Queen Charlotte's, Marylebone Road, N.W.

MENTAL DISEASES.

Bethlehem, Lambeth Road, S.E.
St. Luke's, Old Street, E.C.

NERVOUS DISEASES, PARALYSIS, &c.

Hospital for Epilepsy and Paralysis, Maida Vale, W.
National, Queen's Square, W.C.
West End, Welbeck Street, W.

ORTHOPÆDIC.

Alexandra, Queen Square, Bloomsbury, W.C.
City Orthopædic, Hatton Garden, E.C.

SKIN.

British, Euston Road, N.W.
Hospital for Diseases of the Skin, 52, Stamford Street, S.E.
London Skin, 40, Fitzroy Square, W.
St. John's, Leicester Square, W.C.
St. Paul's, Red Lion Square, W.C.
Western, Great Portland Street, W.

STONE.

St. Peter's, Henrietta Street, Covent Garden, W.C.

THROAT. NOSE, AND EAR.

Central London, Gray's Inn Road, W.C.
Hospital for Diseases of the Throat, Nose and Ear, Golden Square, W.
London, Great Portland Street, W.
Metropolitan, Grafton Street, W.
Municipal Infirmary for Throat and Ear. City Road, E.C.
Royal Ear, Dean Street, Soho.

WOMEN.

Chelsea, Queen's Elm, Fulham Road, S.W.
Grosvenor, Vincent Square, Westminster, S.W.
Hospital for Women, Soho Square, W.
New Hospital for Women, Euston Road, N.W.
Royal Waterloo (for women and children), Waterloo Bridge Road.
Samaritan Free, Marylebone Rd., N.W.
St. Saviour's Hospital for Ladies of limited means, 10, Osnaburgh Street, N.W.

6. INNS OF COURT.

Temple (Inner and Middle), Fleet Street, E.C. Entrances: Victoria Embankment; Tudor Street; Mitre Court; Devereux Court; Fleet Street (opposite Chancery Lane).
Lincoln's Inn, Chancery Lane, W.C. Entrances: Chancery Lane; Carey Street; Little Queen Street; Great Turnstile, High Holborn.
Gray's Inn, High Holborn, W.C. Entrances: High Holborn; Gray's Inn Road; Theobald's Road, Bedford Row.

7. MARKETS.

Billingsgate (Fish), North side of London Bridge, E.C.
Borough (Fruit and Vegetables), South side of London Bridge, S.E.
Covent Garden (Fruit, Vegetables, and Flowers), North of the Strand, W.C.
Cumberland Market (Hay, &c.), Regent's Park.
Leadenhall (Meat, Poultry, and Live Stock), Leadenhall Street, E.C.
London Central (City Corporation) (Meat and General), West Smithfield and Farringdon Road, E.C.
Metropolitan (Cattle), Caledonian Road, N.
Whitechapel (Hay and Straw), Whitechapel High Street, E.

8. MEMORIALS, MONUMENTS, Etc.

Albert Memorial, facing the Albert Hall, Kensington Road, W. A handsome monument, with gilt bronze statue of Prince Albert and over 150 figures in marble. Erected by Queen Victoria and the people of England in memory of the Prince Consort, at a cost of £120,000.
Cleopatra's Needle, Victoria Embankment, S.W. This famous obelisk, which originally stood before the Temple of Heliopolis, is 68 feet high. It was presented to the nation by Mehemet Ali in 1819, and conveyed to this country by Dr. Erasmus Wilson.
Duke of Wellington's Statue, opposite Apsley House, Hyde Park Corner.
Duke of York's Column, St. James's Park, S.W. A column 120 feet high, surmounted by a statue in bronze of the Duke of York, second son of George III.
Marble Arch. This sculptured arch, with its handsome bronze gates, forms the north-east entrance to Hyde Park, and cost over £80,000. It was designed by George IV. as a porte-cochère to Buckingham Palace, but was re-erected in its present position in 1851.
Monument, at the northern approach to London Bridge. A fluted column of Portland stone, 202 feet high, and ascended by a spiral staircase of 345 steps. It was erected to commemorate the Great Fire of London of 1666, which started at this spot. Admission 3d.
Nelson Column, Trafalgar Square, W.C. A granite Corinthian column 150 feet high, surmounted by a statue of the hero of Trafalgar, erected by the nation to commemorate Nelson's great victory.

9. MUSEUMS.

Bethnal Green (Branch of the Victoria and Albert Museum), Cambridge Road, E. Free. Open Mondays, Thursdays, and Saturdays, from 10 a.m. to 10 p.m. Tuesdays, Wednesdays, and Fridays, from 10 a.m. to 4, 5, or 6 p.m., according to the time of year. Sundays from 2 p.m. to dusk.
British, Great Russell Street, Bloomsbury, W.C. Free. Open week-days from 10 a.m. to 6 p.m. Sundays, 2 p.m. to 4, 5, or 6 p.m., according to the time of year.
Carlyle's House, Cheyne Row, Chelsea, S.W. Open daily from 10 a.m. to sunset. Admission 1s.
Horniman, London Road, Forest Hill, S.E. Free. Open daily; week-days 11 a.m. to 6 or 8 p.m. Sundays 3 to 9 p.m.
Imperial Institute, South Kensington, W. Opened by Queen Victoria in 1893. Contains interesting collections representing the industries of the British Colonies. Open daily, except Sundays, from 10 a.m. to 4 or 5 p.m. Admission free. The main portion of the building is occupied as the headquarters of the London University.
Indian Museum (Part of Victoria and Albert Museum), Exhibition Road, South Kensington, S.W. Free. Open daily. Hours same as Victoria and Albert.
Natural History (Branch of the British Museum), Cromwell Road, South Kensington, S.W. Free. Open week-days from 10 a.m., and on Sundays from 2.30 p.m. Time of closing varies from 4 to 8 p.m.
Practical Geology, Jermyn Street, Piccadilly, S.W. Free. Open week-days 10 a.m. to 4 or 5 p.m. Mondays and Saturdays to 10 p.m. Sundays from 2 p.m. till dusk.
Royal United Service Association, Whitehall, S.W. Admission 6d. (Sailors, Soldiers, and Policemen in uniform free). Open from 11 a.m. to 4 p.m. in winter and 11 a.m. to 6 p.m. in summer.
Science Museum. Exhibition Road and Imperial Institute Road, South Kensington. Free. For times when open refer to Victoria and Albert.
Sir John Soane's, 13, Lincoln's Inn Fields. Free. Open daily, excepting Mondays and Saturdays, from 10.30 a.m. to 5 p.m. from March to August inclusive.
Victoria and Albert, South Kensington, S.W. Open Mondays, Thursdays, and Saturdays from 10 a.m. to 10 p.m. free. On Tuesdays, Wednesdays, and Fridays 10 a.m. to 4, 5, or 6 p.m., according to the time of year, Admission 6d. Sundays free from 2 p.m. to dusk.

10. MUSIC HALLS AND VARIETY THEATRES.

Alhambra, Leicester Square, W.C.
Bedford, High St., Camden Town, N.W.
Camberwell, 23, Denmark Hill.
Camden, High Street, Camden Town, N.W.
Cambridge, 136, Commercial Street, E.
Canterbury, 143, Westminster Bridge Road, S.E.
Chelsea Palace, King's Road, S.W.
Coliseum, St. Martin's Lane, W.C.
Collins's, 10, Islington Green, N.
Empire, Leicester Square, W.C.
Empress, Brixton, S.W.
Euston, 37, Euston Road, N.W.
Foresters', 93, Cambridge Road, N.E.
Grand, Clapham Junction.
Granville, Broadway, Walham Green.
Hackney Empire, Mare St., Hackney.
Hammersmith Palace, Hammersmith, W.
Holborn Empire, 242, High Holborn, W.C.
Holloway Empire, Holloway Road, N.
London, Shoreditch, E.
London Hippodrome, Cranbourne Street, Leicester Square, W.C.
London Pavilion, Piccadilly Circus, W.
Metropolitan, 267, Edgware Road, W.
Middlesex, Drury Lane, W.C.
New Cross Empire, New Cross Road, S.E.
Oxford, 14, Oxford Street, W.
Palace, Shaftesbury Avenue, W.C.
Paragon, 95, Mile End Road, E.
Peckham Hippodrome, High Street, Peckham.
Putney Hippodrome, High Street, S.W.
Royal Standard, 126, Victoria Street.
Sadlers Wells, Rosebery Avenue, E.C.
Shepherd's Bush Empire, The Green, Shepherd's Bush, W.
South London, London Road, S.E.
Stratford Empire, Broadway, Stratford, E.
Surrey, 124, Blackfriars Road, S.E.
Tivoli, Strand, W.C.

11. OFFICIAL BUILDINGS.

Bank of England, Threadneedle Street, E.C. The premises are guarded every night by the military.
Central Criminal Court. It is built on the site of Newgate prison, and takes the place of "The Old Bailey."
Custom House, Lower Thames Street, E.C.
General Post Office, St. Martin's-le-Grand. Here are situated, in a group of lofty and extensive buildings, the headquarters of the enormous postal and telegraphic business of this country.
Greenwich Hospital (now known as the Royal Naval College). The Painted Hall contains a collection of naval relics and pictures. May be viewed free daily.
Greenwich Observatory. This famous observatory is not open to the public, and cannot be viewed except by special permission of the Astronomer Royal.

Government Offices.

Admiralty, The.	Whitehall and St. James's Park.
Board of Trade Offices.	
Colonial Office	
Education Office.	
Foreign Office.	
Home Office	
Horse Guards	
India Office	
Privy Council Office.	
The Treasury	
War Office.	

Guildhall, King's Street, Cheapside, E.C. Noted for its great civic functions and receptions to foreign potentates and distinguished persons. On the 9th November each year the Lord Mayor's Banquet is held in this historic and interesting building. An excellent Museum and Art Gallery and Free Library are contained in the Guildhall, and are open to the public free daily.

Houses of Parliament, Westminster, S.W. Visitors are admitted to view these beautiful and stately buildings on Saturdays from 10 to 4, except when Parliament is assembled. Admission to the Strangers' Gallery of the House of Commons, when sitting, can be obtained by an order from a Member of Parliament.

Lambeth Palace, Lambeth Palace Road, close to Lambeth Bridge. The town residence of the Archbishop of Canterbury. May be viewed by permission of the Archbishop's Chaplain.

Law Courts, Strand, W.C. A magnificent block of buildings, opened by Queen Victoria in 1882. Visitors are admitted to the public galleries when the Courts are sitting, or may view the Central Hall during the vacation upon application to the Superintendent.

Mansion House, Queen Victoria Street, E.C. This historic building, which dates back to the year 1739, is used as the Official Residence of the Lord Mayor of London.

Mint, Tower Hill, E.C. Upon application, by letter, to the Deputy-Master of the Mint, admission may be obtained to inspect this establishment, where the gold and silver coinage of the realm is produced by wonderful machinery.

Record Office, Chancery Lane, W.C. A splendid block of fire-proof buildings of Tudor architecture, containing priceless national records and state papers, including the celebrated Domesday Book. The public are admitted free of charge.

Royal Exchange, Threadneedle Street and Cornhill, E.C. May be viewed by anyone wishing to do so. Statues and frescoes well worth seeing. Part of the building is occupied by "Lloyd's," known the world over in connection with underwriting and ship insurance.

Royal Hospital, Chelsea, for old and disabled soldiers. Founded 1682.

Somerset House. Strand and Victoria Embankment, W.C., contains numerous Government offices, including Probate Registry Office, Inland Revenue Office, Audit Office, Office of the Registrar General of Births, Deaths and Marriages, etc. It is a remarkably fine building and one of the largest in London. It cost about £1,000,000 to build.

Stock Exchange, Capel Court, Bartholomew Lane, E.C. The money market for buying and selling Stocks, Shares and Securities. Not open to the public.

Tower of London. Tower Hill, E.C. An ancient fortress dating from the time of William the Conqueror. Open daily (Sundays excepted) from 10 a.m. to 4 p.m. Admission to view the Armouries 6d., and the Crown Jewels 6d. Mondays and Saturdays free.

Westminster Hall. Adjacent to the Houses of Parliament. It is one of the oldest and grandest architectural structures in the Metropolis. For admission see *Houses of Parliament.*

Woolwich Arsenal. Open for inspection by British subjects on Tuesdays and Thursdays by card, to be obtained at the War Office, Whitehall.

12. PARKS AND GARDENS.

In and around London are the following Parks, Gardens, and Open Spaces:—

Battersea Park.
Blackheath.
Brockwell Park (Herne Hill).
Burnham Beeches.
Bushey Park.
Clapham Common.
Clissold Park (Stoke Newington).
Deptford Park.
Epping Forest.
Finsbury Park, N.
Gladstone Park (Dollis Hill).
Golder's Hill.
Green Park (St. James's).
Greenwich Park.
Hadley Common.
Hampstead Heath
Hampton Court Gardens.
Highbury Fields (Islington).
Highgate Woods.
Hounslow Heath.
Hyde Park.
Kennington Park.
Kensington Gardens.
Kew Gardens, Royal.
Mitcham Common.
Parliament Hill.
Plumstead.
Regent's Park.
Richmond Park.
Royal Botanic Gardens.
St. James's Park.
Southwark Park.
Streatham Common.
Temple Gardens.
Tooting Bec.
Victoria Park (Hackney).
Wandsworth Common.
Waterlow Park (Highgate).
Wembley Park.
West Ham Park.
Wimbledon Common.

13. PLACES OF ENTERTAINMENT.

Agricultural Hall, Royal. Upper Street, Islington, N. Trade and other exhibitions and shows are held here, Cattle Show, Dairy Show, and Horse Shows.

Albert Hall, Royal, South Kensington, S.W. Concerts and large Meetings. The hall holds from 8,000 to 10,000 people and contains one of the largest organs in the world.

Alexandra Palace, Muswell Hill, N. Exhibitions and various Entertainments. The palace stands in delightful grounds.

Art Galleries. *Under separate heading.*

Crystal Palace, Sydenham, S.E. Exhibitions, Concerts, etc. Beautiful grounds of 200 acres. First class Cricket and Football grounds and Athletic tracks. The final tie for the Association Football Cup is held here. Headquarters of the London County Cricket Club, which is managed by Dr. W. G. Grace.

Earl's Court, W. Summer Exhibitions.

Madame Tussaud's, Marylebone, N.W. Celebrated Waxwork Exhibition.

Museums. *Under separate heading.*

Music Halls and Variety Theatres. *Under separate heading.*

Olympia, Addison Road, Kensington, W. Large Spectacular Exhibitions, including Military Tournament.

Queen's Hall, Langham Place, W. Concert Hall.

Royal Italian Circus, Hengler's, Argyle Street, Oxford Street, W. Circus.

Royal Palaces. *Under separate heading.*

Steinway Hall, Lower Seymour Street, W. Concert Hall.

St. George's Hall, Langham Place, W. Maskelyne's Home of Mystery.

Theatres. *Under separate heading.*

White City, Shepherd's Bush. Franco-British and Japanese Exhibitions held here.

Zoological Gardens, Regent's Park, N.W. Extensive and interesting collection of animals, birds, reptiles, etc.

14. ROYAL PALACES.

Buckingham Palace, St. James's Park, S.W. Built by George IV. The London Residence of their Majesties the King and Queen. Not open to the public, but permits to inspect the Royal Stables may be obtained from the Master of the Horse.

Hampton Court Palace, Hampton, Middlesex. This imposing mansion, erected by Cardinal Wolsey, with its beautiful grounds and park, is situate on the Thames, 15 miles from London. The State Apartments, with a choice collection of pictures, are open to the public free of charge daily (except Fridays), Sundays from 2 p.m.

Kensington Palace, Kensington Gardens, W. This Palace is of particular interest as the birthplace of Queen Victoria. The State Rooms are open to the public free daily (except Wednesdays, Christmas Day and Good Friday). Sundays 2 to 6 p.m.

Marlborough House, Pall Mall, S.W. Became the property of the Crown in 1817. It was built in 1708.

St. James's Palace, St. James's Street, S.W. Built by Henry VIII. The official town residence of the Court since the fire at Whitehall in 1698. The Park of the same name was originally the grounds of the Palace, but was opened for the public in 1829.

Windsor Castle, Windsor, Berks. Has been a residence of the British sovereigns since the time of the Conqueror, who began the first building. Many Monarchs have added to and altered the original building. When the King is not in residence the State Apartments are open to the public on Tuesdays, Wednesdays and Thursdays from 11 a.m. to 3 or 4 p.m. The Stables daily from 1 to 2.30 p.m. St. George's Chapel daily, excepting Wednesdays, from 12.30 to 3 or 4 p.m.

15. THEATRES.

CENTRAL LONDON.

Adelphi, 410, Strand, W.C.
Aldwych, Aldwych, Strand, W.C.
Apollo, Shaftesbury Avenue, W.
Comedy, Panton Street, S.W.
Court, Sloane Square, S.W.
Covent Garden, Bow Street, W.C.
Criterion, Piccadilly Circus, W.
Daly's, Leicester Square, W.
Drury Lane, Catherine Street, W.C.
Duke of York's, St. Martin's Lane, W.C.
Gaiety, 345, Strand, W.C.
Garrick, 2, Charing Cross Road, W.C.
Globe, Shaftesbury Avenue, W.
Haymarket, 7, Haymarket, S.W.
His Majesty's, Haymarket, S.W.
Imperial, Tothill Street, S.W.
Kingsway, Great Queen Street.
Lyceum, Wellington Street, Strand.
Lyric, 29, Shaftesbury Avenue, W.
New, St. Martin's Lane, W.C.
New Royalty (Théâtre Français), 73, Dean Street, Soho, W.
Playhouse, The, Northumberland Avenue, S.W.
Prince of Wales's, Coventry Street, W.
Princess's, 152, Oxford Street, W.
Queen's Theatre, Shaftesbury Avenue, W.
St. James's, King Street, S.W.
Savoy, Strand and Embankment.
Scala, Charlotte St., Fitzroy Square, W.
Shaftesbury, Shaftesbury Avenue, W.
Strand, Aldwych, E., Strand, W.C.
Terry's, 105, Strand, W.C.
Vaudeville, 404, Strand, W.C.
Wyndham's, Charing Cross Road, W.C.

SUBURBAN.

Alexandra, Stoke Newington, N.
Borough, Stratford, E.
Brixton, Brixton Road, S.W.
Broadway, New Cross, S.E.
Coronet, High St., Notting Gate, W.
Dalston, Dalston Lane, N.E.
Duchess, Balham, S.W.
Elephant and Castle, New Kent Road, S.E.
Fulham, High Street, Fulham, S.W.
Grand, High Street, Croydon.
Grand, Islington, N.
Grand, Woolwich.
Kennington, Kennington Park Rd., S.E.
King's, Hammersmith, W.
Marlborough, Holloway.
Metropole, Camberwell, S.E.
Pavilion, Mile End, E.
Richmond, The Green, Richmond.
Royal W., London, Church Street, Edgeware Road.
Shakespeare, Clapham Junction, S.W.
Standard, High Street, Shoreditch, E.
Terriss, Rotherhithe.
Theatre Royal, Kilburn, N.W.
Theatre Royal, Stratford, E.

16. RAILWAY TERMINI.

Great Central Railway, Marylebone Station, Marylebone Road, N.W.

Great Eastern Railway, Liverpool Street Station, Liverpool Street, E.C.

Great Northern Railway, King's Cross Station, Euston Road, N.W.

Great Western Railway, Paddington Station, Praed Street, W.

London, Brighton & South Coast Railway, London Bridge Station, South side of London Bridge, S.E., and Victoria Station, Buckingham Palace Road, S.W.

London & North Western Railway, Euston Station, Euston Square, N.W.

London & South Western Railway, Waterloo Station, South side of Waterloo Bridge, S.E.

London, Tilbury & Southend Railway, Fenchurch Street Station, Fenchurch Street, E.C.

Midland Railway, St. Pancras Station, Euston Road, N.W.

North London Railway, Broad Street Station, Liverpool Street, E.C.

South Eastern & Chatham Railway, London Bridge Station, South side of London Bridge, S.E.; Cannon Street Station, Cannon Street, E.C.; Charing Cross Station, Charing Cross, W.C.; Victoria Station, Vauxhall Bridge Road, S.W.; Holborn Viaduct Station, Holborn Viaduct, E.C.; and St. Paul's Station, Queen Victoria Street, E.C.

17. THAMES BRIDGES.

(In proper order, starting with the nearest to the sea.)

Tower (can be opened to allow large vessels to pass).
London Bridge.
Cannon Street (Railway).
Southwark.
Blackfriars (Railway).
Blackfriars.
Waterloo.
Charing Cross (Railway and Foot).
Westminster.
Lambeth (Suspension).
Vauxhall.
Grosvenor Road (Railway).
Victoria (Chelsea Suspension)
Albert (Suspension).
Battersea.
Battersea (Railway).
Wandsworth.
Putney (Railway).
Putney.
Hammersmith (Suspension).
Barnes (Railway).
Kew (Railway).
Kew.
Richmond.

GEORGE III. AND HIS DESCENDANTS.

George III. = Sophia Charlotte of Mecklenberg-Strelitz. (1760–1820.)

- **George IV.** (1820–1830.) = Caroline of Brunswick.
  - Charlotte, *d.* 1817.
- Frederick, Duke of York, *d.* 1827.
- **William IV.** (1830–1837.) = Adelaide of Saxe-Meiningen.
  - Two daughters who died in infancy.
- Edward, Duke of Kent. = Victoria of Saxe-Coburg, widow of Prince Charles of Leiningen.
  - **Victoria** (1837–1901.) = Prince Albert of Saxe-Coburg Gotha.
- Ernest, Duke of Cumberland. = Frederica of Mecklenberg-Strelitz.
  - George, King of Hanover and 2nd Duke. = Alexandrina of Saxe-Altenburg.
    - Ernest Augustus, Duke of Cumberland. = Thyra of Denmark.
- Adolphus, Duke of Cambridge. = Augusta of Hesse. (*See descendants in table below.*)

DESCENDANTS OF ADOLPHUS, DUKE OF CAMBRIDGE.

- George, Duke of Cambridge, *d.* 1904.
- Augusta = Grand Duke of Mecklenberg-Strelitz.
- Mary = Duke of Teck.
  - Victoria Mary = George V.
  - Adolphus, Duke of Teck. = Lady Margaret Grosvenor.
  - Francis.
  - Alexander = Alice of Albany.

(In addition to those enumerated in the table above, George III. had three sons and six daughters who died without issue, some of them in infancy.)

DESCENDANTS OF THE EMPRESS FREDERICK OF GERMANY.

Victoria, Princess Royal of England. = Frederick, Crown Prince and afterwards Emperor of Germany.

- **William II.** Emperor of Germany, *b.* 1859, succeeded 1888. = Augusta Victoria of Schleswig-Holstein.
  - Friedrich Wilhelm, Crown Prince of Germany, *b.* 1882. = Duchess Cecilia of Mecklenburg-Schwerin.
    - Wilhelm Friedrich, *b.* 1906.
  - Eitel Frederick, *b.* 1883. = Duchess Sophie of Oldenburg.
  - Adalbert, *b.* 1884.
  - Augustus, *b.* 1887.
  - Oscar, *b.* 1888.
  - Joachim, *b.* 1890.
  - Victoria Louise, *b.* 1892.
- Charlotte, *b.* 1860. = Hered. Prince of Saxe-Meiningen.
- Henry, *b.* 1862. = Irene of Hesse.
- Sigismund, *b.* 1864, *d.* 1866.
- Victoria, *b.* 1866. = Prince Adolphus of Schaunburg-Lippe.
- Waldemar, *b.* 1868, *d.* 1878.
- Sophia, *b.* 1870. = Duke of Sparta.
- Margaret, *b.* 1872. = Prince Frederick of Hesse-Cassel.

DESCENDANTS OF QUEEN VICTORIA.

Victoria, 1837–1901. = Prince Albert of Saxe-Coburg Gotha, *b.* 1819, *d.* 1861.

- (1) **Victoria**, Princess Royal, *b.* 1840, *d.* 1901. (*For descendants see separate table.*) = Frederick, Crown Prince, afterwards Emperor of Germany.
- (2) **EDWARD VII.**, *b.* 1841, *d.* 1910. (*For descendants see separate table.*) = Alexandra of Denmark.
- (3) **Alice**, *b.* 1843. *d.* 1878. = Grand Duke of Hesse.
  - **Victoria**, *b.* 1863 = Prince Louis of Battenberg.
  - Elizabeth, *b.* 1864. = Grand Duke Serge of Russia. Assass. 1905.
  - Irene, *b.* 1866. = Prince Henry of Prussia.
  - Ernest, Grand Duke of Hesse, *b.* 1868. = (1) Victoria Melita of Saxe-Coburg Gotha. (*Marriage dissolved*). (2) Eleanor of Solms-Hohensolms-Lich.
  - Frederick, *b.* 1870, *d.* 1873.
  - Alix Victoria, *b.* 1872. = Nicholas II. of Russia.
    - Four daughters and a son.
  - Mary, *b.* 1874, *d.* 1878.
- (4) **Alfred**, Duke of Edinburgh and Duke of Saxe-Coburg Gotha, *b.* 1844, *d.* 1900. = Grand Duchess Marie of Russia.
  - Alfred, *b.* 1874. *d.* 1899.
  - Marie, *b.* 1875. = Crown Prince of Roumania.
    - Has issue.
  - Victoria Melita, *b.* 1876. = (1) Grand Duke of Hesse. (*Marriage dissolved*). (2) Grand Duke Cyril of Russia.
  - Alexandra, *b.* 1878. = Hered. Prince of Hohenlohe-Langenburg.
  - Beatrice, *b.* 1884.

DESCENDANTS OF QUEEN VICTORIA = Prince Albert (*continued*).

- (5) **Helena**, *b.* 1846. = Prince Christian of Schleswig-Holstein.
  - Christian Victor, *b.* 1867, *d.* 1900.
  - Albert, *b.* 1869.
  - Victoria, *b.* 1870.
  - Louise, *b.* 1872. = Prince Aribert of Anhalt. (*Marriage dissolved*).
  - Harold *b.* 1876, *d.* 1876.
- (6) **Louise**, *b.* 1848. = Marquis of Lorne, now Duke of Argyle.
- (7) **Arthur**, Duke of Connaught, *b.* 1850. = Louise Margaret of Prussia.
  - Margaret, *b.* 1882. = Prince Gustav Adolf of Sweden.
  - Arthur, *b.* 1883.
  - Victoria Patricia, *b.* 1886.
- (8) **Leopold**, Duke of Albany, *b.* 1853, *d.* 1884. = Helen of Waldeck.
  - Alice, *b.* 1883. = Alexander of Teck.
  - Leopold Charles Edward, Duke of Albany and Duke of Saxe-Coburg Gotha. *b.* 1884. = Victoria Adelaide of Schleswig-Holstein-Glücksburg.
- (9) **Beatrice**, *b.* 1857. = Prince Henry of Battenberg. *d.* 1896.
  - Alexander, *b.* 1886.
  - Victoria Eugénie, *b.* 1887. = Alfonso XIII. of Spain, 1906.
    - Alfonso, *b.* 1907.
    - Jaimes, *b.* 1908.
    - Beatriz, *b.* 1909.
  - Leopold, *b.* 1889.
  - Maurice, *b.* 1891.

DESCENDANTS OF EDWARD VII.

Edward VII., 1901–1910. = Alexandra of Denmark.

- Albert Victor, Duke of Clarence, *b.* 1864, *d.* 1892.
- **GEORGE V.**, *b.* 1865, became king 1910. = Victoria Mary of Teck.
  - Edward, Prince of Wales, *b.* 1894.
  - Albert, *b.* 1895.
  - Victoria, *b.* 1897.
  - Henry, *b.* 1900.
  - George, *b.* 1902.
  - John, *b.* 1905.
- Louise (Princess Royal), *b.* 1867. = Duke of Fife.
  - Alexandra, *b.* 1891.
  - Maud, *b.* 1893.
- Victoria, *b.* 1868.
- Maud, *b.* 1869. = Prince Charles of Denmark (Haaken VII. of Norway, elected 1905).
  - Alexander (Olaf), *b.* 1903.
- Alexander, *b.* 1871, *d.* 1871.

KINGS AND QUEENS OF ENGLAND.

EARLY ENGLISH.

ANGLO-SAXON LINE.

Egbert	827–839
Ethelwulf	839–858
Ethelbald	858–860
Ethelbert	860–866
Ethelred	866–871
Alfred	871–901
Edward the Elder	901–925
Athelstan	925–940
Edmund	940–946
Edred	946–955
Edwy	955–959
Edgar	959–975
Edward the Martyr	975–979
Ethelred the Unready	979–1015
Edmund Ironside	1016–1016

DANISH LINE.

Canute	1016–1035
Harold I.	1035–1040
Hardicanute	1040–1042

ANGLO-SAXON LINE.

Edward the Confessor	1042–1066
Harold II.	1066–1066

SINCE THE CONQUEST.

HOUSE OF NORMANDY.

		MARRIED.
William I.	1066–1087	Matilda of Flanders
William II.	1087–1100	died unmarried
Henry I.	1100–1135	1. Matilda of Scotland 2. Adeliza, daughter of the Count of Louvain
Stephen	11135–154	Matilda of Boulogne

HOUSE OF PLANTAGENET.

Henry II.	1154–1189	Eleanor of Aquitaine
Richard I.	1189–1199	Berengaria of Navarre
John	1199–1216	1. Avisa, daughter of Earl of Gloucester 2. Isabella of Angoulême
Henry III.	1216–1272	Eleanor of Provence
Edward I.	1272–1307	Eleanor of Castile
Edward II.	1307–1327	Isabella of France
Edward III.	1327–1377	Philippa of Hainault
Richard II.	1377–1399	1. Anne of Bohemia 2. Isabella of France

HOUSE OF LANCASTER.

Henry IV.	1399–1413	1. Mary Bohun. 2. Joan of Navarre
Henry V.	1413–1422	Catherine of France
Henry VI.	1422–1461	Margaret of Anjou

HOUSE OF YORK.

Edward IV.	1461–1483	Elizabeth Woodville
Edward V.	1483–1483	died unmarried
Richard III.	1483–1485	Anne, daughter of Earl of Warwick

HOUSE OF TUDOR.

Henry VII.	1485–1509	Elizabeth of York, daughter of Edward IV.
Henry VIII.	1509–1547	Catharine of Aragon and five others.
Edward VI.	1547–1553	died unmarried
Mary	1553–1558	Philip of Spain
Elizabeth	1558–1603	died unmarried

KINGS AND QUEENS OF GREAT BRITIAN.

HOUSE OF STUART.

James I.	1603–1625	Anne of Denmark
Charles I.	1625–1649	Henrietta Maria of France
(*Commonwealth*	1649–1660)	
Charles II.	1660–1685	Catherine of Braganza
James II.	1685–1689	1. Anne Hyde. 2. Mary of Modena
William III. and Mary	1689–1694	
William III.	1694–1702	
Anne	1702–1714	George of Denmark

HOUSE OF HANOVER.

George I.	1714–1727	Sophia Dorothea of Zell
George II.	1727–1760	Caroline of Anspach
George III.	1760–1820	Charlotte of Mecklenberg-Strelitz
George IV.	1820–1830	Caroline of Brunswick
William IV.	1830–1837	Adelaide of Saxe-Meiningen
Victoria	1837–1901	Albert of Saxe-Coburg and Gotha

HOUSE OF SAXE-COBURG.

Edward VII.	1901–1910	Alexandra of Denmark
George V.	1910–	Victoria Mary of Teck.

N.B.—Since 1801, George III and his successors have reigned as King or Queen of the United Kingdom, of Great Britain and Ireland.

FRENCH SOVEREIGNS AND PRESIDENTS.

(SINCE THE REVOLUTION, 1789).

Louis XVI. (executed 1793)	1774
Louis XVII. (never reigned)	—
Napoleon Bonaparte, First Consul	1799
Napoleon I., Emperor (abdicated 1814)	1804
Napoleon II. (never reigned)	—
Louis XVIII. (restored)	1814
Charles X. (deposed 1830)	1824
Louis Philippe (abdicated 1848)	1830
Louis Napoleon, President	1848
Napoleon III., Emperor (deposed 1870)	1852
M. Thiers, President	1871
Marshal Mac Mahon, President	1873
M. Jules Grévy, President	1879
M. Carnot, President (assassinated 1894)	1887
M. Casimir Perier, President (resigned)	1894
M. Félix Faure, President	1895
M. Emile Loubet, President	1899
M. Fallières, President	1906

PRESIDENTS OF THE UNITED STATES.

(THE PRESIDENTS ARE ELECTED FOR A TERM OF FOUR YEARS).

General Washington	1789 and 1793.
John Adams	1797.
Thomas Jefferson	1801 and 1805.
James Madison	1809 and 1813.
James Monroe	1817 and 1821.
John Quincy Adams	1825.
Andrew Jackson	1829 and 1833.
Martin Van Buren	1837.
William Henry Harrison	1841 (died 1841).
John Tyler	1841.
James Knox Polk	1845.
Zachary Taylor	1849 (died 1850).
Millard Fillmore	1850.
Franklin Pierce	1853.
James Buchanan	1857.
Abraham Lincoln	1861 and 1865 (assassinated 1865).
Andrew Johnson	1865.
Ulysses S. Grant	1869 and 1873.
Rutherford Birchard Hayes	1877.
James A. Garfield	1881 (assassinated 1881).
Chester A. Arthur	1881.
Grover Cleveland	1885.
Benjamin Harrison	1889.
Grover Cleveland	1893.
William McKinley	1897 and 1931 (assassinated 1901).
Theodore Roosevelt	1901.
Theodore Roosevelt	1905.
William Howard Taft	1909.

MEMORABLE EVENTS.

1.—ASSASSINATIONS OF MONARCHS AND PRESIDENTS.

(This list is of necessity very incomplete, as in earlier times so many rulers met their death by violence, that to include them all, we should require a much larger space than we can afford to devote to the subject.)

Xerxes I., King of Persia	465 B.C.	
Artaxerxes III., King of Persia	338	by Bagoas
Philip II. of Macedon	336	by Pausanias
Darius III., King of Persia	330	by Bessus
Julius Cæsar, Emperor of Rome	44	by Brutus and other conspirators
Caius Caligula	41 A.D.	by a tribune
Titus Flavius Domitian, Emperor of Rome	96	
Edmund I., King of England	946	by an outlaw
Edward the Martyr, King of England	979	by his stepmother's orders
Albert I., Emperor of Germany	1308	by his nephew
Edward II., King of England	1327	
James I., King of Scotland	1437	by conspirators
Edward V., King of England	1483	by order of his uncle Gloucester, afterwards Richard III.
James III., King of Scotland	1488	by his nobles
Henry III., King of France	1589	by Jacques Clément
Henry IV., King of France	1610	by Ravaillac
Gustavus III., King of Sweden	1792	by Ankarström, an ex-officer of the guard
Paul, Czar of Russia	1801	by conspirators
Abraham Lincoln, President of U.S.	1865	by Booth, an actor
Abdul Aziz, Sultan of Turkey	1876	
Alexander II., Czar of Russia	1881	by Nihilists
James Garfield, President U.S.	1881	by Charles Guiteau
Marie François S. Carnot, French President	1894	by an anarchist
Nasr-ed-Deen, Shah of Persia	1896	
Borda Idiarte, President of Uruguay	1897	
Elizabeth, Empress of Austria	1898	by an anarchist, Luccheni
Humbert I., King of Italy	1900	by Bresci
William McKinley, President of U.S.	1901	by Czolgosz
Alexander I., King of Servia, and his wife Draga	1903	by conspirators
The King of Portugal and the Crown Prince	1908	by conspirators.

2.—SOME FAMOUS BATTLES.

(Naval battles are thus indicated *)

Name.	Date.	Result.
Marathon	490 B.C.	Greeks defeated Persians.
Thermopylæ	480 B.C.	Persians defeated Greeks.
Syracuse	413 B.C.	Spartans defeated Athenians.
Arbela	331 B.C.	Alexander defeated Darius.
Caudine Forks	321 B.C.	Samnites defeated Romans.
Gaza	312 B.C.	Ptolemy defeated Demetrius.
Cannæ	216 B.C.	Hannibal defeated Romans.
Metaurus	207 B.C.	Romans defeated Carthaginians.
Philippi	42 B.C.	Octavius and Antony defeated Brutus and Cassius.
*Actium	31 B.C.	Octavius defeated Mark Antony.
Teutoburg	9 A.D.	Arminius with Germans defeated Romans under Varus.
Châlons	451	Romans and Goths defeated Attila the Hun.
Tours	732	Charles Martel defeated the Saracens.
Andernach	876	Louis of Saxony defeated Charles the Bald.
Hastings	1066	William I. defeated Harold.
Bannockburn	1314	Bruce defeated English.
Morgarten	1315	Swiss defeated Austrians.
Crecy	1346	English defeated French.
Patay	1429	French under Joan of Arc defeated English.
Towton	1461	Yorkists defeated Lancastrians.
Cérisolles	1544	French defeated Emperor Charles V.
*Lepanto	1571	John of Austria defeated Turks.
*Spanish Armada	1588	English defeated Spaniards.
Ivry	1590	Henry IV. defeated the League.
Lützen	1632	Swedes defeated Austrians.
Narva	1700	Charles XII. of Sweden. defeated Peter the Great.
Blenheim	1704	Marlborough deftd. French.
Pultowa	1709	Peter the Great defeated Charles XII.
Plassey	1757	Clive defeated Surajah Dowlah.
Quebec	1759	Wolfe defeated French.
*Off Brest	1794	Howe defeated French.
*Nile	1798	Nelson defeated French.
Seringapatam	1799	British defeated Tippoo Sahib.
Hohenlinden	1800	French defeated Austrians.
Austerlitz	1805	Napoleon defeated Austrians.
*Trafalgar	1805	Nelson defeated French and Spaniards.
Jena	1806	Napoleon defeated Prussians.
Wagram	1809	Napoleon defeated Austrians.
Albuera	1811	English defeated French.
Salamanca	1812	English defeated French.
Borodino	1812	Napoleon defeated Russians.
Leipsic	1813	Allies defeated French.
Waterloo	1815	Allies defeated French.
*Navarino	1827	English, French and Russians defeated Turks.
Alma	1854	English and French defeated Russians.
Balaklava	1854	English and French defeated Russians.
Inkermann	1854	English and French defeated Russians.
Magenta	1859	French and Sardinians defeated Austrians.
Königgrätz or Sadowa	1866	Prussians defeated Austrians.
Sedan	1870	Prussians defeated French.
Plevna	1877	Turks defeated Russians but were at length driven out of Plevna.
Liao-yang	1904	Japanese defeated Russians.
*Sea of Japan	1905	Russian fleet almost annihilated by the Japanese.

3.—GREAT EARTHQUAKES AND VOLCANIC ERUPTIONS.

A.D.

79. Eruption of Vesuvius destroyed Pompeii, Herculaneum, and Stabiæ. It was at the latter place the Elder Pliny perished.
Severe eruptions of Vesuvius occurred in the 5th, 6th, and 11th centuries. There was an alarming outbreak in 1631 following a long period of quiet. The 18th century witnessed numerous eruptions. One of the most serious outbreaks of the 19th century was that which took place in 1871–2. There was also a violent eruption in 1906, when some hundreds of lives were lost and great devastation wrought.

1169. Eruption of Mount Etna; Catania and 15,000 of its inhabitants destroyed.

1318. Earthquake in England; the most severe ever experienced there.

1692. Port Royal, Jamaica, engulfed forty fathoms deep; 3,000 killed.

1693. Earthquake in Sicily; more than fifty towns and cities destroyed.
Catania with 18,000 inhabitants totally engulfed. More than 100,000 lives lost.

1755. Great Earthquake at Lisbon, city almost entirely destroyed and more than 40,000 people supposed to have perished.

1822. Aleppo in Syria destroyed by earthquake, more than half its inhabitants killed.

1859. Quito visited by a destructive earthquake.

1860. Earthquake at Mendoza, South America, in which many thousands lost their lives.

A.D.

1868. Disastrous earthquake in Peru and Ecuador; many towns destroyed.

1883. Eruption of Krakatoa, Java; more than 30,000 perished.
Severe shocks at and around Colchester, and much damage done.

1886. Eruption of Talawera, New Zealand, destroying the celebrated "Pink Terraces."

1891. Terrible earthquake in Japan; 300,000 persons homeless.

1902. St. Pierre, Martinique, destroyed by eruption of Mount Pelée; "within ten minutes St. Pierre became a city of the dead."
Eruption of Mount Soufrière, St. Vincent, destroyed nearly all the buildings in one-third of the island.
Earthquake in Turkestan; the victims numbered 10,000.

1905. Earthquake at Dharmsala, India; native regiment and several Europeans lost, and some 10,000 natives killed in Lahore and other places.

1906. Earthquake in Formosa, towns and villages wiped out.
Alarming earthquake at San Francisco, followed by a devastating fire that completed its ruin.
Earthquake reduced Valparaiso to ruins; 3,000 perished.

1907. Earthquake destroyed Kingston, Jamaica; 700 lives lost.

1908. Awful earthquake in and around Messina, about 100,000 supposed to have perished.

4.—GREAT PESTILENCES, FAMINES, STORMS & OTHER DISASTERS.

A.D.

1016. Terrible famine throughout Europe.

1193-5. Famine in England followed by pestilence.

1348. England visited by the "Black Death." One-third of its inhabitants said to have perished. Throughout Europe the deaths amounted, it was estimated, to 20,000,000.

1485. The "Sweating Sickness" appeared in London for the first time and carried off thousands.

1665. Great Plague of London in which more than 60,000 perished.

1666. Great Fire in London, raged for five days. St. Paul's Cathedral and many churches included among the buildings destroyed.

1703. The worst storm ever known in England. Enormous damage on land and sea. The Eddystone Lighthouse was destroyed, and with it perished its designer, Winstanley.

1770. Terrible Famine in India; 2½ million people perished.

1831. Asiatic Cholera first appeared in England at Sunderland.

1834. Houses of Parliament destroyed by fire.

1846. Irish Famine caused by the failure of the potato crop.

1848. Great outbreak of Cholera in England; 50,000 deaths.

1861. Great fire near Tooley Street, London, continued for several weeks.

1862 Hartley Colliery, Northumberland, 200 killed.

1865. In the descent of the Matterhorn after Mr. Whymper and his party had made the first successful attempt to reach the summit, four of their number fell over a precipice and were killed.

1867. Skating calamity in Regent's Park, 41 drowned.

1871. Great Fire at Chicago; nearly 20,000 buildings destroyed.

1877. Famine in India; 5,000,000 perished.

1877-8. Dreadful famine in the northern provinces of China. Some 8,000,000 are reported to have perished.

A.D.

1892. Great famine in Russia.

1894. Terrible Colliery Disaster in South Wales; nearly 300 lives lost.

1896. More than 1,000 people crushed to death in a panic during a fête held at Moscow, to commemorate the coronation of the Czar.

1897. Disastrous fire at a Charity Bazaar in Paris; more than 100 people, mostly women, lost their lives.

1898. Terrific Hurricane in the West Indies; many hundred lives lost; numerous shipping disasters, and many sugar estates devastated.
Great City Fire at Cripplegate; damage two million sterling.

1899. Serious landslip following a severe earthquake at Darjeeling, India; hundreds of acres of tea plantations destroyed.
Great hotel fire in New York, entailing the loss of many lives.

1901. Terrible colliery disaster in Wales, between seventy and eighty lives lost.

1903. Dreadful disaster on Underground Electric Railway in Paris; more than seventy people killed, mostly by suffocation.
Terrible fire at Colney Hatch Asylum; some fifty of the patients killed.

1906. Great mine disaster near Lille, France; more than 1,000 lives lost. Three weeks after the accident fourteen men were found alive and brought to the surface.
Railway accident near Salisbury, to the train forming the American boat express; of the fifty passengers, twenty-one were killed outright.
Disastrous railway accident near Dundee; twenty-one killed.

1910. Inundation of Paris; vast destruction of property but small loss of life.
Terrible Colliery Disaster at Whitehaven, 137 miners entombed in a burning pit.

5.—NOTABLE SHIPWRECKS.

A.D.	
1782.	**Grosvenor,** Indiaman, lost off South Africa. **Royal George,** man-of-war, foundered off Spithead; about 800 lives lost.
1786.	**Halsewell,** East Indiaman, lost; about 370 people drowned.
1792.	**Union,** packet of Dover, lost off Calais; a similar loss had not occurred for more than 100 years.
1799.	**H.M.S. Lutine,** lost off Dutch coast. Only one man saved, and he died before reaching England. Vast treasure aboard; £100,000 has been recovered, but over a million still remains under the waves.
1800.	**Queen Charlotte,** man-of-war, burnt off Leghorn; about 700 perished.
1811.	**St. George, Defiance,** and **Hero,** three men-of-war, lost off Jutland; of all the crews, numbering about 2,000 men, only eighteen were saved.
1825.	**Kent,** East Indiaman, burnt in the Bay of Biscay; nearly all saved by the brig Cambria.
1833.	**Amphitrite,** with female convicts for New South Wales, wrecked off Boulogne; only three saved out of a total of 130.
1849.	**Royal Adelaide,** steamer, wrecked off Margate; 400 lives lost.
1852.	**Birkenhead,** troopship, lost off South Africa; between 400 and 500 perished.
1854.	Eleven British transports with cargo worth half a million, wrecked in the Black Sea; 500 drowned.
1855.	**Pacific,** steamer, left Liverpool for New York with nearly 200 people on board; never heard of again (supposed to have struck an iceberg).
1859.	**Royal Charter,** steamer, wrecked off Anglesea; 450 lost.
1866.	**London,** steamer, foundered in the Bay of Biscay; 200 drowned.
1870.	**H.M.S. Captain,** foundered near Finisterre, with the loss of all her crew except eighteen. Among the lost was Captain Coles, the designer of the ship.
1873.	**Atlantic** (White Star Line), lost off Nova Scotia; between 500 and 600 drowned.
1875.	**Grosser Kürfurst,** German ironclad, lost by collision with König Wilhelm. **Mistletoe,** yacht, run down in the Solent by H.M. yacht Alberta. (Queen Victoria on board). Captain of Alberta reprimanded.
1878.	**Eurydice,** training-ship, homeward bound, foundered off the Isle of Wight with some 300 of her crew. **Princess Alice,** pleasure steamer, sunk by collision in the Thames; more than 600 lost.
1891.	**Utopia,** British steamer, with 800 Italian emigrants for New York, sank in Gibraltar Bay; 560 persons drowned.
1893.	**Victoria,** warship, sank off Tripoli from collision with the Camperdown; about 300 lost, including Admiral Tryon.
1896.	**Elbe,** North German Lloyd steamer, lost off Lowestoft; more than 300 lost. **Drummond Castle,** Cape Liner, lost off Ushant; above 200 lost.
1897.	**Aden,** P. & O. Liner, lost in the Indian Ocean; nearly 100 drowned.
1898.	**Mohegan,** liner, wrecked on the Manacles, off Cornwall; over 100 lost. **La Bourgoyne,** French Liner, sank off Novia Scotia from collision with a British sailing-ship; about 500 lives lost.
1899.	**Stella,** excursion steamer from Southampton to the Channel Islands, wrecked on the Casquet Rocks in a fog; 100 lives lost.
1905.	**Hilda,** excursion steamer, lost off the French coast; over 100 lives lost.
1906.	**Montagu,** battleship, struck on the rocks off Lundy Island. All efforts to save the ship unavailing, but no lives lost.
1907.	**Berlin,** a passenger vessel from Harwich, with 145 persons on board, wrecked in a storm on the Hook of Holland; only fifteen saved.
1909.	**Republic,** a White Star Liner, wrecked from collision. Rescue of passengers due to wireless telegraphy.

6.—GREAT DISCOVERIES AND INVENTIONS.

A.D.	
1320.	Invention of gunpowder by Schwarz.
1589.	Invention of the Knitting-frame by William Lee.
1607.	Galileo constructed the first Telescope.
1628.	Circulation of the Blood discovered by William Harvey.
1640.	Barometer invented by Torricelli, an Italian.
1689.	Discovery of the Law of Gravitation by Sir Isaac Newton.
1710.	Invention of the pianoforte by Cristofalli, an Italian.
1721.	First Mercury thermometer constructed by Fahrenheit.
1763.	Hargreaves' Spinning Jenny invented.
1764.	Beginning of many improvements in the Steam Engine by James Watt.
1769.	Arkwright invented the Spinning-frame.
1779.	Crompton invented a Spinning machine called the **mule.**
1783.	Balloon invented by the Montgolfier Brothers.
1785.	Cartwright invented a power loom for weaving.
1798.	Vaccination introduced by Dr. Jenner.
1815.	Sir Humphrey Davy's invention of a Safety-lamp for use in mines.
1830.	Electrical Induction discovered by Michael Faraday thus paving the way for electric lighting, telegraphy, etc.
1837.	The Magnetic Needle telegraph patented by Cooke and Wheatstone.
1841.	Invention of the Sewing-machine by Elias Howe.
1847.	Sir James Simpson introduces the use of Chloroform as an anæsthetic. Chloroform was discovered some years previously by an American chemist.
1840.	Steam Hammer invented by James Nasmyth.
1856.	Bessemer's patent for making Steel.
1864.	Introduction of the Antiseptic Treatment in surgery by Lord Lister.
1868.	Dynamite invented by Nobel. Invention of Whitehead's Torpedo.
1876.	Invention of Bell's Articulating Telephone.
1877.	Invention of Edison's Phonograph.
1882.	Koch discovers the bacillus of Tuberculosis and later that of Cholera.
1884.	Invention of Nordenfelt's Submarine boat.
1886.	Louis Pasteur discovers a method of Inoculation as a cure for Hydrophobia. The Pasteur Institute at Paris opened.
1890.	Cordite invented by Sir F. A. Abel.
1898.	First practical application of Marconi's System of Wireless Telegraphy.
1903.	Radium discovered by M. and Mme. Curie.

7.—MISCELLANEOUS EVENTS.

B.C.
55. Invasion of Britain by Julius Cæsar.

A.D.
1066. Invasion of England by William, Duke of Normandy.
1453. Constantinople taken by the Turks.
1473. Printing introduced into England by William Caxton.
1492. Columbus discovered America.
1520. Magellan, the first to circumnavigate the world.
1521. Conquest of Mexico by Cortes.
1532. Conquest of Peru by Pizarro.
1549. Francis Xavier, the first missionary to visit Japan.
1586. Drake introduced tobacco into England.
1588. Defeat of the Spanish Armada.
1607. Virginia, the first English Colony, founded in America.
1613. New River water brought to London.
1620. Tea introduced into England.
1620. Landing of the Pilgrim Fathers at Plymouth, Massachusetts.
1649. Trial and Execution of Charles I.
1675. Greenwich Observatory founded.
1683. London street lamps first lighted.
1688. Trial and acquittal of the seven Bishops.
1694. Bank of England founded.
1704. Capture of Gibraltar by Sir George Rooke.
1720. South Sea Bubble exploded.
1752. New Calendar adopted in England.
1754. British Museum opened.
1757. Admiral Byng tried by court-martial and shot.
Clive wins the Battle of Plassey, and lays the foundation of our Indian Empire.
1759. Capture of Quebec by General Wolfe.
1765. First tunnel for navigation constructed in England, was on the Bridgwater Canal, by Brindley.
1768. Royal Academy of Arts founded.
1780. First Derby run.
The Gordon Riots.
1783. First Execution in front of Newgate prison. Hitherto held at Tyburn near the Marble Arch.
1788. First British Settlement in Australia.
1789. Outbreak of the French Revolution.
1790. The first Lifeboat launched.
1793. Execution of Louis XVI. and Marie Antoinette.
1795. Trial of Warren Hastings, lasted seven years and ended in an acquittal.
1797. Mutiny of the Nore.
1807. Gas first used to light a street in London.
Slave Trade, throughout the British dominions, prohibited by Act of Parliament.
1812. Famous Duel between H.M.S. "Shannon" and the "Chesapeake" of the American navy, in which the former was victorious.
1814. Great Frost which lasted nearly six weeks. A fair was held on the Thames.
1820. Trial and acquittal of Queen Caroline, wife of George IV.
1829. First University Boat Race.
First Passenger Railway opened in England.
1830. Pillory in use for the last time. A perjurer named Bossy the last to suffer in this way.
1832. First Reform Bill passed.
1834. Slavery abolished in the British Empire.
1835. Lucifer Matches came into use.
1838. First Steamship crossed the Atlantic.
1840. Queen Victoria fired at by a half-witted youth, named Edward Oxford.
Penny Postage introduced.
1843. Thames Tunnel completed.
1845. Sir John Franklin's ill-fated Arctic Expedition set sail from Greenhithe.

A.D.
1847. Gold discovered in California.
1850. McClure discovered the North-west Passage.
1851. Gold discovered at Bathurst, in Australia.
First Great International Exhibition held in Hyde Park.
The New York racing yacht "America" won the R.Y.S. cup at Cowes.
1858. Speke discovered Victoria Nyanza.
1859. First Handel Festival held at the Crystal Palace.
1861. Emancipation of the Russian Serfs.
Great Comet seen in England.
Launch of the "Warrior," the first iron-plated vessel in the British navy.
Opening of the Post Office Savings Bank throughout the British Isles.
1864. Garibaldi presented with the freedom of the City of London.
1866. First Electric cable laid across the Atlantic was in 1858, but it proved a failure. The first to prove a success was laid eight years later.
1867. Wall of Clerkenwell prison, London, blown up by Fenians to free two of their number imprisoned there.
1868. Michael Barrett, one of the Fenians, executed. This was the last public execution.
1869. Suez Canal opened.
1870. Thames Embankment completed.
Diamonds discovered at Kimberley.
1874. Tichborne Trial, Conviction of Arthur Orton for perjury and forgery.
1875. Captain Webb swam from Dover to Calais. A few years later he was drowned while trying to swim the rapids of Niagara.
1878. Removal of Temple Bar from its position between the Strand and Fleet Street.
1882. Murder of Lord Frederick Cavendish, chief secretary for Ireland, and Mr. Burke, in Phœnix Park, Dublin.
1886. Gold discovered in the Witwatersrand, Transvaal.
1887. Great Naval Review held at Spithead in honour of the Queen's Jubilee.
1893. Departure of an Arctic Expedition under Nansen in the **Fram.**
1894. Tower Bridge opened.
Manchester Ship-Canal opened.
Captain Dreyfus' trial. Reinstated, 1906.
1896. Andrée set out in a balloon to reach the North Pole, but was never heard of again.
1897. Celebration of Queen Victoria's Diamond Jubilee.
1898. Introduction of Imperial Penny Postage between Great Britain and her Colonies.
1900. A youth named Sipido fired a pistol at the Prince of Wales at the railway station at Brussels. No one was hurt.
1901. First Parliament of the Australian Commonwealth opened by the Duke of Cornwall and York.
Great Siberian Railway completed.
1902. Opening of the Gordon Memorial College at Khartoum.
Completion of the Great Nile Dam at Assouan.
Great Coronation Review held at Spithead.
Anglo-Japanese Alliance signed.
1903. Great Coronation Durbar held at Delhi.
1905. Simplon Tunnel completed.
1906. Anarchist attempt to blow up the King and Queen of Spain on their wedding-day.
1907. Opening of the new "Old Bailey."
1909. Lieutenant Shackleton got within 112 miles of the South Pole.
Commander Peary reached the North Pole.
1910. Inauguration of the Union of South Africa.

THE LONGEST RIVERS IN THE WORLD.

Name.		Length in Miles. (about).	Name.		Length in Miles. (about).
Mississippi with Missouri	(N. America)	4,200	Colorado	(N. America)	2,000
Amazon	(S. America)	4,000	Yukon	(Alaska)	2,000
Nile	(Egypt)	3,500	Indus	(India)	1,900
Yenisei	(Siberia)	3,100	Rio Grande	(N. America)	1,800
Congo	(W. Africa)	3,000	Brahmaputra	(India)	1,800
Yang-tse-kiang	(China)	3,000	Danube	(Central Europe)	1,700
Lena	(Siberia)	3,000	Euphrates	(Asia Minor)	1,700
Hoang-ho	(China)	2,700	Ganges	(India)	1,550
Niger	(W. Africa)	2,600	Orinoco	(S. America)	1,500
Amur	(Eastern Asia)	2,500	Irawadi	(Burma)	probably 1,500
La Plata	(S. America)	2,500	Zambesi	(E. Africa)	1,500
Obi	(Siberia)	2,300	Columbia	(N. America)	1,300
Volga	(Russia)	2,300	Dnieper	(Russia)	1,250
St. Lawrence	(N. America)	2,200	Don	(Russia)	1,100
*Mackenzie	(N. America)	2,200	Murray	(Australia)	1,100

(Compare the Thames—220 miles.)

* The name *Mackenzie* is often restricted to the river below Great Slave Lake, in length 1,100 miles.

THE HIGHEST MOUNTAINS IN THE WORLD.

(APPROXIMATE HEIGHTS GIVEN). THOSE MARKED THUS (*) ARE VOLCANOES.

Name.	Height in feet.	Where situated.	Name.	Height in feet.	Where situated.
Mount Everest	29,000	(Himalayas) India.	Mount St. Elias	18,000	(Alaska Mts.) N. America.
Dapsang	28,500	(Karakorum Mts.) Central Asia.	*Orizaba	17,400	Mexico.
Godwin Austin	28,200	(Himalayas) India.	*Popocatapetl	17,400	Mexico.
Kinchinjinga	28,100	(Himalayas) India.	Kenia	17,200	British E. Africa.
Dhawalagiri	26,800	(Himalayas) India.	Mount Ararat	17,000	Armenia.
Nanda Devi	25,700	(Himalayas) India.	Ruwenzori	16,600	E. Africa.
Tagharma	25,500	(Pamir) Turkestan.	Kazbek	16,500	(Caucasus Mts.) Russia.
Khan-tengri	24,000	(Thian Shan Mts.) China.	†Mount Brown	16,000	(Rocky Mts.) British N. America.
Aconcagua	22,400	(Andes) Chili.	Mont Blanc	15,700	(Pennine Alps) France.
Kaufmann	22,200	(Pamir) Turkestan.	Monte Rosa	15,200	(Pennine Alps) Italy.
Mercedario	22,000	(Andes) Chili.	Ras Dashan	15,100	Abyssinia.
Gualtieri	21,500	(Andes) Bolivia.	Agua	15,000	Central America.
Huascau	21,500	(Andes) Peru.	Matterhorn	14,700	(Pennine Alps) Switzerland.
Sorata	21,400	(Andes) Bolivia.	Blanca Peak	14,400	(Rocky Mts.) United States.
Chimborazo	20,600	(Andes) Ecuador.	Ligonyi (Elgon)	14,000	E. Africa.
Kilima-Njaro	19,700	E. Africa.	Finster-Aarhorn	14,000	(Bernese Alps) Switzerland.
*Cotopaxi	19,500	(Andes) Ecuador.	Jungfrau	13,700	(Bernese Alps) Switzerland.
*Antisana	19,100	(Andes) Ecuador.	Fremont's Peak	13,500	(Rocky Mts.) N. America.
Cayambe	19,000	(Andes) Ecuador.	Mount Cook	12,300	(Southern Alps) New Zealand.
Demavend	18,500	(Elburz Mts.) Persia.	*Fusi Yama	12,300	Japan.
Elburz	18,300	(Caucasus Mts.) Russia.			

(Compare Ben Nevis 4,400 feet, the loftiest mountain in the British Isles).

† The heights of the peaks in British North America are variously given. Thus, some authorities put Mount Brown at 16,000 feet, while it has been given as low as 10,000 feet.

The greatest **Ocean Depths** are about the same distance below the sea-level as are the highest mountains above it. The greatest depth so far recorded is 30,930 feet, near the Kermadec Islands in the south-west Pacific. The greatest depth known in the Atlantic is 27,960 feet, to the north of the West Indies. In the Indian Ocean the deepest sounding hitherto made is 19,200 feet.

COMPARATIVE RAINFALLS.

The annual rainfall varies greatly in different places. In the Sahara and Gobi deserts, in parts of Mexico and Peru, it never rains at all, while at Cherrapungi, in Bengal, the annual rainfall amounts to 493 inches. The highest rainfalls occur in the tropics, in mountainous districts and in regions near the sea. In parts of England and Scotland the rainfall does not amount to thirty inches, indeed in Lincolnshire it is below twenty inches; on the other hand more than forty inches fall over a portion of England, while over a considerable part of the Scotch Highlands the amount exceeds eighty inches. The rainfall is higher in Ireland. The highest rainfall in England is at Seathwaite, in the Lake District. The difference is in some cases very striking; thus, in Norway and in Spain the annual fall varies from nearly seventy inches to thirteen. In Russia and Siberia it drops from twenty inches to three, and France and Germany have a rainfall varying from thirty-five to twenty inches, though the figures are much larger in mountainous districts. The annual rainfall of Australia is as low as seven inches in some parts, while in others it mounts as high as fifty or sixty inches. The accompanying table shows the annual fall of rain in various parts of the world.

Place.	Situation.	Annual Rainfall in inches.	Place.	Situation.	Annual Rainfall in inches.
Seathwaite	England	146	New York	United States	38
London	England	24	San Diego	California	9
Bergen	Norway	72	Hokitika	New Zealand	120
North Cape	Norway	11	Christchurch	New Zealand	26
Cherrapungi	Bengal	493	Zanzibar	E. Africa	59
Bombay	India	74	Port Elizabeth	S. Africa	24
Karachi or Kurrachee	India	7	Port Said	Egypt	2
Ratnapura	Ceylon	148	Brisbane	Queensland	50
Colombo	Ceylon	87	Gawler	S. Australia	13
Vera Cruz	Mexico	180			

RACES OF MANKIND.

The human family has been divided into five great races. They are as follows: The Caucasian; the Mongolian; the Negro; the Malay; the American. The table below will give an idea of the tribes or nations comprising these five great races.

The Caucasian or Indo-European Race. (white)	The natives of Europe (with the exception of the Magyars of Hungary, and the Laplanders and Finns), the Persians, Jews, Arabians, Hindoos, Afghans, and the people of Northern Africa; also the descendants of Europeans in America, South Africa, Australia, etc.
The Mongolian Race (yellow)	The Chinese, Japanese, Siamese, Burmese, Tibetans and Koreans; also the Laplanders, Finns, Magyars, Tartars and Turks, and many Russians.
The Negro Race (black)	The natives of Africa south of the Sahara with the exception of the colonists of Cape Colony, etc. The natives of Australia, Tasmania and some of the Malaysian Islands are also included under this heading.
The Malay Race (brown)	The natives of the Malay Peninsula, the Indian Archipelago and most of the islands of Oceania.
The American Race or Red Indians	The Indian tribes of America, who are gradually dying out.

RELATIVE HEIGHT AND WEIGHT.

A glance at the table below will give a fair idea of what people's weight should be in proportion to their height. The average man or woman grows stouter with advancing years, and slimness is becoming to the young, but to be well-proportioned, the fully-developed man or woman should conform to the following standard:

WOMEN.	STONES.	POUNDS.	MEN.	STONES.	POUNDS.
Five feet	about 7	5	Five feet two inches	about 9	0
Five feet one inch	„ 7	10	Five feet three inches	„ 9	7
Five feet two inches	„ 8	0	Five feet four inches	„ 9	13
Five feet three inches	„ 8	7	Five feet five inches	„ 10	2
Five feet four inches	„ 9	0	Five feet six inches	„ 10	5
Five feet five inches	„ 9	7	Five feet seven inches	„ 10	8
Five feet six inches	„ 9	13	Five feet eight inches	„ 11	1
Five feet seven inches	„ 10	6	Five feet nine inches	„ 11	7
Five feet eight inches	„ 10	12	Five feet ten inches	„ 12	1
Five feet nine inches	„ 11	2	Five feet eleven inches	„ 12	6
			Six feet	„ 12	10

NOTABLE RAILWAY TUNNELS.

Name.	Length in miles (about.)	Situation.
Simplon (completed February, 1905. The total cost is roughly about £3,000,000.)	12	connects Switzerland and Italy.
Mount St. Gothard	9¼	connects Switzerland and Italy.
Mont Cenis	8	connects France and Italy.
Arlberg	6	Austria.
Hoosac Mountain	4¼	Massachusetts.
St. Clair	2	under the river St. Clair in North America.

Alpine tunnels.

Name.	Length in miles (about.)	Situation.
Severn	4½	Great Western Railway.
Totley	3½	Midland Railway.
Woodhead	3	Great Central Railway.
Standedge	3	North Western Railway.
Bramhope	2⅛	North Eastern Railway.
Medway	2	South Eastern Railway.
Cowburn	2	Midland Railway.
Box	1¾	Great Western Railway.
Mersey	1½	between Liverpool and Birkenhead.

(There are in all about thirty tunnels in England which exceed one mile in length.)

SOME FAMOUS ORGANS.

The earliest organs were water-organs, and the first specimen was the work of Ctesibius of Alexandria. Instruments built from his designs found their way to Rome and were patronized by the Emperor Nero. They were employed to accompany the contests in the public games and for other secular purposes. The date of the introduction of the organ into the Church is uncertain, but it was probably towards the end of the 7th century.

The following is a list of the most famous organs.

Haarlem Cathedral	This organ was for a long time the largest in the world. Begun in 1735 it took more than three years to complete.
Seville Cathedral	The bellows of this organ are worked "see-saw" fashion by a man walking up and down a long plank.
Royal Albert Hall, London	
Crystal Palace, Sydenham	This huge organ was erected in 1857.
St. George's Hall, Liverpool	Erected at a cost of about £10,000.
Church of St. Maurice, Olmutz, Austria	
Leeds Town Hall	
Church of St. Peter and St. Paul, Görlitz, Silesia	
Roman Catholic Cathedral Montreal	
Music Hall, Cincinnati, U.S.	
Town Hall, Sydney, N.S.W.	This organ has the distinction of being the largest ever built for an English Colony.
Church of St. Nicholas, Freiburg, Baden	One of the finest-toned organs in Europe.

SOME OF THE WORLD'S LARGEST BELLS.

We do not know who invented the bell; it probably had no single inventor, but was the outcome of the combined ideas of many. It is uncertain, also, at what date large bells were introduced, though it is probable they came into use at the time of the dawn of Christianity. "But for fully a thousand years, we may feel certain that Christendom, and England as part of it, has heard the far-reaching tones of the bells ring out, now gladly, now sadly, across broad acres of field and woodland, and over the busy hum of the bustling town. And in all that time there has been scarce an event of interest in the life of nations or of districts, not many even in the lives of private individuals, in which the tones of the bells have not mingled with the emotions that were aroused thereby."—From "A Book about Bells," by the Rev. George S. Tyack, B.A.

	Approximate Weight in Tons.	Remarks.
"Tsar Kolokol," the Great Bell of Moscow (the largest bell in the world.)	200	Supposed to have been cast in 1653. In 1737 a fire caused its fall, and it remained on the ground, cracked and useless, until 1837, when it was made to serve as the dome of a chapel which was excavated beneath it.
Great Bell at Mingoon, Burmah	125	Said by some authorities to rival the giant of Moscow in point of size.
Another Moscow Bell	125	This is the largest bell in use in the world.
The Great Bell at Pekin	53	
Novgorod, Russia	31	
"Kaiserglocke," Cologne Cathedral	26	
St. Isaac's Cathedral, St. Petersburg	22	Like the bell of Moscow, this fine specimen is adorned with imperial portraits.
Olmütz, Austria	18	
Notre Dame, Paris	13	
Vienna	18	
St. Paul's, London	17	"Great Paul" was cast and hung in 1882.
Sens, France	15	
Erfurt Cathedral, Prussian Saxony	13	This bell was cast at the end of the 15th century.
Montreal (R.C. Cathedral)	13	
York	12	
"Big Ben," Westminster	11	See under "Bells" in *Dict. of Gen. Inf.*
Görlitz, Silesia	10	
Bruges	10	
"Great Tom," Oxford	7	

NOTABLE SPIRES AND TOWERS.

The following are the heights of some of the most notable spires and towers in the world.

	Height in Feet.		Height in Feet.
Eiffel Tower, Champ-de-Mars, Paris	984	Salisbury Cathedral	404
Ulm Cathedral	532	Freiburg Minster, Baden	380
Cologne Cathedral	512	Florence Cathedral	370
Rouen Cathedral	483	Chartres Cathedral, France	370
St. Nicholas, Hamburg	480	St. Paul's, London	365
Strasburg Cathedral	464	St. Isaac's Cathedral, St. Petersburg	330
St. Stephen's Cathedral, Vienna	450	St. Patrick's Cathedral, New York	325
St. Peter's, Rome	440	Norwich Cathedral	314
Amiens Cathedral	420	Notre Dame, Paris	310
Notre Dame, Antwerp	405	Canterbury Cathedral	235

NOTABLE BRIDGES.

The earliest bridges were made of wood. The most famous bridge of antiquity was Trajan's stone structure over the Danube, 4,600 feet in length. The accompanying list gives a few details of some of the most famous of modern bridges.

Name.	Length in feet (about.)	Date of Completion.	Designer.	Description.
Britannia	1510	1850	Stephenson and Fairbairn	Tubular Suspension bridge over the Menai Strait, on the Chester and Holyhead Railway.
Brooklyn	5990	1883	Roebling	Suspension bridge over East River, connects Brooklyn with New York.
Calcutta	1530	—	Sir Bradford Leslie	A pontoon bridge, probably the longest floating bridge in the world.
Clifton Suspension	700	1864	Brunel	Bridge over the Avon near Bristol. (Formerly Hungerford Bridge over the Thames near Charing Cross).
Forth	8290	1889	Sir John Fowler and Sir Benjamin Baker	Railway bridge across the river Forth, Scotland.
Grosvenor	340	1832	Harrison	Single span stone bridge over the Dee at Chester.
Kew Bridge	1300	1903	Sir Wolfe Barry	Over the Thames; connects Brentford with Kew.
London Bridge	1000	1831	Sir John Rennie	Over the Thames.
Menai	1700	1825	Telford	Suspension Bridge over the Menai Strait.
Newcastle High Level	1400	1849	Robert Stephenson	Connects Newcastle with Gateshead.
Niagara Suspension		1855	Roebling	Over the Niagara.
St. Lawrence (Quebec)	3200	—		Cantilever bridge across the St. Lawrence, six miles above Quebec. In 1907 a part collapsed, while building. The Dominion Government has since undertaken the task of completion.
Tay	10,500	1887	Barlow	Railway bridge over the Tay in Scotland.
Tower	800	1894	Sir Wolfe Barry	Suspension and bascule bridge over the Thames at London.
Zambesi	650	1905	Mr. G. A. Hobson	Cantilever bridge across the Zambesi, 700 yards below the Victoria Falls.

SPORTS AND PASTIMES.

HORSE-RACING.

(*a*) Won The Derby; (*b*) The 2000 Guineas; (*c*) The 1000 Guineas; (*d*) The Oaks; (*e*) The St. Leger.

* Race not run at time of going to press.

THE DERBY (*a*).

For 3 years old. Colts 9 st.; Fillies 8 st. 11 lbs. 1 mile 4 fur. 29 yds. Record Time 2 m. 35½ s.

Year.	Owner.	Winner.	Betting.	Jockey.	Trainer.	Time.
1859	Sir J. Hawley	Musjid	9 to 4	Wells	G. Manning	2 59
1860	Mr. Merry.	Thormanby	4 to 1	Custance	M. Dawson	2 55
1861	Col. Towneley	Kettledrum	16 to 1	Bullock	W. Oates	2 43
1862	Mr. Snewing	Caractacus	40 to 1	J. Parsons	W. Smith	2 45½
1863	Mr. R. C. Naylor	Macaroni (*b*)	10 to 1	T. Chaloner	J. Godding	2 50½
1864	Mr. W. I'Anson	Blair Athol (*e*)	14 to 1	J. Snowden	W. I'Anson	2 43
1865	Count F. de Lagrange	Gladiateur (*b*) (*e*)	5 to 2	H. Grimshaw	T. Jennings	2 46
1866	Mr. R. Sutton	Lord Lyon (*b*) (*e*)	5 to 6	Custance	J. Dover	2 50
1867	Mr. Chaplin	Hermit	1000 to 15	Daley	G. Bloss	2 52
1868	Sir J. Hawley	Blue Gown	7 to 2	Wells	J. Porter	2 43½
1869	Mr. J. Johnstone	Pretender (*b*)	11 to 8	J. Osborne	T. Dawson	2 52¼
1870	Lord Falmouth	Kingcraft	20 to 1	T. French	M. Dawson	2 45
1871	Baron Rothschild	Favonius	9 to 1	T. French	J. Hayhoe	2 50
1872	Mr. H. Savile.	Cremorne	3 to 1	Maidment	W. Gilbert	2 45½
1873	Mr. Merry.	Doncaster	45 to 1	F. Webb	R. Peck	2 50
1874	Mr. W. S. Cartwright	George Frederick	9 to 1	Custance	T. Leader	2 46
1875	Prince Batthyany	Galopin	2 to 1	Morris	J. Dawson	2 48
1876	Mr. A. Baltazzi	Kisber	4 to 1	Maidment	J. Hayhoe	2 44
1877	Lord Falmouth	Silvio (*e*)	100 to 9	F. Archer	M. Dawson	2 50
1878	Mr. W. S. Crawford	Sefton	100 to 12	Constable	A. Taylor	2 56
1879	Mr. Acton.	Sir Bevys	20 to 1	G. Fordham	J. Hayhoe	3 2
1880	Duke of Westminster	Bend Or	2 to 1	F. Archer	R. Peck	2 46
1881	Mr. P. Lorillard	Iroquois (*e*)	11 to 2	F. Archer	J. Pineus	2 50
1882	Duke of Westminster	Shotover (*b*)	11 to 2	T. Cannon	J. Porter	2 45¾
1883	Sir F. Johnstone	St. Blaise	5 to 1	C. Wood	J. Porter	2 48¾
1884	Mr. J. Hammond dead heat Sir J. Willoughby	St. Gatien Harvester	100 to 8 100 to 7	C. Wood S. Loates	R. Sherwood Jewitt	2 46½
1885	Lord Hastings	Melton (*e*)	75 to 40	F. Archer	M. Dawson	2 44½
1886	Duke of Westminster	Ormonde (*b*) (*e*)	4 to 9	F. Archer	J. Porter	2 45¾
1887	Mr. Abington	Merry Hampton	100 to 9	J. Watts	Gurry	2 43
1888	Duke of Portland	Ayrshire (*b*)	5 to 6	F. Barrett	G. Dawson	2 43
1889	Duke of Portland	Donovan (*e*)	8 to 11	T. Loates	G. Dawson	2 44¾
1890	Sir J. Miller	Sainfoin	100 to 15	J. Watts	J. Porter	2 49½
1891	Sir F. Johnstone	Common (*b*) (*e*)	10 to 11	G. Barrett	J. Porter	2 56½
1892	Lord Bradford	Sir Hugo	40 to 1	F. Allsopp	T. Wadlow	2 44
1893	Mr. McCalmont	Isinglass (*b*) (*e*)	4 to 9	T. Loates	Jewitt	2 43
1894	Lord Rosebery	Ladas (*b*)	2 to 9	J. Watts	M. Dawson	2 45½
1895	Lord Rosebery	Sir Visto (*e*)	9 to 1	S. Loates	M. Dawson	2 43¾
1896	Prince of Wales	Persimmon (*e*)	5 to 1	J. Watts	R. Marsh	2 42
1897	Mr. Gubbins	Galtee More (*b*) (*e*)	1 to 4	C. Wood	S. Darling	2 44
1898	Mr. J. Larnach	Jeddah	100 to 1	O. Madden	R. Marsh	2 47
1899	Duke of Westminster	Flying Fox (*b*) (*e*)	2 to 5	M. Cannon	J. Porter	2 42½
1900	Prince of Wales	Diamond Jubilee (*b*) (*e*)	6 to 4	H. Jones	R. Marsh	2 42
1901	Mr. W. C. Whitney	Volodyovski	5 to 2	L. Reiff	J. Huggins	2 40⅘
1902	Mr. J. Gubbins	Ard Patrick	100 to 14	Martin	S. Darling	2 42⅕
1903	Sir J. Miller	Rock Sand (*b*) (*e*)	4 to 6	Maher	Blackwell	2 42⅘
1904	Mr. L. de Rothschild	St. Amant (*b*)	5 to 1	K. Cannon	A. Hayhoe	2 45⅘
1905	Lord Rosebery	Cicero	4 to 11	Maher	P. Peck	2 39⅗
1906	Major E. Loder	Spearmint	6 to 1	Maher	Gilpin	2 36⅘
1907	Mr. R. Croker	Orby	100 to 9	J. Reiff	J. Allen	2 44
1908	Chev. Ginestrelli	Signorinetta (*d*)	100 to 1	W. Bullock	Chev. Ginestrelli	2 39⅘
1909	H.M. King Edward VII.	Minorn (*b*)	7 to 2	Herbert Jones	R. Marsh	2 42⅗
1910	Mr. Fairie	Lemberg	7 to 4	B. Dillon	A. Taylor	2 35⅕

Year.	2000 GUINEAS (*b*). (Newmarket). 3 yrs. old. Colts 9 st.; Fillies 8 st. 9 1 mile. Record 1 m. 38⅘ s.	1000 GUINEAS (*c*). (Newmarket). 3 years old Fillies. 9 st. 1 mile. Record	THE OAKS (*d*). (Epsom). 3 years old Fillies. 9 st. 1 m. 4 f. 29 y. Record 2 m. 38⅖ s.	ST. LEGER (*e*). (Doncaster). 3 yrs. old. Colts 9 st.; Fillies 8 st. 11 1 m. 6 f. 132 y. Record 3 m. 4⅕ s.
1895	Kirkconnel	Galeottia	La Sagesse	Sir Visto (*a*)
1896	St. Frusquin	Thais	Canterbury Pilgrim	Persimmon (*a*)
1897	Galtee More (*a*) (*e*)	Chelandry	Limasol	Galtee More (*a*) (*b*)
1898	Disraeli	Nun Nicer	Airs and Graces	Wildfowler
1899	Flying Fox (*a*) (*e*)	Sibola	Musa	Flying Fox (*a*) (*b*)
1900	Diamond Jubilee (*a*) (*e*)	Winifreda	La Roche	Diamond Jubilee (*a*) (*b*)
1901	Handicapper	Aida	Cap and Bells II.	Doricles
1902	Sceptre (*c*) (*d*) (*e*)	Sceptre (*b*) (*d*) (*e*)	Sceptre (*b*) (*c*) (*e*)	Sceptre (*b*) (*c*) (*d*)
1903	Rock Sand (*a*) (*e*)	Quintessence	Our Lassie	Rock Sand (*a*) (*b*)
1904	St. Amant (*a*)	Pretty Polly (*d*) (*e*)	Pretty Polly (*c*) (*e*)	Pretty Polly (*c*) (*d*)
1905	Vedas	Cherry Lass (*d*)	Cherry Lass (*c*)	Challacombe
1906	Gorgos	Flair	Keystone II.	Troutbeck
1907	Slieve Gallion	Witch Elm	Glass Doll	Wool Winder
1908	Norman III.	Rhodora	Signorinetta (*a*)	Your Majesty
1909	Minorn (*a*)	Electra	Perola	Bayardo
1910	Neil Gow	Winkipop	Rosedrop	*

NEWMARKET STAKES.

3 yrs old. Colts 9 st.; Fillies 8 st. 11. 1½ miles.

1899	Dominie II.	
1900	Diamond Jubilee (*a*, *b*, *e*)	
1901	William III.	
1902	Fowling Piece	
1903	Flotsam	
1904	Henry I.	
1905	Cicero (*a*)	
1906	Lally	
1907	Acclaim	
1908	St. Wolf	
1909	Louviers	
1910	*Race Cancelled.*	

GRAND NATIONAL.

Steeplechase (Liverpool). 4 miles 856 yards. (Handicap).

		yrs.	wght.
1899	Manifesto	11	12-7
1900	Ambush II.	6	11-3
1901	Grudon	11	10-0
1902	Shannon Lass	7	10-1
1903	Drumcree	9	11-3
1904	Moifaa	8	10-7
1905	Kirkland	9	11-5
1906	Ascetic's Silver	a	10-9
1907	Eremon	a	10-1
1908	Rubio	a	10-5
1909	Lutteur III.	5	10-11
1910	Jenkinstown	9	10-5

GRAND PRIX.

(Paris). 8 years old. 1 mile 7 furlongs.

1899	Perth
1900	Semendria
1901	Cheri
1902	Kizil Kourgan
1903	Quo Vadis
1904	Ajax
1905	Finasseur
1906	Spearmint (*a*)
1907	Sans Souci II.
1908	Northeast
1909	Verdun II.
1910	Nuage

JUBILEE.

(Kempton). 1½ miles. (Handicap).

		yrs.	wght.
1899	Kt. of Thistle	6	8-4
1900	Sirenia	5	8-6
1901	Santoi	4	8-9
1902	Royal George	4	6-9
1903	Ypsilanti	5	8-1
1904	Ypsilanti	6	9-5
1905	Ambition	4	7-1
1906	Donnetta	6	8-11
1907	Polar Star	3	7-12
1908	Hayden	4	6-12
1909	Ebor	4	7-7
1910	*Race Cancelled.*		

ECLIPSE STAKES.

(Sandown). 1½ miles. (£10,000.)

		yrs.	wght.
1899	Flying Fox (*a*, *b*, *e*)	3	9-4
1900	Diamond Jubilee (*a*,*b*,*e*)	3	9-4
1901	Epsom Lad	4	9-13
1902	Cheers	3	8-8
1903	Ard Patrick (*a*)	4	10-2
1904	Darley Dale	3	9-1
1905	Val D'Or	3	9-1
1906	Llangibby	4	9-13
1907	Lally	4	9-13
1908	Your Majesty (*e*)	3	8-13
1909	Bayardo (*e*)	3	9-2
1910	Neil Gow and Lemberg		

PRINCESS OF WALES.

(Newmarket). 1½ miles. (£10,000 Stakes).

		yrs.	wght.
1899	Flying Fox (*a*,*b*,*e*)	3	9-5
1900	Merry Gal	3	7-13
1901	Epsom Lad	4	9-2
1902	Veles	4	9-2
1903	Ard Patrick (*a*)	4	9-8
1904	Rock Sand (*a*, *b*, *e*)	4	9-2
1905	St. Denis	4	8-3
1906	Dinneford	4	8-4
1907	Polymelus	5	9-7
1908	Queen's Advocate	4	8-10
1909	Dark Ronald	4	9-1
1910	Ulster King	3	8-5

JOCKEY CLUB.

(Newmarket). 1½ miles. (£10,000 Stakes).

1899	Flying Fox (*a*, *b*, *e*)
1900	Disguise II.
1901	Pietermaritzburg (*a*)
1902	Rising Glass
1903	Sceptre (*b*, *c*, *d*, *e*)
1904	Rock Sand (*a*, *b*, *e*)
1905	St. Amant (*a*, *b*)
1906	Beppo
1907	Sancy
1908	Radium
1909	Phaleron
1910	*

MIDDLE PARK PLATE.

(Newmarket). 6 furlongs. 2 years old.

		weight.
1899	Democrat	9-0
1900	Floriform	8-10
1901	Minstead	8-10
1902	Flotsam	9-3
1903	Pretty Polly (*c*, *d*, *e*)	9-0
1904	Jardy	9-3
1905	Flair (*c*)	9-0
1906	Galvani	9-3
1907	Lesbia	9-0
1908	Bayardo	9-3
1909	Lemberg	9-3
1910	*	

ASCOT GOLD CUP.

2½ miles.

		yrs.	wght.
1899	Cyllene	4	9-0
1900	Merman	a	9-4
1901	Santoi	4	9-0
1902	William III.	4	9-0
1903	Maximum II.	4	9-0
1904	Throwaway	5	9-4
1905	Zinfandel	5	9-4
1906	Batchelor's Button	a	9-4
1907	White Knight	4	9-0
1908	White Knight	5	9-4
1909	Bomba	3	7-7
1910	Bayardo (*e*)	4	9-0

ROYAL HUNT CUP.

(Ascot). 7 furlongs 166 yards. (Handicap).

		yrs.	wght.
1899	Refractor	3	6-3
1900	Royal Flush	a	7-0
1901	Stealaway	4	6-7
1902	The Solicitor	4	7-4
1903	Kunstler	5	7-5
1904	Csardas	5	7-5
1905	Andover	4	8-0
1906	Dinneford	4	7-8
1907	Lally	4	8-0
1908	Billy the Verger	4	6-13
1909	Dark Ronald	4	7-2
1910	Bachelor's Double	4	8-4

GOODWOOD CUP.

2½ miles.

		yrs.	wght.
1899	Merman	a	9-5
1900	Mazagan	4	9-3
1901	Fortunatus	3	8-0
1902	Perseus	3	7-1
1903	Rabelais	3	7-2
1904	Saltpetre	4	7-10
1905	Red Robe	4	7-10
1906	Plum Tree	3	7-12
1907	White Knight	4	9-10
1908	Radium	5	9-2
1909	Carrousel	3	7-8
1910	*		

DEWHURST PLATE.

(Newmarket). 7 furlongs. 2 years old.

		weight.
1899	Democrat	9-3
1900	Lord Bobs	8-9
1901	Game Chick	9-3
1902	Rock Sand (*a*, *b*, *c*)	9-5
1903	Henry I.	9-2
1904	Rouge Croix	8-9
1905	Picton	8-9
1906	My Pet II.	9-2
1907	Rhodora (*c*)	8-7
1908	Bayardo	9-5
1909	Lemberg	9-3
1910	*	

LINCOLNSHIRE.

(Lincoln). 1 mile. (Handicap).

		yrs.	wght.
1899	General Peace	5	7-5
1900	Sir Geoffrey	5	8-6
1901	Little Eva	6	7-5
1902	St. Maclou	4	7-12
1903	Over Norton	6	7-6
1904	Uninsured	4	7-10
1905	Sansovino	4	7-6
1906	Ob	5	8-0
1907	Ob	6	8-10
1908	Kaffir Chief	6	7-11
1909	Duke of Sparta	5	6-11
1910	Cinderello	5	7-2

CITY AND SUBURBAN.

(Epsom). 1½ miles. (Handicap).

		yrs.	wght.
1899	Newhaven II.	6	9-0
1900	Grafter	a	8-10
1901	Australian Star	5	7-10
1902	First Principal	5	7-6
1903	Brambilla	3	7-1
1904	Robert le Diable	5	8-2
1905	Pharisee	6	8-5
1906	Dean Swift	5	7-11
1907	Velocity	5	9-2
1908	Dean Swift	a	8-12
1909	White Eagle	4	8-7
1910	Bachelor's Double	4	8-0

CESAREWITCH.

(Newmarket). 2½ miles. (Handicap).

		yrs.	wght.
1899	Scintillant	3	7-0
1900	Clarehaven	4	7-13
1901	Balsarroch	3	6-5
1902	Black Sand	5	8-2
1903	Grey Tick	a	6-9
1904	Wargrave	6	7-4
1905	Hammerkop	5	8-9
1906	Mintagon	5	7-0
1907	Demure	4	6-9
1908	Yentoi	4	7-1
1909	Submit	3	6-13
1910	*		

CAMBRIDGESHIRE.

(Newmarket). 1 mile 1 furlong. (Handicap).

		yrs.	wght.
1899	Irish Ivy	3	7-11
1900	Berrill	4	7-9
1901	Watershed	3	7-7
1902	Ballantrae	3	6-8
1903	Hackler's Pride	3	6-10
1904	Hackler's Pride	4	8-10
1905	Velocity	3	6-5
1906	Polymelus	4	8-10
1907	Land League	4	7-13
1908	Marcovil	5	7-10
1909	Christmas Daisy	4	7-2
1910	*		

CRICKET. (*See also next page.*)

CHAMPION COUNTIES.

1887	Surrey	1897	Lancashire
1888	Surrey	1898	Yorkshire
1889	Surrey / Lancashire / Notts.	1899	Surrey
		1900	Yorkshire
		1901	Yorkshire
		1902	Yorkshire
1890	Surrey	1903	Middlesex
1891	Surrey	1904	Lancashire
1892	Surrey	1905	Yorkshire
1893	Yorkshire	1906	Kent
1894	Surrey	1907	Notts.
1895	Surrey	1908	Yorkshire
1896	Yorkshire	1909	Kent

CHAMPION BATSMEN.

	(12 *completed innings.*)	Runs	Aver.
1898	Quaife (W. G.)	1219	60.9
1899	Major Poore	1551	91.2
1900	K. S. Ranjitsinhji	3065	87.5
1901	C. B. Fry	3147	78.6
1902	Shrewsbury	1250	50.0
1903	C. B. Fry	2683	81.3
1904	K. S. Ranjitsinhji	2077	74.1
1905	C. B. Fry	2801	70.6
1906	C. J. Burnup	1207	67.0
1907	C. B. Fry	1449	46.7
1908	B. J. T. Bosanquet	1081	54.0
1909	J. R. Mason	783	65.25

CHAMPION BOWLERS.

	(*Over* 100 *wkts.*)	Wkts	Aver.
1898	Hearne (J. T.)	222	14.0
1899	Trott (A. E.)	239	17.0
1900	Rhodes	261	13.8
1901	Rhodes	251	15.1
1902	Haigh	158	12.5
1903	Mead	131	13.6
1904	Hearne (J. T.)	145	18.8
1905	Haigh	129	15.3
1906	Haigh	174	14.5
1907	Hallam	168	12.7
1908	Haigh	103	13.4
1909	Haigh	122	13.95

CRICKET RECORDS. (*Also see previous page.*)

ALL ROUND.

Hirst, in 1904 and again in 1905 made over 2000 runs, and took over 100 wickets. In 1906 he made 2,385 runs and took 208 wickets.

W. G. Grace, C. L. Towsend and G. L. Jessop, have each made over 2000 runs, and taken over 100 wickets in one season.

W. W. Armstrong, for the 1905 Australian team in England, made 2002 runs and took 130 wickets; heading both the batting and bowling averages.

For the Australians in 1909, W. W. Armstrong made 1480 runs with an average of 43.52, and took 126 wickets for 16.23 runs.

BATTING.

W. G. Grace heading the batting averages in 1866-68-69-70-71-72-73-74-76-77-79-80.

1739 runs were scored in the match, New South Wales *v.* Stoddart's team, in 1898.

New South Wales scored 918 *v.* South Australia, in 1901.

Yorkshire scored 887 *v.* Warwickshire, in 1896.

Oxford University (1 man short) scored 12 only *v.* M.C.C., in 1877.

Notts scored 13 only *v.* Yorkshire, in 1901.

Brown (J. T.) and Tunnicliffe made 554 for the 1st wicket for Yorkshire *v.* Derbyshire, in 1898.

M. A. Noble and W. W. Armstrong made 428 for the 6th wicket for Australians *v.* Sussex, in 1902.

A. C. Maclaren and Hayward (T.) made 314 for the 1st wicket for Maclaren's team *v.* New South Wales, in 1902.

R. W. Nicholls and Roche made 230 for the last wicket for Middlesex *v.* Kent, in 1899.

A. C. Maclaren made 424 for Lancashire *v.* Somerset, in 1895.

W. G. Grace made 400 not out for United South of England *v.* 22 of Grimsby, in 1876.

Clem Hill made 365 not out for South Australia *v.* New South Wales, in 1900.

Hayward (T.) made 3,518 runs during the season, 1906.

C. B. Fry, in 1901, and Hayward (T.) in 1906, made 13 centuries in one season, and Abel (R) in 1900 made 12.

C. B. Fry, in 1901, made six consecutive centuries.

C. B. Fry has made two separate centuries in one match on four occasions. W. G. Grace, R. E. Foster and Hayward (T.) have made two separate centuries on three occasions. Hayward, in 1906, did so in two consecutive matches.

In 1909 Surrey scored 645 for only 4 wickets, against Hampshire at the Oval.

BOWLING.

All ten wickets in one innings:—
W. G. Grace; M.C.C. *v.* Oxford University, 1886.
Burton; Middlesex *v.* Surrey, 1888.
S. M. J. Woods; Cambridge University *v.* Thornton's XI., 1890.
Richardson; Surrey *v.* Essex, 1894.
Pickett; Essex *v.* Leicestershire, 1895.
Tyler; Somerset *v.* Surrey, 1895.
W. P. Howell; Australians *v.* Surrey, 1899.
Bland; Sussex *v.* Kent, 1899.
Briggs; Lancashire *v.* Worcestershire, 1900.
Trott; Middlesex *v.* Somerset, 1900.
Fielder; Players *v.* Gentlemen, 1906.

Four wickets with successive balls:—
Hide (Jesse); Sussex *v.* M.C.C., 1890.
Lockwood; Surrey *v.* Warwickshire, 1891.
Shacklock; Notts *v.* Somerset, 1893.
Martin; M.C.C. *v.* Derbyshire, 1895.
Mold; Lancashire *v.* Notts, 1895.
W. Brearley; (Not all in the same innings). Lancashire *v.* Somerset, 1905.
G. Dennet for Gloucester *v.* Essex, 1906.
C. Blythe, Kent *v.* Northampton, 1909.

It is also worthy of note that C. T. B. Turner took 314 wickets for the 1888 Australian Team, in England.

Richardson took 290 wickets, in 1895.

TEST MATCHES.

England *v.* Australia (including 1909)
Played in Australia—
England won 20, Australia 30, Drawn 2.
Played in England—
England won 16, Australia 8, Drawn 15.
Remarkable Scores—
England 576 at the Oval, 1899.
England 577 at Sydney, 1903.
Australia 551 at the Oval, 1884.
Australia 586 at Sydney, 1894.
England 53 at Lord's, 1888.
Australia 36 at Birmingham, 1902.

R. E. Foster made 287 for England at Sydney, in 1903; W. L. Murdoch 211 for Australia at the Oval, in 1884; W. G. Grace 170 for England at the Oval, in 1886.

The following batsmen made centuries in their first test match:
C. Bannerman (1877), W. G. Grace (1880), H. Graham (1893), K. S. Ranjitsinhji (1896), R. A. Duff (1902), R. E. Foster (1903).

The following bowlers have done the "Hat trick" in test matches:—
F. R. Spofforth (1879), W. Bates (1883), Hearne (J. T.) (1899), H. Trumble (1902 and 1904).

Rhodes took 15 wickets in one test match (1904).

INTER-VARSITY. (1910).

Cambridge 36, Oxford 32, Drawn 8.

Public Schools.

Harrow 35, Eton 32, Drawn 18.

FOOTBALL.

ASSOCIATION CUP WINNERS.

Years.		
1871–2	Wanderers beat Royal Engineers	1–0
1872–3	Wanderers beat Oxford University	2–0
1873–4	Oxford University beat Royal Engineers	2–0
1874–5	Royal Engineers beat Old Etonians*	2–0
1875–6	Wanderers beat Old Etonians*	3–0
1876–7	Wanderers beat Oxford University†	2–0
1877–8	Wanderers beat Royal Engineers	3–1
1878–9	Old Etonians beat Clapham Rovers	1–0
1879–80	Clapham Rovers beat Oxford University	1–0
1880–1	Old Carthusians beat Old Etonians	3–0
1881–2	Old Etonians beat Blackburn Rovers	1–0
1882–3	Blackburn Olympic beat Old Etonians†	2–1
1883–4	Blackburn Rovers beat Queen's Park	2–1
1884–5	Blackburn Rovers beat Queen's Park	2–0
1885–6	Blackburn Rovers beat West Bromwich Albion*	2–0
1886–7	Aston Villa beat West Bromwich Albion	2–0
1887–8	West Bromwich Albion beat Preston North End	2–1
1888–9	Preston N. End beat Wolverhampton W.	3–0
1889–90	Blackburn Rovers beat Sheffield Wednesday	6–1
1890–1	Blackburn Rovers beat Notts	3–1
1891–2	West Bromwich Albion beat Aston Villa	3–0
1892–3	Wolverhampton Wanderers beat Everton	1–0
1893–4	Notts County beat Bolton Wanderers	4–1
1894–5	Aston Villa beat West Bromwich Albion	1–0
1895–6	Sheffield W. beat Wolverhampton W.	2–1
1896–7	Aston Villa beat Everton	3–2
1897–8	Notts Forest beat Derby County	3–1
1898–9	Sheffield United beat Derby County	4–1
1899–1900	Bury beat Southampton	4–0
1900–1	Tottenham Hotspur beat Sheffield United*	3–1
1901–2	Sheffield United beat Southampton*	2–1
1902–3	Bury beat Derby County	6–0
1903–4	Manchester City beat Bolton Wanderers	1–0
1904–5	Aston Villa beat Newcastle United	2–0
1905–6	Everton beat Newcastle United	1–0
1906–7	Sheffield Wednesday beat Everton.	2–1
1907–8	W'hampton Wanderers beat Newcastle United	3–1
1908–9	Manchester United beat Bristol City	1–0
1909–10	Newcastle United beat Barnsley	2–0

* After a drawn game. † Extra half-hour played.

INTER-VARSITY.

(Including Season 1909-10).

ASSOCIATION.

Cambridge	18	Oxford	17	Drawn	2

RUGBY.

Oxford	16	Cambridge	12	Drawn	9

INTERNATIONALS.

(Including Season 1909-10).

ASSOCIATION.

Scotland	17	England	12	Drawn	10
England	24	Wales	2	Drawn	6
England	26	Ireland	0	Drawn	3
Scotland	26	Wales	4	Drawn	5
Scotland	23	Ireland	2	Drawn	2
Wales	14	Ireland	10	Drawn	5

RUGBY.

Scotland	16	England	12	Drawn	9
England	12	Wales	13	Drawn	2
England	21	Ireland	11	Drawn	2
Scotland	13	Wales	12	Drawn	1
Scotland	24	Ireland	6	Drawn	3
Wales	16	Ireland	8	Drawn	1

New Zealand (1905–6 tour) defeated England (15 pts. to nil), Scotland (12 pts. to 7), Ireland (15 pts. to nil), but were beaten by Wales (3 pts. to nil). The latter was the only defeat of the tour.

South Africa (1906–7 tour) defeated Ireland (16 pts. to 12), Wales (11 pts. to nil). drew with England (3 pts. each), and were beaten by Scotland (6 pts. to nil).

CHAMPIONS.

	ASSOCIATION.		RUGBY.
Years.	The League.	Southern League.	County.
1891–2	Sunderland	—	Yorkshire
1892–3	Sunderland	—	Yorkshire
1893–4	Aston Villa	—	Yorkshire
1894–5	Sunderland	Millwall	Yorkshire
1895–6	Aston Villa	Millwall	Yorkshire
1896–7	Aston Villa	Southampton	Kent
1897–8	Sheffield U.	Southampton	Northumberland
1898–9	Aston Villa	Southampton	Devon
1899–00	Aston Villa	Tottenham H.	Durham
1900–1	Liverpool	Southampton	Devon
1901–2	Sunderland	Portsmouth	Durham
1902–3	Sheffield W.	Southampton	Durham
1903–4	Sheffield W.	Southampton	Kent
1904–5	Newcastle U.	Bristol Rovers	Durham
1905–6	Liverpool	Fulham	Devon
1906–7	Newcastle U.	Fulham	Devon & Durham
1907–8	Manchester U.	Queen's Park R.	Cornwall
1908–9	Newcastle U.	Northampton.	Durham
1909–10	Aston Villa	Brighton	Gloucestershire

ROWING.

UNIVERSITY BOAT RACE.

Year.	Course.	Winner.	Time.	Won by
			m. s.	
1836	Westmstr. to Putney.	Cam.	36.0	1 min.
1839		Cam.	31.0	1¼ min.
1840		Cam.	29.30	¾ length
1841		Cam.	32.30	1 m. 4 s.
1842		Ox.	30.45	13 secs.
1845	P. to M.	Cam.	23.30	30 secs.
[1]1846	M. to P.	Cam.	21.5	2 lengths
1849	Putney to Mortlake.	Cam.	22.0	8 lengths
1849		Ox.	—	foul
1852		Ox.	21.36	27 secs.
1854		Ox.	25.29	11 strokes
1856	M. to P.	Cam.	25.50	½ length
[2]1857	Putney to Mortlake.	Ox.	22.35	35 secs.
1858		Cam.	21.23	22 secs.
1859		Ox.	24.40	Cam. sank
1860		Cam.	26.5	1 length
1861		Ox.	23.30	48 secs.
1862		Ox.	24.41	30 secs.
1863	M. to P.	Ox.	23.6	43 secs.
1864	P. to M.	Ox.	21.40	26 secs.
1865	P. to M.	Ox.	21.24	4 lengths
1866	P. to M.	Ox.	25.35	15 secs.
1867	Putney to Mortlake.	Ox.	22.40	½ length
1868		Ox.	20.56	6 lengths
[3]1869		Ox.	20.5	3 lengths
1870		Cam.	22.4	1¼ length
1871		Cam.	23.5	1 length
1872		Cam.	21.15	2 lengths
[4]1873		Cam.	19.35	3½ lengths
1874		Cam.	22.35	3 lengths
1875		Ox.	22.2	10 lengths
1876		Cam.	20.20	8 lengths
[5]1877		—	24.8	dead heat
1878		Ox.	22.13	10 lengths
1879		Cam.	21.18	3½ lengths
[6]1880		Ox.	21.23	3¾ lengths
1881		Ox.	21.51	3 lengths
1882		Ox.	20.12	7 lengths
[7]1883		Ox.	21.8	4 lengths
1884		Cam.	21.39	2½ lengths
1885		Ox.	21.36	3 lengths
1886		Cam.	22.29	⅔ length
[8]1887		Cam.	20.52	3½ lengths
1888		Cam.	20.48	5 lengths
[9]1889	Putney to Mortlake.	Cam.	20.14	2¾ lengths
1890		Ox.	22.3	1 length
1891		Ox.	21.48	½ length
1892		Ox.	19.21	2½ lengths
[10]1893		Ox.	18.47	1 l. 4 ft.
1894		Ox.	21.39	3½ lengths.
1895		Ox.	20.50	2½ lengths
1896		Ox.	20.1	⅔ lengths
1897		Ox.	19.12	2½ lengths
[11]1898		Ox.	22.15	easily
1899		Cam.	21.4	3½ lengths
[10]1900		Cam.	18.47	easily
[12]1901		Ox.	22.31	⅔ length
[12]1902		Cam.	19.9	5 lengths
1903		Cam.	19.32	6 lengths
1904		Cam.	21.34	4½ lengths
1905		Ox.	20.35	3 lengths
[13]1906		Cam.	19.24	3½ lengths
1907		Cam.	20.26	4½ lengths
1908		Cam.	19.19	2½ lengths
1909		Ox.	19.50	3½ lengths
1910		Ox.	20.15	3½ lengths

Total Races 66; Oxford won 35, Cambridge 30, Dead Heat 1.

[1] Rowed in outriggers for first time. [2] First race rowed in keelless boats and with round oars. [3] Oxford also defeated Harvard this year (fours). [4] Sliding seats first used. [5] Oxford bow damaged his oar. [6] Postponed on account of fog. [7] Rowed in a snowstorm. [8] Oxford 7 broke his oar. [9] Cambridge had the same crew as 1888. [10] "Record Time." [11] Rowed in a gale; Cambridge waterlogged. [12] Oxford used Dr. Warre's short boat. [13] Cambridge also defeated Harvard this year.

Famous Blues:—G. A. Selwyn (C. 1829) became Bishop of Lichfield. W. B. Brett (C. 1839), Lord Esher, Master of the Rolls. Hon. L. Denman (C. 1841), the famous judge. A. de Rutzen (C. 1849), now London's chief magistrate. W. H. Waddington (C. 1849), Prime Minister of France. J. W. Chitty (O. 1849), Lord Justice. J. J. Hornby (O. 1849) and E. Warre (O. 1857), Headmasters of Eton. A. L. Smith (C. 1857), Master of the Rolls.

HENLEY REGATTA.

Year.	Grand. Record 6 m. 51 s.	Ladies. Record 7 m. 1 s.	Thames. Record 7 m. 5¼ s.	Stewards. Record 7 m. 30 s.	Visitors. Record 7 m. 37 s.
1897	New College	Eton	Kingston	Leander	Trin. Coll., Oxford
1898	Leander	Eton	Trin. Coll., Oxford	Leander	New College
1899	Leander	Eton	First Trinity	Magdalen College	Balliol College
1900	Leander	New College	Trin. Coll., Cam.	Leander	Trin. Coll., Cam.
1901	Leander	Univ. College	Trinity Hall	Third Trinity	Balliol College
1902	Third Trinity	Univ. College	Trinity Hall	Third Trinity	Jesus College
1903	Leander	Magdalen College	Trin. Coll., Dublin	Third Trinity	Univ. College
1904	Leander	Eton	Caius College	Third Trinity	Third Trinity
1905	Leander	Eton	Thames	Leander	Trinity Hall
1906	Gand, Belgium	First Trinity	Christ's College	Leander	Third Trinity
1907	Gand, Belgium	Trinity Hall, Cam.	Christ's College Cam.	Magdalen Coll., Ox.	Magdalen Coll., Ox.
1908	Ch. Ch. Oxford	Jesus College, Cam.	Wadham College Ox.	Magdalen Coll., Ox.	Magdalen Coll., Ox.
1909	Club Nautique de Gand, Belguim	St. John's Coll., Ox.	Wadham Coll., Ox.	Thames Rowing Club	Christ Church, Oxford
1910	Magdalen College	Eton	Anglian	Winnipeg	Trinity Hall

Year.	Wyfolds. Record 7 m. 46 s.	Goblets. Record 8 m. 15 s.	Diamonds. Record 8 m. 11 s.
1897	Kingston	E. R. Balfour *and* Guy Nickalls	E. H. Ten Eyck
1898	Kingston	A. Bogle *and* W. J. Fernie	B. H. Howell
1899	Trinity Hall	C. K. Philips *and* H. W. M. Willis	B. H. Howell
1900	Trinity Hall	C. J. D. Goldie *and* G. M. Maitland	E. G. Hemmerde
1901	Trinity Hall	H. J. Hale *and* F. W. Warre	C. V. Fox
1902	Burton-on-Trent	W. Dudley Ward *and* C. W. H. Taylor	F. S. Kelly
1903	Kingston	Lothar Klaus *and* A. Ehrenberg	F. S. Kelly
1904	Birmingham	C. J. D. Goldie *and* C. W. H. Taylor	L. S. Scholes
1905	London	R. H. Nelson *and* P. H. Thomas.	F. S. Kelly
1906	London	B. C. Johnstone *and* R. V. Powell	H. T. Blackstaffe
1907	Magdalen College, Oxford	B. C. Johnstone *and* R. V. Powell	Capt. W. H. Darell
1908	Thames R. C.	H. R. Barker *and* A. C. Gladstone	A. McCulloch
1909	Balliol College, Oxford	B. C. Johnstone *and* E. G. Williams	A. A. Stuart
1910	Trinity Hall	J. S. Burn *and* G. L. Thomson	W. D. Kinnear

Year.	WINGFIELD SCULLS. Record 22 m. 6¾ s.	DOGGETTS. Coat and Badge.	Year.	PROFESSIONAL CHAMPIONS.
1899	B. H. Howell	J. See	1884	W. Beach *beat* E. Hanlan
1900	C. V. Fox	J. J. Turffery	1888	P. Kemp *beat* T. Clifford
1901	H. T. Blackstaffe	A. H. Brewer	1888	H. E. Searle *beat* P. Kemp
1902	A. H. Cloutte	R. G. Odell	1890	J. Stanbury *beat* W. O'Connor
1903	F. S. Kelly	E. Barry	1896	J. Gaudaur *beat* J. Stanbury
1904	St. George Ashe	W. A. Pizzey	1901	G. Towns *beat* J. Gaudaur
1905	H. T. Blackstaffe	H. Silvester	1905	J. Stanbury *beat* G. Towns
1906	H. T. Blackstaffe	E. Brewer	1906	G. Towns *beat* J. Stanbury
1907	J. de G. Edge	A. T. Cook	1907	W. Webb *beat* G. Towns
1908	H. T. Blackstaffe	J. Graham	1908	E. Barry *beat* G. Towns
1909	A. A. Stuart	George Robert Luck	1909	R. Arnst *beat* W. Webb

ATHLETIC RECORDS.

WORLD'S.

Run.	Made by.	Year.	
			m. s.
100 yards	D. J. Kelly (A)	1906	9⅘
120 hur.	F. C. Smithson (A)	1908	15
220 yards	B. J. Wefers (A)	1897	21
¼ mile	M. W. Long (A)	1900	47
½ mile	E. Lunghi	1909	1 53⅘
1 mile	W. G. George (P)	1886	4 12¾
3 miles	A. Shrubb (B)	1903	14 17⅘
4 miles	A. Shrubb (B)	1904	19 23⅖
10 miles	A. Shrubb (B)	1904	50 40⅘
			ft. ins.
High Jump. M. Sweeney (A)		1895	6 5⅝
Long Jump. P. O'Connor (B)		1901	24 11¾
Pole Jump. W. R. Dray (A)		1903	12 9¾
Putting 16 lb. weight. R. Rose (Can.)		1907	49 7½
Throwing 16 lb. hammer. M. J. McGrath (Can.)		1907	173 7

WALKING.

			m. s.
1 mile	A. T. Yeomans (B)	1906	6 19⅗
2 miles	A. T. Yeomans	1906	12 53½
3 miles	J. W. Raby (P)	1883	20 21½
4 miles	G. E. Larner (B)	1905	27 14
5 miles	J. W. Raby (P)	1883	35 10
6 miles	J. W. Raby	1883	43 1
7 miles	G. E. Larner (B)	1905	50 50⅘
8 miles	G. E. Larner (B)	1905	58 18⅖
9 miles	J. W. Raby (P)	1883	67 14
10 miles	J. W. Raby	1883	74 45

SWIMMING.

100 yards	C. M. Daniels (A)	1907	55⅘
220 yards	F. C. V. Lane (B)	1902	2 28⅖
440 yards	T. S. Battersby	1908	5 26⅖
880 yards	H. Taylor	1906	11 25⅖
1 mile	T. S. Battersby	1909	24 1⅘
			ft. ins.
Plunging W. Taylor (B)		1906	82 7

MARATHON RACE.

This race (26 miles 385 yards) was finished at the Stadium, Franco-British Exhibition, 1908; Winner J. J. Hayes, U.S.A., 2 hours 55 minutes 18 seconds. Dorando Pietri (Italy), who was the first to pass the winning-post, was disqualified because helped. Subsequently he ran against Hayes over the Marathon distance at New York and beat him by 45 seconds, but was afterwards beaten by Tom Longboat, a Canadian Indian. But the most noteworthy performance was that of Siret a Frenchman, who in the Professional Marathon race, from Windsor to the Stadium, completed the distance in 2 hours 37 minutes 23 seconds.

BRITISH AMATEUR.

Made by.	Year.	
		m. s.
A. F. Duffey	1901	9⅘
F. C. Smithson	1908	15
C. G. Wood	1887	21⅘
H. C. L. Tindall / E. C. Bredin	1889 / 1895	48½
M. W. Shepherd	1903	1 54
J. Binks	1902	4 16⅘
A. Shrubb	1903	14 17⅘
A. Shrubb	1904	19 23⅖
A. Shrubb	1904	50 40⅘
		ft. ins.
P. Leahy	1898	6 4⅗
P. O'Connor	1901	24 11¾
R. D. Dickinson	1891	11 9
D. Horgan	1897	48 2
S. R. Gillis	1908	164 5⅜

INTER-VARSITY.

Made by.	Year.	
		m. s.
Several	—	10
K. Powell (C)	1907	15⅘
—	—	—
W. Fitzherbert (C)	1896	49⅗
K. Cornwallis (O)	1904	1 54⅘
C. C. Henderson-Hamilton (O)	1905	4 17⅘
F. S. Horan (C)	1893	14 44
—	—	—
—	—	—
		ft. ins.
M. J. Brooks (O)	1876	6 2½
C. B. Fry (O)	1892	23 5
—	—	—
W. W. Coe (O)	1902	43 10
R. H. Watson (C)	1909	148 10

LONG DISTANCE RUNNING.

Professional:—25 miles in 2h. 33m. 42s. by L. Hurst (1903). 50 miles in 5h. 55m. 4⅘s. by G. Cartwright (1887). 100 miles in 13h. 26m. 30s. by C. Rowell (1882). In 1 hour H. Watkins ran 11 miles 1286 yards (1899). Amateur:—25 miles in 2h. 33m. 44s. by G. A. Dunning (1881). 50 miles in 6h. 18m. 26⅕s. by J. E. Dixon (1885). 100 miles in 17h. 36m. 14s. by J. Saunders (1882). In 1 hour A. Shrubb ran 11 miles 1136 yards (1904).

LONG DISTANCE WALKING.

25 miles in 3h. 40m. 20s., and 50 miles in 7h. 52m. 27s., by J. Butler (B) (1905). 100 miles in 18h. 8m. 50s. by W. Howes (P) (1880), and in 18h. 4m. 10s. by T. E. Hammond (1908). In 1 hour G. E. Larner (B) walked 8 miles 438 yards (1905). In 12 hours J. Hibberd (P) walked 70 miles 677 yards (1888), and W. Brown 68 miles 855 yards (1909)

London to Brighton (52½ miles): J. Butler in 8 hours 23 minutes 27 seconds (1906), T. E. Hammond, 8 hrs. 18 min. 18 secs. (1909), and H. E. Ross, 8 hrs. 11 mins. 14 secs. (1909).

LONG DISTANCE CYCLING.

100 miles:—(1) paced, 4h. 16m. 35s. (1897) by A. A. Chase.
(2) unpaced, 4h. 36m. 22s. (1902) by H. Green.

24 hours:—At the Stadium, 513 miles 1430 yards (1909), by J. H. Bishop

Land's End to John o' Groats:—
Paced:—G. P. Mills, 3 days 5 hours 49 min (1894).
Unpaced:—G. A. Olley, 3 days 20 hours 15 min. (1905).
Tricycle:—G. P. Mills, 3 days 16 hours 47 min. (1893).
Tandem Bicycle, G. P. Mills and T. A. Edge, 3 days 4 hours 46 min. (1895).
H. Green now (1908), holds the record 2 days 19 hours 50 minutes.

London to Brighton and back:—
Paced:—W. J. Neason, 5 hours 6 min. 42 sec. (1897).
Unpaced:—R. Shirley, 5 hours 15 min. 29 sec. (1906).
Tandem:—J. C. Paget and M. R. Mott, 5 hours 9 min. 30 sec. (1906).

(A) American Amateur. (B) British Amateur. (C) Cambridge. (F) French. (O) Oxford. (P) Professional.

BILLIARDS.

HIGHEST BREAKS. "All-in":—W. J. Peall 3,304 (1890).
Spot barred:—J. Roberts junior, 1,392 (1894).
With the aid of the "Anchor" cannon:—
T. Reece 6,138, March 30th, 1907. C. Dawson 6,245, March 30th, 1907. W. Cook 42,746, June 4th, 1907. T. Reece 23,810, May 2nd, 1907.
The record break of 836 (831 off the red) was made by G. Gray in Melbourne, August, 1909, the number scored off the red ball making also a record. The highest record in England was reached by H. W. Stevenson in 1905, who made a break of 802.

NOTABLE SWIMS.

Captain Webb swam from Dover to Calais (about 21 miles) in 21 hours 45 min., on August 24th, 1875. He was drowned in attempting to swim Niagara Rapids on July 24th, 1883.
Miss Beckwith swam 20 miles in the Thames in 6 hours 25 min., on July 5th, 1876.
J. Finney remained under water 4 min. 29½ sec., on April 7th, 1886; Miss E. Wallenda 4 minutes 45½ seconds, December 14th, 1898.

CHAMPIONS.

Year.	TENNIS.	LAWN TENNIS.		
	Singles.	Ladies.	Gentlemen.	Doubles.
1894	H. E. Crawley	Mrs. Hillyard	J. Pim.	W. and H. Baddeley
1895	Sir E. Grey, Bt.	Miss C. Cooper	W. Baddeley	W. and H. Baddeley
1896	Sir E. Grey, Bt.	Miss C. Cooper	H. S. Mahony	W. and H. Baddeley
1897	J. B. Gribble	Mrs. Hillyard	R. F. Doherty	R. F. and H. L. Doherty
1898	Sir E. Grey, Bt.	Miss C. Cooper	R. F. Doherty	R. F. and H. L. Doherty
1899	E. H. Miles	Mrs. Hillyard	R. F. Doherty	R. F. and H. L. Doherty
1900	E. H. Miles	Mrs. Hillyard	R. F. Doherty	R. F. and H. L. Doherty
1901	E. H. Miles	Mrs. Sterry	A. W. Gore	R. F. and H. L. Doherty
1902	E. H. Miles	Miss M. Robb	H. L. Doherty	S. H. Smith, F. L. Riseley
1903	E. H. Miles	Miss D. K. Douglass	H. L. Doherty	R. F. and H. L. Doherty
1904	V. Pennell	Miss D. K. Douglass	H. L. Doherty	R. F. and H. L. Doherty
1905	E. H. Miles	Miss M. Sutton	H. L. Doherty	R. F. and H. L. Doherty
1906	E. H. Miles	Miss D. K. Douglass	H. L. Doherty	S. H. Smith, F. L. Riseley
1907	J. Gould	Miss M. Sutton	N. E. Brooks	N. E. Brooks, A. F. Wilding
1908	C. Fairs	Mrs. Sterry	A. W. Gore	A. F. Wilding, M. J. G. Ritchie
1909	E. H. Miles	Miss D. Boothby	A. W. Gore	H. Roper Barret, A. W. Gore
1910	—	Mrs. Lambert Chambers	A. F. Wilding	A. F. Wilding, M. J. G. Ritchie

Year.	GOLF.			RIFLE SHOOTING.
	Open.	Amateur.	Ladies.	The King's Prize.
1894	J. H. Taylor	J. Ball, Junr.	Lady M. Scott	Pte. Rennie, 3rd Lanark
1895	J. H. Taylor	L. Balfour-Melville	Lady M. Scott	Pte. Hayhurst, Canada
1896	H. Vardon	F. G. Tait	Miss Pascoe	Lieut. Thomson, Queen's Ed.
1897	Mr. H. H. Hilton	A. J. T. Allan	Miss E. C. Orr	Pte. Ward, 1st Devon
1898	H. Vardon	F. G. Tait	Miss L. Thomson	Lieut. Yates, 3rd Lanark
1899	H. Vardon	J. Ball, Junr.	Miss M. Hezlet	Pte. Priaulx, Guernsey
1900	J. H. Taylor	H. H. Hilton	Miss R. Adair	Pte. Ward, 1st Devon
1901	J. Braid	H. H. Hilton	Miss M. A. Graham	L.-Corp. Ommundsen, Queen's Ed.
1902	A. Herd	C. Hutchings	Miss M. Hezlet	Lieut. Johnson, 1st London
1903	H. Vardon	R. Maxwell	Miss R. Adair	C.-Sergt. Davies, 3rd Glam.
1904	J. White	W. J. Travis	Miss L. Dod	Pte. Perry, Canada
1905	J. Braid	A. G. Barry	Miss B. Thompson	C.-Sergt. Comber, 2nd E. Surrey
1906	J. Braid	J. Robb	Mrs. Kennion	Capt. Davies, 1st Middlesex
1907	Arnaud Massy	John Ball	Miss M. Hezlet	Lieut. W. C. Addison, Australia
1908	J. Braid	E. A. Lassen	Miss Titterton	Pte. G. Gray, 5th Scottish Rifles
1909	J. H. Taylor	R. Maxwell	Miss W. Campbell	Corpl. H. C. Burr, Lond. Rifle Brig
1910	J. Braid	—	—	Corp. Radice, Ox. U. Officers Train. C

BILLIARDS.

PROFESSIONALS.

1870	J. Bennett *beat* J. Roberts, Junr.
1871	J. Roberts, Junr., *beat* J. Bennett
1871	W. Cook *beat* J. Roberts, Junr.
1871	W. Cook *beat* J. Bennett
1872	W. Cook *beat* J. Roberts, Junr.
1874	W. Cook *beat* J. Roberts, Junr.
1875	J. Roberts, Junr., *beat* W. Cook
1875	J. Roberts, Junr., *beat* W. Cook
1877	J. Roberts, Junr., *beat* W. Cook
1880	J. Bennett *beat* W. Cook
1881	J. Bennett *beat* T. Taylor
1885	J. Roberts, Junr., *beat* W. Cook

UNDER BILLIARD ASSOCIATION RULES.

1899	C. Dawson *beat* J. North
1900	H. W. Stevenson *beat* C. Dawson
1901	C. Dawson *beat* H. W. Stevenson (April)
,,	H. W. Stevenson (challenger), declared champion by the Billiard Association (November)
1903	C. Dawson *beat* H. W. Stevenson
1908	M. Inman *beat* G. E. Williams

AMATEURS.

1894 (May) H. Mitchell	1903 (Dec.) S. S. Christey
1894 (Dec.) T. Maughan	1904 W. A. Lovejoy
1896 S. H. Fry	1905 A. W. T. Good
1899 A. R. Wisdom	1906 E. C. Breed
1900 S. H. Fry	1907 H. C. Virr
1901 S. S. Christey	1908 H. C. Virr
1902 A. W. T. Good	1909 Major Fleming
1903 (Mar.) A. R. Wisdom	

BOXING.

On July 4th, 1910, one of the most sensational fights ever known took place in America, for the World's Heavy-weight Championship between Jeffries and the negro Johnson, which resulted in a victory for Johnson, who knocked out Jeffries in the 15th round.

COURSING.

Year.	WATERLOO CUP.	
	Nominator.	Winner.
1894	Count Stroganoff.	Texture
1895	R. B. Carruthers	Thoughtless Beauty
1896	G. F. Fawcett	Fabulous Fortune
1897	T. P. Hale	Gallant
1898	J. Trevor	Wild Night
1899	J. B. Thompson	Black Fury
1900	J. H. Bibby	Fearless Footsteps
1901	J. H. Bibby	Fearless Footsteps
1902	G. F. Fawcett	Farndon Ferry
1903	J. H. Bibby	Father Flint
1904	E. Darlinson	Homfray
1905	W. H. Pawson	Pistol II.
1906	H. Hardy dine	Hoprend
1907	Sir R. W. Buchanan-Jar-	Long Span
1908	Mr. E. Hulton	Hallow Eve
1909	Messrs. J. E. & S. M. Dennis	Dendraspis

SKATING.

Year.	GREAT BRITAIN.	
	Amateur.	Professional.
1881	F. Norman	G. Fish Smart
1887	R. Wallis	G. Fish Smart
1889	W. Loveday	James Smart
1890	W. Loveday	James Smart
1891	W. Housden	—
1892	J. C. Aveling	George See
1895	A. E. Tebbit	James Smart
1900	A. E. Tebbit	Fred Ward
1902	A. E. Tebbit	Jos. Bates
1906	A. E. Tebbit	Fred Ward
1908	F. W. Dix.	S. Greenall
1909	F. W. Dix	S. Greenall

SPORTING SEASONS AND CLOSE TIMES.

1. GAME SEASONS.

From a legal standpoint the word *Game* includes hares, pheasants, partridges, grouse, heath or moor game, black game and bustards.

No game can be killed or taken on a *Sunday* or *Christmas Day*.

LEGAL SEASONS FOR KILLING GAME.

Grouse or Moor Fowl.	For the whole of the United Kingdom, Aug. 12th to Dec. 10th.
Black Game or Heath Fowl	Somerset, Devon and New Forest, Sept. 1st to Dec. 10th. All other parts of the United Kingdom, Aug. 20th to Dec. 10th.
Pheasant.	For the whole of the United Kingdom, Oct. 1st to Feb. 1st.
Partridge.	Great Britain. Sept. 1st to Feb. 1st. Ireland. Sept. 20th to Jan. 10th.
Bustard	England and Wales. Sept. 1st to Mar. 1st. Scotland. No close time. Ireland. Sept. 1st to Jan. 10th.
Hare	Great Britain. No close time.* Ireland. Apr. 20th to Aug. 12th.
Male Deer	Great Britain. No close time. Ireland. June 10th to Dec. 31st.
Fallow Male Deer	Great Britain. No close time. Ireland. June 10th to Sept. 29th.
Quail. Landrail	Great Britain. As wild birds. Ireland. Sept. 20th to Jan. 10th.
Ptarmigan	England and Ireland. As wild birds. Scotland. Aug. 12th to Dec. 10th.

* It is not lawful to sell or expose for sale any hare or leveret in any part of Great Britain during the months of March, April, May, June, or July. This does not apply to foreign hares.

2. HUNTING SEASONS.

Stag Hunting.	August 12th to October 12th.
Deer Hunting.	November 10th to March 3rd.
Fox Hunting.	November 1st to April 1st.
Hare Coursing.	July 1st to February 28th.
Otter Hunting.	April 15th to September 15th.

3. PROTECTION OF WILD BIRDS.

A series of Acts of Parliament have been passed for the protection of wild birds in the United Kingdom during the breeding season. These Acts—*The Wild Birds Protection Acts*, 1880–1904—make it unlawful for any person, during the period between March 1st and August 1st, to shoot or attempt to shoot, or use any boat for the purpose of shooting or causing to be shot, any wild bird; or to use any lime, trap, snare, net, or other instrument for the purpose of taking any wild bird. No person must expose or offer for sale, or have in his control or possession after March 15th, any wild bird recently killed or taken.

The Acts apply to all wild birds, but more especially to those given in the following schedule:

American quail.	Kittiwake.	Sealark.
Auk.	Lapwing.	Seamew.
Avocet.	Loon.	Sea parrot.
Bee-eater.	Mallard.	Sea swallow.
Bittern	Marrot.	Shearwater.
Bonxie.	Merganser.	Shelldrake.
Colin.	Murre.	Shoveller.
Cornish chough.	Night-hawk.	Skua.
Coulterneb.	Night-jar.	Smew.
Cuckoo.	Nightingale.	Snipe.
Curlew.	Oriole.	Solan goose.
Diver.	Owl.	Spoonbill.
Dotterel.	Ox Bird.	Stint.
Dunbird.	Oyster catcher.	Stone curlew.
Dunlin.	Peewit.	Stonehatch.
Eider duck.	Petrel.	Summer snipe.
Fern-owl.	Phalarope.	Tarrock.
Fulmar.	Plover.	Teal.
Gannet.	Ploverspage.	Tern.
Goatsucker.	Pochard.	Thickknee.
Godwit.	Puffin.	Tystey.
Goldfinch.	Purre.	Whaup.
Grebe.	Razorbill.	Whimbrel.
Greenshank.	Redshank.	Widgeon.
Guillemot.	Reeve or Ruff.	Wild duck.
Gull (except Black-backed gull).	Roller.	Willock.
	Sanderling.	Woodcock.
Hoopoe.	Sandpiper.	Woodpecker.
Kingfisher.	Scout.	

The Penalties are :—

In the case of wild birds included in the schedule a fine not exceeding £1 for each bird in respect of which an offence has been committed.

In the case of any other wild bird, for the first offence a reprimand and payment of costs, and for subsequent offences a fine of 5s. for each bird in addition to the payment of costs.

Owners or occupiers of land, or persons authorised by them, can on such land kill or take any wild bird *not* in the schedule.

Any person can demand the full name and address of any person found offending against the Acts.

A Secretary of State, in the case of England and Wales, the Secretary for Scotland, or the Lord Lieutenant of Ireland can, upon the application of the Local Authorities,

Extend or vary the time during which the killing and taking of wild birds or any of them is prohibited; in any particular county or district.

Prohibit the taking or destroying of wild birds' eggs in any year or years in any place or places, or of the eggs of any specified kind of wild birds.

Local authorities that obtain powers for the variations of the Acts must in every year give public notice of any order which is in force in any place within their districts during the three weeks preceding the commencement of the period of the year during which the order operates; (1) by advertising the order in two local newspapers; (2) by fixing notices of the order in conspicuous spots within or near each place in which the order operates; (3) in any other manner that may be thought expedient to make the order known to the public.

When any person is convicted of an offence against the Acts, the Court may, in addition to any penalty that may be imposed, order any wild bird, or wild bird's egg, or any trap, net, snare, or decoy bird to be forfeited and disposed of as the Court shall think fit.

Every person who, on any pole, tree or cairn of stones or earth, shall affix, place, or set any spring, trap, gun, or other instrument calculated to cause bodily injury to any wild bird coming in contact therewith, and every person who shall knowingly permit or suffer or cause any such trap to be so affixed, placed, or set, shall be guilty of an offence, and shall be liable to a penalty not exceeding £2, and for a second or subsequent offence to a penalty not exceeding £5.

4. CLOSE TIME FOR FRESHWATER FISH.

Under this head "freshwater fish" includes all kinds of fish (other than pollan, trout, and char), which live in fresh water, except those kinds which migrate to or from the open sea.

The close time for freshwater fish is from the 15th day of March to the 15th day of June, both inclusive, for England and Wales (excepting parts of Norfolk and Suffolk, where the close time is from March 1st to June 30th.

Any person who, during the close time, takes, sells, buys, or has in his possession for sale, any freshwater fish, is liable for the first offence to a fine of £2, and for subsequent offences to a fine of £5, with the following exceptions:—

Owners of private fisheries where trout, char, or grayling are specially preserved may destroy within such fisheries any "freshwater fish" other than grayling.

Persons may fish in such fisheries with the leave of the owners.

Persons may take fish for bait or scientific purposes.

5. CLOSE TIME FOR TROUT AND CHAR.

In England and Wales, the general close time for Trout and Char is from October 2nd to February 1st, but there are exceptions. Any private owner can of course, within the legal limit, restrict the fishing in his own water. In parts of Norfolk and Suffolk the close time, for nets only, is from September 10th to January 25th. In the Thames from September 11th to March 31st.

6. CLOSE TIME FOR SALMON.

England and Wales.

The general close time for Salmon in England and Wales is November 2nd to February 1st for rods and September 1st to February 1st for netting. The following are the exceptions:—

	Rods.	Nets.
Adur	Oct. 1 to Feb. 2	Sep. 1 to Feb. 2
Avon and Stour (Hants)	Oct. 2 to Feb. 1	July 31 to Feb. 1
Avon and Erme (Devon)	Nov. 30 to May 1	Sep. 30 to May 1
„ (in Erme)	Nov. 30 to Apr. 4	Sep. 30 to Apr. 4
Axe	Nov. 20 to Apr. 30	Sep. 20 to Apr. 30
Camel	Dec. 1 to Apr. 30	Sep. 21 to Apr. 4
Clwyd and Elwy	Nov. 15 to May 15	Sep. 15 to May 15
Conway	Nov. 15 to Apr. 30	Sep. 15 to Apr. 30
Coquet	Nov. 1 to Jan. 31	Sep. 15 to Mar. 25
Cumberland West	Nov. 14 to Mar. 10	Sep. 15 to Mar. 31
Dart	Oct. 1 to Feb. 28	Aug. 17 to Feb. 28
Dee	Nov. 2 to Mar. 31	Sep. 1 to Mar. 31
Derwent (Cumb.)	Nov. 15 to Mar 10	Sep. 15 to Mar. 10
Dovey	Nov. 1 to Apr. 30	Sep. 14 to Apr. 30
Eden (below Old Sandsfield)	Nov. 16 to Feb. 15	Sep. 10 to Feb. 10
Exe	Oct. 20 to Mar. 1	Sep. 1 to Mar. 1
„ (above Woodbury Rd. Stn.)	Oct. 20 to Mar. 1	Sep. 1 to Apr. 15
Fowey (below Lostwithiel Bridge)	Dec. 1 to Apr. 30	Nov. 1 to Apr. 4
Kent	Nov. 15 to Mar. 31	Sep. 15 to Mar. 31
Ribble	Nov. 2 to Mar. 1	Sep. 1 to Mar. 1
Severn	Oct. 16 to Feb. 1	Aug. 16 to May 1
Stour (Kent)	Nov. 2 to May 1	Sep. 1 to May 1
Taff and Ely	Nov. 15 to Apr. 30	Aug. 31 to Apr. 30
Teign	Nov. 1 to Mar. 2	Sep. 1 to Mar. 2
Usk	Nov. 2 to Mar. 1	Sep. 1 to Mar. 1
Wye	Oct. 16 to Feb.1	Aug. 16 to Feb. 1
„ (above Bigs Weir Bridge)	Oct. 16 to Feb. 1	Aug. 16 to May 1
Yorkshire	Nov. 16 to Feb. 28	—

Ireland.

The close time varies considerably in Ireland. The following gives the general times in different districts for rod fishing:—

Ballina	Sep. 16 to Jan. 31
Ballycastle	Nov. 1 to Jan. 31
Bangor	Oct. 1 to Apr. 30
Bantry	Nov. 1 to Mar. 16
Coleraine	Oct. 1 to Feb. 28
Connemara	Oct. 16 to Jan. 31
Cork	Oct. 13 to Jan. 31
Dublin	Nov. 1 to Jan. 31
Drogheda	Sep. 16 to Feb. 11
Dundalk	Oct. 1 to Jan. 31
Galway	Oct. 16 to Jan. 31
Kenmare	Nov. 1 to Mar. 31
Killarney	Nov. 1 to Mar. 31
Letterkenny	Nov. 2 to Jan. 31
Limerick	Nov 1 to Jan. 31
Lismore	Oct. 1 to Jan. 31
Londonderry	Oct. 11 to Mar. 31
Skibbereen	Nov. 1 to Jan. 31
Sligo	Oct. 1 to Jan. 31
Waterford	Oct. 1 to Jan. 31
Waterville	Oct. 16 to Jan. 31
Wexford	Oct. 1 to Mar. 14

Scotland.

The general close time for Salmon in Scotland is November 1st to February 10th for rods and August 27th to February 10th for nets. The following are the exceptions:—

	Rods.	Nets.
Annan & Stinchar	Nov. 16 to Feb. 24	Sep. 10 to Feb. 24
Beauly, Dunbeath, Lossie, Ness, Spey	Oct. 16 to Feb. 10	Aug. 27 to Feb. 10
Bervie, Carradale, Fleet, Garnock, Girvan, Howmore, Inner, Iorsa, Irvine, Laggan, Luce, Sorn, Ugie, Ythan, All rivers in Harris, Benbecula, N. Uist, Orkney	Nov. 1 to Feb. 24	Sep. 10 to Feb. 24
Earn	Nov. 1 to Jan. 31	—
Forth	Oct. 16 to Jan. 14	—
Hope & Polla	Sep. 11 to Jan. 10	—
Nith	Nov. 15 to Feb. 24	Sep. 10 to Feb. 24
Tay	Oct. 16 to Jan. 14	Aug. 21 to Feb. 4
Thurso	Sep. 15 to Jan. 10	—
Tweed	Dec. 1 to Jan. 31	—

PROFESSIONAL FEES.

ARCHITECTS' FEES.

1. A commission of 5 p.c. on cost of works executed under his direction.

2. But a higher percentage is charged in all works costing less than £1,000, and in those requiring designs for furniture, fittings, &c.

3. When several distinct buildings on the same plan are erected at the same time, the usual commission is charged on one building, and for the rest a modified charge is arranged.

4. When the work under consideration is not carried out: (1) For preliminary sketches and interviews the charge depends on the time and trouble involved. (2) For drawing out the approved design with plans, specifications, &c., 2½ p.c. on the estimated cost.

5. For approving plans submitted by the lessee and for inspecting the buildings during their progress, 1¼ p.c. up to £5,000, and above that by special arrangement.

6. For valuing freehold, copyhold or leasehold property, the charge is: 1 p.c. on £1,000; then ½ p.c. up to £10,000; and ¼ p.c. above £10,000. In valuations for mortgage, if an advance is not made, ⅓ of the above scale, with a minimum fee of 3 guineas.

7. For estimating dilapidations and furnishing or checking a schedule of the same, 5 p.c. on the estimate, with a minimum fee of 2 guineas.

8. The charge per day depends on an architect's professional position, the minimum charge being 3 guineas.

9. For all other services according to arrangement. In all cases travelling and other out-of-pocket expenses are paid by the client.

SURVEYORS' FEES.

1. For surveying an estate and preparing plan—if under 100 acres according to agreement; if over 100 acres, 2s. per acre.

2. For setting out on an estate the position of the proposed roads, taking levels, getting out drawings and tracings, &c.—2s. p.c. on estimated cost.

3. For subsequently preparing specifications and working drawings of roads and sewers, obtaining tenders, supervising the works, checking the accounts, &c.—4 p.c. on cost of work executed.

4. For valuing to fix rent—5 p.c. on first £200, and 2½ p.c. on remainder of one year's rental value.

5. For valuing timber or cropping—5 p.c. on first £100, and 2½ p.c. on the excess.

6. For valuing land—6d. per acre with 5 guineas as minimum fee. If valuing for probate—2 p.c. on first £500, and 1¼ p.c. on the excess.

7. For inspecting and reporting on the sanitary condition of premises the charge is—according to the nature and extent of the services rendered.

See also 5-9 under Architects' Fees.

DISTRICT SURVEYORS' FEES.

Before building operations are begun it is necessary to give notice to the Local Authority and to comply with its bye-laws. Several towns have their own Building Acts and Schedules of fees. In some cases no fees are charged by the Local Authority for supervision, the salaries of the officials being charged on the rates. In the County of London surveyors are appointed to the various Districts, whose duties and fees are settled by Act of Parliament as follows:—

1. ON NEW BUILDINGS: (1) For any building not exceeding 30 square feet in area and 10 feet in height—10s. (2) When not exceeding 400 square feet in area and two storeys in height—£1 10s.; for every additional storey, 5s., and for every additional 100 square feet, 2s. 6d. (3) When not exceeding 400 square feet in area and of one storey only—15s.

2. ON ADDITIONS OR ALTERATIONS: For every addition or alteration made or done to a building after the roof has been covered in, one half of the fee charged on a new building, calculation being made upon the area of the whole building.

3. ON VARIOUS WORKS. The Acts also provide for the payment of fees for various works, such as—supervising the erection of chimney shafts, temporary wooden structures, dangerous structures, formation of means of escape in case of fire, &c. Schedules of these fees will be found in the London Building Act, 1894, and Amendment Acts, 1898 and 1905.

AUCTIONEERS' AND ESTATE AGENTS' FEES.

The following are the usual fees and charges in London:—

1. Sale by Auction of Estates and Houses—a commission of 5 p.c. on the first £100, and 2½ p.c. up to £5,000, and 1¼ p.c. on the residue above that sum, and in addition all out-of-pocket expenses.

2. Sale by Private Treaty—commission as per above scale, but no out-of-pocket expenses.

3. Sale of Furniture—5 p.c. on the amount realised and expenses attending the sale.

4. Disposal of Freehold Ground Rents—one year's ground rent.

5. Letting building land—one year's rent, or by arrangement

6. Letting house property, factories, shop property, &c.—when let on agreement for not more than three years, 5 p.c. on the first year's rent; when for a longer term 7½ p.c. And, in addition, 5 p.c. up to £1,000 and 2½ p.c. on the residue upon any premium or consideration. Also, 5 p.c. on the purchase price of any plant, fixtures, fittings, &c., which may be purchased by the tenant or lessee. Where the rent is weekly, one week's rent is charged.

7. Valuation of house property—1 p.c. Valuation of furniture—5 p.c. up to £500, and 2½ p.c. on the residue. If for Probate or Administration purposes—2½ p.c. on the first £100, and 1½ on the residue.

8. Obtaining money on Mortgage—1 p.c. on the advance arranged.

9. Collection of rents: The charges vary according to the circumstances, and a special arrangement is usually made; but the usual scale of commission is 2½ p.c. on quarterly property and ground rents, 5 p.c. on monthly and weekly houses, unless let in tenements, when commission is 7½ p.c.

CHARTERED ACCOUNTANTS' FEES.

The Institute of Chartered Accountants has not prescribed any scale of charges, but the following is the usual scale in London.

1. The fee per day of 7 hours is as follows:—

Principals	£3	3	0	to	£10	10	0
First Class Clerks (Chartered)	£2	2	0				
First Class Clerks (not chartered)	£1	11	6				
Other Clerks		10	6	to	£1	1	0

These fees do not include out-of-pocket expenses.

2. The fees payable to Public Auditors appointed by the Treasury for auditing the accounts of Friendly Societies:—

When the Society consists of less than 100 members	£1	1	0
When from 100 to 500 members for each 100	£1	1	0
When over 500 in respect of the first 500 ..	£5	5	0

with an additional 10s. 6d. for each 100 (or part) beyond.
The maximum fee in any case 50 guineas.

3. For auditing the accounts of Industrial and Provident Societies:—

When total sales do not exceed £2,000 per annum	£1	1	0
When from £2,000 to £10,000, for each £2,000	£1	1	0
When over £10,000, in respect of the first £10,000	£5	5	0

With 10s. 6d. for each additional £2,000 or fractional part.
The Auditor is free to accept lower terms than the above.

MEDICAL FEES.

1. **Family Doctor.** His fees vary with the rental of the patient's house. When attended at the doctor's house—from 2s. 6d. (artisans, 1s. 6d.). When visited by the doctor—from 3s. 6d. to 10s. 6d. (artisans 2s. 6d.). When immediate attendance is requested—half as much again. The fee for night-calls is double that by day. When more than one patient is seen in the same house at one visit, half fee for each patient after the first. Visits over two miles from the doctor's house—2s. 6d. a mile extra. Detention at the patient's house per half-hour after the first half-hour—from 2s. 6d. to 10s. 6d. For medicine supplied by the doctor the usual charge is 2s. 6d. a bottle. Certificates of inability to work, etc.—from 2s. 6d. upwards. Certificates for Life Insurance or Lunacy—from one guinea. Vaccination—from 5s. upwards. Setting a broken bone and similar minor surgery—from two guineas. Midwifery, including 14 days' attendance—from one to ten guineas, two or three guineas being the common fee. First confinements—half as much again as other confinements Consultations between the family doctor and another family doctor called in—For the former double the fee for an ordinary visit; for the latter one one guinea upwards. Administration of an Anæsthetic—one guinea upwards.

2. **Consultant.** His fees are due at the time of consultation. At the Consultant's own house—from two to five guineas for a first visit; half fees for subsequent visits. At the Patient's house—an additional charge according to distance. Serious surgical operations—from ten to a hundred guineas.

SOLICITORS' FEES.

The charges which Solicitors are entitled to make are now prescribed and fixed by various Rules of Court, and their bills of costs are all liable to taxation, at the instance of any party chargeable therewith. No reliable statement can be made as to what costs are payable in respect of contentious matters in the various Courts, as they depend on the nature of the proceedings taken, the issues involved, and the fees paid to Counsel and witnesses, but all costs directed to be paid by one party to another are taxed by the Taxing Master.

The fees payable in respect of conveyancing matters have been fixed as follows :—

1. The Solicitor for a Vendor or Purchaser, or for a Mortgagor or Mortgagee, when the Consideration money does not exceed £1,000 is entitled to 1½ p.c. ; when it exceeds £1,000 but not £3,000, to a further fee of 1 p.c. on the amount above £1,000.
2. If the Solicitor himself negotiates the sale, purchase, or mortgage loan he is entitled to an additional fee of 1 p.c. up to £3,000 of the consideration money.
3. A Lessor's Solicitor for preparing and completing a lease and counterpart, at a rack rent, is entitled to charge—When the rental does not exceed £100 a fee of 7½ p.c. When the rental exceeds £100 but not £500, then a further fee of 2½ p.c. on the amount above £100.

The minimum charge in any case is £5.

4. A Lessee's Solicitor for perusing lease and completing the same is entitled to one-half of the amount payable to the Lessor's Solicitor.

N.B.—The above fees are exclusive of stamp duties and all out-of-pocket expenses. In certain districts, Solicitors who are members of a Local Law Society, or who represent certain trades or societies, accept fees on a lower scale than those given above. It may also be mentioned that Solicitors generally are prepared to give an estimate of the probable cost of any particular transaction.

HINTS TO AUTHORS.

The following hints are more particularly in reference to preparing copy for the printers, correcting proofs, etc., and much of this affects the important question of "Author's Corrections." There is no more fruitful source of annoyance and dispute than these "Author's Corrections." The charge for them is invariably considered unsatisfactory. On the one hand, authors make many more corrections than they think they do ; and on the other hand unfair charges are very often made by unscrupulous printers. It is most advisable to engage the services of a thoroughly respectable printer, even if his charges are a trifle higher than those of a less dependable firm.

The manuscript should be prepared as nearly as possible as it is intended finally to appear in print. From the printers' point of view, authors do not, as a rule, take sufficient pains in preparing the manuscript for the press, but leave a great deal to be altered when the matter is in type. This, of course, means charges for "Author's Corrections." Authors feel it is so much easier to make corrections in a printed proof than in the manuscript. This is so ; but it must be remembered that such corrections have to be paid for.

The observation of the following rules will not only materially assist the printer, but will do much to obviate the objectionable charges referred to above.

PRINTERS' TECHNICAL TERMS.

Broadside.—A sheet of paper not folded, but printed as one page the whole size of the sheet.

Composing.—Setting up the type ready for printing. The mechanic who does this is called a Compositor.

Distributing.—Breaking up the type after the printing is done and returning each type to its proper box. This takes about half as long to do as the composing.

Folio.—The number of a page. The size of a sheet of paper folded once, making two leaves or four pages.

Forme.—When the make-up is complete, a number of pages (generally sixteen or some multiple of sixteen) are brought together and *locked up* into one complete, rigid piece, ready to place on the machine. This is known as *a Forme*, and from this the actual printing is done.

Fount.—A batch of type of the same size with the proper proportions of the different letters, etc. (i.e. so many a's, so many b's, etc.).

Headline.—The top line of a page, usually containing the title of the book or chapter, and the folio.

Imposing.—Arranging the pages on the machine so that when printed and the sheet is *folded* the pages will come in proper sequence.

Imprint.—The name of the printer or publisher, or both, at the end of the publication and on the title page.

Inset.—Pages that are sometimes printed as alterations or additions, after a publication has been printed, and inserted during the binding operations.

Make-up.—When the whole of the matter for a publication has been set up into type, it has to be arranged into pages. This is called the *make-up*, and is done by the author and sent to the printer.

Octavo (8vo).—Denotes a sheet of paper folded three times, making eight leaves or sixteen pages.

Proof.—When the author's copy has been set up into type, a *proof* is printed from the type and sent to the author. This proof is corrected by the author and returned to the printer, who makes the corrections and sends a *revised proof* to the author. If necessary, this process is gone through again (there may be second and third revised proofs), but when the author is finally satisfied with the proof he marks it *press*, and this is the *press proof* from which the publication is printed from.

Quarto (4to).—Denotes a sheet of paper folded twice, making four leaves or eight pages.

Register.—The printer has to put the type for the different pages on the machine in the exact position that they should print on the sheet, and in such a way that the pages on the opposite sides of the sheet should exactly back one another. This is called the *Register*.

Set off.—Sheets that are just printed sometimes come in contact with other sheets, and the wet ink makes an impression on these other sheets. This is called a *set off*.

Signature.—A sign (usually a letter or figure) on the first page of each sheet to show the binder the sequence of the sheets.

Stet.—If any part of a manuscript or proof is struck out by mistake, the word *stet* placed against it shows that the part struck out should stand.

PREPARATION OF MSS.

The printer's charges for Author's corrections are frequently the cause of great annoyance and dispute, but if the following rules are carried out in preparing the MSS., a considerable amount, if not all, of this annoyance may be prevented.

Use Large Post Quarto or Foolscap Quarto, as this is the most convenient size of paper for the printer to work from.

Have the paper ruled with lines wide apart to allow of alterations being made distinctly : or a good plan is to have the lines rather close together, and write on every other line.

Have a wide margin on left hand side for instructions to printer, etc.

When making alterations, strike out the part to be altered and re-write above it. If a long piece is to be altered, it is well to strike out the old part and say, "See (A)," and re-write on a separate sheet, marking the new part "To go at (A), sheet...."

Number the sheets as you go along.

Write on one side of the paper only.

Do not crowd a number of lines at foot of a sheet after the last ruled line. Start a fresh sheet if only for two or three lines.

Write as plainly as possible, giving special attention to proper names, foreign words, etc., and all words that the compositor may easily mistake.

Typewritten copy is the most easily read.

Give full instructions to the printer as to type to be used, and the marks you use for his guidance (e.g. set in minion, words underlined to be in italics, those doubly underlined in clarendon). This should be put on the first sheet of every portion of copy sent. It is best to write all instructions in red ink.

Put extracts quoted from other works in the *next size* smaller type.

Remember that the compositor will follow your punctuation, use of capitals, spelling (of words that are spelt in two different ways, as almanack, etc.), unless you instruct him otherwise.

Fasten the sheets together, being careful that they are all there and in order.

Mark distinctly on the MS., or "copy," what it is for and by whom sent. Also give instructions where the proofs are to be sent when ready.

SIZES OF TYPE.

The size of a type is the depth of the type and gives the number of lines that can be got on a page. Each size, however, is made with what is known as a different "face," i.e. the letters are of different widths and therefore one style of any size of type will give more words to a line than another style of the same size.

The examples given in the opposite column are all of the same "face."

The name of a type is its size, and each size has at least three different styles; these are "Roman," "Clarendon," and "Italics," and each of these three has its Large Capitals and Small Capitals. The "Roman" is the ordinary type, the others being used to emphasize any words or sentences.

Excepting the last four, the examples given in the opposite column are "Roman," the first letter "T" being a Large Capital. The last three examples show the Roman Small Capitals, Clarendon, and Italics of minion type.

There are various styles for headings and titles, but it is better to arrange these with the printer from what he has in stock or can obtain.

The Typewriting Type is an imitation of typewriting copy and is used for Circular Letters, &c.

Printers measure the length of a line by the number of ems that the line will take. Although the types vary in width it may be taken that

4½	ems of	Great Primer	= 1 inch.
5½	„	English	= „
6	„	Pica	= „
7	„	Small Pica..	= „
8⅔	„	Long Primer	= „
9½	„	Brevier	= „
12	„	Nonpareil	= „
17½	„	Diamond	= „

It can also be reckoned that

One line of	Double Pica ..	= 2 lines of	Small Pica.
„	Great Primer ..	= „	Bourgeois.
„	English	= „	Minion.
„	Pica..	= „	Nonpareil.
„	Long Primer ..	= „	Pearl.
„	Bourgeois	= „	Diamond.

The types used in this work are Minion, Nonpareil and Pearl. There are 76 lines of Minion to the column, 90 of Nonpareil and 111 of Pearl.

Besides the ordinary or "Roman" *minion* (the type principally used in this book), we give examples of the Small Capitals, Clarendon and Italics.

DIAMOND.

The size of a type gives the number of lines that can be got on a page.

PEARL.

The size of a type gives the number of lines that can be got on a page.

NONPAREIL.

The size of a type gives the number of lines that can be got on a page.

MINION.

The size of a type gives the number of lines that can be got on a page.

BREVIER.

The size of a type gives the number of lines that can be got on a page.

BOURGEOIS.

The size of a type gives the number of lines that can be got on a page.

LONG PRIMER.

The size of a type gives the number of lines that can be got on a page.

SMALL PICA.

The size of a type gives the number of lines that can be got on a page.

PICA.

The size of a type gives the number of lines that can be got on a page.

ENGLISH.

The size of a type gives the number of lines that can be got on

GREAT PRIMER.

The size of a type gives the number of lines that ca

DOUBLE PICA.

The size of a type gives the number of

TYPEWRITING TYPE.

The size of a type gives the number of lines that can be

MINION SMALL CAPS.

THE SIZE OF A TYPE GIVES THE NUMBER OF LINES THAT CAN BE GOT ON A PAGE.

MINION CLARENDON.

The size of a type gives the number of lines that can be got on a page.

MINION ITALICS.

The size of a type gives the number of lines that can be got on a page.

HOW TO MARK A PROOF FOR CORRECTION.

1. OATMEAL is to ~~to~~ many people indigestible, very though nourishing
2. if it can be digested
3. OATMEAL water is made by placing a hanpful of oatmeal in a
4. muslin bag and allowing it to soak in a gallon of water and then boiling
5. for twenty minutes. The upper portion is then poured off gently.
6. OBESITY literally on account of eating "—is the term used to denote
7. an undue accumulation of fat in the body. the causes of obesity vary;
8. heredity is responsible in some cases, but unsuitable
9. diet in most cases. The anæmic shop-girl ~~or draper's assistant~~, whose
10. mid-day meal is tea and buns instead of meat, is often fat. Many
11. other examples will occur to the reader. OPHTHALMIA
12. flammation of the inner surface of the eyelids. (See Eye.)
13. OPIUM is the dried ~~juice~~ of the white poppy. It contains resin, and other bodies.

THE ABOVE PROOF AFTER CORRECTION.

OATMEAL is to many people indigestible, though very nourishing if it can be digested.

OATMEAL WATER is made by placing a handful of oatmeal in a muslin bag and allowing it to soak in a gallon of water for an hour and then boiling for twenty minutes. The upper portion is then poured off gently.

OBESITY, literally "on account of eating"—is the term used to denote an undue accumulation of fat in the body. The causes of obesity vary; heredity is responsible in some cases, but unsuitable diet in most cases. The anæmic shop-girl, whose mid-day meal is tea and buns instead of meat, is often fat. Many other examples will occur to the reader.

OPHTHALMIA. Inflammation of the inner surface of the eyelids. (See *Eye*.)

OPIUM is the dried juice of the white poppy. It contains morphine, codeine, resin, and other bodies.

CORRECTIONS. EXPLANATIONS OF THE CORRECTIONS.

In Copy.	In Margin.	Explanation.	See Lines
—	~~	Delete or omit the words or letters, &c., struck out	1, 8, 9, 10
=	Small Caps	Put words underlined in small capital letters	3
/	#	Divide the words	4, 7
⌊	eq	Equalize the spaces shown	5
^	^	Insert the words or letters, &c., shown in the margin	4, 6, 12
⁄	⁄	Insert inverted-commas or asterisk, &c., where shown	6
/	x	Take out bad letter and replace with good one	7
/	=	Put straight	8
for	for	Correct word or letter, &c., as shown in margin	6, 9
○	○	The full-stop is shown in a circle	11
⊂	⊂	Close up	10
/	wf	Wrong fount, i.e. a wrong-sized type is used and must be altered	10
⊏	⊏	Bring the word or letter, &c., to where shown	11
⌊	tr	Transpose	1
=	○	Reverse letter	3
=	e.c.	Lower case, i.e., use small letters, not capitals	5
/	?Space	See if there is too much (or too little) space between these lines	5, 6, 10, 11
—	Cap	Letter underlined should be a capital	7
—	Clar	Put words underlined in clarendon type	7
⌒	run on	Continue in the same line	8, 9
//	N.P.	This word should start a new paragraph	11
.....	Italics	Put words underlined in italics	12
	stet	Do not omit the parts struck out	13

When the ends of the lines are uneven, draw lines as shown on right hand margin.

If there is not room opposite the line, in the margin, a correction can be put anywhere, but a line must be drawn from the error to the correction . . . 13

SIGNS AND SYMBOLS.

Roman Numerals.

There can be little doubt that in the earliest times the fingers were used for expressing numbers, and hence arose the custom of using 5 and 10 and their multiples as convenient groups.

Thus the Romans used V. for 5; X. for 10; C. for 100; and M. for 1,000. The thousand is also expressed by a line over a numeral (thus $\overline{X}$.=10,000), and CIↃ. It is not clearly known why capital letters were used as the numerals; C. is the initial of centum and M. of mille, but earlier forms are known. These were a circle divided vertically—⏀—for 1,000 and horizontally or in quadrants —⊖—⊕—for 100. The sign for 1,000=⏀ is really the same as CIↃ which, no doubt, easily became M. The half of this sign gives D (500). L (50), in its older form ⊤ suggests that it is the half of the symbol for 100—⊕.

When a sign is followed by others of equal or less value, the number expressed is the sum of those numerals (xvi.= 16); and when a sign is preceded by another of less value, the number expressed is the difference between the values of the numerals (XL=40). The following table gives a number of examples.

I. . 1	XVI. . . 16	C. 100	
II. . 2	XVII. . . 17	CXC. 190	
III. . 3	XVIII. . . 18	CXI. 111	
IV. . 4	XIX. . . . 19	CC. 200	
V. . 5	XX. . . . 20	CCXXII. 222	
VI. . 6	XXX. . . 30	CCCLXXXVI. . . 386	
VII. . 7	XL. . . . 40	CD. 400	
VIII. . 8	L. 50	D. 500	
IX. . 9	LV. . . . 55	DC. 600	
X. 10	LX. . . . 60	DCCC. 800	
XI. 11	LXX. . . 70	DCCCLXXXVIII. . 888	
XII. 12	LXXX. . . 80	CM. 900	
XIII. 13	LXXXVIII. 88	CMXCIX. 999	
XIV. 14	XC. . . . 90	M. 1000	
XV. 15	XCIX. . . 99	MDCCCLXXXVIII. 1888	

Signs of the Zodiac.

♈	Aries, the Ram.	♏	Scorpio, the Scorpion.
♉	Taurus, the Bull.	♐	Sagittarius, the Archer.
♊	Gemini, the Twins.	♑	Capricornus, the Goat.
♋	Cancer, the Crab.	♒	Aquarius, the Water-bearer.
♌	Leo, the Lion.	♓	Pisces, the Fishes.
♍	Virgo, the Virgin.		
♎	Libra, the Balance.		

Solar System.

☿	Mercury.	☄	Comet.
♀	Venus.	✳	Star.
⊕	The Earth.	●	The Moon (New).
♂	Mars.	☽	The Moon (First Quarter).
♃	Jupiter.	○	The Moon (Full).
♄	Saturn.	☾	The Moon (Last Quarter).
♅	Uranus.		
♆	Neptune.		
☉	The Sun.		

Chemical Elements.

A	Argon.	Ce	Cerium.
Ag	Silver (Argentum).	Cl	Chlorine.
Al	Aluminium.	Co	Cobalt.
As	Arsenic.	Cr	Chromium.
Au	Gold (Aurum).	Cs	Cæsium.
B	Boron.	Cu	Copper (Cuprum).
Ba	Barium.	Di	Didymium.
Be	Beryllium.	Er	Erbium.
Bi	Bismuth.	Fe	Iron (Ferrum).
Br	Bromine.	F	Fluorine.
C	Carbon.	Ga	Gallium.
Ca	Calcium.	Gd	Gadolinium.
Cb	Columbium.	Ge	Germanium.
Cd	Cadmium.	Gl	Glucinum.

Chemical Elements (*continued*).

H	Hydrogen.	Ra	Radium.
He	Helium.	Rb	Rubidium.
Hg	Mercury (Hydrargyrum).	Rh	Rhodium.
		Ru	Ruthenium.
I	Iodine.	S	Sulphur.
In	Indium.	Sb	Antimony (Stibium).
Ir	Iridium.	Sc	Scandium.
K	Potassium (Kalium).	Se	Selenium.
Kr	Krypton.	Si	Silicon.
La	Lanthanum.	Sm	Samarium.
Li	Lithium.	Sn	Tin (Stannum).
Mg	Magnesium.	Sr	Strontium.
Mn	Manganese.	Ta	Tantalum.
Mo	Molybdenum.	Tb	Terbium.
N	Nitrogen.	Te	Tellurium.
Na	Sodium (Natrium).	Th	Thorium.
Nb	Niobium.	Ti	Titanium.
Nd	Neodymium.	Tl	Thallium.
Ne	Neon.	Tm	Thulium.
Ni	Nickel.	U	Uranium.
O	Oxygen.	V	Vanadium.
Os	Osmium.	W	Tungsten (Wolfram).
P	Phosphorus.	Xe	Xenon.
Pb	Lead (Plumbum).	Yb	Ytterbium.
Pd	Palladium.	Yt	Yttrium.
Pr	Prascodymium.	Zn	Zinc.
Pt	Platinum.	Zr	Zirconium.

Mathematical, Commercial, &c.

+	Plus, the sign of addition.
—	Minus, the sign of subtraction.
×	The sign of multiplication.
÷	The sign of division.
:	Is to } The signs of proportion. Thus 3 : 6 : : 4 : 8.
::	As }
:	Is to }
∵	Because.
∴	Therefore.
=	Equals, the sign of equality.
>	Greater than.
<	Less than.
√	Square Root.
∛	Cube Root. ∜ Fourth Root. ⁵√ Fifth Root, etc.
( ) [ ] { }	Indicate that the figures enclosed are to be taken together. Thus $10 \times (7 + 4)$; $8 - [9 \div 3]$; $30 \times \{\frac{7+3}{4-2}\}$.
° ′ ″	Degrees, minutes, seconds. Thus 25° 15′ 10″ represents 25 degrees, 15 minutes, 10 seconds.
′ ″	Feet, inches. Thus 9′ 10″=9 feet 10 inches.
∞	Infinity.
⊥	Perpendicular to.
∥	Parallel to.
◯	Circle.
∠	Angle.
∟	Right-angle.
□	Square.
▭	Rectangle.
△	Triangle.
0	The cipher, zero.
£	Pounds sterling.
$	Dollars.
%	Per cent.
c/o	Care of.
d/a	Days after acceptance.
d/s	Days after sight.
a/c	Account.
@	At.

℈ Scruple.	Apothecaries' weight.
ʒ Drachm.	
℥ Ounce.	

OLD CHINA.

SECTION I.

Hard Paste



Porcelain was made in China from very early times; in 1171, forty pieces were sent by Saladin to the Sultan of Damascus. In the 16th century it was imported by European merchants, first by the Portuguese, later by the Dutch and English. In 1695 St. Cloud succeeded in its manufacture of a glassy porcelain, but Böttger of Dresden in 1709 made the discovery of true porcelain. Meissen, in Saxony, secured the secret of its manufacture, but failed to keep it, and factories arose at Vienna, Höchst, Fürstenberg, Berlin, Frankenthal, and other places. In England, Dwight of Fulham, 1745, claimed to have discovered the mystery of transparent earthenware, and about 1750 there were in existence a number of factories, the earliest approximate dates being Bow 1730, Chelsea 1745, Derby and Worcester 1751, Plymouth 1768, Bristol 1770.

Porcelain is divided into two classes, according to its composition.

The whole of the marks given in the list down to the Bristol marks (Section 2, Line 1, mark *d*) are found on **true** or **hard porcelain** which is made of china stone and china clay and its glaze is of china stone. The body and glaze are fired at one time, so the glaze is hard, thin and lies close to the paste. When tried with a knife it will turn the edge and even a file makes but little impression. The colours on hard paste are clear, dry and well-defined and when fractured it is like a broken shell.

The other marks from Bow (Section 2, Line 1, mark *e*) to the end are found on **artificial** or **soft paste porcelain** which is composed largely of glass or fritted china with a little white clay and its glaze is a fusible glass which was fired at a later operation and at a lower temperature, so that it lies more thickly on the paste and often shows cracks. The paste is so soft that it can be easily scratched. The colours on soft paste sink into the body and the edges of the colours are not clear, but look as if the colour ran. Hence gilding is often used to hide the colour outline. When broken it is granular, like chalk, but harder.

The collector must use his judgment on the paste, the glaze, the decoration, and the marks. He must discount idle tales, and, when buying important or costly pieces, should obtain a written guarantee from the seller.

KEY TO MARKS.

TRUE OR HARD PASTE.

Section I. **CHINA.**

Line 1.—Seal characters. *a.* 1723; *b.* 1796; *c.* 1821; *d.* 1851.

Line 2.—Symbols. *a.* leaf; *b.* fungus; *c.* peach and bat; *d.* two fishes; *e.* lozenge.

Line 3.—Date marks. *a.* 1721; *b.* 1796; *c.* 1862; *d.* the Pakwa.

JAPAN.

Line 4.—*a.* prosperity; *b.* gold; *c.* felicity; *d.* happiness; *e.* the swastika.

GERMANY.

Line 5.—*a.* Meissen (Böttcher), Dresden; *b.* Augustus Rex; *c, d, e.* Dresden (with star Marcolini); *f.* Dresden 1730.

Line 6.—*a.* Dresden without defect; *b.* with defects; *c.* Fürstenburg; *d.* Hochst; *e.* Höchst; *f.* Hesse-Darmstadt; *g.* Fulda; *h.* Gotha.

Line 7.—*a.* Rudolstadt 1758; *b.* Ludwigsburg 1758; *c.* Ludwigsburg; *d.* Hildesheim 1760; *e.* Nymphenburg 1758; *f.* Frankenthal.

Line 8.—*a.* Frankenthal—Carl Theodore period; *b.* Anspach 1718; *c, d, e.* Berlin 1750.

Line 13.—*a, b.* The old Strasburg marks.

AUSTRIA.

Line 8.—*f.* Schlakenwald.

Line 9.—*a.* Vienna 1718.

HOLLAND.

ine 9.—*b.* Weesp 1756; *c, d.* Amsterdam; *e.* the Hague.

BELGIUM.

ine 10.—*a, b, c.* Brussels 1780; *d, e, f, g.* Luxemburg.

SWITZERLAND.

ine 11.—*a.* Zurich 1760; *b.* Nyon.

DENMARK.

ine 11.—*c, d.* Copenhagen 1772.

PORTUGAL.

ine 11.—*e.* Vista Allegre.

ITALY.

ine 11.—*f.* Vineuf.

RUSSIA.

ine 12.—*a, b, c, d.* St. Petersburg; *e.* Moscow, so called; *f, g.* Moscow (A. Popoff).

FRANCE.

ine 13.—*c.* Brancas Lauraguais; *d.* Orleans 1764; *e.* Marseilles; *f, g.* Niederville (Count Custine).

ine 14.—*a.* Bordeaux; *b, c, d, e.* Sèvres (*c.* soft paste too).

ine 15.—*a.* Limoges 1773; *b.* Clignancourt; *c.* Rue Thiroux, Paris; *d.* Rue de Bondy, Paris (Angoulême); *e.* Lille 1784; *f.* Belleville (J. Petit).

ction II. **ENGLAND.**

ine 1.—*a.* Plymouth 1768; *b, c, d.* Bristol 1770.

ARTIFICIAL OR SOFT PASTE.

ENGLAND AND WALES.

ne 1.—*e, f.* Bow 1730.

ne 2.—Chelsea marks from 1745.

ne 3—*a, b.* Chelsea—Derby 1769; *c, d, e.* Crown Derby (*e.* 1797); *f. g.* Derby.

ne 4.—Worcester 1751. *a.* three early marks; *b.* square mark; *d.* Richard Holdship transfer-printer; *c, e, f, g.* imitated from Dresden, Oriental, Sèvres, Chantilly.

ne 5.—Worcester, the Flight and Barr marks.

ne 6.—*a.* Chamberlain's Worcester; *b.* Caughley 1772; *c.* Salopian; *d.* Caughley, imitated from Dresden.

ne 7.—Caughley. *a.* decorated number; *b.* on early printed ware; *c.* Rose's mark; *d.* Coalport; *e.* Colebrook Dale 1772.

ne 8.—*a.* Colebrook Dale; *b.* Monogram—Swansea, Caughley, Nantgarw 1820; *c.* Newhall 1777; *d, e, f.* Pinxton 1793.

ne 9.—*a, b, c.* Minton 1791; *d.* Spode 1800; *e, f.* Copeland 1833.

ne 10.—*a.* Swansea 1780; *b.* Swansea; *c.* Nantgarw 1813; *d.* Liverpool.

ne 11.—*a.* Wedgwood; *b.* Longton (Meyer and Newbold); *c.* Leeds; *d.* Lane End (Turner). (These four made earthenware).

FRANCE.

ne 12.—*a.* Paris (Poterat); *b.* St. Cloud 1702; *c.* St. Cloud (Trou); *d.* Lille; *e.* Chantilly 1803; *f.* Menecoy—Villeroy 1735.

ne 13.—*a, b.* Vincennes 1740; *c.* Sèvres 1756; *d, e.* Sceaux; *f.* Orleans.

ne 14.—*a, b.* Arras; *c, d, e.* Tournay.

SWEDEN.

ne 14.—Marieberg.

ITALY.

ne 15.—*a, b.* Doccia; *c.* Le Nove; *d, e.* Venice.

ne 16.—*a.* Venice; *b, c, d.* Capo di Monte; *e, f.* Capo di Monte, Naples.

SPAIN.

ne 17.—*a, b, c, d, e.* Buen Retiro, Madrid which also used 16*c*.

SECTION II.



MOTOR CARS AND MOTOR CYCLES.

A Motor Car or Cycle must not be driven on a public highway at a speed exceeding twenty miles per hour.

No person must drive a Motor who is not licensed to do so; and no one may be licensed to drive a motor car under 17 years of age, or a motor cycle under 14.

In case of an accident, the Motorist is bound to stop, and give his name and address if required.

A Car can be registered under any Authority, but a Driver's Licence must be taken in the district in which the driver resides. Lamps must be alight from one hour after sunset until one hour before sunrise.

Each Car must exhibit the distinguishing letters of the Authority registered under and the number allotted to the Car by the Authority on both the front and rear of the car.

The Registration Letters are:—

A.	London.	C.J.	Herefordshire.	E.X.	Great Yarmouth.	L.I.	Westmeath.
A.A.	Hampshire.	C.K.	Preston.	E.Y.	Anglesey.	L.N.	London.
A.B.	Worcestershire.	C.L.	Norwich.	F.	Essex.	L.S.	Selkirkshire.
A.C.	Warwickshire.	C.M.	Birkenhead.	F.A.	Burton-upon-Trent.	M.	Cheshire.
A.D.	Gloucestershire.	C.N.	Gateshead.	F.B.	Bath.	M.I.	Co. Wexford.
A.E.	Bristol.	C.O.	Plymouth.	F.C.	Oxford.	M.S.	Stirlingshire.
A.F.	Cornwall.	C.P.	Halifax.	F.D.	Dudley.	N.	Manchester.
A.H.	Norfolk.	C.R.	Southampton.	F.E.	Lincoln.	N.H.	Northampton.
A.I.	Meath.	C.T.	Lincolnshire (Kesteven).	F.F.	Merionethshire.	N.I.	Co. Wicklow.
A.J.	Yorkshire (N. Riding)	C.U.	South Shields.	F.H.	Gloucester.	N.S.	Sutherland.
A.K.	Bradford.	C.W.	Burnley.	F.I.	Tipperary (N.Riding)	O	Birmingham.
A.L.	Nottinghamshire.	C.X.	Huddersfield.	F.J	Exeter.	O.I.	Belfast.
A.M.	Wiltshire.	C.Y.	Swansea.	F.K.	Worcester.	O.S.	Wigtownshire.
A.N.	West Ham.	D.	Kent.	F.L.	Soke of Peterboro'.	P.	Surrey.
A.O.	Cumberland.	D.A.	Wolverhampton.	F.M	Chester.	P.I.	Cork.
A.P.	East Sussex.	D.B.	Stockport.	F.N.	Canterbury.	P.S.	Shetland.
A.R.	Hertfordshire.	D.C.	Middlesborough.	F.O.	Radnorshire.	R.	Derbyshire.
A.S.	Nairnshire.	D.E.	Pembrokeshire.	F.P.	Rutland.	R.I.	Dublin.
A.T.	Kingston-upon-Hull.	D.H.	Walsall.	F.R.	Blackpool.	R.S.	Aberdeen.
A.U.	Nottingham.	D.I.	Co. Roscommon.	F.T.	Tynemouth.	S.	Edinburgh.
A.W.	Shropshire.	D.J.	St. Helens.	F.X.	Dorsetshire.	S.A.	Aberdeenshire.
A.X.	Monmouthshire.	D.K.	Rochdale.	F.Y.	Southport.	S.B.	Argyllshire.
A.Y.	Leicestershire.	D.L.	Isle of Wight.	G.	Glasgow.	S.D.	Ayrshire.
B.	Lancashire.	D.M.	Flintshire.	H.	Middlesex.	S.E.	Banffshire.
B.A.	Salford.	D.N.	York.	H.I.	Tipperary (S.Riding)	S.H.	Berwickshire.
B.B.	Newcastle-on-Tyne.	D.O	Lincolnshire (Holland).	H.S.	Renfrewshire.	S.J.	Bute.
B.C.	Leicester.	D.P.	Reading.	I.A.	Co. Antrim.	S.K.	Caithness.
B.D.	Northamptonshire.	D.R.	Devonport.	I.B.	Co. Armagh.	S.L.	Clackmannanshire.
B.E.	Lincolnshire (Lindsey).	D.S.	Peebles.	I.C.	Co. Carlow.	S.M.	Dumfriesshire.
B.H.	Buckinghamshire.	D.U.	Coventry.	I.D.	Co. Cavan.	S.N.	Dumbartonshire.
B.I.	Co. Monaghan.	D.W.	Newport (Mon.).	I.E.	Co. Clare.	S.O.	Elginshire.
B.J.	East Suffolk.	D.X.	Ipswich.	I.F.	Co. Cork.	S.P.	Fifeshire.
B.K.	Portsmouth.	D.Y.	Hastings.	I.H.	Co. Donegal.	S.R.	Forfarshire.
B.L.	Berkshire.	E.	Staffordshire.	I.J.	Co. Down.	S.S.	Haddingtonshire.
B.M.	Bedfordshire.	E.A.	West Bromwich.	I.K.	Co. Dublin.	S.T.	Invernessshire.
B.N.	Bolton.	E.B.	Isle of Ely.	I.L.	Fermanagh.	S.U.	Kincardine.
B.O.	Cardiff.	E.C.	Westmoreland.	I.M.	Co. Galway.	S.V.	Kinrossshire.
B.P.	West Sussex.	E.D.	Warrington.	I.N.	Kerry.	S.W.	Kircudbrightshire.
B.R.	Sunderland.	E.E.	Grimsby.	I O.	Co. Kildare.	S.X.	Linlithgowshire.
B.S.	Orkney.	E.F.	West Hartlepool.	I.P.	Co. Kilkenny.	S.Y.	Midlothian.
B.T.	Yorkshire (E.Riding)	E.H.	Hanley.	I.R.	King's Co.	T.	Devonshire.
B.U.	Oldham.	E.I.	Co. Sligo.	I.T.	Co. Leitrim.	T.I.	Limerick.
B.W	Oxfordshire.	E.J.	Cardiganshire.	I.U.	Co. Limerick.	T.S.	Dundee.
B.X.	Carmarthenshire.	E.K.	Wigan.	I.W.	Co. Londonderry.	U.	Leeds.
B.Y.	Croydon.	E.L.	Bournemouth.	I.X.	Co. Longford.	U.I.	Londonderry.
C.	Yorkshire (W.Riding)	E.M.	Bootle.	I.Y.	Co. Louth.	U.S.	Govan.
C.A.	Denbighshire.	E.N.	Bury.	I.Z.	Mayo.	V.	Lanarkshire.
C.B.	Blackburn.	E.O.	Barrow-in-Furness.	J	Durham.	V.S.	Greenock.
C.C.	Carnarvonshire.	E.P.	Montgomeryshire.	J.I.	Tyrone.	W.	Sheffield.
C.D.	Brighton.	E.S.	Perthshire.	J.S.	Ross and Cromarty.	W.I.	Waterford.
C.E.	Cambridgeshire.	E.T.	Rotherham.	K.	Liverpool.	W.S.	Leith.
C.F.	West Suffolk.	E.U.	Brecknockshire.	K.I.	Co. Waterford.	X.	Northumberland.
C.H.	Derby.	E.W.	Huntingdonshire.	K.S.	Roxburgh.	X.S.	Paisley.
C.I.	Queen's County.			L.	Glamorganshire.	Y.	Somersetshire.
				L.C.	London.	Y.S.	Partick.

SPEED LIMITS. In no case must the speed on a highway exceed 20 miles an hour, and in certain specified places 10 miles an hour. The penalty for a first offence is a fine not exceeding £20, and for a subsequent offence a fine not exceeding £50. Similarly, any person driving a car to the public danger, but in the latter case imprisonment not exceeding three months may be inflicted instead of a fine after the first offence.

MOTOR SIGN POSTS. (1) A white circle—speed limit given on plate below. (2) A red circle means road closed to motorists. (3) A red triangle means caution. (4) A diamond-shaped board for any other notice.

REGISTRATION FEES. For registration of a car £1; for registering a change of ownership 5s. For registration of a motor cycle 5s.; for registering a change of ownership 1s. For licence to drive a motor car 5s. (For **Excise Duties** see p. 555).

AN ENGLISH DICTIONARY.

[This Dictionary contains a selection of words in Current Literature, of whose meaning or spelling the ordinary reader may be in doubt, as well as Scientific and Technical Terms in common use. To make the most of our space we have, as a rule, given only one form of each word and only the meaning which it most commonly bears. Words which present no difficulty either in meaning or spelling have been omitted. It is obvious that an Abridged Dictionary cannot supersede altogether the use of a complete one, but it is hoped that by the careful selection of the 14,000 words here given it may meet all ordinary requirements.]

Abaft, on or towards the stern of a ship.
Abandon, to desert, forsake; recklessness.
A bas, down, down with.
Abash, to put to shame.
Abate, to lessen.
Abattoir, a public slaughter-house.
Abbot *m.*, **Abbess** *f.*, the head of an abbey.
Abbacy, the dignity and office of an abbot.
Abbreviate, to shorten.
Abdicate, to withdraw from, vacate.
Abdo'men, see *Med. Dict.*
Abduct, to draw away by force or otherwise.
Abeam, crosswise of a ship.
Aberration, wandering from the true course, mental distraction.
Abet, to side with, aid.
Abettor, one who abets.
Abeyance, state of waiting or suspension.
Abhorrence, extreme aversion and disgust.
Abib, first month of Jewish ecclesiastical year.
Ab initio, from the beginning.
Abiogenesis, life from matter that is *supposed* to be wholly void of life.
Ab'ject, mean, low, grovelling.
Abjure, solemnly to renounce or retract.
Ablution, purification, religious cleansing.
Abnegate, to disavow, repudiate.
Abnormal, not according to rule.
Abolish, to destroy, annul.
Abominate, to loathe, hate strongly.
Aborigines, original inhabitants.
Abortion, see "Miscarriage," *Med. Dict.*
Ab ovo, "from the egg," from the very beginning.
Abrasion, a wearing off by rubbing.
Abridge, to shorten, make a summary of.
Abridgment, the act of abridging.
Abrogate, to repeal, annul.
Abrupt', short and sudden, unceremonious.
Abscess, a collection of pus or matter.
Abscind, to cut off.
Abscission, a cutting off.
Abscond, to decamp, make off.
Absence, not being present.
Absentee'ism, the practice of absenting one's self from one's post, estate or land.
Absinthe, an unwholesome French drink.
Absolute, without limitation.
Absolution, the act of absolving.
Absolve, remit sin, release from some obligation.
Absorbent, capable of sucking up.
Absorption, a sucking up, preoccupation.
Abstemious, sparing in eating and drinking.
Absterge, to wipe off.
Abstract, to take away; an epitome.
Abstruse, hard to understand.
Abyss, an immeasurably deep gulf.
Abysmal, like an abyss.
Abyssinian, a native of Abyssinia.
Academy, a place of learning; a society for promoting the arts and sciences.
Academ'ic, belonging to an academy; said of a debate that has no practical result.
Academician, a member of an academy.
Acantha, prickle, thorn, spine.
Acarpous, without fruit, sterile.
Accede, to agree to some proposal.
Accelerate, to quicken, increase the speed.
Accentuate, to speak with the accents well marked: to emphasize.
Acceptance, act of receiving graciously.
Access, way of drawing near.
Accessible, admitting of approach.
Accessory, helping to gain some end.
Ac'cidence, that part of grammar which deals with inflexions.
Acclaim, to salute with shouts of joy.
Acclamation, hearty applause.
Acclimatize, to render capable of living in a particular climate; adapt.
Acclivity, an upward slope.
Accolade, a ceremony used in making a knight.
Accommodate, to supply something to meet another's convenience; to adapt.
Accompanist, one who plays an instrument in support of the chief performer.
Accompaniment, the part played by an accompanist.
Accomplice, a partner in some secret or wrong doing.
Accompt, an account.
Accordion, a musical instrument.
Accou'cheur, a surgeon who aids in childbirth.
Accoutre, to equip for battle.
Accredit, to give authority to a person sent on a mission.
Accretion, the part added by growth or other means of increase.
Accrue, to arise, result from.
Accumulate, to heap together, amass.
Ac'curacy, exactness.
Accursed, lying under a curse.
Aceph'ala, animals that seem headless, like an oyster.
Acerbity, sourness, bitterness.
Acet'ic, sour, like vinegar.
Ache, pain.
A cheval, on horseback.
Achieve, to accomplish.
Achromatic, free from colour.
Acidity, sourness, tartness.
Acme, the highest point.
Acne, see *Med. Dict.*
Acolyte, one who waits on a priest in performing his offices.
Aconite, a poisonous plant.
Acoustic, relating to the sense of hearing.
Acquiesce, to assent quietly without raising any positive objection.
Acquiescence, the giving a quiet assent.
Acquire, to gain, obtain.
Acquisition, the thing gained.
Acquisitive, being prone to acquire.
Acquittal, a release from the charge of guilt.
Acquittance, a setting free from a debt; the writing in which the release is conveyed.
Acre, an area containing 4840 square yards.
Acridity, a biting sharpness of taste or temper.
Ac'rimony, the same as acridity.
Acrisia, a diseased state in which the power of judgment is wanting.
Acrobat, a performer in vaulting, rope-dancing, &c.
Acrolith, a statue having the ends only of stone.
Acrop'olis, a citadel, the citadel of Athens.
Acrostic, a stanza, the first, or certain other, letters of whose lines form a word.
Actinia, a polyp, such as the sea-anemone.
Actinic, having the property of actinism.
Actinism, that property of the sun's rays which produces chemical effects, as in photography.
Actinom'eter, an instrument for finding the degree of activity of the actinic rays.
Actinozo'a, a class of zoophytes, including sea-anemones and coral polyps.
Actuality, the state of being real.
Actually, in very deed.
Actuary, an expert in calculations; a registrar.
Actuate, to induce action.
Acu'leated, having prickles or a sting.
Acu'men, keenness of mind.
Acupressure, see *Med. Dict.*
Adage, an old saying.
Adagio, slowly, gravely.
Adamant, anything extremely hard.
Adamantean, adamantine, extremely hard.
Adaptability, quality of being able to be adapted or fitted for a certain purpose.
Adar, the sixth month of Jewish civil year.
Addendum (*pl.* addenda), what is appended.
Addicted, prone (to).
Adduce, to bring forward as an instance.
Adept, one well versed in any art.
Adequate, sufficient for a particular purpose.
Ad'equacy, the state of being adequate.
Adhere, to stick together.
Adhesive, sticky.
Adieu, good-bye.
Adipose, fat or fatty.
Adit, a passage.
Adjacent, lying near.
Adjecti'val, like an adjective.
Adjourn, to put off to another day.
Adjudicate, to adjudge, award.
Ad'junct, something joined to a thing, but not forming an essential part of it.
Adjure, to charge solemnly.
Adjust, to adapt, set right.
Ad'jutant, a military officer of high rank.
Ad'jutancy, the office of an adjutant.
Adju'tor, a fellow-helper.
Administer, to direct or control the execution of laws, orders, rules, &c.
Administrative, the act of administering; a body of men who administer.
Ad'miralty, a body of men who have supreme control in the management of the navy.
Ad'mirable, worthy of admiration.
Admissible, able to be admitted or allowed.
Admittance, permission to enter.
Admonish, to warn, caution.
Admonitory, serving to admonish.
Adnascent, growing to something else.
Ad nauseam, to satiety or disgust.
Adnominal, adjectival.
Adobe, a sun-dried brick.
Adolescence, the growing time of life.
Adolescent, growing from the child into the adult.
Adopt, to regard as one's own.
Adoration, paying honour as to a divine being.
Adosculation, the impregnation of plants or animals by outward connection only.
Adrift, floating about aimlessly.
Adroit, expert, dexterous.
Adscript, one attached to an estate as a serf.
Adstriction, a close binding.
Adularia, a very fine variety of felspar.
Adulation, servile flattery.
Adulterate, to debase by mixing inferior materials.
Adultery, a breaking of the marriage-vow.
Adulterer *m.*, **Adulteress** *f.*, one who commits adultery.
Adum'brate, to shadow forth.
Aduncous, bent like a hook.
Adust, parched up, looking scorched.
Ad valo'rem, according to value.
Advanta'geous, beneficial.
Advent, arrival, coming, approach.

Adventitious, acquired accidentally.
Adventurer *m.*, **Adventuress** *f.*, one who undertakes a risky enterprise; one who sails under false colours.
Adverbially, in the manner of an adverb.
Ad'versary, an opponent, enemy.
Adversative, implying opposition.
Ad'verse, acting directly against.
Adversity, calamity, distress.
Advert, to turn the mind or attention (to).
Advertency, attention, careful regard.
Adver'tisement, warning, public notice.
Advise, to give advice; acquaint.
Advisedly, deliberately, designedly.
Advisable, expedient, wise to be done.
Advisory, having the right to advise.
Advocate, one who pleads for another.
Ad'vocacy, pleading for another.
Advow'son, the right to appoint to a benefice.
Ad'ytum, inmost sanctuary.
Adze, a kind of axe.
Ægis, originally the shield of Jupiter, now used for anything that shields.
Ægro'tat, a medical certificate in proof of illness.
Æon, same as Eon.
Æpyornis, a bird of Madagascar, now extinct.
Aerate, to charge with carbonic acid gas, &c.
Aerial, relating to the air.
Aerie or **eyrie,** nest of an eagle or other bird of prey.
Aero-dynamics, the science which treats of the force of air in motion.
Aerolite, a meteoric stone.
Aerology, the science of the atmosphere.
Aeromancy, foretelling by means of atmospheric appearances.
Aerom'eter, the instrument for measuring the weight of air.
Aeronaut, a balloonist.
Aerophyte, a plant that lives wholly on air.
Aerostat, a flying machine; a balloonist.
Æruginous, like verdigris or copper rust.
Æsculapian, relating to Æsculapius the god of healing.
Æsthetics, the science of correct taste.
Æstivation or **estivation,** the way in which petals in flower-buds are folded.
Ætat, aged.
Æther, see *ether.*
Af'fable, sociable, easy of approach.
Affect, to have an effect upon; assume or pretend.
Affectation, assuming an unnatural manner, pretence.
Af'ferent, carrying to, said of nerves that transmit sensations to nerve centres.
Affi'ance, to betroth.
Affidavit, a written declaration on oath.
Affiliate, to assign the paternity of a child; attach a minor society to one more important.
Affinity, relationship by marriage, mutual attraction.
Affirm, to assert, make a formal statement.
Affix, an addition to the stem of a word.
Affla'tus, divine or poetical inspiration.
Affliction, sorrow, grief.
Af'fluence, wealth, abundance.
Afflux, that which flows towards, addition.
Afforest, to convert land into forest.
Affran'chise, to make free.
Affray, a noisy quarrel, brawl.
Affront, open insult.
Africander, offspring of white parents in South Africa.
Aft, behind, near or toward the stern.
After-damp, poisonous gas found in coal-mines after an explosion.
After-math, a second crop of grass.
Agendum (*pl.* agenda), thing to be done.
Agglomeration, a heap, a mass.
Agglutinate, to make to adhere.
Ag'grandize, to cause to increase in wealth or power.
Aggravate, to intensify, irritate, provoke.
Aggregate, sum total, whole amount.
Aggression, unprovoked attack, breach of peace.
Aggrieve, to annoy, injure, distress.
Aghast, dumb with horror.
Agile, active, nimble.
Agio, the difference between real and nominal value of money.
Agitation, perturbation, excitement.
Aglet or **Aiglet,** the tag of a lace.
Agnail, a growth beside a nail.
Agnostic, one who disclaims knowledge of anything beyond material phenomena.
Agog, eager, stirring.
Agony, anguish, intense suffering.
Agora, a market place, place of assembly.
Agrarian, relating to land.
Agreeable, pleasant, suitable.
Agriculture, cultivation of the soil.
Ague, an intermittent fever attended with fits of shivering.
Aide-de-camp (*pl.* aides-de-camp), officer who attends a general on the field and acts as his messenger.
Aigret or **egret,** a small white heron; a plume of feathers.
Aiguille, a sharp needle-shaped peak of rock.
Air-brake, a brake worked by means of compressed air.
Air-engine, an engine worked by means of heated air.
Air-gun, a gun whose charge is propelled by means of compressed air.
Air-pump, a machine for exhausting the air from a vessel.
Aisle, part of a church on either side of the nave.
Ait or **eyot,** small island in a river.
Akimbo, having the elbows bent outward and the hands resting on the hips.
A la carte, according to the bill of fare.
A la mode, according to the fashion.
Alabaster, a semi-transparent mineral used in making ornaments.
Alacrity, briskness, readiness.
Alarum, a clock for giving an alarm at a fixed time.
Alastor, fate, destiny.
Alb, a white linen vestment worn under the chasuble.
Albanian, native of Albania.
Albatross, a large web-footed sea-bird.
Albinism, state of being an albino.
Albi'no, one whose skin and hair are abnormally white, and whose eyes have pink pupils.
Albu'men, white of egg.
Alchemy, an early form of chemistry aiming at the transmutation of metals into gold.
Alcohol, the intoxicating element in fermented liquors.
Alcoran, see *Koran.*
Alcove, a recess.
Alembic, a vessel used for purpose of distilling.
Alert, watchful, ready.
Alexandrine, a line of poetry consisting of six iambic feet.
Al fresco, in the open air.
Al'gebra, a method of calculation in which letters are used as symbols to represent quantities.
Alhambra, the famous palace of the Moorish Kings of Granada.
Alias, otherwise; an assumed name.
Alibi, a plea that the accused was elsewhere when the crime was committed.
Alien, a stranger, a foreigner.
Alienate, to transfer to another, estrange.
Alignment, a laying out by line.
Aliment, food or nourishment.
Alimony, provision for the maintenance of a wife living apart from her husband.
Aliquot, any part of a number that is contained in it an exact number of times.
Al'kali, a substance which combines with an acid to form a salt.
Alkaloid, a substance resembling an alkali.
Allah, an Arabic name for God.
Allay, to alleviate, assuage.
Allegation, assertion.
Allegiance, loyalty or fidelity to a superior.
Al'legory, a story with a hidden meaning.
Alle'gro, a quick movement in music.
Alleluiah or **hallelula,** "Praise be to God."
Alleviate, to lighten, relieve, allay.
All-hallows, All Saints' Day.
Alliance, union, confederation.
Alligation, a rule in arithmetic.
Alligator, kind of crocodile.
Alliteration, recurrence of the same letter at beginning of words or accented syllables.
Allocate, to allot, assign.
Allocution, a formal address.
Allodial, freehold.
Allotment, portion allotted, act of allotting.
Allotropic, existing in different forms, *e.g.*, carbon as charcoal and diamond.
Allowance, a regular grant of fixed amount.
Alloy, an ingredient that debases the substance with which it is mixed.
Allspice, a spice which combines various flavours, pimento.
Allude, to make a reference or allusion.
Allumette, a lucifer match.
Allure, to entice, charm, beguile.
Allusion, a reference.
Alluvium, soil brought down by rivers.
Alma mater, "benign mother," term applied by students to their university.
Almanac, calendar, register of the divisions of the year.
Almond, the fruit of the almond tree.
Almoner, one who dispenses alms.
Alms, gifts to the needy.
Aloe, a medicinal plant.
Aloof, aside, apart.
Alpaca, a cloth made from the wool of the alpaca, an animal of Peru.
Alpen-stock, a stick fitted with an iron-spike for mountain climbing.
Alpha, the first letter of the Greek alphabet.
Alphabet, a list in regular order of the letters of a language.
Alsatian, belonging to Alsace; a lawless person.
Altar, a raised structure used for sacrifices, a communion table.
Alteration, change, difference.
Altercation, quarrel, wrangle, dispute.
Alter ego, one's other self, or second self.
Alter'native, a choice between two things.
Altitude, height, distance above sea level.
Alto, a male voice of highest pitch.
Alto-relievo, carving in high relief.
Altruism, self-denial for the sake of others, unselfishness.
Alum, a mineral salt.
Aluminium, a white metal of light weight resembling silver.
Alum'nus (*pl.* alumni), "foster son," term applied to a student in relation to his college.
Al'veolar, relating to sockets, especially the teeth.
Amalgam, a compound consisting of mercury combined with another metal.
Amalgamate, to combine or unite.
Amanuensis, one who writes from dictation.
Amaranth, a flower supposed never to fade.
Amaryllis, a genus of plants including narcissus and jonquil.
Amass, to heap up, accumulate.
Amateur, one who studies a subject for love of it, not for profit.
Amative, of an amorous disposition.
Amazement, blank astonishment, stupefaction.
Amazon, a female warrior, a manly woman.
Ambassador, an official representative of a country at a foreign court.
Ambassadress, an ambassador's wife.
Amber, a fossil resin yellow in colour.
Ambergris, a fragrant substance found in the spermaceti whale.
Ambidextrous, equally skilful with both hands.
Ambient, surrounding, encompassing.
Ambiguous, of double or doubtful meaning.
Ambit, circuit.
Ambition, lust of power or fame.
Amble, to go at an easy pace.
Ambrosia, the food of the gods.
Ambry or **aumbry,** a recess in the wall of a church for sacred vessels.
Ambulance, a vehicle for conveying the sick or wounded.
Am'bulatory, place for walking in, aisles, cloisters, &c.
Ambuscade, a lying in ambush.
Ambush, concealment with a view to attack.
Ameer, amir, the title of the ruler of Afghanistan.
Ameliorate, to improve, make better.
Amen, so let it be, term of solemn ratification.
Amenable, accountable, liable.
Amende, fine, penalty.
Amende honorable, an apology.
Amendment, improvement; modification of a motion in a public debate.
Amenity, geniality, courtesy.
Amentia, lack of reason, imbecility.
Amercement, a fine.
Amethyst, a kind of quartz, mauve in colour.
Amiable, of a lovable disposition.
Amice, a strip of linen worn by priests on the neck and shoulders.
Amidships, midway between prow and stern.
Amity, friendship.
Ammonia, a pungent gas of which sal volatile is a salt.
Ammoniac, medicinal gum obtained from a plant.
Ammonite, a fossil mollusc.
Ammunition, material for firearms, such as powder, shot, shell.
Amnesia, loss of memory.
Amnesty, an act of general pardon or oblivion.
Amoret, a sweetheart.
Amorous, inclined to love, of an amative disposition.
Amorphous, shapeless, without regular form.
Amour, a love affair, an intrigue.
Ampersand, &, a sign for the word "and."
Ampere, an electrical unit of measurement.
Amphibious, able to live both on land and in water.
Am'phibrach, a metrical foot consisting of a long syllable between two short ones (⏑–⏑).
Amphitheatre, a round or oval building containing tiers of seats for spectators.
Am'phora, a jar with a handle on each side.
Ample, abundant, plentiful, copious.
Amplification, an enlargement.
Amplitude, fulness, width, extent.
Amputate, to cut off (a limb).
Amuck, in mad frenzy.
Am'ulet, an object worn as a charm.
Anabaptist, one who disapproves of infant baptism.
Anach'ronism, an error in point of time.
Anacolu'thon, an irregular construction, failure in sequence of ideas.
Anadem, a wreath or band for the head.
Anæsthetic, a substance which deadens sensation or perception.
Anaglyph, a carving in low relief.
An'agram, a new word formed by transposing the letters of the original word.
Analect, a selection from an author's writings.
Anal'ogous, bearing an analogy.
Analogy, correspondence or likeness in certain respects.
Analysis, a breaking up into component parts.

Analytical, relating to analysis.
An'archist, one opposed to all forms of government.
Anarchy, state of disorder, lawlessness.
Anath'ema, solemn curse or denunciation.
Anat'omy, dissection of an organic body.
Ancestor, forefather, progenitor.
Anchor, an instrument for holding a ship at rest in the water.
Anchorite, a hermit or recluse.
Ancho'vy, a small fish from which a sauce is made.
Ancient, old, antiquated.
Andiron, an iron hearth-rest for logs.
Anecdote, a short story or incident.
Anemia or **anaemia,** lack of red corpuscles in the blood.
Anent, with reference to.
An'eroid, a barometer constructed without the use of any fluid.
An'eurism, see *Med. Dict.*
Angel, a heavenly messenger, spirit good or evil.
Angelus, a bell rung as signal for reciting the "Hail Mary!"
An'gevin, belonging to the house of Anjou.
Angi'na, severe pain, form of heart disease.
Angle, a corner, inclination of two straight lines to one another.
Anglicanism, adherence to the doctrines of the English or Anglican Church.
Anglo-mania, an unreasoning admiration for all things English.
Anglo-phobia, an unreasoning fear or hatred of the English.
Anguish, intense pain, agony of mind or body.
Angular, having angles, ungraceful.
Anhydrous, containing no water.
Anility, dotage, as applied to an old woman.
Aniline, one of the products of coal-tar yielding brilliant dyes.
Animadversion, severe remarks, strictures.
Animalism, sensualism, lack of higher instincts.
Animate, endowed with life.
Animosity, hostility, enmity.
Animus, ill-feeling, spite.
Aniseed, a cordial prepared from seeds of an aromatic plant.
Anklet, circlet worn round the ankle.
Anna, Indian coin, worth about three halfpence.
Annals, yearly records.
Annates, see *Dict. of Gen. Infor.*
Anneal, to temper or harden by making hot and leaving to cool gradually.
Annexation, the act of appropriating and adding to previous possessions.
Annihilate, to utterly destroy, put out of existence.
Anniversary, the day of the year on which an event originally happened.
Annotation, an explanatory note or comment.
Announcement, a public or formal declaration.
Annoyance, feeling or cause of displeasure.
Annual, yearly, recurring every year.
Annu'ity, a sum of money due annually until death.
Annul, to abolish, cancel, make of none effect.
Annular, ring-shaped.
Annulet, a little ring, small circle round a pillar.
Annunciation, the announcement to the Virgin that she should be the mother of our Lord.
Anodyne, that which soothes or lulls pain.
Anoint, to smear with oil or ointment.
Anom'alous, unusual, irregular.
Anonymous, with no name attached, unacknowledged.
Anserine, goose-like, foolish, silly.
Answer, a reply, response.
Antagonism, hostility, opposition.
Antarctic, the region around the south pole.
Antecedent, going before, preceding.
Ante-chamber, an outer chamber.
Ante-date, to assign an earlier date.
Ante-diluvian, before the flood, out of date.
Ante-meridian, before mid-day.
Ante-natal, existing before birth.
Ante-penultimate, the last syllable but two from end of word.
Anterior, of earlier date; situated in front.
Anthem, a hymn of praise.
Anthology, a collection of choice passages in poetry.
An'thracite, a kind of smokeless coal.
Anthrax, a disease of sheep and cattle, carbuncle.
Anthropoid, resembling the human form.
Anthropology, the science of man in his relation to the rest of creation.
Anthropomorphic, in the likeness of man.
Anti-bilious, counteracting biliousness.
Anticipation, a looking forward, expectation.
Anti-climax, opposed to climax.
Antidote, that which counteracts evil effects.
Anti-macassar, a loose covering for the backs of chairs and sofas.
Antimony, a white metal.
Antip'athy, a feeling of strong dislike.
An'tiphon, alternate chanting.
Antip'o-des, persons or places on the opposite side of the globe.
Antiquary, one versed in antiquities.
Antique, ancient, old-fashioned.
Antiquity, ancient times.
Antiseptic, counteracting blood-poisoning and putrefaction.
Antith'esis, an opposition or contrast.
Antithetical, relating to antithesis.
Anti-toxus, see *Med. Dict.*
Antitrade, a wind blowing in the opposite direction to the trade wind.
Antler, a branch of a stag's horn.
Anxiety, uneasiness of mind, solicitude, apprehension.
A'orist, a Greek tense which expresses indefinite time.
A outrance, to the very end.
Apartment, a room or set of rooms.
Apathetic, without feeling; indifferent.
Aperçu, a sketch; a rough estimate.
Ape'rient, a gentle purgative.
Aperitive, opening; aperient.
Ap'erture, an opening; a passage.
Apex, the point or summit of a thing.
Aphe'lion, that part of a planet's orbit farthest from the sun.
Aphe'mia, a disease in which the patient loses the power of speech.
Aph'orism, a maxim; a precept expressed in a few words.
Apiary, a place where bees are kept.
Apiculture, bee-keeping.
Aplomb, self-possession; assurance.
Apoc'alypse, revelation; the last book of the Bible.
Apocalyp'tic, serving to reveal.
Apoc'ope (o-pe), omission of the last letter or syllable of a word.
Apoc'rypha, see *Dict. of Gen. Infor.*
Apod'osis, the latter part of a conditional sentence.
Ap'ogee, that point in the moon or planet's orbit farthest from the earth.
Apologet'ics, a branch of theology concerned with the defence of Christianity.
Apol'ogize, to make an apology or excuse.
Ap'ologue, a moral fable.
Ap'ophthegm or **apothegm,** a remarkable saying; a maxim.
Apoplexy, a disease involving the sudden loss of sensation and motion.
Apoplectic, relating to, or showing signs of apoplexy.
Aposiope'sis, a sudden breaking off of a sentence for the sake of effect.
Apos'tasy, a departure from professed principles.
A posterio'ri, a reasoning backwards from effect to cause.
Apostol'ical, relating to, or like an apostle.
Apos'trophize, to digress in a speech to address an imaginary auditor.
Apothecary, a person who prepares and sells drugs or medicines.
Apotheo'sis, deification.
Appal or **appall,** to dismay, to fill with terror.
Appanage, lands or income for the maintenance of the younger children of a princely house; a detached part.
Apparatus, tools necessary for any art or trade.
Apparel, clothing, equipment.
Apparent, clear, evident.
Appari'tion, an appearance, a spectre.
Appar'itor, the officer of an ecclesiastical court.
Appeal, to remove a cause to a higher court.
Appearance, the act of coming into sight.
Appease, to calm, to pacify.
Appell'ant, a person who appeals.
Appella'tion, a name, a title.
Appendage, something added.
Appendici'tis, inflammation of the appendix, see *Med. Dict.*
Appen'dix (*pl.* appendices), something added, a supplement.
Appertain, to belong to.
Appetite, a desire for food; violent longing.
Applause, approbation loudly expressed.
Appliance, the thing applied, a tool.
Ap'plicant, one who applies.
Appointment, an office, engagement, equipment.
Apportion, to distribute in just proportion.
Ap posite, fit, well adapted.
Appraiser, one appointed to value goods or property.
Appre'ciable, that may be appreciated or estimated.
Appreciation, valuation, just estimation.
Apprehend, to arrest; to fear; to understand.
Apprehen'sion, the act of apprehending.
Apprentice, one bound to a trade or art.
Apprise, to inform, to give notice.
Approba'tion, the act of approving; support.
Appro'priate, to take for one's own use; suitable.
Appropriation, the act of appropriating; something appropriated.
Approval, commendation, sanction.
Approximation, approach; a near estimate.
Appui, a support, prop.
Appur'tenance, that which belongs to something else.
A prio'ri, a reasoning from cause to effect, the opposite to *a posteriori.*
Apron, a covering for the front of the body.
Apropos, to the purpose.
Apse, a term in architecture, see *Dict. of Gen. Infor.*
Apsidal, pertaining to an apse.
Apteryx, a New Zealand bird with merely rudimentary wings.
Aptitude, fitness; quickness in learning.
Aqua vitæ, "water of life," ardent spirits.
Aquarium, a tank or building for keeping aquatic animals or plants.
Aquatic, of or belonging to the water.
Aq'ueduct, an artificial channel for conveying water.
A'queous, watery.
Aquiline, resembling an eagle; hooked.
Arabesque, ornamentation common in Arabian architecture.
Ar'abic, the language of the Arabs.
Ar'able, fit for tillage.
Arama'ic, the language of the Syrians and Chaldeans.
Ar'biter, an umpire, an arbitrator.
Arbit'rament or **arbitrement,** decision by arbitration.
Ar'bitrary, despotic, capricious.
Arbitration, the determination of a cause by a judge mutually agreed on by the parties.
Arbores'cent, growing like a tree.
Arbore'tum, a place where trees and shrubs are grown for experimental and educational purposes.
Arboriculture, cultivation of trees and shrubs.
Arbour, a shady bower.
Arc, a part of a circle.
Arcade, a covered walk.
Arcadian, pertaining to Arcadia; rustic.
Arca'num, a secret.
Archæol'ogy, the study of ancient times from their relics and remains.
Archa'ic, antiquated; out of date.
Ar'chaism, an ancient or obsolete phrase.
Archangel, a chief angel.
Archbishop, a bishop in authority over other bishops.
Archdeacon, an English Church dignitary with duties connected with a bishopric.
Archery, the use of the bow and arrow.
Archetype, a model, an original pattern.
Archidiac'onal, belonging to an archdeacon.
Archiepis'copal, belonging to an archbishop.
Archiman'drite, an abbot-general in the Greek Church.
Archime'dean, relating to the ancient Greek philosopher, Archimedes.
Archipel'ago, a sea containing many small islands.
Architecture, the art of building.
Archive (generally plural), a record; a place where records are kept.
Archness, roguishness, playful cunning.
Arctic, belonging to the far north.
Ardent, hot, passionate.
Ardour, heat; warmth of affection.
Arduous, laborious, difficult.
Area, surface measurement; a space in front of a basement.
Arefaction, the act of drying.
Are'na, a space strewn with sand for combats.
Argent, silvery, bright like silver.
Argentif'erous, containing silver.
Argilla'ceous, like clay.
Argonaut, one who sailed in the ship *Argo* in search of the golden fleece; a mollusc.
Ar'gosy, a richly-laden merchant ship.
Argue, to reason, to dispute.
Argumentative, consisting of argument; given to argument.
Argus, a mythical being credited with having a hundred eyes; a watchful person.
Aria, an air, a melody.
A'rian, a follower of *Arius,* who denied the perfect equality of Christ with God the Father.
Arid, dry, parched.
Aristocracy, government by nobles; persons of rank.
Aristote'lian, a follower of Aristotle, the Greek philosopher.
Arithmeti'cian, one skilled in the art of numbers.
Armada, a fleet of armed vessels.
Armament, a force prepared for war.
Armenian, a native of Armenia.
Armistice, a short truce.
Armorial, belonging to the arms of a family.
Armourer, one who makes and repairs arms.
Armour-plate, thick iron or steel plates fixed to the sides of a warship.
Armpit, the hollow place under the shoulder.
Army-corps, a division of an army.
Army-list, a monthly publication containing information about the army.
Aromat'ic, spicy, fragrant.
Arrack, a liquor distilled in the East.
Arraignment, a calling to answer in court; an accusation.

Arrangement, the act of putting in order, settlement.
Ar'rant, infamous, downright.
Arras, tapestry.
Array, dress; order of battle.
Arrears, that which remains unpaid after it is due.
Arrest, legal seizure, stop, hindrance.
Arrière-pensée, a hidden thought.
Arrogance, haughtiness, insolent pride.
Arrogate, to assume with arrogance.
Arsenal, a magazine where warlike stores are made or kept.
Arsenic, a mineral poison.
Arsen'ical, containing arsenic.
Arson, the wilful burning of property.
Artery, a blood vessel conveying the blood from the heart.
Artichoke, a vegetable.
Articular, pertaining to the joints.
Articulation, a joint; clear pronunciation.
Artifice, a trick, a cunning device.
Artificial, made by art, not genuine.
Artillery, big guns; soldiers in charge of them.
Ar'tisan, a skilled workman.
Artlessness, simplicity.
Asbes'tos, an incombustible mineral.
Ascendancy or **-ency,** power, dominion.
Ascension, the act of rising.
Ascertain', to make certain.
Ascet'icism, rigid self-denial.
Ascribe, to attribute; to set down.
Ashlar or **ashler,** building stone.
Asiatic, belonging to, or a native of Asia.
As'inine, like an ass, doltish.
Askance, sideways; with suspicion.
Asparagus, a vegetable.
Asperity, harshness.
Aspersion, calumny, malicious report.
Asphalt, a bituminous substance.
Asphyxia, stoppage of the heart due to suffocation.
Aspirant, one who desires earnestly.
Aspirate, to pronounce with full breath.
Ass'agai or **assegai,** a Zulu spear.
Assailant, one who attacks.
Assassin, one who kills by a secret attack.
Assault, a fierce attack.
Assayer, a person who tests metals.
Assemblage, a number of persons met together.
Assen'tient, of the same opinion.
Assertion, a statement without proof.
Assertive, positive, dogmatical.
Assess'ment, the appraisement of property for the purpose of taxation.
As'sets, the property of a debtor.
Asseveration, solemn affirmation.
Assidu'ity, diligence.
Assid'uous, constant in application.
Assign, to transfer to another; to ascribe.
Assignation, the making over of a thing to another; an appointment to meet.
Assimilation, absorption of nutriment; the act of making or growing like.
Assistance, help, succour.
Association, a society; the act of uniting for some common object.
Associate-ship, membership.
Assoil, to absolve, to acquit.
Assonance, an imperfect rhyme.
Assortment, a number of things selected.
Assuage, to mitigate, to soften.
Assumption, a taking for granted; a supposition.
Assurance, firm trust; forwardness, self-confidence; insurance.
Assyrian, a native of Assyria.
Asterisk, a star or mark used in printing.
As'teroid, a small planet.
Asthmatical, troubled with shortness of breath.
Astig'matism, a defect of the eyesight.
Astonishment, amazement, surprise.
Astound, to fill with fear or wonder.
Astrakhan, a fur from an Eastern sheep.
Astringent, binding, contracting.
Astrol'ogy, the so-called science of predicting events by the stars.
Astron'omy, the study of the celestial bodies.
Astute', sharp, crafty, discerning.
Asylum, a refuge, a sure shelter.
Asym'metry, disproportion, absence of symmetry.
At'avism, likeness to a distant ancestor.
Atelier, a studio or workshop.
A'theism, the doctrine that denies the existence of God.
Atheist'ical, professing atheism.
Athenæum, a literary or scientific institution.
Athenian, a native of Athens.
Ath'lete, one skilled in physical exercises.
Athlet'icism, the practice of athletic exercises.
Atlas, a collection of maps.
Atmosphere, the air which surrounds the earth.
At'oll, a form of coral island.
Atom, a minute particle of matter.
Atonement, expiation, amends.
Atrocious, extremely wicked, horrible.
Atrocity, savage cruelty or wickedness.
At'rophy, gradual loss of flesh.
Attaché, a member of an ambassador's suite.
Attachment, affectionate regard.
Attainder, loss of civil rights after a judgment of death or outlawry.
Attainment, the act of acquiring or accomplishing.
Attaint, to find guilty of treason.
Attar, a valuable perfume.
Attemper, to mix in due proportions; to soften.
Attendant, a person that waits on another; one who is present.
Attentive, watchful, heedful, diligent.
Atten'uate, to make thin.
Attestation, testimony; evidence.
Attic, a room at the top of a house.
Attic, belonging to Attica or Athens; classical.
Attire, raiment, dress.
Attitude, posture, position.
Attor'ney (*pl.* attorneys), one who acts for another, a lawyer.
Attraction, the power of drawing something near.
Attrib'utable, that which may be ascribed.
At'tribute, a quality ascribed to a person or thing.
Attri'tion, the wearing away by friction.
Attune, to make harmonious.
Auburn, of a reddish-brown colour.
Au courant, well acquainted with.
Auctioneer, one who sells at a public sale.
Audacious, bold, impudent.
Audacity, effrontery, daring.
Audibility, the quality of being able to be heard.
Audience, a company assembled to listen; a hearing.
Auditor, a hearer; one who examines accounts.
Audito'rium, that part of a public building intended for the audience.
Au fait, expert; well versed in.
Auge'an, relating to Augeas, see *Dict. of Gen. Infor.*
Auger, a carpenter's tool for boring holes.
Augment', to enlarge, to increase.
Augur, to conjecture by signs; one who pretends to predict by the flight of birds.
August', grand, inspiring reverence.
Augustan, belonging to Augustus.
Auk, a web-footed bird with short wings.
Au'reole, a halo.
Au revoir, good-bye till our next meeting.
Auric'ular, told in the ear, secret.
Auri'ferous, producing gold.
Aurist, an ear specialist.
Auspices, favourable omens.
Auspicious, lucky, propitious.
Auster'ity, harshness, severe discipline.
Australian, a native of Australia.
Austrian, a native of Austria.
Authentic'ity, authority, genuineness.
Author *m.*, **Authoress** *f.*, a writer, an originator.
Author'itative, having due authority.
Authority, legal power; influence; the right to determine.
Authorize, to give a right to act.
Autobiog'raphy, the story of a person's life written by himself.
Autoc'racy, absolute power in one person.
Au'tocrat, one whose power is absolute.
Auto-de-fe or **da-fe,** the burning of a heretic.
Autograph, that written with one's own hand.
Automat'ic, having the power of moving itself.
Autom'aton, a figure moved by machinery hidden within it.
Auton'omy, the power of self-government.
Autop'sy, a seeing for one's self; a post-mortem examination.
Autotype, a photographic process, and the picture it produces.
Autum'nal, belonging to autumn.
Auxiliary, helping.
Available, attainable, ready for use.
Av'alanche, a mass of snow and ice falling down a mountain.
Avant-courier, a messenger sent before.
Avaricious, covetous, greedily desirous of gain.
Avast', a sea term meaning stop, cease.
Avatar', the descent of a Hindu deity to earth.
A've-Mari'a, a prayer to the Virgin.
Avenger, one who inflicts vengeance.
Avenue, a thoroughfare; a walk with trees on either side.
Aver', to declare positively.
Average, a mean proportion; middling.
Aversion, intense dislike.
Avert, to turn aside, to keep off.
Aviary, an enclosed place for keeping birds.
Avidity, greediness, eagerness.
Avocation, that which calls one away from his main business; also business, calling.
Avoidable, that may be avoided or escaped.
Avoirdupois, a system of weights in which 16 ounces go to the pound.
Avouch, to affirm, to justify.
Avowal, a frank confession.
Award, a judgment; to adjudge.
Awe-struck, filled with fear or reverence.
Awful, that which strikes with awe.
Awkward, clumsy, ungainly, inelegant.
Awning, a covering to shelter from sun and rain.
Awry', crooked, uneven.
Axiomat'ic, requiring no proof.
Axis, a real or imaginary line on which a thing revolves.
Axle-tree, the pin on which a wheel revolves.
A'yah, a waiting woman in India.
Aye, always, for ever.
Azimuth, see *Dict. of Gen. Infor.*
A'zure, blue like the sky.

Baby farmer, one who receives infants to bring up for payment.
Baccalau'reate, degree of Bachelor of Arts.
Bac'carat, a game of cards.
Bacchana'lian, revelling in drunkenness.
Bachelor, an unmarried man.
Bacil'lus, the name of one division of the microscopic fungi.
Backbiter, a slanderer of the absent.
Back'sheesh, Eastern term for a gratuity.
Backsword, a sword with one sharp edge.
Backwoods, the remote forest lands away from the seaboard, especially in N. America.
Baconian, belonging to the philosopher Bacon.
Bacteriol'ogy, the study of certain minute organisms known as *bacteria.*
Badinage, banter, playful conversation.
Badminton, a game.
Bagatelle, a game; a trifle.
Bagman, an old name for a commercial traveller.
Bagnio, a bath; a house of evil repute.
Bail, to release a person from custody by becoming surety for his appearance when wanted.
Bailiff, a legal officer: an under-steward.
Baize, a coarse woollen cloth.
Balance-sheet, a statement of the assets and liabilities of a business concern.
Balance-wheel, the part of a watch which regulates the beat.
Balcony, a projecting gallery before a window, or inside a building.
Baldachi'no, a canopy.
Bale, a bundle of goods; to dip water out of a boat.
Baleful, sorrowful: destructive.
Balk, a check; to frustrate.
Ballad-monger, a seller of ballads; a second-rate poet.
Ballast, heavy substance put in the bottom of a ship to keep it steady.
Ball-cock, a self-acting contrivance to regulate the supply of water.
Balloon, a large bag, usually of silk, which, when filled with gas, rises and floats in the air.
Ballot, a system of secret voting.
Balm, a fragrant shrub; anything which soothes.
Balsam, an aromatic resin; an ointment.
Balustrade, a row of small pillars, or balusters, joined by a rail.
Banal, commonplace, trifling.
Bandanna or **bandana,** a silk handkerchief of Indian manufacture.
Bandit (*pl.* banditti or bandits), an outlaw, a brigand.
Bandoleer, a leather shoulder belt to hold cartridges.
Bandy, crooked; a club for striking a ball; to toss to and fro.
Baneful, poisonous, destructive.
Banister, the railing of a staircase
Bankruptcy, inability to pay one's debts.
Banneret, a knight made on the field.
Banquet, a rich feast.
Banshee, an Irish fairy attached to a particular house.
Banyan, an Indian tree.
Baptist, one who rejects infant baptism.
Baptistery, a place for baptizing.
Barbican, a fortification to defend the entrance to a castle or town.
Barbarian, savage; an uncivilised person.
Barbarism, savageness; an incorrect word or phrase.
Barbecue, a pig or other animal roasted whole.
Barbette, the platform of a fortification on which heavy guns are placed that may be fired over the parapet.
Bar'carolle, a Venetian boat-song.
Bard, an ancient Celtic minstrel; a poet.
Bargee, one of a barge's crew.
Barleycorn, a grain of barley.
Barm, yeast.
Barmecide's Feast, an ostentatious display of dishes without any food.
Barnacle, a species of shell-fish.
Barom'eter, an instrument which indicates the weight of the atmosphere.
Baronet, the lowest *English* title that is hereditary.
Barouche, a four-wheeled carriage.
Barque, a three-masted ship.
Barrack, a building to lodge soldiers.
Barrage, an artificial bar formed in a river to increase its depth.
Barricade, a hastily formed fortification; an obstruction.
Barrister, one qualified to plead the cause of clients in a court of law.

Barrow, an ancient burial-mound; a small hand carriage.
Bar'ytone, the voice between bass and tenor.
Basalt'ic, of the nature of basalt, a hard rock.
Bas-bleu, a blue-stocking, a learned lady.
Bashfulness, shyness, foolish shame.
Basil, the name of a plant; slope at the edge of a tool.
Bas'ilisk, a kind of lizard; a form of cannon.
Basis, foundation, groundwork.
Basque, a person or the language of the Basque provinces.
Bas-relief, sculpture, the figures of which are only slightly raised above the general surface.
Bass Clef, the figure in form of an inverted C which marks the bass-staff.
Bassinet, a wicker-work cradle.
Bastardy, the state of being illegitimate.
Baste, to sew loosely; to beat; to drip fat on a joint while roasting.
Bastina'do, the Eastern punishment of beating on the soles of the feet.
Bastion, a huge mass of earth standing out from a rampart.
Batavian, a Dutchman, or native of Batavia.
Bateau, a long light boat.
Bathos, descent from the sublime to the ridiculous.
Bathymetry, the art of measuring the depth of the sea.
Batman, a man in charge of the cooking utensils of soldiers in the field.
Battalion, a division of the army.
Batten, to make fat; a piece of wood.
Battery, a raised work for cannon; a number of cannon; assault on a person by beating.
Battlement, a parapet with openings along the top, originally to fire through.
Bat'tue, the driving of game into a limited space from cover by beaters.
Bavardage, idle chatter.
Bayonet, a sword-like weapon fixed to the end of a musket.
Bazaar, an Eastern market-place.
Bead-roll, among Roman Catholics a list of the dead to be prayed for.
Beads-man, a man employed to pray for another.
Bean-feast, annual treat of a firm's employees.
Beatif'ic, making blissfully happy.
Beat'itude, blessedness, the highest happiness.
Beau (*pl.* beaux or beaus), a dandy; a lover.
Beau-ideal, the highest type of perfection.
Beau monde, the world of fashion.
Beauteous, possessed of beauty.
Beaux-esprits, witty people.
Beckon, to invite to advance by a gesture.
Becoming, graceful; suitable.
Bedew, to sprinkle gently as with dew.
Bedight, to adorn, to dress.
Bedizenment, exaggerated adornment.
Bedlam, a madhouse; an excited uproar.
Bed'ouin, a wandering Arab of the desert.
Bedridden, confined to bed.
Beech-mast, the fruit of the beech-tree.
Beef-eater, a yeoman of the guard.
Bees-wing, a light filmy crust formed on port wine which has been long kept.
Beetling, projecting, overhanging.
Befitting, suitable, becoming.
Beginning, commencement, origin, outset.
Beguilement, deception by flattery; diversion.
Be'gum, an Indian princess.
Be'hemoth, a large beast mentioned in the Old Testament.
Behest, a command.
Beige, an undyed woollen material.
Belaud, to give excessive praise to.
Belch, to eject wind from the stomach; to cast up violently.
Beldam, an ugly or cross old woman.
Beleaguer, to besiege.
Belfry, a tower where the bells are rung.
Belgian, a native of Belgium.
Believer, one who believes.
Belladonna, the deadly nightshade, and the drug prepared from it.
Belles-lettres, polite literature.
Bel'licose, war-like.
Bellig'erent, a person or nation at war.
Bell-wether, the leader of a flock of sheep, with a bell round its neck.
Belvedere, a construction on the top of a house or in an elevated spot to command the view.
Bemused, overcome with musing; confused.
Bencher, a senior member of an inn of court.
Benedic'ite *(i-te)*, a hymn of praise used as an alternative to the Te Deum.
Benedick or **benedict,** a newly-married man.
Benedictine, an order of monks; a liqueur made by monks in Normandy.
Benedictus, a canticle which Zacharias was inspired to sing.
Benefaction, a kind or generous deed.
Benefice, an ecclesiastical living.
Benef'icence, active goodness.
Beneficially, in a helpful manner.
Beneficiary, one who holds a benefice, or enjoys a certain privilege.
Benev'olence, the disposition to do good.
Bengalee or **bengali,** the language of Bengal.
Benignity, graciousness.
Benison, a blessing.
Ben trovato, well invented.
Benzene, a liquid distilled from coal-tar.
Bequeath, to leave by will to another.
Bequest, something left by will.
Berber, the language or a native of Barbary.
Bereavement, loss, especially by death.
Berth, a sleeping-place in a ship; a mooring-place; a situation.
Beryl, a precious stone.
Beshrew, to wish evil to.
Besiege, to beset with armed forces.
Besom, a broom.
Besotted, stupid with drink; infatuated.
Bespeak, to engage or order in advance.
Bessemer-steel, steel made by a process invented by Sir H. Bessemer.
Best'ial, beast-like, brutal.
Bestowal, the act of conferring.
Bête-noire, a pet aversion.
Betide, to happen, to befall.
Betoken, to indicate, to foreshow.
Betrayal, an act of disloyalty; disclosure.
Betrothal, an agreement to marry.
Bevel, an instrument for measuring angles; slanting.
Beverage, a drink.
Bevy, a party of birds or girls.
Bewilderment, a confused state of mind.
Bewitching, fascinating, full of charm.
Bewray, to betray or divulge.
Bezique, a game of cards.
Biangular, having two angles.
Bias, weight in the side of a bowl to turn it out of a straight course; leaning, inclination.
Bibacious, fond of drink, thirsty.
Biblical, belonging to or drawn from the Bible.
Bibliography, a description of books; a list of those dealing with a particular subject.
Bibliolatry, unreasoning worship of the Bible; excessive love of books.
Bibliomaniac, one who has a mania for collecting books.
Bibulous, capable of absorbing moisture; given to drinking.
Bicente'nary, 200th anniversary.
Biceps, the front muscle of the upper arm.
Bicker, to wrangle about trifles; quiver, have a tremulous motion.
Bicyclist, one who rides a bicycle.
Bidet', a small horse; a kind of bath.
Biennial, recurring every two years; lasting two years.
Bier, framework for bearing a coffin.
Bifurcate, to divide into two forks.
Bigamy, the crime of having two wives or two husbands at the same time.
Bigotry, fanatical belief, blind zeal.
Bijou (*pl.* bijoux), a small dainty jewel.
Bilateral, two-sided.
Bilge, the bulging part of a cask; the broadest part of a ship's bottom.
Bilin'gual, written in, or speaking, two languages.
Bill-broker, one who buys and sells bills of exchange.
Billet, to assign quarters to soldiers; a log of wood; cylindrical moulding in architecture.
Billet-doux, "a sweet note," a love-letter.
Billion, a million millions.
Bimetallism, a system of currency, see *Dict. of Gen. Infor.*
Binary, dual, consisting of two.
Binnacle, a box containing a ship's compass.
Binocular, fitted with an eye piece for each eye.
Biography, a written account of a life.
Biology, the science of the various forms of physical life.
Biped, an animal with two feet.
Birchen, made of birch.
Bird's-eye, a kind of tobacco; a plant; seen as with the eye of a bird flying above.
Biretta, a kind of clerical cap.
Birth-right, what is due to a man by right of birth.
Biscuit, "twice baked," a hard flat kind of bread.
Bisection, the cutting into two equal parts.
Bissextile, leap-year.
Bivalve, having two valves like the shells of an oyster.
Bivouac, to encamp for the night in the open air.
Bizarre, strange, fantastic.
Black-ball, to refuse to admit to membership by putting a black ball in the ballot-box.
Blackguardly, like a scoundrel or low fellow.
Black-jack, a black leather bottle for holding beer.
Black-letter, Old English or Gothic type or character.
Black-mail, to extort money by threats; hush money.
Black-rod, the usher of the House of Lords.
Blamable, deserving of blame.
Blanc-mange, a white pudding made of milk and isinglass.
Blandishment, coaxing, fawning, wheedling.
Blank verse, verse consisting of unrhymed lines, each of five iambic feet.
Blarney, flattering speeches.
Blasé, satiated with pleasures.
Blasphemous, profane, impious.
Blast-furnace, a furnace for smelting ore in which the fire is kept up by a constant blast of hot air.
Blatant, noisily assertive.
Blazon, to proclaim, spread abroad; to depict the figures on coats of arms.
Blear-eyed, having dim sight.
Blench, to shrink from fear, flinch.
Blight, that which blasts or withers.
Blithesome, gay, light-hearted.
Blizzard, biting storm of wind and snow.
Blockade, to hem in the enemy.
Block-house, a small fort; see *Dict. of Gen. Infor.*
Block-system, system for securing safety in railway travelling; see *Dict. of Gen. Infor.*
Block-tin, tin in the form of blocks.
Blond or **blonde,** fair in face and hair.
Blood-letting, bleeding a person by opening a vein.
Blood-money, money earned by betraying another to death.
Bludgeon, cudgel; stick heavy at one end.
Blue-book, a name given to government official papers and reports from the usual colour of their cover.
Blue-stocking, a learned woman who neglects her personal appearance.
Bluish, of a blue tint.
Boatswain, see *Dict. of Gen. Infor.*
Bodice, upper part of a woman's dress reaching to the waist.
Body-snatcher, one who unearths the bodies of the dead for dissection.
Boer, a South African farmer of Dutch descent.
Bogey, a bugbear.
Boggle, to hesitate from fear.
Bog-trotter, a term applied to an Irishman.
Bogus, false, counterfeit.
Bohemian, a native of Bohemia; one who lives in a free and easy manner.
Boiar or **boyar,** a Russian nobleman.
Boisterous, noisy and rough.
Bolas, a kind of lasso made of balls strung together.
Bole'ro, a lively Spanish national dance.
Bolus, medicine in the form of a big pill.
Bomb, an explosive projectile.
Bombard, to attack with shot and shell.
Bombardier, an artillery-man who serves the guns.
Bombast, boastful inflated language.
Bomb-proof, proof against bombs or shells.
Bona-fide, in good faith, genuine.
Bon-bon, a sweetmeat, a cracker.
Bond, a written obligation under seal to perform a contract or pay a sum of money.
Bonded, deposited in licensed warehouses until the customs duties are paid.
Bone-black, animal charcoal.
Boniface, a term applied to an inn-keeper.
Bon-mot, a witty saying.
Bonne, a French nurse-maid.
Bonnet-rouge, "red cap," one who wore the red cap of liberty during the French revolution; a revolutionary.
Bon-ton, tone or manners of good society.
Bonus, an extra dividend.
Bon vivant, a lover of the pleasures of the table.
Boodle, bribery amongst officials.
Book-keeping, a systematic method of keeping accounts.
Book-maker, a professional betting man.
Book-plate, a label placed on the inside of the cover of a book designed to show the author's name.
Book-worm, an inordinate reader of books.
Booming, pressing the sale of an object by puffing.
Boomerang, an Australian missile which when skilfully hurled returns to the hand.
Boon, a benefit, a blessing.
Boorish, like a boor, rough, uncouth.
Boot-jack, an implement for taking off boots.
Bootless, fruitless, unavailing.
Boot-tree, a last or block on which boots are stretched to preserve their shape.
Booty, spoil, plunder.
Borachio, a Spanish term for a drunkard.
Borderer, one living on the border-land between two countries.
Boreal, belonging to the north wind.
Boredom, state of being bored, ennui.
Borough, a town which sends a member to Parliament.
Boscage or **boskage,** wealth of woodland.
Bosky, bushy, woody.
Bosom, the breast.
Botany, the science of plants.
Botargo, relish made from the roe of mullet.
Boudoir, a lady's private sitting-room.
Bough, the branch of a tree.
Bouilli, a French name for meat gently cooked.
Boulder, a detached piece of rock.
Boulevard, a street or promenade with trees on either side.
Bouleversement, a turning upside-down.

Boundary, a limit.
Bounteous, liberal, plentiful.
Bouquet, a bunch of flowers; the aroma of wine or cigars.
Bourdon, the base stop of an organ; the drone of a bagpipe.
Bourgeois, belonging to the middle class.
Bourgeoisie, the French middle class, the class of shop-keepers.
Bourgeon, to put forth buds or shoots.
Bourn, a limit, boundary, goal.
Bourse, the exchange, the money-market.
Bovine, ox-like.
Bowdlerise, to expurgate to an unnecessary extent, as Bowdler did with Shakespeare's plays.
Bowels, the entrails.
Bowie-knife, a knife shaped like a dagger.
Bowling-alley, long narrow place where bowls are played.
Bowsprit, a spar projecting beyond the bows of a vessel.
Boxing-day, December 26th, the day when Christmas-boxes are given.
Boycott, to exclude from all dealings.
Brace, to tighten; to strap together; to strengthen.
Bracket, a support attached to a wall; marks used to enclose words.
Brackish, somewhat salt or briny.
Brad-awl, a tool for boring holes.
Braggadocio, a noisy boastful person; loud boasting.
Brahman or **brahmin,** a member of the priestly caste among the Hindus.
Braise, to stew meat with bacon.
Brand, to mark with a hot iron; a half burnt piece of wood.
Branded, marked; marked with infamy, stigmatized.
Brand-new or **bran-new,** perfectly new.
Brasier or **brazier,** a vessel for holding burning coals.
Bravado, an outward show of courage, bluster, insolent defiance.
Bravo, "well done;" a daring villain.
Brawling, noisily quarrelling, flowing noisily along.
Brawn, sinew or muscle; pickled meat made of pig's head.
Breach, an opening, a gap; a violation.
Breast-work, a wall or earth-work breast-high for defence.
Breathe, to draw in and give out breath.
Breccia, rock composed of various substances embedded in lime.
Breech-block, movable piece used for closing the breech of a gun.
Breech-loader, a gun in which the charge is inserted at the breech.
Breton, a native of Brittany.
Brevet, military rank temporarily conferred.
Breviary, the Roman Catholic prayer-book.
Brevity, shortness, conciseness.
Brewery, a place where beer is made.
Bric-à-brac, curiosities, knick-knacks.
Bridal, belonging to a bride; a wedding.
Bridewell, a prison, a penitentiary.
Bridle, a check or restraint; the bit and reins used in guiding a horse; to draw up the head in an affected manner.
Brier or **Briar,** a prickly shrub, a wild rose-bush; a tobacco pipe.
Brigadier, a military officer who commands a brigade.
Brigand, a highway robber, a bandit.
Brigantine, a two-masted vessel with a square-rigged foremast.
Brindled, marked with streaks and blotches.
Brine-pan, a shallow bed of sand in which salt is obtained from brine by evaporation.
Briny, like brine, salt.
Briquette, a solid block made of coal-dust.
Brisket, that part of the breast of an animal which is nearest the ribs.
Bristling, standing stiffly erect like bristles.
Britannia metal, a mixed metal consisting chiefly of tin.
Britain, the British Isles.
Briton, a native of Britain.
Broach, to open, to tap; to introduce.
Broad-arrow, a mark like an arrow-head indicating Government property.
Broad-cast, scattered freely about.
Brobdingnagian, gigantic, like the inhabitants of Brobdingnag in Gulliver's Travels.
Brocade, embossed silk or satin.
Broc'ard, a standard rule, canon.
Brochure, a short treatise, pamphlet.
Brogue, provincial accent, especially an Irish accent.
Broidery, embroidery.
Brokerage, commission charged by a broker.
Bronchitis, inflammation of the bronchial tubes.
Brooch, an ornament furnished with a pin.
Brougham, a closed carriage drawn by a single horse.
Brow-beat, to hector, bully.
Brownie, a fairy.
Brown-study, a reverie.
Browse, to graze.
Bruin, a bear.
Bruit, noise, rumour, report.
Brunette, a woman with dark eyes, hair, and complexion.
Brusque, abrupt in manner.
Brutality, brute-like conduct, inhuman cruelty.
Buccaneer, a pirate.
Buckler, a small round shield.
Buckram, a coarse stiff linen.
Bucolic, belonging to herdsmen, rustic, pastoral.
Buddhism, the religion of the Buddhists.
Budget, a collection of things; the annual statement of accounts made by the Chancellor of the Exchequer.
Buffer, a contrivance for lessening the force of concussion; a dull stupid fellow.
Buffet, a side-board; a counter where refreshments are sold.
Buffoonery, clownish behaviour, act of playing the mountebank.
Bugbear, a bogey, an imaginary object of terror.
Bulbous, bulb-shaped.
Bull, a speculator who schemes to raise the price of stocks; a papal edict; a statement involving an absurd contradiction.
Bulletin, an official notification concerning some matter of public interest.
Bullion, uncoined gold and silver.
Bulwark, a defensive screen or rampart; that part of the side of a vessel which rises above the deck.
Bum-bailiff, an under-bailiff.
Bumbledom, the pompous fussiness of low-placed officials.
Bum-boat, a boat used for carrying provisions to a vessel.
Bumptious, intolerably self-assertive.
Bungalow, a lightly built one-storied house.
Bunion or **bunyon,** an inflamed enlargement of the joint of the big toe.
Bunkum, big empty talk.
Bunting, the material used for flags.
Buoyancy, the power of floating, lightness; light-heartedness.
Burden, a load, weight; the refrain of a song.
Bureau, a writing table with drawers; a public office.
Bureaucracy, government by officials and red-tape.
Burgess, an inhabitant of a borough, a citizen.
Burgher, a citizen.
Burglary, the breaking into a house with intent to steal.
Burgomaster, a German term for the chief magistrate of a town.
Burke, to murder by suffocation as "Burke" did; to quietly put an end to.
Burlesque, a travesty, ludicrous imitation.
Burmese, a native of Burma.
Burnish, to polish by friction.
Burrow, a hole dug in the ground by certain animals for protection.
Bursar, a treasurer; one who holds a college exhibition.
Busby, a tall bushy fur cap worn by the hussars.
Business, occupation, trade.
Buskin, a thick-soled boot worn by tragic actors in ancient Greece.
Butchery, wholesale massacre, cruel slaughter.
Butter-milk, churn-milk, the liquid that remains after butter has been separated.
Buttery-hatch, the hatchway of a room where wine and provisions are stored.
Buttress, a projecting block of masonry built against a wall to support it.
Buxom, blithe, hearty and comely.
By-law, a regulation made by some local body or corporation.
By-product, a supplementary or subsidiary product.
By-word, an object of general contempt.
Byzantine, relating to Byzantium the ancient name of Constantinople.

Caaba, a building within the great mosque at Mecca.
Cabal, a small party united for intrigue.
Cab'aret, a tavern.
Cabalistic, having a secret meaning.
Caber, a pole tossed by Highland athletes.
Cabinet-council, a meeting of cabinet ministers.
Cable-gram, a submarine telegram.
Cabriolet, a covered one-horse carriage.
Caca'o, the chocolate-tree.
Cach'alot, the sperm-whale.
Cachet, a seal, authority.
Cachinnation, loud laughter.
Cachucha, a Spanish dance.
Cacoe'thes, a bad habit.
Cacoph'ony, a discordant sound.
Cadav'erous, resembling a corpse, pallid.
Caddie, a boy who carries a golfer's clubs.
Cadence, fall of the voice; tone or sound.
Cadet', a military or naval pupil; a junior.
Cadi, a Turkish judge.
Café, a coffee-house, a restaurant.
Caique, a small light Turkish boat.
Cairn, a heap of stones raised as a monument.
Cajol'ery, flattery, coaxing.
Calamitous, disastrous, deplorable.
Cal'culable, that may be reckoned.
Calculation, the art of reckoning, reckoning.
Caldron, a large pot or kettle.
Caledonian, a native of Scotland.
Calendar, a list of the days of the year.
Calender, a machine for giving a gloss to cloth or paper by pressing it between rollers.
Calenture, a fever which attacks sailors in the tropics.
Calibre, the bore of a gun; capacity.
Calico-printer, one who prints patterns on calico.
Calif or **caliph,** a recognised successor of Mahomet.
Call-boy, a boy who calls the actors when it is time for them to go on the stage.
Calig'raphy, elegant writing.
Callipers, compasses with arched legs.
Calisthenics, a light form of gymnastics.
Callousness, want of feeling.
Callow, unfledged, bare.
Calmness, the state of being quiet or placid.
Calorific, producing heat.
Calumet, the American Indians' pipe of peace.
Calumniation, a false charge.
Calumny, slander.
Calvary, the scene of the crucifixion; a representation of the scene for purpose of devotion.
Calvinism, the doctrine of the reformer Calvin.
Camaraderie, good-fellowship.
Cambrian, belonging to Wales.
Camel'opard, the giraffe.
Camera, an apparatus for taking photographs; a private room.
Campaign, the duration of a war and the operations of the opponents.
Cam panile, a large detached bell-tower.
Campanology, the art of bell-ringing.
Canail'le, the scum of the populace.
Canal, an artificial waterway.
Canard, a hoax, a made-up story.
Cancel, to efface, to annul.
Cancerous, of the nature of a cancer, malignant.
Candelabrum, (*pl.* candelabra), an ornamental candlestick with branches.
Candent, at a white heat.
Candescent, glowing with a white heat.
Candidate, one who seeks some post or honour.
Candid, frank, open.
Candlemas, the festival of the Purification of the Virgin Mary; Feb. 2.
Canine, of the nature of a dog.
Canker, an ulcerous sore; a disease in trees.
Cannibalism, the eating of human flesh.
Cannonade, an artillery attack.
Canoe, a light narrow boat with paddles.
Canon-law, Ecclesiastical law.
Cañon, a deep ravine.
Canonicals, the official dress of a clergyman.
Canonization, the act of enrolling a person on the list of saints.
Canopied, having a roof-like covering.
Cantab, a student of Cambridge University.
Cantankerous, quarrelsome, ill-tempered.
Cantata, a choral work.
Canteen, a barrack refreshment room.
Canthar'ides (id-es), Spanish flies used for producing blisters.
Canticle, a sacred song.
Cantilever or **Cantaliver,** a heavy bracket to support balconies, &c.
Canto, a division of a poem.
Can'tonal, belonging to a canton or district, especially in Switzerland.
Canton'ment, a military station.
Canvas, a coarse kind of cloth.
Canvass, to examine; to solicit votes.
Caoutchouc, India-rubber in a raw state.
Capability, the power or skill to do a thing.
Capacious, wide, roomy.
Cap-a-pie, from head to foot.
Caparison, trappings for a horse.
Caper, to frisk; the bud of the caper-bush.
Capercailzie, a kind of grouse.
Capillary, fine like a hair; a minute blood-vessel.
Capitalist, one who has a large amount of surplus money to invest.
Capitation, a numeration by head or individual.
Capitol, in ancient Rome a temple in which the Senate met; hence a senate-house.
Capit'ulary, a statute passed by a chapter.
Capitulation, surrender on conditions.
Capon, a castrated cock.
Capote, a long cloak with a hood.
Capricious, full of whims, changeable.
Capsize, to upset.
Capstan, a machine on a ship to raise the anchor or any other great weight.
Capsule, the seed vessel of a plant; a small case containing some disagreeable medicine.
Captain-general, a commander-in-chief.
Captious, hard to please, fault-finding.
Captivating, bewitching, fascinating.
Capture, a seizure, a prize.
Capuchin', one of the orders of Franciscan friars.
Carack, a large ship of burden.
Caracole, a half-turn taken by a horse.
Caramel, a sweetmeat; burnt sugar.

Carat, a weight of four grains.
Caravan, a party of travellers in the East; a house on wheels.
Caravan'sary, a kind of inn in the East.
Carbine, a small rifle.
Carboniferous, containing coal.
Carboy, a large bottle in a case to hold acids, &c.
Carbuncle, a red gem; a large painful boil.
Carcass or **carcase,** the dead body of an animal.
Cardigan, a knitted woollen jacket.
Cardinal, a dignitary in the church of Rome ranking next to the Pope; bright red; chief.
Card-sharper, one who cheats at cards.
Careen, to lean to one side (said of a ship).
Career, path in life, profession.
Caress, to fondle; an embrace.
Caricature, a ludicrous likeness.
Carlist, a follower of the Spanish pretender Don Carlos.
Carmine, a crimson colouring matter.
Carnage, slaughter.
Carnal, of the flesh, not spiritual.
Carnival, in Roman Catholic countries a period of revelry just before Lent.
Carniv'orous, flesh-eating.
Carol, a song of gladness.
Car'olus, a gold coin of Charles I's. reign.
Carousal, a noisy revel.
Carpentry, the work of a carpenter.
Carpet-knight, one who has been made a knight by favour, not for his services.
Carping, cavilling, censorious.
Carriage, a vehicle; the act of or charge for carrying; deportment.
Carrion, putrid flesh.
Carron-oil, a liniment to relieve burns.
Carte-blanche, a free hand, full power to act.
Carte-de-visite (*pl.* cartes-de-visite), a small mounted photograph.
Cartel, an agreement between nations at war to exchange prisoners; a challenge.
Carthusian, one of an order of monks.
Cartoon, a design on strong paper; a sketch usually with some political event for subject.
Cartouch, a cartridge; a sculptured scroll.
Cartridge-paper, a thick strong paper.
Cartwright, a maker of carts.
Cascade, a waterfall.
Ca'sein or **caseine,** that part of milk which turns into curd.
Casement, a window opening on hinges.
Case-shot, a shell packed with shot and iron scraps.
Cashier, one in charge of the money; to dismiss from a post.
Cashmere, a soft woollen dress material.
Casi'no, a public hall of amusement on the continent.
Cassation, the annulling of a sentence.
Cassock, a long robe worn under a surplice.
Castanet, a pair of small shells of ivory or hard wood rattled in the hand when dancing.
Cast-away, one shipwrecked or outcast.
Caste, social rank, especially in India.
Cas'tellated, with turrets like a castle.
Castigation, chastisement.
Castilian, a native of Castile.
Casting-vote, the deciding vote when the others are equally distributed.
Cast-iron, iron melted and cast in a mould.
Castor, the beaver; a small roller on the leg of a chair, etc.; a vessel for sprinkling powders.
Cas'trameta'tion, the art of encamping.
Casually, without design, accidentally.
Casualty, a chance event; a fatal accident.
Casuistry, the study of cases of conscience.
Casus belli, a cause of war.
Cataclysm, a deluge; a great disaster.
Catacomb, a subterranean burial-place.
Catafalque, a tomb-like structure temporarily erected for a lying-in-state.
Cat'alan, a native of Catalonia.
Catalogue, a list of names, etc.
Catapult, an ancient instrument of war; a toy for throwing small stones.
Cataract, a waterfall; a disease of the eye.
Catarrh', a cold in the head or throat.
Catas'trophe (**tro-phe**), a calamity; a climax.
Catchment, a surface from which the water may be drained.
Catechism, a form of instruction by means of questions and answers.
Catechu'men, one who is being instructed in the rudiments of Christianity.
Categorical, absolute, positive.
Cat'enary, like a catena or chain.
Caterer, one who provides food or entertainment for others.
Caterpillar, the larva of an insect.
Cathedral, the head church of a diocese.
Catho'licism, adherence to the Catholic Church.
Catholicity, universality.
Catkin, the blossom of hazel and other plants.
Cat's-paw, one who is made the tool of another.
Caucasian, a name given to the white races.
Caucus, an organization that works for the success of a political party in elections.
Caudal, pertaining to the tail.
Cauliflower, a species of cabbage.
Caulk, to stop the seams of a ship.
Causation, the act of causing.
Causeway, a raised way paved with stones.
Caustic, a burning substance; stinging.
Cau'telous, cautious, wily, cunning.
Cauterize, to burn with caustic or a hot iron.
Cautious, wily, watchful.
Cavalcade, a procession on horseback.
Cavalierly, haughtily, disdainfully.
Cavalry, horse-soldiers.
Caveat, a caution, a formal warning.
Cavernous, hollow, containing caverns.
Caviare, the salted roes of certain fish.
Cavil, to raise frivolous objections.
Cavity, a hollow or empty place.
Ceaseless, continual, endless.
Cede, to yield, to give way.
Cedilla, a mark under the letter *C* to show it is pronounced like *S*; thus ç.
Ceiling, the inner roof of a room.
Celebrant, one who officiates at a religious rite.
Celebrity, a noted person; fame.
Celerity, swiftness, speed.
Celery, a plant with edible stalks.
Celestial, heavenly; a native of China.
Celibacy, the state of being unmarried.
Cellarer, one in charge of the cellar.
Cellular, consisting of little cells.
Celluloid, a hard compound used in the place of tortoiseshell, ivory, etc.
Celtic, belonging to the Celts.
Cement, a substance for making two bodies cohere; a bond of union.
Cemetery, a public burial-place.
Cenobite, a monk.
Cenotaph, a tomb built in memory of a person buried in another place.
Censer, a pan in which incense is burned.
Censorship, the office of examiner of war news, books, plays, etc., before they are published.
Censo'rious, severe, addicted to censure.
Censure, to blame, to reproach, to condemn.
Census, a periodical counting of the population.
Cent, a hundred; an American coin.
Centaur, a mythical being, half man half horse.
Centenary, a hundredth anniversary.
Centennial, occurring once in a century.
Centigrade, divided into 100 degrees.
Centimetre, the 100th part of a metre.
Centipede, an insect with many legs.
Centralization, the act of bringing to a common centre.
Centre, the middle.
Centre-board, a sliding keel.
Centri'fugal, receding from the centre.
Centurion, formerly an officer of 100 men.
Century, a hundred years; a hundred.
Cera'mic, relating to pottery.
Cer'berus, a fabulous dog with three heads.
Cereal, a grain used for food.
Cer'ebral, belonging to the brain.
Cerement, clothes for the dead.
Ceremonial, outward form; relating to ceremony.
Certificate, a written testimony.
Ceru'lean, blue, sky-coloured.
Cervical, belonging to the neck.
Cessation, a stop, a pause.
Cess-pool, a hole to receive the contents of a drain.
Chafe, to warm by rubbing; to fret.
Chagrin', vexation, regret.
Chairman, the president of a meeting.
Chaise, a two-wheeled carriage.
Chalet, a Swiss cottage.
Chalice, a communion-cup.
Chalk, a species of limestone.
Challenge, to summon to single combat or to some trial of skill; to call in question.
Cham, the ruler of Tartary.
Chamberlain, a domestic officer in the service of a king or nobleman.
Chamber-practice, the practice of a counsel who advises clients but does not plead in court.
Chameleon, a lizard which changes colour.
Chamfer, to cut to form a level.
Chamois, a species of antelope.
Champagne, a light sparkling wine.
Champaign, flat open country.
Champion, one who does battle for a cause; the victor in a trial of skill, etc.
Chancel, that part of a church which contains the altar.
Chan'cellor, the head of a court or university.
Chancery, a division of the court presided over by the Lord High Chancellor.
Chandelier', a pendant to hold a number of lights.
Chandler, a general dealer.
Changeling, a child left in the place of another; an unstable person.
Channel, a passage of water, a wide strait.
Chanticleer, a cock.
Chantry, a chapel endowed for the chanting of masses for the dead.
Chaos, confusion; a scene of disorder.
Chaotic, in a state of chaos.
Chap'eron, an older person who accompanies a young unmarried lady to public places.
Chaplaincy, the post of a clergyman in the army, navy, a private family, or some institution.
Chaplet, a wreath for the hair; a rosary.
Chapter-house, a building where the official clergy of a cathedral meet for business.
Characteristic, that which marks the character of a person or thing.
Characterize, to mark by certain qualities.
Charade', a sort of riddle.
Charing, work done by the day.
Chargé d'affaires, one in charge of an embassy during the absence of the ambassador.
Chariness, caution, sparingness.
Charioteer, the driver of a chariot.
Charity, generosity of thought and deed.
Chariva'ri, a confused din as of children playing at bands, noisy, mock music.
Char'latan, a quack, a mountebank.
Charles's Wain, a northern constellation.
Charnel-house, a place containing the bones of the dead.
Chart, a map of the sea.
Chartered, granted by charter, privileged; hired.
Chartist, a member of a democratic party.
Chartreuse, a liqueur.
Char'tulary, the record of a monastery.
Chary, careful, sparing.
Chasm, a deep gap in the earth.
Chasseur, a light foot or horse soldier.
Chas'tisement, punishment.
Chastity, purity.
Chasuble, a vestment of a priest.
Château (*pl.* châteaux), a castle; a country mansion.
Chatelaine, the mistress of a castle; an ornament worn at a lady's waist.
Chattel, any movable article of property.
Chauffeur, a stoker, a motor driver.
Chauvinism, exaggerated patriotism.
Cheap-Jack, a travelling vender of cheap goods.
Cheddar, a kind of cheese.
Cheese-paring, the rind of a cheese; stingy.
Chef, a man cook; chief.
Chef-d'œuvre (*pl.* chefs-d'œuvre), a masterpiece.
Cheiropodist or **chiropodist,** one skilled in the treatment of the feet and hands.
Chemically, according to the laws of chemistry.
Chemise, an under-garment worn by women.
Chemistry or **chymistry,** the science that treats of the elements in nature.
Chenille, a sort of silk or worsted cord.
Cheque-book, a book made up of cheques.
Chequer-board, a board for chess, &c.
Cheroot, a cigar.
Cherub (*pl.* cherubs or cherubim), an angelic being; a lovely child.
Chestnut, a tree and its fruit; reddish brown.
Cheval-glass, a large swing glass on a stand.
Chev'elure, a head of hair; a part of a comet.
Chiaroscu'ro, the art of treating light and shade in a picture.
Chiboque or **chibouk,** a Turkish pipe.
Chic, elegance, style.
Chica'nery, trickery, quibbling.
Chicory, a plant used to mix with coffee.
Chief-justice, the chief judge of a court.
Chiffonier, a piece of furniture; a rag-picker.
Chilblain, inflammation of the hands or feet caused by cold.
Childermas-day, Holy Innocents' Day; Dec. 28.
Chiltern Hundreds, see *Dict. of Gen. Infor.*
Chimæra or **chime'ra,** an absurd fancy; a fabulous monster.
Chimerical, fanciful, imaginary.
Chinchilla, a small fur-bearing animal.
Chine, a natural opening in a cliff; the backbone of an animal.
Chinese, a native of China.
Chintz, a printed cotton fabric.
Chiromancy, fortune-telling by the hand.
Chisel, the tool of a sculptor or carpenter.
Chi'valrous, knightly, courteous, brave.
Chloroform, a colourless liquid used to produce insensibility.
Chocolate, a paste made from the fruit of the cacao-tree.
Choir, a band of singers; that part of a church occupied by them.
Cholera, a disease; see *Med. Dict.*
Chol'eric, hot-tempered.
Chopsticks, two small sticks of wood, &c., used to eat with in China.
Choral, belonging to a choir or chorus.
Chord, a number of notes struck together with harmonious effect.
Chorister, a member of a choir.
Chorus, a number of people singing together; a song or part of a song sung by them.
Chough, a bird resembling a crow.
Chow-chow, mixed pickles.
Chrism, consecrated oil.
Christendom, all the Christian nations.
Chromatic, relating to colour; rising in semitones.
Chromo, a kind of coloured print.
Chromo-lithography, the art of printing in colours.
Chronic, of long duration; liable to recur.

Chronicle, a record; a history.
Chronology, the method of reckoning time; the arrangement of events in their proper order.
Chronom'eter, a watch or other time-keeper.
Chrysalis, the form which a grub or caterpillar assumes before it becomes a winged insect.
Chrysan'themum, a plant with large blooms.
Churching, the returning of thanks in church on the part of a mother after child-birth.
Churlish, rough, ill-bred.
Churn, a machine for making butter.
Chute, a slide; a waterfall.
Chutney or **chutnee,** an Indian condiment.
Cicatrice, a scar.
Cicerone, a guide.
Ciceronian, in the style of Cicero.
Ci-devant, former.
Cigarette, tobacco rolled in thin paper.
Ci-git, here lies.
Cimme'rian, very dark, gloomy.
Cincture, a belt, a girdle.
Cinerary, for ashes (of an urn).
Cingalese, a native of Ceylon.
Cinque-ports, see *Dict. of Gen. Infor.*
Cipher, the figure 0; secret writing.
Circu'itous, roundabout.
Circulation, circular movement as of the blood; diffusion.
Circumambient, surrounding.
Circumcision, a Jewish rite.
Circumference, the line that encloses a circle.
Circumlocution, an indirect manner of speaking.
Circumnavigate, to sail round.
Circumscribe, to enclose, to bound, to limit.
Circumspect, prudent, watchful.
Circumstantial, detailed.
Circumvention, the act of outwitting any one.
Cirque, a circus; a valley surrounded by mountains.
Cis-alpine, to the south of the Alps.
Cis-montane, on this side of the mountains.
Cist, a chest; a tomb.
Cistercian, the name of an order of monks.
Cistern, a vessel for storing water.
Citadel, a fortress.
Citation, a call to appear before a judge; a quotation.
Citizenship, the privileges of a citizen.
Civic, relating to a city.
Civil Law, the law of a state; Roman law.
Civil List, the yearly sum granted to the crown.
Civil Service, the non-military branch of the public service.
Civil War, a war between fellow-countrymen.
Civilian, one who is not in the army or navy.
Civility, politeness.
Civilization, the state of being freed from barbarism.
Clachan, a small village.
Claimant, one who claims.
Clairvoyance, the supposed power of seeing invisible things.
Clamminess, a moist sticky state.
Clamorous, noisy, vociferous.
Clannish, united in close bonds.
Clandestine, secret, underhand.
Clangorous, loud and harsh, metallic.
Claqueur, one paid to applaud in a theatre.
Clarenceux or **clarencieux,** the second king-at-arms.
Claret-cup, an iced drink of claret, &c.
Clarification, the act of clearing from impurities.
Clarionet or **clarinet,** a wind instrument.
Classic, an author or work of the first order.
Classical, relating to the classics.
Classification, arrangement into classes.
Claustral, relating to a cloister.
Clavier, the keyboard of a pianoforte, etc.
Claymore, a Highland sword.
Cleanliness, the state of being neat and clean.
Clearance, the act of clearing.
Clearing-house, see *Dict. of Gen. Infor.*
Cleavage, the manner or act of splitting.
Clef, a sign in music placed at the beginning of a staff.
Clemency, mercy, leniency.
Clepsydra, a water-clock.
Cleptomania or **kleptomania,** a mania for stealing.
Clere'story or **clearstory,** the uppermost story of a church pierced by a row of windows.
Clerical, relating to the clergy or to a clerk.
Clerk, a person employed in an office; a cleric.
Client, one who has a professional man to act for him.
Clientèle, the whole body of one's clients.
Climacteric, a period in life when some constitutional change is supposed to occur.
Climatize, to accustom to a different climate.
Climax, the culminating point.
Clinical, relating to a sick-bed.
Clinker-built, built with the planks overlapping each other.
Clique, an exclusive set of people.
Cloister, a convent; an enclosed walk.
Closure, the act of closing; conclusion.
Cloven-hoofed, having the foot divided.
Cloy, to satiate, to surfeit.
Clubbable, sociable.
Clue or **clew,** a ball of thread; something that helps to solve a mystery.
Coact, to act in concert with.
Coadju'tor, a colleague, a fellow-helper.
Coagency, co-operation.
Coag'ulate, to curdle, to congeal.
Coales'cent, joining or growing into one body.
Coali'tion, a union of powers or individuals.
Coal-measures, strata in which coal is found.
Coast-guard, a body of men who keep watch on the coast to prevent smuggling.
Coat-armour, armorial bearings.
Coaxer, a wheedler.
Cobble-stone, a rounded stone used for paving.
Co'caine, a drug that deadens pain.
Cochineal, a scarlet dye obtained from the cochineal insect.
Cockade, a rosette worn on the hat as a badge.
Cock-and-bull, a term for a silly made-up story.
Cockerel, a young cock.
Cockneyism, the peculiar style and speech of a Londoner.
Cockroach, a beetle found in houses.
Cockswain, one who steers or has charge of a small boat and its crew.
Cocktail, a drink made of spirits, etc.
Cocoon, the silky wrapper spun by the larvæ of certain insects.
Coda, an extra passage at the end of a musical composition.
Code, a system of laws, rules, or signals.
Codex (*pl.* codices), an ancient manuscript.
Codicil, an addition to a will.
Codify, to reduce to a code.
Coemption, the act of buying up the whole quantity of anything.
Coercion, restraint, compulsion.
Coe'val, of the same age.
Coexistence, existence at the same time.
Coextensive, having the same or equal extent.
Coffee-room, a public room in a hotel where refreshments are served.
Cogency, the power of convincing; force.
Cogitation, meditation, reflection.
Cognac, the finest French brandy.
Cognate, having the same origin or nature.
Cog'nizable, that may be known; that may be judicially tried.
Cog'nizance, judicial notice; knowledge.
Cohabit, to live together as man and wife.
Coheir, a joint heir.
Coherence, a sticking together; consistency in reasoning.
Cohesion, coherence, connection.
Cohibit, to restrain, to hinder.
Coiffeur, a hairdresser.
Coiffure, a head-dress.
Coincidence, a striking similarity in the time at which two events occur.
Coke, coal with the gas extracted from it.
Col'ander, a straining utensil.
Cold-chisel, a tool for cutting cold metals.
Collaborate, to work together.
Collapsible, capable of closing or shutting up.
Collar-bone, the bone joining the shoulder and breast bones.
Collate, to bring together for comparison, e.g., old MSS.
Collateral, side by side; having a common ancestor but not descended in the same line.
Colleague, an associate in an office.
Collecta'nea, passages culled from various authors.
Collectivism, a socialistic doctrine.
Collegiate, relating to, or like a college.
Collier, a coal-digger; a ship that carries coal.
Collinear, in a corresponding line.
Collision, the act of coming into violent contact.
Collo'quialism, an expression used only in familiar conversation.
Colloquy, conversation; dialogue.
Collusion, a secret compact.
Colon, a punctuation mark; the large intestine.
Colonel, the chief officer of a regiment.
Colonial, belonging to a colony.
Colonization, the act of founding a colony.
Colonnade, a row of columns.
Colophon, a device or printer's name, with date and place of publication, formerly put at the end of a book.
Colossal, huge, of great size.
Colour-sergeant, a sergeant in charge of the colours of a regiment.
Colporteur, a travelling vendor of tracts, &c.
Columbary, a dove-cot; a pigeon-house.
Column, a pillar; an upright row of lines in a book.
Coma, stupor, heavy sleep.
Comatose, lethargic, in a state of coma.
Comb, an instrument for dressing the hair; a bird's crest.
Combatant, one who fights.
Combination, a union of persons or things.
Combustible, inflammable.
Comedian, an actor or writer of comedies.
Comeliness, grace, beauty.
Comestible, an eatable.
Comet, a heavenly body with a luminous tail.
Comfit, a sweetmeat.
Comforter, one who consoles; a woollen scarf.
Comical, droll, laughable.
Comity, courtesy, civility.
Comma, a punctuation mark.
Commander-in-chief, the head of an army.
Comme il faut, correct, seemly.
Commemorate, to celebrate the memory of.
Commencement, beginning, origin.
Commendably, in a praiseworthy manner.
Commensurate, of the same measure.
Com'mentary, a comment; a book of comments.
Com'mentator, a writer of a commentary.
Commercial, belonging to trade.
Commination, a threat, a denunciation.
Commin'atory, threatening.
Commisera'tion, pity, compassion.
Commissa'riat, the provisioning department of an army.
Com'missary, one commissioned to act for another.
Commissionaire, a messenger, light-porter, or door-keeper.
Commissioner, one appointed to perform some office.
Commitment, the act of committing.
Committee, a body of persons appointed to settle some question or conduct some business.
Commodious, roomy, convenient.
Commodity, convenience; a saleable article.
Commodore, the commander of a small squadron of ships.
Common-council, the council of a city or corporate town.
Common-law, the ancient unwritten law of the land.
Common-pleas, one of the law courts.
Commonage, the right of feeding cattle on a common.
Commonalty, the common people.
Commoner, one below the rank of nobility.
Common-place book, a memorandum book.
Commonwealth, a republic; the entire body of the people.
Commotion, uproar, agitation.
Commu'nicable, that may be imparted.
Communicative, ready to impart information.
Communiqué, official information given to the Press for publication.
Com'munism, a state of things in which individual rights to property are abolished.
Commutation, exchange.
Compact', pressed together.
Com'pact, an agreement.
Companion-ladder, a ladder leading to the quarter deck.
Companionable, sociable.
Com'parable, worthy to be compared.
Comparatively, by comparison.
Comparison, the act of likening one thing to another.
Compartment, a division.
Compass, an instrument by which ships are guided; limit; range; to encircle.
Compassionate, merciful, pitiful.
Compatible, consistent, suitable.
Compatriot, a fellow-countryman.
Compeer', an equal, a companion.
Compendious, abridged, comprehensive.
Compendium, a summary.
Compensation, recompense, amends.
Competence, ability; enough to live on.
Compet'itive, relating to competition.
Compla'cency, satisfaction; civility.
Complai'nant, one who brings an action.
Complai'sance, civility; desire to please.
Complementary, completing, making up.
Completeness, the state of being finished.
Complexion, the colour of the face; aspect.
Complexity, the state of being complicated.
Compli'ance, submission, consent.
Complication, intricacy; the act of involving.
Complicity, partnership in wrong-doing.
Complimentary, expressing praise.
Com'pline, the last service at night in the Roman Catholic Church.
Complot, a plot, a conspiracy.
Component, a constituent part or ingredient.
Comportment, behaviour.
Composedly, in a self-possessed manner.
Com'posite, made of several distinct parts.
Compo'sure, self-possession, calmness.
Comprehend, to understand, include.
Comprehensive, having the power to comprehend.
Compressibility, capability of being reduced in size by pressure.
Com'promise, to settle by mutual concessions; bring under suspicion.
Comptroller, an officer appointed to verify the accounts of others.
Compulsion, force, the act of compelling.
Compunction, remorse, regret.
Computa'tion, the act of reckoning; an estimate.
Con amo're, with zest; earnestly.
Concatena'tion, a series of links.
Concave, curved like the inner surface of a sphere.
Concealment, the act of hiding; secrecy.
Concede, to admit, yield, grant.
Conceit, vanity; a fancy.

Conceivable, that may be understood or believed.
Concentration, the act of bringing to a centre.
Concen'tric, having a common centre.
Conception, the act of conceiving; an idea.
Concernment, that in which one is concerned.
Concert', to plan, contrive.
Con'cert, a musical performance.
Concer'to, a musical composition.
Concessionaire, one who holds a concession.
Conchology, the science of shells.
Conciliar, relating to a council.
Concil'iatory, tending to reconcile.
Concise'ness, brevity.
Conclave, a secret assembly.
Conclusive, decisive.
Concoction, a mixture; a design.
Concom'itant, conjoined with; accompanying.
Concordance, agreement; an index showing where each principal word of a book occurs.
Concordat, a compact, a convention.
Concourse, a gathering, a crowd.
Concretely, not in an abstract manner.
Concu'piscence, lust.
Concurrence, union, agreement.
Concussion, a violent shaking; a shock.
Condem'natory, expressing blame.
Condensation, the act of compressing.
Condescension, friendliness towards inferiors.
Condign', deserved, merited.
Conditional, on conditions, not absolute.
Condo'lence, sympathy for another's grief.
Condonement, forgiveness, pardon.
Conducive, tending or contributing to.
Conductor, a leader, manager, director.
Con'duit, a pipe to convey water.
Coney, a rabbit.
Confabulation, familiar conversation.
Confection, a sweetmeat; a mixture.
Confectionery, sweetmeats, etc.
Confederacy, a league, union.
Conference, a meeting for discussion.
Confession, avowal; an acknowledgment of wrong-doing.
Confidant *m.*, **Confidante** *f.*, a trusted friend.
Confidential, trusty; told in secret.
Confidingly, trustfully.
Configuration, external form.
Confinement, restraint, imprisonment, childbirth.
Confirmation, proof; a religious rite.
Confiscation, the seizing of forfeited goods.
Conflagration, a big fire.
Conflict, a struggle; violent collision.
Confluence, a junction of streams; a crowd.
Conformation, the act of complying with; structure.
Conformity, resemblance; consistency.
Confound, to astonish, destroy, defeat.
Confraternity, a brotherhood.
Confrère, a fellow-member.
Confront, to stand face to face, oppose.
Confucian, relating to the Chinese sage, Confucius.
Confuse, to perplex, mingle in disorder.
Confutation, disproof.
Congé, dismissal, farewell.
Congeal', to thicken by cold.
Congenial, pleasing, in sympathy with.
Congenital, belonging to one from birth.
Conge'ries, a mass of small bodies.
Congestion, a superfluity of blood in the veins.
Conglomeration, a confused mass.
Congratulate, to express pleasure at a happy event.
Congregate, to gather together, assemble.
Congregationalist, a member of the Congregational Church or Society.
Congress, a meeting, a conference.
Con'gruence, agreement, suitableness.
Conical, having the form of a cone.
Conif'erous, bearing cones.
Conject'ural, not certain, guessed at.
Conjointly, together, in union with.
Con'jugal, belonging to marriage.
Conjunction, union, league; a part of speech.
Conjuncture, a critical time.
Conjuration, a solemn calling upon; a spell.
Conjury, magical arts.
Connection or **connexion,** union; a relation.
Conniv'ance, the encouragement of a fault by winking at it.
Con'noisseur, a judge, a critic.
Connotation, an implied meaning.
Connubial, relating to marriage.
Conqueror, one who is victorious.
Conquest, something gained by a victory.
Consanguinity, blood-relationship.
Conscience, the faculty of distinguishing between right and wrong.
Conscien'tious, scrupulous.
Consciousness, the perception of what passes in the mind.
Conscription, compulsory military service.
Consecration, dedication to a sacred use.
Consec'utive, following in succession.
Consensus, agreement of opinion.
Consenta'neous, agreeing with, suited to.
Consentient, of the same mind.
Consequential, coming after as a result; conceited.
Conservation, preservation.
Conservative, one who dislikes a violent or radical change.
Conservatoire, a school of music.
Conservatory, tending to preserve; a greenhouse.
Considerateness, thoughtfulness for another.
Consignee', the person to whom things are sent.
Consignment, goods to be delivered.
Consistency, degree of thickness of a paste; agreement.
Consistent, not fluid; not opposed.
Consistory, a spiritual court; an assembly.
Consolable, capable of being comforted.
Consol'atory, affording solace.
Consolidate, to make solid; unite.
Consols, Government Stocks.
Consonant, a letter that cannot be sounded by itself; in agreement with.
Consort', to associate with.
Con'sort, a husband or wife.
Conspicuous, plainly visible; eminent.
Conspirator, one who plots.
Constable, a police-officer.
Constabulary, a body of constables.
Constancy, faithfulness, stability.
Constellation, a cluster of stars.
Consternation, astonishment; dismay.
Constipation, torpid action of the bowels.
Constituency, a body of electors.
Constituent, a voter; an essential part.
Constitutional, consistent with the constitution.
Constraint, compulsion; embarrassment.
Constriction, contraction, compression.
Constructive, capable of construction; implied.
Con'strue, to translate, explain.
Consubstantiation, the doctrine of the Lutheran Church respecting the Lord's Supper.
Consuetudinary, established by custom.
Consul, a government agent in a foreign land.
Consular, relating to a consul.
Consultation, a meeting of persons to take counsel together.
Consumer, one who uses or destroys anything.
Con'summate, to perfect; complete.
Consummation, perfection, end.
Consumptive, wasting; inclined to the disease consumption.
Contact, touch, close union.
Contagion, the transmission of disease by contact.
Contain, to hold, include; restrain.
Contaminate, to defile, pollute.
Contemn, to scorn, despise; to neglect.
Contem'plative, studious, thoughtful.
Contempora'neous, existing or happening at the same time.
Contem'porary, one living at the same time.
Contemptible, worthy of scorn.
Contemptuous, scornful, disdainful.
Content, satisfied; satisfaction.
Contentious, quarrelsome.
Conterminous, bordering upon.
Contest', to contend, oppose.
Con'test, a dispute.
Context, the part preceding or following a passage quoted.
Contigu'ity, contact, nearness.
Continence, self-restraint, chastity.
Continental, belonging to a continent, especially Europe.
Continently, temperately.
Contingency, a chance event.
Contingent, accidental; a share, proportion.
Continuation, prolongation, extension.
Continu'ity, unbroken connection.
Contortion, a writhing or twisting motion.
Contour, the outline of a figure.
Contraband, prohibited, unlawful.
Contraction, a shrinking; an abbreviation.
Contractor, one of the parties to a bargain.
Contradiction, contrary assertion, denial.
Contradistinguish, to distinguish by opposite qualities.
Contralto, a woman's or boy's voice with a low register.
Contrari'ety, opposition, inconsistency.
Con'trariwise, on the other hand.
Contrast', to estimate unlikeness by comparison.
Con'trast, unlikeness.
Contravention, transgression, infringement.
Contre-temps, a mishap, unlucky accident.
Contri'butory, promoting the same end.
Contrition, remorseful grief.
Contrivance, a plan, device.
Controllable, subject to control.
Controlment, restraint, control.
Controversial, related to disputed arguments.
Controvert, to dispute, debate.
Contumacious, obstinate, perverse.
Con'tumely, reproach; insolence.
Contusion, a severe bruise.
Conundrum, a riddle.
Convalescent, recovering from an illness.
Convenance, that which is fitting or proper.
Convene, to call together, assemble.
Convenience, fitness, accommodation, ease.
Convent, a religious house.
Conventicle, a religious meeting of dissenters.
Convention, an assembly; a temporary treaty.
Conventional, agreed on; customary, formal.
Conventual, belonging to a convent.
Convergence, the act of tending to one point.
Con'versant, well versed in.
Conversational, belonging to talk.
Conversazio'ne, a social meeting.
Converse', to chat.
Con'verse, conversation; opposite.
Conversion, a change from one religion or state to another.
Convertible, that may be changed.
Convex, curved like the outer surface of a sphere.
Conveyance, the act or means of carriage; a vehicle; a deed for the transfer of property.
Conviction, firm belief; the state of being found guilty of a crime.
Convince, to persuade, or satisfy by proof.
Convivial, festive, social.
Convocation, an assembly; an ecclesiastical council.
Convolution, a fold; a rolling together.
Convoy, an armed escort by sea or land.
Convulsion, a violent involuntary contraction of the muscles; a commotion.
Coolie, an East Indian porter.
Cooperage, the trade of a barrel-maker.
Co-op'erative, working together.
Co-opt, to adopt into a body by the votes of its members.
Co-ordination, the state of holding the same rank.
Co-partnership, equal share in business.
Cope, to contend with; a covering; a priest's vestment.
Copernican, relating to the astronomer Copernicus.
Copious, plentiful, abundant.
Copper-bottomed, having the bottom cased in copper.
Copper-plate, an engraved plate of copper; a print from such a plate.
Coppice or **copse,** a wood of small growth.
Coptic, belonging to the old Egyptian Church.
Copulative, uniting.
Copyhold, a tenure secured by entry on the rolls of the lord of the manor.
Copying-press, a machine for copying letters.
Copyist, one who copies.
Copyright, the exclusive right of an author to publish his work.
Coquet', to flirt.
Coquettish, inclined to coquet.
Coracle, a basket boat used in Wales and Ireland.
Coral-reef, a ridge formed by the growth of coral.
Corbel, a projection of masonry used to support a pillar, etc.
Cordage, a number of ropes.
Cor'delier, a Franciscan friar.
Cordial, hearty, sincere; an exhilarating drink.
Cordiality, sincerity, heartiness.
Cordillera, a chain of mountains.
Cordite, a smokeless gunpowder.
Cordon, the ribbon of an order; a line of sentries.
Cordon bleu, a first-rate cook.
Corduroy, a thick ribbed cotton material.
Cordwainer, a shoemaker.
Core, the heart or inner part of anything.
Co-respondent, a joint respondent in a law-suit.
Cormorant, a sea-bird; a glutton.
Corner-stone, a stone joining two walls at the corner of a building.
Cornet, a brass wind instrument.
Corn-factor, a wholesale dealer in corn.
Cornice, a moulded projection at the top of a wall.
Cornish, belonging to Cornwall.
Corn-laws, laws restricting the free import of corn.
Cornucopia, the horn of plenty.
Corollary, an inference, a consequence.
Cor'onach, a funeral dirge.
Coronation, the ceremony of crowning.
Coroner, an officer who inquires into the causes and circumstances of sudden or violent death.
Coronet, the inferior crown of the nobility.
Corporal, relating to the body; a noncommissioned officer.
Corporately, as a corporate body.
Corporation, a body politic.
Corporeal, belonging to the body.
Corpse, the dead body of a human being.
Corpulence, extreme fatness.
Corpuscle, a minute body, an atom.
Corral, an enclosure for cattle.
Corrective, tending to correct; restriction.
Correlative, having a reciprocal relation.
Correspondent, agreeing with; one who holds communication with another by letter.
Correspondency, agreement; intercourse by letter.
Corridor, a passage in a building or train.
Corrigenda, corrections required in a book.
Corrigible, punishable; tractable.
Corroborate, to confirm, strengthen.
Corrode, to eat away by degrees.

Corrosive, anything which corrodes.
Corrugation, contraction into wrinkles.
Corruptible, susceptible to corruption.
Corruption, a putrid state; impurity; bribery.
Corsage, a dress bodice.
Corsair, a pirate or his ship.
Corset, a stiffened laced under-bodice.
Cortège, a procession, train of attendants.
Cortes, the Spanish Parliament.
Coruscation, a rapid flash of light.
Corvée, certain obligatory services of a vassal to his lord.
Corvette, a war-vessel.
Corybantic, madly excited.
Cosily, snugly.
Cosmetic, a preparation to beautify the skin.
Cosmic, relating to the world; rising or setting with the sun.
Cosmog'ony, the origin of the world.
Cosmology, the science of the universe.
Cosmopol'itan or **cosmop'olite,** one who is at home in any country.
Cosmos, the system of the universe; order.
Cossack, a Russian light cavalryman.
Costard, a large apple.
Coster-monger, a street hawker.
Costive, constipated.
Costumier, one who makes or sells costumes.
Co-surety, one who is surety with another.
Coterie, a social circle, a clique.
Cothurnus, a high boot worn by old tragedians.
Cotillion, a lively dance.
Cottager, one who lives in a cottage.
Couch, a bed; to lie down; to operate on the eye.
Cough, a spasmodic effort to remove phlegm from the lungs.
Coulée, a narrow ravine; a flow of lava.
Coulter or **colter,** the small blade of a plough.
Council, an assembly for consultation.
Councillor, a member of a council.
Counsel, advice; a barrister.
Counsellor, one who gives counsel.
Countenance, the face, expression; support.
Counteraction, hindrance, opposition.
Counter-attraction, opposite attraction.
Counter-balance, to oppose with equal power.
Counter-charge, a charge brought in opposition to another.
Counterfeit, false; forged; an imitation.
Counter-foil, the portion of a cheque, etc., kept by the giver.
Counter-irritant, something applied to the body to remove one irritation by causing another of less consequence.
Countermand, to withdraw an order.
Counter-mark, an extra mark on a bale of goods.
Counter-move, a counteracting movement.
Counterpane, a coverlet for a bed.
Counterpart, a correspondent part; a copy.
Counterplot, a plot opposed to another plot.
Counterpoint, a kind of musical composition.
Counterpoise, equality of weight or power.
Counter-scarp, the outer side of the ditch in fortification.
Counter-sign, a military passwood.
Counter-tenor, a high tenor.
Countervail, to have equal force or value.
Counter-weight, equal weight against.
Countess, the wife of an earl or count.
Countrified, having rustic manners; rural.
County Council, a body elected by the ratepayers to administer the local government of the county.
County Court, a court for settling between debtor and creditor.
County Town, the chief town of a county.
Coup, a blow; successful stroke.
Coup de grâce, finishing stroke.
Coup d'état, a sudden political move.
Coup d'œil, a glance.
Coupé, the front compartment of a railway carriage; a four-wheeled carriage for two inside.
Coupler, that which links together.
Couplet, two lines of poetry rhyming.
Coupon, a dividend warrant.
Courageous, brave, daring, bold.
Courier, an express messenger; a travelling attendant.
Courser, a swift horse; one who hunts hares.
Court-dress, dress worn at court.
Courteous, polite, well-bred.
Courtesan, a woman of loose life.
Courtesy, politeness.
Court-martial (*pl.* courts martial), a court for the trial of military and naval prisoners.
Court-roll, the record of a court.
Court-yard, a yard adjoining a house, etc.
Cousin, the child of an uncle or aunt.
Cousin-german, a first cousin.
Cove, a small bay.
Covenant, a mutual agreement.
Covenantor, one who enters into a covenant.
Coverlet, an outer bed-cover.
Covert, sheltered, secret; a thicket.
Coverture, (law) the state of a married woman.
Covetous, inordinately desirous.
Covey, a number of birds together.
Cowardice, want of courage.
Cow-boy, the name given in America to one in charge of cattle.
Cow-catcher, an apparatus on the front of an engine to remove obstacles from the line.
Cowl, a monk's hood; a revolving chimney top.
Co-worker, one working with another.
Coxcombical, foppish, conceited.
Coxcombry, foppishness.
Coyness, reserve, bashfulness.
Cozener, a cheat.
Crab-apple, a wild apple.
Crabbed, peevish, morose; perplexing.
Crackling, a noise; the skin of roast pork.
Cracknel, a biscuit.
Craftiness, cunning, wiliness.
Craftsman, a skilled workman.
Cragginess, a craggy or rocky state.
Cragsman, a skilful climber of rocks.
Crambo, a rhyming game.
Cramp-iron, a piece of iron bent at each end.
Cranage, the sum charged for the use of a crane.
Cranium, the skull.
Crank, a part of a machine; a bend; a whim.
Crannied, full of crevices.
Crape, a thin fabric.
Crapulence, illness caused by intemperance.
Crassness, coarseness; stupidity.
Crate, a large wicker case.
Crater, the mouth of a volcano.
Cravat, a neckcloth.
Craven, a coward.
Crawl, to creep, to move very slowly.
Crayon, a chalk pencil.
Crazily, insanely; weakly.
Cream-cheese, a creamy kind of cheese.
Creamery, an establishment where butter and cheese are made or sold.
Crease, a mark made by doubling anything; a line on a cricket pitch.
Cre'asote' or **cre'osote,** an oil obtained from wood tar.
Create, to form out of nothing; beget; make.
Creator, one who creates; God.
Creature, a living being.
Crèche, a public nursery where mothers may leave their children while they go to work.
Credence, belief, credit.
Credential, that which gives a right to confidence.
Credibility, the state of meriting belief.
Cred'itable, deserving praise or credit.
Credu'lity, readiness to believe.
Creed, belief; a summary of the articles of faith.
Creek, a small bay.
Creel, a fisherman's basket.
Cremate, to reduce a dead body to ashes.
Cremation, the practice of cremating.
Cre'matory or **crematorium,** a place where cremation is carried out.
Cre'nellate, to furnish with battlements.
Creole, one born in the West Indies or the old Spanish States of America, but of European descent.
Crepitant, creaking.
Crepuscular, belonging to twilight.
Crescen'do, gradually increasing in sound.
Crescent, a half-moon; increasing.
Cresset, an iron frame for a beacon; a torch.
Crested, having a crest or comb.
Crest-fallen, dejected.
Creta'ceous, chalky.
Cre'tinism, an Alpine malady partly mental.
Cretonne, a printed cotton fabric.
Crevasse, a rent or split in a glacier.
Crevice, a crack, a cleft.
Crewel, an embroidery yarn.
Cribbage, a game at cards.
Cricket, an out-door game; an insect.
Criminal, one guilty of a crime.
Criminous, wicked, iniquitous.
Crimp, brittle; to curl; to decoy.
Crimson, a rich red colour.
Cringe, to fawn, to flatter in an abject manner.
Crinoline, a skirt stiffened with wire, etc.
Crisis, a turning-point, a critical moment.
Crispin, a shoemaker, from the saint of that name.
Criterion (*pl.* criteria), a standard to judge anything by.
Critic, a judge of merit; a fault-finder.
Critically, in the manner of a critic.
Criticism, the art of judging; a critical observation.
Criti'que, a review of a literary work, etc.
Croaking, grumbling; anticipating evil.
Crochet, a sort of knitting with a small hook.
Crockery, earthenware.
Crocodile, a large aquatic reptile.
Crocus, a small flower.
Cromlech, a prehistoric structure of stone.
Crony, an old acquaintance.
Croon, to hum softly.
Crop-eared, having the ears cropped.
Croquet, an out-door game.
Crosier, a bishop's staff.
Cross-bones, an emblem of death.
Cross-breeding, the intermixing of differ t varieties or breeds.
Cross-examination, the examination of a witness by the counsel of the opposite side.
Cross-fire, the crossing of two or more lines of fire.
Cross-grained, having the fibres irregular; stubborn.
Cross-purposes, a game of questions and answers; a misunderstanding.
Cross-question, to cross-examine.
Cross-reference, a reference to another part of a book.
Cross-trees, pieces of timber across the upper parts of the masts.
Crotchet, a note in music; a whim.
Croup, a disease of the throat common among children; the buttocks of a horse.
Croupier, the attendant at a gaming-table.
Crowbar, a heavy bar of iron used as a lever.
Crown-glass, the finest sort of window glass.
Crown-prince, the heir-apparent to the throne.
Crow's-nest, a look-out box at the mast-head of a ship.
Crucial, forming a decisive test.
Crucible, a chemical melting-pot.
Crucifer, a plant having its petals arranged cross-wise.
Crucifix, a cross with the figure of Christ upon it.
Cruciform, in the form of a cross.
Crucify, to put to death upon the cross.
Crudeness, unripeness; want of finish.
Cruelly, in a hard or cruel manner.
Cruet, a small bottle for condiments.
Cruise, to sail here and there.
Cruiser, a ship that cruises; a war-ship.
Crumb, the soft part of bread; a particle of bread.
Crumpet, a kind of tea-cake.
Crupper, a strap under a horse's tail.
Crusade, a religious expedition of the middle ages; a concerted attack on a supposed evil.
Crush-hat, a soft collapsible tall hat.
Crush-room, a room in a theatre to which the audience may retire during the intervals.
Crusta'cea, a class of animals including lobsters, crabs, &c.
Crustiness, the state of being crusty; snappishness.
Crutch, a support for the lame.
Crutched, using crutches; marked by a cross.
Crux, something extremely puzzling or difficult to deal with.
Crypt, a vault under a church.
Cryptic, hidden, secret, occult.
Cryptogram, a secret writing.
Crystal, a regular solid body; a superior kind of glass.
Crystalline, like crystal, transparent.
Crystallization, the act of forming crystals.
Cube, a regular solid body having six equal square sides.
Cubic, having the form of a cube.
Cubicle, a small separate sleeping place.
Cubit, an old measure of length.
Cucking-stool, an old instrument of punishment.
Cuckoo, a bird.
Cucumber, a garden plant and its fruit.
Cud, food which a ruminating animal chews for the second time.
Cuddy, a small cabin on board ship; a donkey.
Cue, words in an actor's speech giving a hint to another player; a hint; a rod used in billiards.
Cui bono?, for whose benefit? for what good?
Cuirass', a breastplate.
Cuirassier', a soldier having a cuirass.
Cuir-bouilli, specially prepared leather.
Cuisine, a kitchen; the cooking.
Cul-de-sac, a street with only one entrance.
Culinary, relating to the kitchen.
Cull, to gather, pick out.
Cullender, a colander, a strainer.
Culminate, to arrive at the highest point.
Culpable, guilty, deserving of blame.
Culprit, a person guilty of a crime.
Cult, worship, homage.
Cul'tivable, that may be cultivated.
Cultivation, the practice of tilling the soil; improvement.
Culture, cultivation; the result of intellectual training.
Culverin, a cannon with a long slender barrel.
Culvert, an arched drain under a road, etc.
Cumbersome, clumsy, unwieldy.
Cumbrian, belonging to Cumberland.
Cumbrous, troublesome, vexatious.
Cummer-bund or **kamar-band,** a waist-belt.
Cumulative, increasing by additions.
Cumulus (*pl.* cumuli), a heap; a kind of cloud.
Cune'iform, having the form of a wedge.
Cupid, the god of love.
Cupidity, avarice, inordinate love of gain.
Cu'pola, a dome.
Cupping, a process of drawing blood.
Cur, a worthless dog; a despicable man.
Curable, that may be cured.
Curaçoa, a liqueur.
Curacy, the office of a curate.
Cu'rative, relating to the cure of disease.
Cura'tor, the superintendent of a museum, etc.
Curdle, to congeal.
Curé, a French parish priest.

Curfew, in old times the bell rung as a signal for the putting out of lights.
Curio, a curiosity; a rare work of art.
Curiosity, inquisitiveness; a singular object.
Curlew, a wading bird.
Curling-stone, a stone used for the Scottish game of curling.
Curmudgeon, a churlish fellow; a miser.
Currant, a small fruit; a kind of small raisin.
Currency, circulation; that which passes from hand to hand as money.
Current, in circulation; a running stream.
Curriculum, a course of study.
Currier, one who dresses leather.
Curry, to dress leather; to comb a horse; an Indian sauce; stew prepared with this sauce.
Curry-comb, a comb used to clean horses.
Curse, to wish evil to; to swear.
Cursive, flowing, running.
Cursory, hasty, careless.
Curt, brief, abrupt, brusque.
Curtail, to shorten, to cut the end off.
Curtain, drapery round a bed, window, etc.
Curtsy or **curtsey,** a low bow made by women.
Curvature, crookedness; a bending.
Curvet', to leap, bound, frisk.
Curvilinear, composed of curved lines.
Cushat, the wood-pigeon or ring-dove.
Cushioned, provided with cushions, padded.
Cusp, a sharp projecting point, as in a horn of the moon.
Custard, a milk-pudding.
Custo'dian, one in charge of a public building.
Cus'tody, imprisonment; care, security.
Cus'tomary, usual, habitual.
Custom-house, the office where duties are paid at sea-port and frontier towns.
Custos, a keeper.
Cuta'neous, relating to the skin.
Cuticle, the outer skin of the body.
Cutlery, the trade of a cutler; knives and other cutting instruments.
Cutlet, a small piece of veal or mutton.
Cutpurse, a thief.
Cutter, one who cuts; a small vessel.
Cycle, a period of time at the end of which events begin to recur; a bicycle or tricycle.
Cyclic, relating to a cycle.
Cyclom'eter, an instrument for measuring the distance covered by a bicycle.
Cyclone, a storm of great violence moving in a circle.
Cyclopædia, a book of general information.
Cyclope'an, vast, gigantic.
Cygnet, a young swan.
Cylinder, a roller-like body of uniform diameter.
Cylindrical, having the form of a cylinder.
Cymbal, a musical instrument.
Cymric, belonging to the Welsh.
Cynic, a morose or sarcastic man.
Cynicism, scorn or contempt of others.
Cy'nosure, the constellation of the little bear; an object of attraction.
Cypress, an evergreen tree.
Cyst, a bag containing morbid matter.
Cythere'an, relating to Venus.
Czar, the Emperor of Russia.
Cza'revitch, the eldest son of the Czar.
Czarevna, the wife of the Czarevitch.
Czarina, the Empress of Russia.
Czech, a native of Bohemia and Moravia.

Dabbler, one who engages in a pursuit in a desultory manner.
Da capo, a musical term indicating that the movement is to be repeated "from the beginning."
Dachsund, a special breed of dogs.
Dacoit or **dakoit,** a Hindu term for a brigand.
Dactyl, a metrical foot consisting of a long syllable followed by two short ones; e.g. mērrily.
Dado, a skirting of wood or paper around a room.
Dædalian, intricate, skilfully constructed like the maze of Dædalus.
Dæmon, see *Demon.*
Daffodil, a spring flower of the lily tribe.
Daguerreotype, a photograph taken on a metal plate.
Dahlia, a well-known flower.
Daimio, a Japanese noble.
Daintily, in a refined or fastidious manner.
Dairy, a place where butter and cheese are made or sold.
Dais, a raised platform, at one end of a hall, intended as a place of honour.
Daisy, a common flower.
Dalesman, one who dwells in a dale.
Dalliance, idle gossip, trifling.
Damageable, liable to be damaged.
Damascene, to adorn with patterns like those on damask.
Damask, figured material with an interwoven design.
Dame d'honneur, maid of honour.
Damnable, deserving of the strongest condemnation.
Damper, a sliding plate for regulating the draught of a stove; a kind of bread made without yeast.
Damsel, a maiden.
Damson, a kind of **plum.**
Dandruff or **-riff,** scurf which forms at the roots of hair.
Dandyism, foppishness in dress.
Danish, belonging to Denmark.
Danseuse, a female professional dancer, a ballet-dancer.
Dapple-gray, mottled gray.
Daring, venturesome, audacious.
Darkling, in the dark.
Darwinism, the theory of Darwin concerning evolution.
Dash-board, a board in front of a vehicle to keep off the mud.
Dastardly, cowardly.
Datum (*pl.* data), the thing given or assumed as true.
Daughter, a child of the female sex.
Dauntless, not to be daunted, fearless.
Dauphin, ancient title of the eldest son of the French king.
Davit, a projecting piece of wood or iron on the side of a vessel for hoisting and lowering a boat.
Davenport, a small writing-table furnished with drawers.
Davy-lamp, a safety lamp for use in mines, named after its inventor, Sir Humphry Davy.
Dawning, beginning to appear, breaking; day-break, dawn.
Day-dream, a waking dream, castle in the air, reverie.
Day-star, a star which heralds day, the morning-star.
Dazzling, blinding by its brilliancy.
Deacon, a clergyman who has not yet been ordained priest; a kind of elder among the Nonconformists.
Deaconess, a female church worker living under rule in a community.
Dead-heat, a race in which two of the competitors come in exactly equal.
Dead-letter, a law which has fallen into disuse; a letter insufficiently addressed for delivery.
Dead-lock, an *impasse,* a difficult situation from which there is no escape in any direction, a stand-still.
Dead-reckoning, a mode of determining the position of a ship without the help of astronomical observations.
Deaf-mute, a person who is both deaf and dumb.
Dean, a church dignitary at the head of the clergy of a cathedral; an officer in a university.
Dearth, scarcity. famine.
Death-rate, the percentage of deaths.
Death's-head, a skull; a moth having marks resembling a skull.
Death-warrant, a legal warrant authorising the execution of a condemned person.
Débâcle, a breaking up, a downfall.
Debar, to exclude.
Debasement, humiliation, degradation.
Debatable, open to debate, giving rise to dispute.
Debauchee, a licentious person.
Debauchery, licentiousness.
Deben'ture, a certificate or security for a loan of money.
Debilitate, to weaken, enfeeble.
Debit, to enter on the debtor side of an account.
Debonair, gay, lively, blithesome.
Debouch, to issue from a narrow place into the open.
Debou'chure, the mouth of a river.
Débris, confused mass of broken rubbish.
Debtor, one who is in debt.
Début, first formal appearance in society or before the public.
Débutante, a young girl who makes her first appearance in society.
Decade, a period of ten years.
Decadence, gradual decay or deterioration.
Decalogue, the ten commandments.
Decampment, hurried departure.
Decanter, a glass vessel with a stopper for holding wine or spirit.
Decapitation, the act of cutting off the head.
Decasyllab'ic, having ten syllables.
Decease, death.
Deceitful, underhand, not straightforward.
Deceiver, one guilty of deception.
Decency, propriety of behaviour, seemly conduct.
Decentralization, the transfer of a power from a central to a local body.
Deceptive, illusive, calculated to deceive.
Decidedly, assuredly; in a decided manner.
Deciduous, shedding its leaves annually.
Decimal system, a system of reckoning in which the value of the digits from left to right decreases in the ratio of 10 to 1.
Decimate, to punish or destroy every tenth person.
Decipher, to read what is written in cipher or very indistinctly.
Decisive, determinate, crucial.
Decla'matory, in the style of an impassioned speech.
Declaration, a formal statement.
Declination, a slanting away from a straight line.
Decline, to bend away from; to decay, diminish; to refuse.
Declivity, a slope as seen from above.
Decoct, to act upon a substance by boiling it.
Decolletée, having the neck and shoulders bare.
Decolorize, to render colourless, bleach.
Decomposition, the process of becoming decomposed.
Dec'orative, of an ornamental character.
Deco'rous, characterized by decorum or propriety.
Deco'rum, propriety, seemly behaviour.
Decoy, to entice or lure away.
Decreasingly, in a lessening degree.
Decree, an edict, statute, ordinance.
Decrepit, feeble and powerless with age.
Decrepitude, a state of feebleness resulting from old age.
Decres'cent, growing less, waning.
Decre'tal, a papal decree, a collection of ecclesiastical decrees.
Decri'al, act of running down, or depreciating.
Decumbent, in a reclining posture.
Dedal or **dædal,** a curiously wrought or intricate device like the labyrinth of Dædalus.
Dedalian or **dædalian,** curiously or cunningly wrought.
Dedicatory, of the nature of a dedication.
Deducible, capable of being deduced or inferred.
Deduction, an inference; something withdrawn or deducted.
Deductive, able to be deduced from the premises; deducing particular truths from general principles.
Deemster, one who dooms or judges, the title of one of the two chief magistrates in the Isle of Man.
Deer-stalking, hunting deer by following them stealthily.
Defacement, the act of disfiguring.
Defalca'tion, inability to account for money received in trust.
Defam'atory, slanderous, calumnious.
Defaulter, one who fails to account for money entrusted to him, or to appear in court when summoned.
Defeasible, able to be undone or annulled.
Defection, desertion, withdrawal.
Defective, imperfect, lacking in some respect.
Defence, act of defending; vindication, justification.
Defendant, one who appears in court to answer an accusation.
Defensive, connected with defence.
Deference, respect paid to a superior.
Deferential, showing deference.
Defiance, insolent resistance, contemptuous opposition.
Defiant, insolently daring.
Deficiency, lack, insufficiency.
De'ficit, a falling short due to excess of expenditure over revenue.
Defilade, to construct defences for the protection of a place against artillery or rifle fire from a higher level.
Defile', a narrow pass; to march in single file.
Definite, exactly defined, precise.
Defin'itive, exactly defining; positive, express.
Deflagration, a sudden fierce and bright combustion.
Deflection or **deflexion,** act of turning or swerving aside.
Deformation, act of disfiguring.
Deformity, disfigurement, mal-formation.
Defray, to bear the cost of, settle, pay.
Deftness, neatness of hand, dexterity.
Defunct', dead.
Defy, to brave or challenge insolently.
Dégagé, at ease, unconstrained.
Degeneracy, deterioration in race.
Degeneration, the process of deterioration in race or character.
Degradation, humiliation.
Degree, step, grade, stage; university distinction marking the degree of attainment; 360th part of a circle, or four right angles.
Dehortation, attempt to dissuade or deter.
Deification, the raising to the rank of a god.
De'ify, to make a god of, worship as a god.
Deign, to condescend.
Deism, belief in God but not in revealed religion.
Deity (*pl.* deities), godhead, divinity, the Supreme Being.
Dejection, depression of spirits.
Déjeuner, a meat breakfast or luncheon.
De jure, by law.
Delaine, a mixed fabric or woollen muslin.
Delation, the act of informing against a person.
Delectable, affording delight.
Delectation, the feeling of delight.
Delegate, one despatched as a representative, a deputy.
Delete, to blot out, destroy.
Deleterious, harmful, destructive.
Deliberation, careful consideration.
Delicacy, refinement; fineness of organization; weakness, fragility.
Delicious, pleasing to the senses.
Delight, intense pleasure.
Delimitation, determination of the limits.
Delineate, to portray.

Delinquency, shortcoming, failure in duty.
Delirious, suffering from delirium.
Delirium, a wandering in mind, or raving, due to fever or strong excitement.
Deliverance, a setting free.
Delphian, Delphic—belonging to Delphi, prophetic, oracular.
Delta, Greek letter Δ = d; land enclosed by two diverging mouths of a river.
Delude, deceive, beguile.
Deluge, flood.
Delusion, erroneous impression.
Delusory, productive of delusion.
Demagogue, a popular agitator, leader of the people.
Demand, to require, ask as a right.
Demarcation, act of marking off the bounds or limits.
Demean, comport, behave; lower, degrade.
Demeanour, bearing, behaviour.
Demented, out of one's mind, insane.
Demesne, a landed estate.
Demi-god, one regarded as more than human.
Demijohn, a narrow-necked flask in a wicker case.
Demi-monde, a term applied to women of damaged reputation, courtesans.
Demise', death, transfer of an estate.
Demobilization, a disbanding of troops.
Democracy, government by the people.
Democratic, belonging to or favourable to a democracy.
Demogorgon, an imaginary spirit supposed to be invested with peculiar terror.
Demoiselle, a young lady.
Demolish, to pull down, destroy.
Demolition, the act of demolishing.
Demon or dæmon, a spirit, evil spirit.
Demoniac or demoni'acal, possessed by an evil spirit.
Demonism, belief in the existence of demons.
Demon'strable, able to be demonstrated or proved.
Demon'strative, expressing the feelings openly; proving clearly.
De'monstrator, one who makes a subject clear by means of experiment or illustration.
Demoralization, deterioration in morals.
Demos, the people, the lower orders.
Demur, to raise objections, to take exception to some point.
Demureness, affectation of gravity.
Demurrage, compensation for the undue detention of a vessel or railway waggon.
Demy', paper of a particular size; scholar of Magdalen College, Oxford.
Denationalization, the deprivation of national rights.
Dene, a dell, a small valley.
Deniable, capable of being denied.
Denizen, inhabitant, occupant.
Denomination, title, designation; a particular sect.
Denominator, the lower number in a vulgar fraction.
Denotation, extent of the application of a word.
Denoue'ment, outcome, issue.
Denouncement, a formal accusation.
De novo, anew.
Denseness, obtuseness, dullness of perception.
Density, proportion of matter in relation to bulk.
Dental, relating to the teeth.
Dentated, having a toothed edge.
Dentifrice, tooth powder.
Dentistry, the practice of dental surgery.
Dentition, the cutting of teeth.
Denudation, the act of denuding or laying bare.
Denunciation, a formal accusation.
Denun'ciatory, of the nature of denunciation, threatening.
Deny, to refuse to admit as true, contradict; to refuse.
Deodand, a personal possession which, having been the cause of death, was by ancient custom set apart for sacred purposes.
Deodorization, the act of rendering odourless.
Departmental, belonging to a department.
Departure, a going away.
Depauperize, to remove from a state of pauperism.
Dependant or dependent, depending on, subordinate.
Depict, to portray, delineate.
Depilation, the process of removing hair.
Depletion, a state of emptiness or exhaustion.
Deplorable, to be deplored or regretted.
Deploy, (of soldiers) to open out into line.
Deponent, one who makes a deposition; (of a verb) passive in form and active in meaning.
Depopulate, to deprive of inhabitants.
Deportation, transportation, banishment.
Deportment, carriage, demeanour, bearing.
Depose, to remove from office, dethrone; testify.
Deposit, to lay down, to place in trust.
Depositary, one to whom something is entrusted.
Deposition, a formal statement.
Depository, a place where goods are stored, a warehouse.
Depôt, place where stores are deposited, warehouse.
Depravation, the act of corrupting, deterioration.
Depravity, turpitude, baseness, corruption.
Deprecation, an attempt to avert by entreaty.
De'precatory, of a deprecating character.
Depreciation, disparagement, undervaluing; diminution in value.
Depredation, plundering or pillaging.
De'predatory, given to plundering.
Depression, dejection, low spirits; a hollow; a sinking, lowering.
Deprivation, the being deprived, destitution, hardship.
Deputation, a body of men sent to represent the views of others.
Deputy, a member of a deputation, a delegate; a substitute.
Derelict, a vessel abandoned on the seas by its crew.
Deride, to make a mock of, jeer at.
Derisive, mocking, jeering.
Derivation, source, origin; act of tracing the origin.
Derivative, that which is derived.
Derogate, to detract from, to lessen.
Derog'atory, lowering to the dignity.
Derrick, a machine for hoisting weights.
Dervish, a Mohammedan devotee dedicated to a life of poverty and austerity.
Descant, to speak at great length, to enlarge.
Descend, to come down.
Descendant, offspring, scion.
Description, narrative, account; sort or kind.
Descry, to discern, detect, espy.
Desecrate, to profane, divert from hallowed uses.
Desert', to abandon, forsake; merited reward or punishment.
Deserving, meritorious, worthy.
Deshabille, informal costume, undress.
Desiccate, to dry thoroughly.
Desid'erative, implying desire.
Desidera'tum, a thing desired or desirable.
Design, a plan, outline drawing, pattern; purpose.
Designate, to point out, indicate; nominate, name.
Desirability, the quality of being desirable.
Desirous, full of desire, eager.
Desist, to cease, forbear.
Desolation, state of dreary solitude, or of being laid waste.
Despair, the lack of all hope.
Despatch or dispatch, an official message; dismissal; speed, promptitude.
Desperado, a desperate villain.
Desperately, in a desperate or reckless manner.
De'spicable, mean, contemptible.
Despise, to look down upon, to scorn.
Despite, in spite of; malignant contempt.
Despoil, to rob, to unjustly deprive.
Despoliation, the act of robbing or spoiling.
Despondent, down-cast, dispirited.
Despotically, in a despotic or tyrannical manner.
Despotism, the government or behaviour of a tyrant.
Dessert, fruit and sweetmeats at the close of a dinner.
Destination, the place to which one is bound, the use for which anything is designed.
Destine, to pre-ordain, to devote.
Destiny, fate, lot, end for which one is destined.
Destitution, the state of being in want.
Destroyer (naval), a vessel designed for the destruction of torpedo-boats.
Destructible, able to be destroyed.
Destruction, act of destroying, demolition, ruin.
Des'uetude, disuse, discontinuance.
Des'ultory, unsystematic, casual, disconnected.
Detachment, severance; a detached body of troops.
Detail'ed, circumstantial, exact.
Detain, to retain, keep back, withhold.
Detection, the discovery of something concealed.
Detective, one whose business it is to detect or investigate crime.
Detention, the act of detaining.
Detergent, cleansing.
Deteriorate, to grow worse, degenerate.
Determinable, able to be determined.
Determinant, enabling to determine; the name of a special method used in the solution of equations.
Determination, decision or resolve; strength of purpose.
Deterrent, serving to deter.
Detestable, hateful, deserving of detestation.
Dethronement, the act of dethroning or deposing.
Detonation, an explosion accompanied by a report.
Detour', a round-about or circuitous way.
Detraction, disparagement, slander.
Detrain, to remove from a train, e.g. troops.
Detriment, a drawback, loss.
Detrition, act of wearing away through friction.
Detri'tus, débris due to the gradual wearing away of rocks.
De trop, too much, in the way.
Deuce, a card or die with two spots; the devil.
Deu'terogamy, a second marriage.
Deu'teronomy, the name of 5th book of the Pentateuch.
Devastation, the act of laying waste, state of being laid waste.
Develop, to arrive gradually at maturity; to bring to perfection.
Development, the gradual ripening of the faculties, growth.
Deviation, a diverging from the path; a departure from truth.
Device, plan, contrivance; emblem, motto.
Devious, wandering, erring.
Deviser, one who devises or contrives.
Devisor, one who leaves by will or bequeaths.
Devoid, lacking, destitute.
Devoir, duty.
Devolution, the act of handing over to another.
Devolve, to pass over.
Devotee, one extravagantly devoted, a fanatic.
Devout, devoted to religion, pious.
Dew-point, the temperature at which the water-vapour in the air condenses in the form of dew.
Dexter, on the right hand, right as opposed to left.
Dexterous, skilful, handy, adroit.
Dey, the title of the former rulers of Algiers, Tunis and Tripoli.
Diabe'tes, a disease in which sugar is not used up in the body as it should be.
Diabe'tic, belonging to or subject to diabetes.
Diablerie, fiendish mischief, sorcery.
Diabolical, devilish, fiendish.
Diac'onal, belonging to a deacon.
Diadem, a crown.
Diær'esis, two dots placed over the second of two vowels to show that they are to be sounded separately.
Diagnosis, the determination of the nature of a complaint.
Diagonal, the line joining the opposite angles of a quadrilateral.
Diagram, an outline figure used for the purpose of demonstration or illustration.
Dial, an instrument for indicating the time of day (*See Sun-dial*), a round graduated plate with a movable index.
Dialect, the form of language or manner of speaking peculiar to a district.
Dialectics, the art or rules of logical discussion.
Dialogue, discourse or conversation.
Diam'eter, a line passing through the centre of a circle and ending both ways in the circumference.
Diametrically, in a diametrical manner; absolutely.
Diamond-drill, a borer with a small diamond at the point.
Diapa'son, the entire compass of a voice or instrument; certain stops in an organ.
Diaper, linen toweling with an interwoven design, a similar design on metal or in stone.
Dia'phanous, transparent.
Diaphragm, the muscle separating the chest and the abdomen.
Diarrhœa, an excessive purging of the bowels.
Diary, a book in which the events of every day are recorded.
Diatonic, belonging to the natural scale.
Diatribe, invective, an attack in a public speech.
Dictation, act of dictating; imperious orders.
Dictator, one who dictates; one vested with absolute authority.
Dictatorial, imperious, overbearing.
Diction, choice of words, phraseology, style.
Dictionary, an alphabetical list of words with their meanings.
Dictum, pronouncement, verdict, authoritative assertion.
Didactic, aiming at instruction.
Die-sinker, one who engraves dies.
Dies non, a day on which the law-courts are closed.
Di'etary, a regulated course of diet.
Diete'tic, belonging to diet.
Differentiate, to distinguish points of difference between; to become different or modified.
Difficulty, something hard to tackle; obstacle; embarrassment.
Diffidence, lack of self-confidence.
Diffraction, a breaking up or bending of a ray of light when it strikes the edge of an opaque body or passes through a small aperture.
Diffuseness, prolixity.
Diffusion, wide-spread dispersion.
Digestible, easy of digestion.
Digestion, the dissolving of the food in the stomach, etc., see *Med. Dict.*
Digit, a finger; any of the numerals under ten.
Dignified, full of dignity, lofty in demeanour.
Dignitary, a person holding an exalted position in Church or State.
Digression, a departure from the main theme.
Dike or dyke, a bank of earth thrown up as a barrier against inundation.

Dilapidation, wear and tear, ruin.
Dilatation or dilation, distention, expansion.
Dilatory, given to putting off or procrastinating.
Dilemma, a difficulty involving one of two unpleasant alternatives.
Dilettante (*pl.* dilettanti), a superficial admirer of the fine arts.
Diligence, application, industry; a kind of omnibus used on the continent.
Dilution, the act of reducing the strength of a liquid by the addition of water or some other liquid.
Diluvial, belonging to a flood.
Dime, an American coin worth ten cents.
Dimensions, length, breadth and thickness; extent, proportions.
Diminish, to lessen, decrease.
Diminuendo, a musical direction to gradually diminish the sound.
Dimin'utive, very small.
Dimity, figured or striped white cotton material.
Dimness, a lack of clearness or brightness, obscurity.
Dimpled, having dimples.
Dinghy or dingey, a small boat belonging to a ship.
Dingo, a native Australian wild dog.
Dingy, dull or faded in colour.
Dio'cesan, belonging to a diocese; a bishop of a diocese.
Diocese, the district over which a bishop holds jurisdiction.
Diora'ma, a pictured representation of some scene viewed by the spectator through an aperture.
Diphtheria, a disease of the throat—see *Med. Dict.*
Diphthong, two vowel sounds pronounced in one syllable.
Diploma, a certificate testifying to the holder's proficiency in some subject.
Diplo'macy, the art of political negotiation, tact in negotiation.
Dipsomania, an irresistible longing for stimulants.
Diptych, a double or folding tablet.
Direction, line of motion; management of an affair; postal address.
Director, one who directs; a manager.
Directory, a book containing names and addresses of the inhabitants of a certain district.
Direful, terrible, fearful.
Dirge, a lament for the dead.
Dirtiness, uncleanliness.
Disability, lack of some capacity; disqualification.
Disabuse, to undeceive, remove a wrong impression.
Disadvantageous, detrimental, not to one's advantage.
Disaffection, dislike or disloyalty.
Disafforest, to deprive of the claim to be considered forest land.
Disagreeable, unpleasant.
Disallow, to reject, refuse to acknowledge.
Disannul, to abrogate entirely.
Disappearance, a ceasing to be visible, vanishing, departing.
Disappointment, sorrow for the frustration of a hope.
Disapprobation, disapproval, condemnation.
Disapproval, censure, disapprobation.
Disarm, to deprive of arms.
Disarrangement, disturbance of the regular order, throwing into disorder.
Disarray, confusion, disorder.
Disassociate, to sever the connexion between.
Disaster, a grave calamity.
Disastrous, ruinous, calamitous.
Disavowal, a disclaiming, repudiation.
Disbandment, the breaking up of a body of troops.
Disbelief, a refusal or inability to believe.
Disbursement, act of paying out money; money paid out.
Disc or disk, a flat circular plate.
Discard, to cast off, repudiate.
Discernible, able to be discerned.
Discernment, the power of perception, insight.
Discharge, to perform; dismiss; unload; set at liberty.
Disciple, one who follows the teaching of another.
Disciplinarian, one able to maintain discipline.
Disclaimer, disavowal, refusal to acknowledge.
Disclosure, a revelation of something secret or hidden.
Discoloration, the process or state of being discoloured.
Discolour, to spoil the colour of, stain.
Discomfiture, a disconcerting defeat.
Discomfort, lack of comfort, uneasiness.
Discomposure, loss of composure.
Disconcert', to put out of countenance, embarrass.
Disconsolate, incapable of being consoled.
Discontent, lack of content, state of dissatisfaction.
Discontinue, to cease; to put an end to.
Discord, lack of harmony, strife.
Discordant, inharmonious.
Discount, an allowance made for ready-money payment.
Discountenance, to refuse to countenance or sanction; to put out of countenance.
Discourage, to dishearten; to attempt to dissuade.
Discouraging, disheartening.
Discourse, conversation; formal speech.
Discourteous, lacking in courtesy, impolite.
Discourtesy, lack of courtesy, rudeness.
Discovery, something discovered, act of discovering.
Discreditable, not creditable, disreputable.
Discreet, circumspect, prudent.
Discrepancy, failure to tally or agree.
Discretion, prudence, judgment.
Discriminate, to distinguish between, to note the points of difference.
Discursive, rambling, not keeping to the point.
Discussion, debate.
Disdainful, haughty, scornful.
Diseased, suffering from disease.
Disembark, to come ashore, to land.
Disembarrass, to free from embarrassment, disencumber.
Disembody, to set free from the body.
Disembogue, to discharge at the mouth (of a river).
Disembowel, to remove the bowels.
Disembroil, to deliver from broil or strife.
Disenable, to render unable.
Disenchantment, disillusionment.
Disencumber, to free from encumbrance.
Disendowment, a depriving of endowment.
Disengage, to set free; to set the mind or attention at liberty.
Disentangle, to extricate.
Disestablish, to unsettle what has been established.
Disesteem, low esteem, light estimation.
Disfigurement, what disfigures or renders unsightly.
Disfranchisement, the being deprived of the rights of citizenship, especially the right of voting.
Disgorge, to vomit up, to restore under compulsion what has been wrongfully seized.
Disgraceful, shameful.
Disguise, to conceal by means of a deceptive exterior.
Disgusting, causing disgust, revolting.
Dishabille, see *Deshabille.*
Dishearten, to discourage.
Dishevelled, with ruffled or disordered hair.
Dishonesty, lack of honesty or sincerity.
Dishonourably, in a dishonourable or discreditable way.
Disillusionize, to disenchant, to free from illusion.
Disinclination, lack of inclination, unwillingness.
Disinfectant, that which destroys infection.
Disingenuous, insincere, wanting in openness.
Disinherit, to deprive of the rights of inheritance.
Disintegrate, to break up a whole into its parts, to reduce to fragments.
Disinter', to unearth something buried.
Disinterestedness, conduct not dictated by self-interest.
Disjointed, disconnected.
Disjunctively, in a disjoined manner.
Dislocation, a putting out of place or out of joint.
Disloyalty, want of loyalty, disaffection.
Dismal, gloomy, depressing.
Dismantle, to disarray.
Dismast, to deprive of its masts.
Dismay, to daunt, to discourage.
Dismemberment, the act of separating the limbs from one another.
Dismissal, the sending away, discharge.
Disobedient, not obedient, disregarding orders.
Disobliging, unwilling to oblige.
Disorderliness, state of being disorderly or untidy.
Disorganization, lack of organization, confusion.
Disown, to refuse to own.
Disparagement, depreciation.
Disparate, unequal, too unlike to be compared.
Disparity, inequality.
Dispassionate, uninfluenced by emotion, impartial.
Dispel, to drive away, to disperse.
Dispensary, a place where medicines are dispensed, or medical advice given.
Dispensation, permission to infringe a rule; the dealings of Providence.
Dispense with, to do without.
Dispersal, a scattering abroad, dispersion.
Dispersion, a scattering or being scattered.
Dispiriting, disheartening.
Displacement, a putting out of place.
Display, show, ostentation.
Displeasure, anger.
Disport, to divert or amuse (one's self).
Disposal, arrangement, right of bestowing.
Disposition, natural character or tendency; act or power of disposing.
Dispossession, the being deprived of possession.
Dispraise, to find fault with, blame, censure.
Disproportion, lack of proportion.
Disputable, open to question or debate.
Disputant, one who disputes.
Disqualification, something which renders one ineligible.
Disquieting, perturbing.
Disquisition, a treatise containing a formal examination of a subject.
Disregard, lack of regard.
Disrepair, the state of being out of repair.
Disrep'utable, bringing into disrepute, not respectable.
Disrespectful, lacking in respect.
Disruption, a breaking asunder.
Dissatisfaction, discontent.
Dissection, the cutting up of an organic body into its several parts.
Disseize, to unlawfully dispossess of an estate.
Disseizin, act of unlawful dispossession.
Dissemble, to conceal the real feelings, dissimulate.
Disseminate, to scatter abroad, propagate.
Dissension, strife, contention.
Dissentient, disagreeing, holding different views.
Dissertation, a treatise, disquisition.
Disseverance, the act of disuniting.
Dissident, dissenting; one who dissents.
Dissilience, the act of springing asunder.
Dissimilarity, unlikeness.
Dissipate, to disperse, scatter, waste.
Dissipation, dispersion; a dissolute manner of life.
Dissociate, to sever association.
Dissoluble, able to be dissolved or reduced to atoms.
Dissolute, licentious, intemperate.
Dissolvable, able to be dissolved.
Dissonance, discord.
Dissuade, to strive to deter by persuasion.
Dissuasion, the act of dissuading.
Dissylla'bic, consisting of two syllables.
Dissyllable, a word of two syllables.
Distaff, a staff on which flax is wound for spinning.
Distant, far away, remote.
Distasteful, unpalatable, unpleasing.
Distemper, disease; method of painting used in colouring walls.
Distend, to stretch or inflate.
Distension or distention, the state of being distended.
Distich, a couplet.
Distil, to fall in drops; to convert a liquid into vapour and recondense it.
Distillation, the process of distilling.
Distillery, a place where spirits are manufactured by distillation.
Distinction, a distinctive mark, difference; a mark of honour.
Distingué, distinguished in appearance and mien.
Distinguish, to note the points of difference: to confer a mark of honour.
Distortion, a twisting out of shape, contortion.
Distracted, torn by conflicting feelings, beside one's self.
Distrain, to seize goods for non-payment of debt.
Distrait, preoccupied, absent-minded.
Distraught, frantic, beside one's self.
Distressful, fraught with distress, causing distress.
Distribu'tion, the act of distributing or allotting.
Distri'butively, assigning to each his proper share.
Distrustfulness, mistrust, suspicion.
Disturbance, anything that disturbs, commotion.
Disunion, lack of unity, strife.
Disusage, a forsaking the use of.
Dithyrambic, inspired with frantic enthusiasm, like the dithyrambs or hymns in praise of Bacchus.
Ditto, the same as before.
Ditty, the words or air of a simple song.
Diurnal, daily, recurring every day.
Divagation, a wandering away.
Divergent, parting asunder and going in different directions.
Divers, several, sundry.
Diverse, varied in form or character.
Diversity, variety.
Divertissement, amusement, diversion.
Divest, to strip, deprive, denude.
Dividend, a share of the profits in a concern paid to the shareholders.
Divination, the practice of foretelling the future by occult means.
Divine, god-like, superhuman; belonging to God, sacred; an ecclesiastic; to foretell, guess.
Diving-bell, a hollow bell-shaped structure in which divers can work under water.
Divisibility, the state of being divisible.
Divisional, belonging to a particular division.
Divorce, to separate husband and wife by legally annulling the marriage contract.
Divulsion, the act of plucking asunder.

Dizziness, vertigo, giddiness.
Doab, a term used in India for land between two rivers.
Docile, teachable, amenable, tractable.
Docility, the quality of being docile.
Docket, a descriptive label, register or note on the back of a paper indicating its contents.
Dock-yard, a yard where ships are built or repaired.
Doctorate, rank of a doctor.
Doctrinaire, one inclined to push his theories to an unpractical extent.
Doctrinal, belonging to or containing doctrine.
Documentary, derived from documents.
Dodo, a bird once found in the Mauritius but now extinct.
Doff, to take off (some article of dress).
Dog-cart, a light two-wheeled vehicle with seats back to back.
Dog-days, the hot season of the year when the dog-star is above the horizon.
Doge, the name of the chief magistrate of Venice and Genoa.
Doggedness, obstinate persistency.
Doggerel, a jingling rhyming verse.
Dogma, authoritative doctrine.
Dogmatically, in a dogmatic or authoritative manner.
Dog-star, Sirius, a bright star in the constellation of Canis Major.
Doily, a small mat for use at table.
Doldrums, the region of the ocean near the equator subject to dead calms; melancholy, depression.
Doleful, sad, full of grief.
Dollar, a gold or silver coin worth 100 cents or about 4s. 2d.
Dolmen, an ancient structure of huge stones placed upright in the earth, supporting a rough unhewn stone or table.
Do'lorous, full of grief.
Dolour, pain, grief.
Dolphin, a sea animal resembling a porpoise.
Dolt, a dull fellow, a blockhead.
Domain, estate around a country-seat.
Domesticate, to render familiar with household affairs.
Domicile, place of abode.
Domiciliary, belonging to a domicile or residence.
Dominant, ruling, predominating; fifth note of a scale.
Domineer, to act in a dictatorial or overbearing way.
Dominican, belonging to the black friars or order of St. Dominic.
Dominie, a Scotch name for a schoolmaster.
Dominion, supreme authority, territory under sovereign rule.
Domino, a cloak with a hood or half-mask used for disguise.
Dominoes, a game played with 28 pieces of dotted ivory.
Don, a fellow of a college; a Spanish gentleman; to put on.
Donation, a gift, a contribution for charitable purposes.
Donjon, the strong central tower in an ancient castle.
Donna, the title of a Spanish lady.
Donor, giver.
Doomsday, day of doom, judgment day.
Doomsday-book, an authoritative register of the lands of England made by order of William the Conqueror.
Doric, name of the simplest and strongest style of Greek architecture; a term used to denote a broad dialect.
Dormant, sleeping, quiescent, in abeyance.
Dormer, a sleeping-room, an attic.
Dormer-window, a window rising vertically from a sloping roof.
Dormitory, a large bedroom with sleeping accommodation for several persons.
Dossal, drapery or hangings for the back of an altar.
Dot, French term for a marriage portion or dowry.
Dotage, mental weakness due to old age; excessive fondness.
Dotard, an old man who is mentally weak.
Double entendre, a word or phrase used with a secondary and unpleasant meaning underlying it.
Double-entry, a method of book-keeping in which a double record is made of each transaction.
Double-first, a first-class degree in both classics and mathematics.
Doublet, one of a pair; a garment formerly worn by men.
Doubtful, uncertain.
Douceur, a money present given as a bribe or a reward.
Douche, shower-bath, jet or spray of water playing on the body.
Doughtiness, sturdy valour.
Dowager, a widow of high rank; a stately old lady.
Dower, marriage portion, widow's portion.
Down-train, a train on its way from the principal terminus.
Dowry, a bride's marriage-portion.
Doxology, a hymn of praise to the Trinity.
Dozen, a set of twelve.
Drachm or dram, ⅛ of an ounce in Apothecaries' weight.
Draconic or draconian, excessively severe like the laws of Draco.
Draff, dregs of malt, any worthless refuse.
Drag-net, a net in which fish are caught by dragging it along the bottom of the water.
Dragoman, a term used in the East for a guide and interpreter.
Dragon, a fabulous monster; a fierce woman.
Dragoon, a cavalry soldier.
Drain-trap, a contrivance for preventing the escape of foul gas from drains.
Drama, a representation of human beings speaking and acting as in real life.
Dramatist, an author of dramas.
Dramaturgic, belonging to the dramatic art.
Drastic, thorough, effectual.
Draught-board, a chequered board on which draughts are played.
Draw-bridge, a bridge over a moat which can be raised or lowered at will.
Dreadnaught, an overcoat of stout, weather-proof cloth.
Dreaminess, the state of being dreamy.
Dreary, gloomy, cheerless.
Dredger, a machine for raising sand or mud from the bottom of the water.
Dress-circle, a special part of the theatre assigned to those in evening-dress.
Dressing-case, a box supplied with toilet requisites.
Drift-net, a net kept in position in the water by floats and weights.
Drill, a tool for boring holes; strong twilled linen material; to train in physical exercises; to sow in rows.
Driveller, an idle, foolish babbler.
Droit, right, duty.
Drollery, quaint humour; a puppet-show.
Dromedary, a camel with one hump.
Drop-scene, a painted curtain to drop in front of a stage.
Dropsical, subject to dropsy.
Drosky, a Russian four-wheeled open carriage.
Droughtiness, lack of rain.
Drought or **Drouth,** water-famine, period of dry weather; thirst.
Drover, one who drives sheep or cattle.
Drowsily, in a drowsy or sleepy manner.
Drudgery, dull and unceasing toil.
Dru'dical, belonging to the Druids.
Drum-head, the parchment side of a drum.
Drum-head court-martial, court-martial held in war time, with perhaps an upturned drum as table.
Drunkard, one who drinks to excess.
Dry-goods, fabrics and other wares sold by drapers.
Dry wines, wines which are not sweet.
Dryad, a wood-nymph.
Dry-nurse, a nurse who rears a child without the breast.
Dry-point, a sharp needle used in engraving or etching.
Dry-rot, rot which causes timber to grow brittle and decay.
Drysalter, a dealer in chemical products; a dealer in salted or dried meats.
Dualism, a twofold division.
Dubiety, state of doubt.
Dubious, doubtful, uncertain, questionable.
Dubitation, state of doubt.
Ducal, belonging to a duke.
Ducat, a gold coin originally issued in Italy worth nearly ten shillings.
Duchess, the wife or widow of a duke.
Duchy, the dominions of a duke.
Ducking-stool, a stool on which scolds were ducked.
Duct, a little pipe or tube.
Ductile, pliable, able to be drawn out into fine threads.
Dude, a fop, a dandy.
Dudgeon, offended feeling, huffiness, petulance.
Duel, a deadly encounter between two persons to settle a private quarrel.
Duellist, one who fights a duel.
Duenna, a severe chaperon.
Duet, a piece of music for two voices or performers.
Dukedom, dominions of a duke, rank of a duke.
Dulce domum, "home, sweet home."
Dulcet, sweet, sweet-sounding.
Dulcimer, a stringed instrument played with two hammers.
Dullard, one who is dull of perception, slow-witted.
Duly, in due season, suitably.
Dumb-waiter, a movable shelf for the conveyance of dishes.
Dummy, a dumb or silent person; lay figure; exposed hand at whist.
Dungeon, a dark underground prison.
Dunnage, old canvas and timber used to protect the cargo from bilge water and keep it steady.
Duodecimo, a book the pages of which are made of sheets folded into twelve leaves.
Duomo, Italian name for a cathedral.
Dupery, the practice of duping, gulling.
Duplex, two-fold.
Duplication, doubling, or making two-fold.
Duplicity, double-dealing, deceitful conduct.
Durability, capacity for lasting.
Durance, detention, imprisonment.
Durbar, an Indian name for a grand official reception; the hall of audience.
Dusky, dark, swarthy.
Dutch auction, an auction at which goods are put up at an unreasonably high price and then rapidly lowered till a bid is made.
Dutch courage, fictitious courage inspired by alcohol.
Dutch oven, a cooking utensil in which meat can be broiled in front of the fire.
Duteous, dutiful.
Dwarfish, like a dwarf.
Dyer, one who makes a business of dyeing fabrics.
Dynamical, relating to force and motive energy.
Dynamite, a dangerous explosive containing nitro-glycerine.
Dy'namo, a machine for generating electric currents.
Dynastic, belonging to a dynasty or line of rulers.
Dys'entery, a disease resembling acute diarrhœa.
Dyspepsia, indigestion.
Dyspeptic, suffering from indigestion.

Eagerness, impetuosity, zeal, ardour.
Eaglet, a young eagle.
Earl-marshal, an English officer of state.
Earnest, ernest, earnest, money, a pledge.
Earthliness, the state of being earthly or worldly.
Earthquake, a tremor or convulsion of the earth.
Earth-shine, light sometimes visible on that part of the moon not lit up by the sun.
Earth-work, a fortification made of earth.
Ear-witness, one who can bear witness from his own hearing.
Easeful, quiet, peaceful.
Easiness, freedom from difficulty.
Easterling, a native of the East; a Baltic trader.
Easterly, from or towards the east.
Eastertide, festival of Easter.
Eau-de-Cologne, a well-known perfume.
Eau-de-vie, brandy.
Eavesdropper, one who listens to the private conversation of others.
Ebb-tide, the receding tide.
Ebon, like ebony; black.
Ebonite, vulcanised rubber.
Ebri'ety, drunkenness.
Ebullient, boiling over.
Ebullition, act of boiling; a violent display of feeling.
Ecarté, a game of cards.
Eccentric, deviating from the centre; peculiar.
Eccentricity, deviation from a centre; peculiar conduct; an oddity.
Ecclesiast, a clergyman.
Ecclesiology, the study of church architecture, &c.
Echelon, disposal of troops in the form of steps.
Echo, return or reflection of a sound.
Eclaircissement, an explanation or clearing-up.
Eclat, splendour; renown; applause.
Eclectic, selecting from the views of others.
Eclecticism, the practice of selecting from various systems.
Eclipse, a temporary obscuration; to darken; to excel.
Ecliptic, apparent path of the sun.
Eclogue, a pastoral poem.
Econom'ic, frugal; thrifty.
Economize, to save money by careful management.
Ecstasy, rapture; enthusiasm.
Ecstatic, in a state of ecstasy.
Ecumenical, universal.
Ec'zema, a skin disease.
Edacious, greedy, ravenous.
Eddying, turning round and round.
Edelweiss, an Alpine flower.
Edging, a narrow border of lace, etc., on a garment.
Edible, fit to be eaten.
Edict, an order issued by a sovereign; a decree.
Edification, instruction; mental progress.
Edifice, a building.
Edify, to build; to benefit by instruction.
Edit, to prepare for publication.
Edition de luxe, a richly bound edition of a book beautifully printed on the best paper.
Editorial, belonging to or written by an editor.
Educate, to bring up, instruct.
Educational, relating to education.
Educe, to bring out, extract.
Eerie, inspiring fear; weird.
Effaceable, that may be rubbed out.
Effective, productive of results; serviceable.
Effectual, producing the desired effect.
Effeminacy, womanish weakness in a man.
Efferent, carrying outwards.

Effervescence, bubbling of a liquid due to the escape of gas.
Effete, barren; worn out.
Efficacious, able to produce the desired effect.
Ef'ficacy, the state of being efficacious.
Efficiency, ability to produce a given effect.
Efficient, effective, capable.
Effigy, an image or figure of a person.
Efflorescence, production of flowers; a redness of the skin.
Ef'fluence, that which flows out.
Effluvium, noisome vapour from decayed matter.
Efflux, the act of flowing out; effluence.
Effront'ery, impudence, shamelessness.
Effulgent, shining, bright, luminous.
Effusion, that which is poured out.
Effusive, pouring out; demonstrative.
Egg-flip, a drink of hot ale with eggs, spice, etc.
Eglantine, sweetbrier; wild-rose.
Ego, one's self.
Egoism or egotism, inordinate love of self.
Egoistical, showing egoism.
Egregious, remarkable, extraordinary.
Egress, the act of going out; a means of exit.
Egyptology, the study of Egyptian antiquities.
Eider-down, soft down of the eider-duck.
Eighteenth, next to the seventeenth.
Eikon, a likeness; a sacred picture.
Eirenicon, a suggested arrangement with the view of conciliating.
Ejaculation, a sudden exclamation.
Ejection, the act of casting out, expulsion.
Ejectment, a casting out; expulsion.
Elaboration, the act of bringing to perfection.
Elan, dash, transport.
Elapse, to pass away, to glide away.
Elastically, in an elastic or springy manner.
Elasticity, power of quick recovery.
Elated, flushed with success.
Elation, pride caused by success.
El Dorado, an imaginary land of gold.
Elect, to choose, to pick out; one chosen.
Electioneer, to work for the election of a candidate.
Electoral, relating to an elector or elections.
Electrical, belonging to electricity.
Electrician, one skilled in electricity.
Electricity, one of the forces of nature.
Electro, a short form of electrotype.
Electrocution, execution by electricity.
Electrolier, a pendant for electric lights.
Electrom'eter, an instrument for measuring electricity.
Electrotype, see *Dict. of Gen. Infor.*
Eleemos'ynary, given in or depending on charity.
Elegance, grace, beauty of form.
Elegi'ac, belonging to elegy; mournful.
Elegy, a mournful song; a dirge.
Elemental, arising from first principles.
Elementary, uncompounded, primary.
Elephantine, pertaining to an elephant; huge.
Elevation, the act of raising up; height; dignity.
Elf-land, fairy-land.
Elicit, to draw out, discover by reasoning.
Elide, to cut off a syllable.
Eligible, fit to be chosen, preferable.
Eliminate, to reject, leave out.
Elision, the act of cutting off a syllable.
Elite, a select body.
Elixir, an invigorating cordial.
Elizabethan, belonging to Elizabeth's reign.
Ellipse, an oval figure.
Ellipsis, omission of a word or phrase.
Elliptical, belonging to an ellipse; having a part left out.
Elocutionist, one skilled in the art of speaking.
Elogium, an oration in praise of a person or event.
Elohim, a Hebrew name for God.
Elongation, the act of lengthening; distance.
Elopement, the running away of two lovers.
Eloquence, power of speaking well and fluently.
Elucidate, to explain, to make clear.
Elude, to evade, to avoid by artifice.
Elusive, using stratagem to evade.
Elusory, evasive, deceitful.
Elvish, elfish, full of mischief.
Elysian, very delightful.
Elysium, an abode or state of exquisite bliss.
El'zevir, a book printed by the Elzevir family.
Emaciation, a wasting away; leanness.
Emanate, to issue or flow from.
Emanation, the act of proceeding from.
Emancipate, to set free, release from control.
Emasculate, to castrate, render weak.
Embalm, to preserve a dead body by aromatics.
Embankment, a raised mound.
Embargo, prohibition; a stop put to trade.
Embarrass, to perplex, entangle, abash.
Embassy, an ambassador's mission or official residence; a solemn message.
Embattled, drawn up in order of battle; furnished with battlements.
Embellish, to beautify, to adorn.
Ember, a live cinder.
Ember-days, certain fast days before the Sunday when priests and deacons are ordained.
Embezzle, to appropriate by breach of trust.
Embitter, to render bitter.
Emblazon, to adorn with heraldic figures; to embellish.
Emblematic, symbolical, typical.
Embodiment, the state of being invested with or united in a body.
Embonpoint, plumpness.
Embosom, to admit to one's affections; to enclose.
Emboss, to adorn with raised work.
Embouchure, the mouth of a river.
Embowel, to take away the entrails; to enclose in.
Embower, to enclose as with trees.
Embrace, to clasp in the arms.
Embrasure, an opening in a wall for guns.
Embrocation, a liniment.
Embroidery, fancy needlework.
Embroilment, a state of disturbance.
Embryo, the first undeveloped state of anything.
Embryology, the science which treats of embryos.
Emend, to correct, change for the better.
Emendation, the act of improving or correcting.
Emerald, a green precious stone.
Emerge, to come forth.
Emergency, an unforeseen event or necessity.
Emer'itus, retiring with a pension.
Emersion, the act of emerging.
Emery, a hard mineral used for polishing.
Emetic, a medicine to cause vomiting.
Emeute, a riot, rising.
Emigrant, one who removes to another country.
Emigration, the act of emigrating.
Emigré, a noble who left France during the revolution.
Eminence, height; distinction; title of cardinal.
Emir, an Eastern ruler.
Em'issary, a special or secret messenger.
Emit, to send forth.
Emollient, a softening application.
Emolument, profit, advantage.
Emotional, easily moved or excited.
Empale, to transfix on an upright stake; to fence in.
Empery, empire, sovereign power.
Emphasis, stress laid on certain words.
Emphatic, forcible, striking.
Empirical, based on observation only.
Empiricism, dependence on experience alone.
Employee, one employed by another.
Empoison, to poison; to infect with bitterness.
Emporium, a centre of trade.
Empressement, earnestness; eager attention.
Emprise, an enterprise.
Emptiness, the state of containing nothing.
Empurple, to make of a purple colour.
Empyr'eal, composed of pure fire or light.
Emulation, rivalry; the attempt to excel.
Emulgent, milking or draining out.
Emulous, eager to surpass another.
Emulsion, a milk-like medicine.
Enable, to make possible, confer power.
Enactment, the establishment of a law.
Enamel, a glossy, paint-like coating.
En avant, forward!
En bloc, in a lump.
Encaustic, with the colours burnt in.
Enceinte, space enclosed by ramparts; pregnant.
Enchanter, one who charms; a magician.
Enchantment, delight; the use of magic spells.
Enchiridion, a hand-book.
Encircle, to enclose in a ring.
Enclitic, that leans upon.
Encomiastic, bestowing praise.
Encomium, praise, eulogy.
Encompass, to surround; bring about; go round.
Encore, again; a recall at the theatre, etc.
Encounter, to meet face to face; an attack.
Encouragement, incitement; support.
Encroach, to advance gradually; to trespass on another's rights.
Encumber, to clog, impede; to load with debts.
Encumbrance, a clog; a burden upon an estate.
Encyclical, sent round to many people.
Encyclopædia, a book of information on every subject.
Encyclopædic, containing much information.
Endearment, a term of affection; a caress.
Endeavour, to try, to attempt.
Endemic, peculiar to a locality or people.
Endive, a plant used in salads.
Endorse, to ratify; to sign one's name on the back of.
Endorsement, act of endorsing; ratification.
Endowment, a fund settled on a person or institution.
Endue, to put on; to credit with.
Endurance, duration; the power of bearing suffering.
En'ema, see *Med. Dict.*
Energetic, full of activity, forcible.
Energize, to act with energy.
Enervation, the state of being weakened.
En évidence, to the fore, conspicuous.
Enfant terrible, a precocious child.
Enfeeblement, loss of strength.
Enfeoffment, formal conveyance of an estate.
En fête, making holiday.
Enfilade, to fire on a line of troops from their flank.
Enfin, at last, finally.
Enforcement, compulsion, sanction.
Enfranchise, to admit to political rights; to free.
Engagement, a promise; a betrothal; a fight.
Engaging, pleasing, attractive.
Engender, to beget; to give rise to.
Engine, a machine; an instrument.
Engineer, one who constructs or manages engines.
Englishry, people of English descent.
Engorge, to devour, swallow up.
Engrain, to dye in a lasting colour.
Engraving, a print.
Engross, to monopolise; to copy in large writing.
Engrosser, one who purchases large quantities of a commodity in order to make a profit.
Engrossment, the act of engrossing.
Engulf, to swallow up.
Enhance, to increase; to raise in esteem.
Enigma, a riddle; an obscure statement.
Enigmatical, puzzling; having a hidden meaning.
Enjoin, to direct, command, prescribe.
Enjoyment, happiness; desirable possession.
Enlace, to lace, to encircle.
Enlargement, increase in size; addition.
Enlightenment, moral or mental illumination.
Enlist, to join the army; to enrol on one's side.
Enliven, to animate; to make cheerful.
En masse, in a body, all together.
Enmity, unfriendliness, disagreement.
Ennoble, to make noble; to elevate.
Ennui, feeling of boredom, weariness.
Enormity, an atrocious crime; wickedness.
Enormous, huge; excessive; very wicked.
Enough, sufficient.
Enounce, to articulate; to state.
Enquire or inquire, to seek for information.
Enrage, to rouse to anger.
En rapport, in connection; in harmony.
Enrapture, to fill with joy or delight.
En règle, in proper order.
En revanche, in return; by way of retaliation.
Enroll or enrol, to insert in a register or in a list.
Enrolment, the act of enrolling; a register.
En route, on the way.
Ensample, an example, a specimen.
Ensanguine, to suffuse with blood.
Ensconce, to cover as with a fort; to hide.
Ensemble, the general effect.
Enshrine, to enclose in a shrine; to cherish as sacred.
Enshroud, to cover up; to conceal.
Ensign, the flag of a regiment; the officer bearing it.
Enslave, to deprive of liberty.
Ensnare, to catch in a trap; to entangle.
Ensue, to come after; to follow as a result.
En suite, in company; matching.
Ensure, to make certain.
Entail, to settle the succession to an estate.
Entanglement, intricacy; state of confusion.
En'tasis, the swelling outline of a column between its top and its base.
Entente cordiale, a friendly understanding between two nations.
Enter'ic, belonging to the intestines.
Enterprising, ready to venture on a bold scheme.
Entertaining, affording amusement.
Enthrall or enthral, to enslave, to entrance.
Enthronement, the act of placing on a throne.
Enthusiasm, heat of imagination; fervent zeal.
Enthusiast, one filled with enthusiasm.
Enticement, allurement; a tempting away.
Enticing, seductive, attractive.
Entire, whole, unbroken.
Entirety, completeness, fulness.
Entitle, to name; to give a claim to.
Entity, a real being; existence.
Entombment, burial.
Entomology, the science of insects.
Entourage, surroundings; courtiers, etc.
Entr'acte, the interval between the acts of a play.
Entrails, the bowels.
Entrain, to get into a train (used of troops).
Entrancement, a state of rapturous joy.
En'trant, one who enters; a new member.
Entreaty, an earnest prayer or petition.
Entrée, right of entry; a made dish.
Entre nous, between ourselves.
Entrepôt, a warehouse; a commercial centre.
Entry, the act of entering; an entrance passage.
Entwine, to interlace, twist together.
Enucleate, to solve, make clear.
Enumeration, a detailed reckoning.
Enunciation, the act of speaking out; declaration.
Envel'op, to cover up; to surround.
En'velope, a wrapper; a cover for a letter.
Envenom, to poison; to make odious; enrage.
Enviable, exciting envy; much to be desired.

Envious, filled with envy.
Environment, surroundings.
Envi'rons, districts round a town, etc.
Envoy, a diplomatic agent; a messenger.
Envy, jealousy of another's advantages.
Eon or aeon, a very long period of time.
Epaulette, an officer's shoulder badge.
Epergne, an ornamental stand for the table.
Ephem'eral, living for one day only.
Epic, an account of some great event in lofty verse.
Epicure, a lover of the luxuries of the table.
Epicure'an, luxurious; fond of the table.
Epicurism, the principles of Epicurus; luxury.
Epidemic, affecting great numbers.
Epidermis, outer or scarf skin.
Epigram, a short pointed poem or saying.
Epigrammatic, sharp and to the point.
Epigraph, an inscription on a building, etc.
Epilepsy, a convulsive disease.
Epilogue, a poem or speech at the end of a play.
Epiph'any, a Church festival.
Episcopacy, government by bishops.
Episcopalian, relating to a bishop.
Episcopate, the whole body of bishops.
Episode, a minor event or story.
Epistle, a letter.
Epistolary, relating to letters.
Epitaph, an inscription on a tomb.
Epithalamium, a marriage song.
Epithet, an adjective denoting some quality.
Epit'ome (o-me), an abridgment of a book, etc.
Epitomize, to abridge, to condense.
Epoch, a point of time from which events date.
Epon'ymous, naming a tribe or place after some person.
Equability, evenness, uniformity.
Equality, agreement in size, rank, or value.
Equanimity, evenness of mind; composure.
Equation, an algebraic proposition in which an equality is stated.
Equatorial, on or near the equator, relating to the equator.
Equerry or equery, an officer of a royal stable.
Equestrian, a person on horseback.
Equi-distant, at the same distance.
Equil'ibrist, one skilled in balancing.
Equilibrium, state of being evenly balanced.
Equine, belonging to horses.
Equinoctial, belonging to the Equinoxes.
Equinox, time when the day and night are everywhere equal.
Equipment, accoutrements, an outfit.
Equipoise, equality of weight or force.
Eq'uitable, just, impartial.
Equity, justice, impartiality.
Equivalent, of equal value, meaning, etc.
Equiv'ocal, of doubtful signification.
Equivocation, ambiguity of speech.
Era, a period dating from some important event.
Eradicate, to uproot, to exterminate.
Erase, to rub out; to destroy.
Erastianism, see *Dict. of Gen. Infor.*
Erasure, something rubbed out.
Erect, upright; to build, to raise.
Erectile, capable of erection.
Eremite, a hermit, recluse.
Ergo, therefore.
Ero'dent, a drug that eats away.
Erosion, the act of eating away.
Erot'ic, relating to love.
Errand, a commission given to a messenger.
Errant, wandering, roving.
Erring, sinful, straying from the right way.
Errat'ic, wandering; uncertain; changeable.
Erra'tum (*pl.* errata), an error in writing or printing.
Erroneous, wrong, mistaken.
Error, a mistake; a fault.
Erse, the language of the Irish or Scotch Highlanders; Gaelic.
Erstwhile, at one time, formerly.
Eructation, the act of belching.
Er'udite, learned.
Erudition, learning, knowledge.
Eruption, a bursting out; pimples on the skin.
Erysipelas, a skin disease.
Escalade, a storming with ladders.
Escal'lop, a shell-fish.
Escapade, a mischievous prank.
Escapement, an escape; a part of a watch.
Escarpment, the steep side of a hill, etc.
Eschalot, a species of onion.
Eschatol'ogy, the doctrine of "the last things," death, judgment, etc.
Escheat, the falling of land to the state or the lord of the manor through failure of heirs.
Escheator, an officer to look after escheats.
Eschew, to avoid; to fly from.
Esclandre, an action that causes scandal.
Es'cort, one or more persons acting as a guard.
Escort', to act as an escort.
Escritoire, a writing-desk.
Esculent, suitable for food.
Escutcheon, a shield bearing a coat of arms.
Eskimo (*pl.* Eskimos), a native of the extreme north of North America.
Esoter'ic, secret; known to a chosen few.
Espalier, a fruit-tree grown on a trellis.
Esparto, a Spanish grass made into paper, etc.
Especially, chiefly, particularly.
Espi'al, a spy; the act of spying.
Es'pionage, the practice of a spy.
Esplanade, a level walk or drive.
Espousal, a betrothal.
Esprit de corps, a corporate spirit.
Espy, to watch narrowly; to see at a distance.
Esquire, an armour-bearer; a courtesy title.
Es'sayist, a writer of short treatises.
Essence, qualities that make a thing; perfume.
Essentially, necessarily; in a high degree.
Established, founded; firmly fixed.
Estaminet, a restaurant where one may smoke.
Estates, (of the realm), the lords, temporal and spiritual, and the commons.
Esteem, to have a great respect for; to consider.
Es'timable, worthy of esteem.
Estimation, calculation; opinion; esteem.
Estrangement, withdrawal of friendship.
Estuary, the mouth of a tidal river.
Esurience, hunger, want.
Etagère, an ornamental set of shelves.
Et cætera, and other such things.
Etching, a form of engraving.
Eternally, for ever; continually.
Eternity, duration without end.
Etesian, blowing at periodical intervals.
Ether, the upper air; an anæsthetic.
Ethereal, of the nature of air; heavenly.
Ethical, relating to morals.
Ethics, the science of morals.
Ethiopian, a native of Ethiopia; a black.
Ethnical, pertaining to race.
Ethnographical, describing the races of the earth.
Ethnology, study of mankind.
Ethos, customs and morals.
Etiolation, a growing pale from want of light.
Etiquette, rules of polite conduct.
Etymological, relating to etymology.
Etymology, science of the origin of words.
Eucalyptus, an Australian tree.
Eucharist, Sacrament of the Lord's Supper.
Eulogistic, expressing praise.
Eulogium, a eulogy.
Eulogy, a speech or writing in praise of any one.
Eunuch, a castrated man.
Eupeptic, easy to digest.
Euphemism, a mild term used for an offensive one.
Euphemistic, containing a euphemism.
Euphony, an agreeable sound.
Euphuism, high-flown language.
Eurasian, the child of a Hindu woman and a European.
Eureka, cry of triumph at a discovery.
Euthanasia, an easy death.
Evacuate, to empty; to withdraw from.
Evade, to avoid by cunning; to prevaricate.
Evaluation, exact valuation.
Evanescent, vanishing; imperceptible.
Evangelical, according to the Gospel.
Evangelist, one of the writers of the Gospels; a lay preacher.
Evaporate, to disappear in vapour; to vanish.
Evasion, an excuse, a subterfuge.
Evasive, practising evasion; elusive.
Evenness, levelness; uniformity; calmness.
Eventually, in the end, finally.
Eversion, the act of upsetting or destroying.
Eviction, legal dispossession of a tenant.
Evidence, testimony; statements by a witness.
Evidently, visibly, without doubt.
Evince, to show, to prove.
Eviscerate, to disembowel.
Evolution, a gradual unrolling or development.
Evolve, to unfold, disclose itself.
Ewe, a female sheep.
Ewer, a large jug for water.
Exacerbation, increase of malignity or bitterness.
Exaction, extortion; an unjust demand.
Exactitude, accuracy, exactness.
Exaggerate, to overstep the truth.
Exaltation, elevation to power or dignity; excited feeling.
Examination, close inspection or inquiry; trial of knowledge.
Examinee, a person examined.
Example, a copy or pattern; a precedent.
Ex animo, sincerely.
Exasperation, irritation; provocation.
Ex cath'edra, given with authority.
Excavate, to hollow out.
Exceed, to go beyond; to surpass.
Excel, to surpass; to be great.
Excellence, great worth or merit; dignity.
Excelsior, higher yet.
Exceptional, unusual.
Excerpt, an extract from a book, etc.
Excess, more than enough; over-indulgence.
Exchange, to give one thing for another; to barter.
Exchequer, the State money department.
Excisable, liable to be taxed.
Exciseman, a collector of excise duties.
Excision, a cutting off; removal.
Excitableness, agitation from joy or grief.
Excitation, excitement, commotion.
Exciting, rousing; very interesting.
Exclamation, an emphatic utterance; outcry.
Exclamatory, containing an exclamation.
Exclude, to shut out; to debar; to except.
Exclusive, not taking into account; cliquish.
Excogitate, to invent; to think out.
Excommunicate, to exclude from Church privileges.
Excoriate, to flay, strip off the skin.
Excoriation, act of flaying; loss of skin.
Excortication, the stripping off of bark.
Ex'crement, matter discharged from the body.
Excrescence, a growth; an unnecessary part.
Excrete, to separate and throw off from the body.
Ex'cretory, throwing off or excreting from the body.
Excruciating, agonising; intensely painful.
Exculpate, to clear from blame, exonerate.
Exculpatory, clearing from a charge.
Excursion, an outing; expedition; digression.
Excursus, an explanation appended to a book.
Excusable, that may be excused.
Excuse, to free from blame; to pardon.
Exeat, leave of absence.
Ex'ecrable, detestable, accursed.
Execrate, to hold in abhorrence; to curse.
Exec'utant, one who performs or carries out.
Exec'utive, having the power to carry out.
Exec'utrix, a woman appointed to carry out the instructions in a will.
Exege'sis, interpretation of the Scriptures.
Exegete, a person skilled in exegesis.
Exegetical, explanatory.
Exem'plary, worthy to be imitated.
Exemplification, illustration by example.
Exemption, freedom from, immunity.
Exequies, funeral rites.
Exercise, to train for use; to employ; a task.
Exercitation, exercise; practice; use.
Exertion, the act of putting into use; effort.
Exhalation, emitted vapour; evaporation.
Exhaust, to drain entirely; to weary.
Exhaustion, act of draining; great fatigue.
Exhaust-pipe, a pipe for the outlet of waste steam.
Exhibit, to show; to offer for inspection.
Exhibitioner, one who gains an exhibition or scholarship.
Exhilarate, to make cheerful; to enliven.
Exhortation, a speech inciting to good deeds.
Exhortatory, tending to exhort.
Exhumation, the act of disinterring.
Exigency, pressing necessity; demand.
Exigent, needing immediate attention.
Exiguous, small, diminutive.
Exile, banishment, or one banished.
Existence, state of being, life.
Exit, a going out; a place of egress.
Exodus, departure; an old Testament book.
Exon, an officer of the Yeomen of the Guard.
Exonerate, to clear from blame, to acquit.
Ex'orable, capable of being persuaded.
Exorbitance, excessive demand; enormity.
Exorcise, to drive away an evil spirit.
Exorcism, the act of expelling evil spirits.
Exordium, a preface.
Exoter'ic, for communication to the public.
Exotic, foreign, not native to the soil.
Expand, to spread, lay open; to grow larger.
Expansion, the act of expanding; enlargement.
Ex parte, biassed, partial.
Expatiate, to range at large; to enlarge upon.
Expatriate, to banish from one's native land.
Expectancy, something expected; hope.
Expectation, prospect of coming events.
Expectoration, discharged phlegm; spittle.
Expediency, suitableness to an end.
Expedite, to hasten, to despatch.
Expedition, haste; a journey for some purpose.
Expeditiously, swiftly, promptly.
Expel, to drive out, banish, eject.
Expenditure, the act of spending; sum spent.
Experience, knowledge gained by practice.
Experiment, something done as a proof or test.
Expert, one specially skilled in a subject.
Ex'piable, that may be atoned for.
Expiation, atonement.
Expiration, act of breathing out: the end.
Explanatory, serving to make clear.
Ex'pletive, added in order to fill up; an oath.
Explication, explanation.
Explicit, plainly expressed; clear in statement.
Explode, to burst with a loud noise.
Exploit, a deed of daring; to turn to one's own advantage.
Exploitation, act of making successful use of.
Exploration, search; examination.
Explosion, a sudden loud bursting.
Exponent, a representative; a term in Algebra.
Exponential, belonging to an exponent.
Exports, goods sent abroad.
Exportation, the act of exporting.
Exposé, a formal explanation; an exposure.
Exposed, without protection; liable.
Exposition, explanation; an exhibition.
Ex post facto, after the thing is done.
Expostulate, to reason with, remonstrate.
Exposure, state of being open to view or risk.
Expression, utterance; a phrase; a look.
Expressively, significantly, so as to make an impression.
Express-rifle, a sporting rifle.

Expropriate, to renounce claim to.
Expugn, to conquer, take by assault.
Expulsion, the act of expelling; banishment.
Expunge, to blot out, efface.
Expurgate, to purge, to purify.
Ex'quisite, excellent; complete; keen.
Exscind, to cut off.
Extant, still existing.
Extemporaneous, without premeditation.
Extemporary, done or spoken extempore.
Extem'pore (o-re), without forethought or study.
Extend, to stretch out; enlarge; increase.
Extension, enlargement.
Extent, the degree to which anything is extended.
Extenuate, to lessen; to palliate.
Exterior, external, outward.
Extermination, complete destruction.
Extern, outward; visible; a day pupil.
Externals, outward forms.
Extinction, destruction; suppression.
Extinguish, to put out, suppress, destroy.
Extirpate, to root out; to cut off.
Extol, to praise; to magnify.
Extortioner, one who makes oppressive exactions.
Extraction, the act of drawing out; lineage.
Extradition, the delivery of an accused person to the authorities of the country from which he has fled.
Extrajudicial, out of the regular course of legal procedure.
Extra-mundane, beyond the material world.
Extraneous, not a real part of a thing; foreign.
Extraordinary, out of the common; remarkable.
Extravagance, wasteful expenditure; excess.
Extravaganza, a musical composition of eccentric style.
Extremist, one who holds extreme views.
Extricate, to disentangle; to set free.
Extrinsic, outward; foreign.
Extrude, to thrust out.
Extrusion, the act of driving out.
Exuberance, overgrowth; luxuriance.
Exudation, discharge by pores or incisions.
Exultant, overjoyed; triumphant.
Exuviæ, cast-off skins, shells, etc.
Ex voto, in accordance with a vow.
Eyelet, a small hole for cord, etc.
Eye-service, service performed only when under inspection.
Eyesore, something that offends the sight.
Eyot, a small river island.

Fabian, cautious, avoiding conflict.
Fabric, an edifice; cloth, etc.
Fabricator, one who manufactures.
Fabulous, feigned; not real; amazing.
Façade, the front of an edifice.
Facet or facette, one of the small, cut surfaces of a gem.
Facetious, full of playful wit.
Facial, belonging to the face.
Facile, easy; easily persuaded.
Facile princeps, undoubtedly the first.
Facility, dexterity; freedom from difficulty.
Fac-simile, an exact copy.
Faction, a political party; discord.
Factious, given to faction; clamorous.
Factitious, made by art; not natural.
Factor, an agent; any element necessary for the accomplishment of a certain result.
Factotum, one engaged for all kinds of work.
Faculty, ability; power of mind; a branch of learning.
Faddist, one addicted to hobbies; a crotchety person.
Fæces, excrements; sediments.
Faery, an imaginary being; an elf.
Fagot or faggot, a bundle of sticks.
Fahrenheit, the thermometer in common use in England, so named after its inventor.
Faience, a kind of pottery formerly made at Faenza in Italy.
Failure, non-performance; unsuccessfulness; insolvency.
Fainéant, inert; lazy.
Fait accompli, something already done.
Faith-healing, cures wrought by prayer and imagination without other means.
Faithlessness, inconstancy, perfidy.
Fakir' or **fakeer',** a religious mendicant of the East.
Falchion, a short, broad sword.
Falconer, a trainer of hawks.
Faldstool, a kneeling-stool.
Falernian, an excellent Italian wine praised by Horace.
Fallacious, producing mistakes; deceptive.
Fallacy, a mistake; an error in argument.
Fallibility, liability to mistakes.
Falling-sickness, a disease, epilepsy.
Fallow, pale yellow; uncultivated for a time.
Fallow-deer, the deer of English parks.
Falsehood, a lie; want of honesty.
Falsetto, higher than the natural voice.
Falsification, the act of counterfeiting or making false.
Faltering, hesitating; unsteady.
Familiarity, omission of ceremony; close acquaintance, intimacy.
Familiar spirit, a spirit accompanying an individual; a spirit that may be summoned.
Family, the members of a household; a tribe.
Famine, dearth; scarcity of food.
Famish, to perish of hunger; to starve.
Famous, renowned; celebrated.
Fanat'ic, a zealot; a religious enthusiast.
Fanaticism, enthusiasm; religious frenzy.
Fanciful, guided by imagination; whimsical.
Fancy-free, not in love.
Fandango, an old Spanish dance.
Fane, a consecrated building; a temple.
Fanfare, a flourish of trumpets.
Fanfaronade, bluster, boasting.
Fantasia, a fanciful piece of music.
Fantastical, imaginary, capricious, odd.
Far niente, doing nothing.
Farce, low comedy; to stuff (cookery).
Farceur, a joker.
Farcical, ludicrous, absurd.
Fardel, a bundle, a burden.
Far-fetched, brought from afar; forced.
Farinaceous, containing flour; mealy.
Farm-bailiff, the overseer of a farm.
Farm-stead, a farm with its outbuildings.
Farrago, a mixed mass, a medley.
Farriery, the trade of a blacksmith.
Farrow, a litter of pigs.
Farthingale, a sort of crinoline.
Fasces, an axe with a bundle of rods, a Roman emblem of authority.
Fascinate, to charm, to bewitch.
Fascination, the power of charming; witchery.
Fascines, bundles of wood bound by three rings.
Fashionable, after the prevailing mode.
Fashious, annoying.
Fastening, that which attaches or makes firm.
Fastidious, hard to please; squeamish.
Fastnesses, fortified or secure places.
Fatalism, the belief that all things are ruled by fate.
Fatality, a decree of fate; a fatal event.
Fata Morgana, a mirage seen on the coasts of Italy and Sicily.
Father-land, one's native country.
Fathom, a measure of six feet; to plumb the depths of.
Fathomless, that cannot be fathomed.
Fatigue, weariness; toil.
Fatigue-duty, the work of a soldier apart from the use of arms.
Fattiness, the quality of being fat or fatty.
Fatuity, foolishness; weakness of mind.
Fatuous, foolish, feeble of mind.
Faubourg, a French suburb.
Faultily, in a culpable or imperfect manner.
Faun, a rural deity.
Fauna, the animals of a particular region.
Fauteuil, an arm-chair.
Faux pas, a false step; an error.
Favonian, pertaining to the west wind; propitious.
Favourable, kind; propitious; conducive to.
Favouritism, partiality for certain people.
Fawn, a young deer; light brown; to cringe.
Fay, a fairy.
Fealty, fidelity to a superior lord; loyalty.
Feasible, practicable.
Feat, a noteworthy deed.
Featherweight, a boxer of the lightest of the four orders of weight, viz., heavy, middle, light, and feather weights.
Feathery, clothed with, or like, feathers.
Feature, a single part of the face; a prominent part.
Febrifuge, a medicine to cure fever.
Febrile, proceeding from fever.
Feckless, weak, worthless.
Feculent, foul; dreggy.
Fecundation, the act of making prolific.
Fecundity, fruitfulness.
Federal, relating to a league or contract.
Federation, the act of forming a league; a league.
Feign, to pretend; to invent.
Feint, to move so as to deceive; to dodge; a movement to deceive.
Felicitate, to congratulate; to make happy.
Felicitous, happy, suitable.
Feline, pertaining to, or like, a cat.
Fellah, an Egyptian peasant.
Fell-monger, a dealer in hides.
Fellowship, companionship; partnership.
Felly or **Felloe,** one of the curved pieces that form the wooden rim of a wheel.
Felo de se', suicide.
Felonious, villainous; with criminal intent.
Felony, a severe crime.
Felucca, a small vessel with oars and lateen sails.
Feminine, belonging to women; tender, soft.
Femme covert, a married woman.
Femoral, belonging to the thigh.
Fencing, the art of attack and defence with sword and foil; material for fences or barriers.
Fend, to shut out; to keep off.
Fenestral, pertaining to a window.
Fenian, a member of an Irish secret society.
Feoff, a fief, fee, or freehold estate.
Feretory, a shrine to hold relics of saints.
Ferial, belonging to holidays.
Fermentation, a process of decomposition.
Ferocious, savage, fierce.
Ferocity, savageness, fierceness.
Ferret, an animal resembling a weasel.
Ferruginous, containing iron; rust-coloured.
Ferrule, the metal ring on the end of a stick, etc.
Fertility, fruitfulness; abundance.
Ferule, a flat stick with which to punish children.
Fervency, earnestness, ardour, zeal.
Fervid, burning, vehement, zealous.
Fervour, heat of mind, zeal.
Festal, belonging to a feast, joyous.
Fester, to become virulent; to suppurate.
Festival, a religious or joyous celebration.
Festoon, a kind of wreath or garland.
Fête, a feast-day, a holiday.
Fête champêtre, an open-air festival.
Fetid, emitting a bad smell.
Fetish, an idol; an object of worship.
Fetlock, the piece of hair above a horse's hoof.
Fetus, an embryo, the young in the womb.
Feud, a quarrel, a contention; a fief.
Feudal, pertaining to the relation between a lord and his vassal.
Feudatory, holding lands by feudal tenure.
Feuilleton, the part of a newspaper devoted to a short, or serial story.
Feverish, troubled with fever, hot, restless.
Fez, a red cap worn in oriental countries.
Fiacre, a carriage for hire in France.
Fiancé *m.*, **fiancée** *f.*, a betrothed person.
Fiasco, a humiliating failure.
Fiat, a decree, a command.
Fibre, a small thread or filament.
Fibrous, composed of fibres.
Fibula, a brooch; a surgical needle; one of the bones between the knee and ankle.
Fichu, a sort of neckerchief of muslin, etc.
Fickleness, inconstancy, unsteadiness.
Fictile, manufactured by the potter.
Fictional, invented, feigned.
Fictitious, not real, imaginary.
Fidei defensor, defender of the faith.
Fidelity, faithfulness, honesty.
Fidgety, restless, over-anxious.
Fiduciary, a trustee; of the nature of a trust.
Fidus Achates, a faithful friend.
Fief, lands held by grant from a superior or overlord.
Field-artillery, artillery for use in the field.
Field-day, a day when the troops take the field for practice.
Field-marshal, the highest rank in the army.
Fiendish, extremely cruel or malicious.
Fierceness, ferocity, violence.
Fieriness, the state of being fiery.
Fiery, hot like fire, hot-tempered.
Figment, an invention, a fiction.
Figurative, illustrative, symbolical, not literally exact; not literal.
Figure-head, the figure on the prow of a ship.
Filament, a slender thread; a fibre.
Filbert, a cultivated variety of the hazel nut.
Filcher, a thief.
Filial, befitting a son or daughter.
Filiation, the determination of the paternity of a child.
Filibuster, a piratical adventurer.
Filigree, a lacework of gold or silver wire.
Filings, fragments rubbed off with a file.
Fillet, a head-band; meat or fish boned.
Fillibeg or **Philabeg,** a Highland kilt.
Fillip, to strike with the finger nail; to incite.
Filly, a young mare.
Film, a thin skin; a very fine thread.
Filminess, the state of being filmy.
Filter-bed, a tank with a prepared bottom through which a liquid may be filtered.
Filthiness, a dirty or foul state.
Filtrate, to strain or filter.
Fimbriation, a fringe, a decoration of an edge or border.
Finale, the last item on a programme; a final movement.
Finality, completeness, decisiveness.
Finally, lastly, completely.
Finance, the management of money matters.
Financially, in respect to finance.
Financier, one engaged in finance.
Finery, showy dress or ornaments.
Finesse, artifice, stratagem.
Finger-board, the keyboard of a musical instrument.
Finger-plate, a plate fixed on a door near the handle.
Finial, an architectural ornamentation.
Finical, foppish, fastidious.
Finicking, particular over trifles.
Finis, the end, conclusion.
Finite, having a limit.
Finnan haddock or **Findon haddock,** a smoked fish cured after the manner of the curers of Findon, near Aberdeen.
Finnish, relating to Finland.
Fiord or **fjord,** a narrow inlet on the coast, as in Norway.

Fire-eater, one who pretends to eat fire; a furious person.
Fire-ship, a ship filled with combustibles to fire the vessels of the enemy.
Firing, fuel; the discharge of fire-arms.
Firmament, the sky, the heavens.
Firman, an order of the Turkish Government.
First-floor, the floor above the ground-floor.
First-fruit, first produce, result, or profit.
First-hand, direct from the originator.
First-water, the best quality.
Firth, an arm of the sea.
Fisc, the public treasury.
Fiscal, belonging to the public treasury, relating to taxation or revenue.
Fishgig, a dart for hurling at fish.
Fishiness, the quality of being fishy; slipperiness.
Fish plate, a plate bolted across the junction of two lengths of railway line to hold them together.
Fish-slice, a broad knife for serving fish.
Fission, a splitting up into parts.
Fissure, a cleft, a narrow chasm.
Fistic, connected with boxing.
Fisticuff, a fight with fists.
Fistula, a kind of flute. See also *Med. Dict.*
Fitful, uncertain, changeable.
Fitz, a prefix meaning 'son of,' as Fitzgerald.
Fives, a game of hand-ball; a disease of horses.
Fixative, something that has power to fix.
Fixed stars, stars which appear not to move.
Fixity, coherence of parts, firmness.
Fixture, a piece of furniture that goes with the house.
Flabbergast, to overwhelm with surprise.
Flabbiness, the state of being soft and loose.
Flaccid, flabby, weak, lax.
Flag'ellant, a fanatic who scourges himself.
Flagellation, the use of the scourge.
Flageolet, a small wind instrument.
Flagging, drooping; paving stones.
Flagitious, villainous, atrocious.
Flagon, a vessel with a narrow mouth to hold liquors.
Flagrancy, the quality of being flagrant.
Flagrant, burning; notorious, heinous.
Flagrante bello, during war.
Flagrante delicto, in the very act.
Flail, an implement for threshing grain.
Flakiness, the state of being flaky.
Flaky, loosely held together; lying in layers.
Flambeau, a lighted torch.
Flamboyant, a style of architecture; blazing.
Flamingo, a bird with red-coloured plumage.
Flâneur, an idler.
Flange, a projecting rim or edge.
Flanking, at the side of.
Flannel, a soft woollen material.
Flap-doodle, food for fools.
Flaring, blazing; making a show.
Flash-point, the heat at which an inflammable liquid takes fire.
Flat-race, a race on open ground.
Flatterer, one who gives undue praise.
Flatulency, wind in the stomach; emptiness.
Flatulent, full of wind; empty.
Flaunting, making a boastful display, gaudy.
Flavourless, tasteless, insipid.
Flawless, without a flaw or blemish.
Flaxen, made of flax; fair.
Flay, to strip off the skin.
Flèche, a slender spire.
Flection or **Flexion,** the act of bending, a bend
Fledgeling, a young bird just able to fly.
Fleerer, a mocker.
Fleming, a native of Flanders.
Fleshings, flesh-coloured tights.
Fleshly, corporeal, carnal, worldly.
Fleur-de-lis, a lily-bloom; the royal arms of France.
Flexibility, pliancy, easiness to be persuaded.
Flighty, fanciful, frivolous.
Flimsiness, the state of being thin and unsubstantial.
Flintiness, a stony hardness; hard-heartedness.
Flint-knapper, a worker in flint, a flint-shaper.
Flippancy, a pert manner of speech.
Flirtation, a playing at love-making.
Floatation or **flotation,** the study of floating bodies; the act of floating.
Flocculent, flaky, or fleecy like wool.
Flock-bed, a bed stuffed with coarse wool.
Floe, a mass of floating ice.
Flood-gate, a gate to let out or keep in water.
Flood-tide, the rising tide.
Flora, all the plants of a district.
Florentine, of, or pertaining to Florence
Florescence, the flowering of plants.
Floriculturist, one skilled in the cultivation of flowers.
Florid, bright in colour; embellished.
Florist, a cultivator of flowers.
Flotilla, a little fleet.
Flotsam, portions of a wreck found floating on the sea.
Flour, finely ground corn or grain.
Flourish, to thrive, to prosper; to brag; to wave.
Flout, to mock at, to jeer.
Floweret, a small flower.
Fluctuation, a rising and falling; uncertainty.
Flue, an outlet for smoke or heat soft down, fluff.
Fluency, volubility; ready flow of words.
Fluid'ity, a liquid state.
Fluke, the hook of an anchor; an accidental good stroke.
Flummery, a jelly made of oatmeal; nonsense.
Flunkey, a liveried man-servant.
Flush-box, the small tank by which a water-closet is flushed.
Fluted, embellished with furrows or grooves.
Fluvial, belonging to rivers.
Fluxion, the act of flowing; that which flows.
Fly-blown, tainted with the eggs of flies.
Fly-fishing, fishing with flies for bait.
Flying-buttress, a term in architecture.
Fly-wheel, a wheel to regulate the motion of machinery.
Foal, a young horse or ass.
Foamy, covered with foam; frothy.
Focal, belonging to a focus.
Focus (*pl.* foci), a point of concentration.
Focussing cloth, the dark cloth used by a photographer in adjusting his camera.
Foeman, an enemy in war.
Fogeyism, dull and old-fashioned habits.
Fog-signal, an alarm sounded on ships or light-houses, and by trains during a fog.
Foible, a weak side; a failing.
Foil, to defeat; a blunt rapier used in fencing.
Foist, to insert artfully; to pass off fraudulently.
Foliage, leaves of trees.
Foliation, the beating of a metal into thin plates; the act of putting forth leaves.
Folio, a large book or page of manuscript; two opposite pages of an account book.
Folk-lore, ancient legends, primitive customs and traditions of the people of a district.
Fomentation, application of warm lotions or poultices.
Fons et origo, the source and origin.
Font, the vessel containing water for baptism.
Foolhardiness, recklessness, rashness.
Foolscap, a large size of manuscript paper.
Foot-board, the step of a carriage.
Foot-cloth, a cover reaching to a horse's feet.
Footing, ground for the foot; position; entrance.
Foot-lights, lights on the front of a stage.
Foot-note, a note at the foot of a page.
Foot-pad, a highwayman on foot.
Footplate, the platform on which an engine-driver and his stoker stand.
Foppery, affectation; fondness for dress.
Forage, fodder; provisions; to plunder.
Forage-cap, a small cap worn by soldiers.
Foray, a pillaging expedition.
Forbearance, leniency; command of temper.
Forçat, a French convict or galley-slave.
Forcefully, violently, impetuously.
Forcemeat, fine chopped meat.
Forceps, surgical pincers, a pair of tongs.
Forcibly, by force.
Fordable, passable without swimming.
Fore-and-aft, from stem to stern of a vessel.
Fore-arm, the lower part of the arm; to arm in advance.
Forebode, to foretell; to cause a presentiment.
Forecast, to foresee; to plan in advance; to predict.
Forecastle, the front part of a vessel where the crew are quartered.
Foreclosure, prevention; forfeiture of the right of redemption (of a mortgage).
Forefinger, the finger next the thumb, the first finger.
Foregone, past, decided beforehand.
Foreground, the front of a picture or landscape.
Foreign, not of the same country; remote.
Foreland, a headland or cape.
Forelock, a lock of hair on the forehead.
Foreman, a head workman, chief man.
Fore-mentioned, referred to before.
Forensic, belonging to the law-courts.
Foreshore, the sloping part of a shore.
Foreshorten, to shorten parts in a drawing so as to convey the correct idea of distance.
Forestall, to anticipate; to take up beforehand.
Forestry, the management of forests.
Forethought, providential care; anticipation.
Foreword, a preface.
Forfeiture, the loss of a right by some transgression or omission; a fine.
Forfend, to forbid; to avert.
Forgather, to come together.
Forgery, the fraudulent copying of another's writing.
Forgiveness, pardon; willingness to pardon.
Forlorn, forsaken, destitute.
Form, the bed or sitting-place of a hare.
Formal, ceremonious; precise.
Formality, the strict observance of ceremony.
Formation, the manner in which a thing is formed, the act of forming.
Formic, belonging to ants.
For'midable, terrible, inspiring fear.
Formula (*pl.* ae), a prescribed form.
Formulary, a book of rules or established forms.
Formulation, the act of reducing to a formula.
Fornication, impurity of intercourse between unmarried people.
Forswear, to renounce or deny upon oath.
Forte, that in which one excels.
Forte (-e), loudly (music).
Fortify, to strengthen against attack; to encourage.
Fortissimo, as loudly as possible (music).
Fortitude, strength in adversity.
Fortuitous, accidental, by chance.
Fortune-hunter, a man who seeks a rich wife.
Forum, a public place in Rome where justice was dispensed.
Forwardness, presumption; preparedness.
Fosse, a ditch, a moat.
Fossil, petrified animal or vegetable remains.
Foster-child, a child nursed by one who is not its parent.
Fother, to stop a leak in the bottom of a ship.
Foudroyant, sudden and terrible like a lightning stroke.
Foul-mouthed, making use of bad language.
Foundation-stone, the stone of a building laid with ceremony.
Founder, an originator; to sink (of a boat).
Foundery or **foundry,** a place where metals are cast.
Foundling, a child found forsaken.
Fountain-head, a source or origin.
Four-in-hand, a carriage drawn by four horses.
Fourteenth, the ordinal of fourteen.
Fowling-piece, a gun for shooting birds.
Fracas, an uproar; a quarrel.
Fractional, forming only a part of a whole.
Fractious, fretful; given to quarrelling.
Fracture, the breaking of a bone, etc.
Fragile, delicate; brittle; easily broken.
Fragility, brittleness; frailty.
Frag'mentary, made up of broken pieces.
Fragrance, sweet perfume, an agreeable odour.
Fragrant, odorous, having a sweet scent
Frail, fragile, wanting in strength of mind.
Frailty, weakness, infirmity.
Framework, a frame enclosing anything; a skeleton structure.
Franc, a French coin worth about 9½d.
Franchise, a privilege; the right of voting at parliamentary elections.
Franciscan friar, a monk of the order of St. Francis.
Frangible, fragile; able to be broken.
Frankincense, an odoriferous kind of resin.
Frankish, relating to the Franks.
Franklin, a steward; a landowner.
Frantically, madly, furiously.
Frappé, cooled by ice.
Fraternal, brotherly.
Fraternity, a brotherhood.
Fraternize, to become very friendly with.
Fratricide, the murder or murderer of a brother.
Fraud, deceit, artifice; a cheat.
Fraudulence, deceitfulness, dishonesty.
Fraught, laden, stored, filled.
Freakish, capricious, full of vagaries.
Free Churches, the churches separated from the Established Church.
Freebooter, a plunderer, a robber.
Freedom, liberty, independence.
Freehand, drawing unassisted by instruments.
Freehold, land held by free tenure with no duties except to the Crown.
Free-lance, a mercenary soldier of mediæval times.
Freemason, a member of a secret society.
Free-thinker, one who does not believe in the orthodox forms of religion.
Free-trade, the interchange of commodities without the payment of duties.
Free-will, unrestricted liberty of action.
Freezing mixture, a mixture of ice and salt that will cause other things to freeze.
Freightage, the charge for conveying goods.
French chalk, used by tailors to draw lines on, and remove grease spots from cloth.
French leave, departure without announcement, a slipping off.
Frenetic, mad, distracted.
Frenzied, maddened, distracted.
Frenzy, madness, distraction of mind.
Frequency, numerous repetition at short intervals.
Frequenter, one who often resorts to a place.
Fresco, a painting on freshly plastered walls.
Freshman, an undergraduate during his first year.
Freshet, a flood of fresh water.
Fretted, adorned with frets or fretwork.
Friable, easily reduced to powder.
Friar, a member of a religious order.
Fricassee, fowl, etc., cut up and dressed with sauce.
Friction, a rubbing together of two surfaces.
Friendliness, a disposition to friendship.
Frieze, a woollen cloth; an architectural term.
Frigate, a ship of war.
Frigid, intensely cold; dull; stiff.
Fringe, an ornamental edging to dress, etc.
Friskiness, gaiety; liveliness.

Frith-stool, a seat near an abbey or church which gave the right of sanctuary to any fugitive who reached it.
Frivolity, unseemly levity.
Frivolous, trifling; given to frivolity.
Frock-coat, a close-fitting long coat for men.
Frolicsome, playful, full of gaiety.
Frond, the leaf of a fern, etc.
Frondescent, bursting into foliage.
Frontage, the front part of a building.
Frontal, in front; belonging to the forehead; a cloth for the front of an altar.
Frontier, the extreme border of a territory.
Frontispiece, a picture facing the title-page of a book.
Frost-bitten, nipped by the frost.
Frothiness, the state of being frothy or foamy.
Frou-frou, the rustling of a silken skirt.
Frouzy or **frowzy,** dim, musty; untidy.
Froward, ungovernable, perverse.
Fructification, the act of fructifying.
Fructify, to bear fruit; to fertilise.
Frugality, thrift; parsimony.
Fruiterer, a seller of fruit.
Fruition, pleasure given by possession or use.
Fruitlessly, vainly; unprofitably.
Fruity, of the flavour of fruit.
Frumentaceous, made of, or like grain.
Frumenty, a dish made of wheaten grains boiled in milk and seasoned.
Frump, a dowdy, disagréeable woman.
Frustrate, to defeat, to balk.
Frustum, the stump of a cone after the upper part has been shorn off along a plane parallel to the base.
Fuchsia, a garden plant.
Fuddler, a drunkard.
Fuel, matter to feed a fire.
Fugacious, fleeting; volatile.
Fugitive, one who flies from danger or justice.
Fugleman, an expert soldier who stands in front as a model for the rest at drill.
Fugue, a musical composition.
Fulfil, to perform, to carry out.
Fulgent, shining.
Fulig'inous, sooty, smoky.
Full-blown, open to its full extent.
Fuller, one who cleanses cloth.
Fulminate, to thunder; to make a loud noise.
Fulsome, nauseous, offensive.
Fumarole, the hole from which volcanic smoke issues.
Fumid, smoky; vaporous.
Fumigation, a disinfecting by means of vapours.
Funambulist, a rope-dancer.
Function, the performance of an act or duty; power.
Functionary, one holding a special office.
Fundamental, serving for the foundation; essential.
Funeral, the ceremony of burial.
Fune'real, suiting a funeral; dismal.
Fungus (*pl.* fungi or funguses), a plant such as the mushroom, etc.; a spongy growth.
Funicular, consisting of a small cord, held by a taut cord.
Funnel, a pipe to let out smoke or steam; an instrument for filling bottles, etc.
Furbelow, a flounce or other ornament of dress.
Furbish, to burnish, polish up.
Furioso, with energy (mus.); a raging person.
Furiously, madly, violently.
Furl, to roll up and make fast, as a sail.
Furlong, the eighth part of a mile.
Furlough, leave of absence.
Furnace, an enclosed fire-place.
Furniture, useful and ornamental movables in a house; equipage.
Furor scribendi, a passion for writing.
Furore, excitement; intense enthusiasm.
Furrier, a dealer in furs.
Furrow, a trench made by the plough; a wrinkle.
Fustigate, to cudgel, to beat.
Furtherance, assistance towards an end.
Furtive, stolen, sly.
Fuscous, of a dark shade.
Fusee, a match; the cone round which the cord of a watch is wound; a light musket.
Fusel-oil, an oil obtained from fermented malt, potatoes, etc.
Fusible, capable of being melted.
Fusilier or **fusileer,** a soldier armed with a fusil or small musket.
Fusillade, a discharge of musketry.
Fusion, the act of melting; a blending by melting together.
Fussiness, unnecessary ado about trifles.
Fustian, a kind of cloth; bombast.
Futile, in vain; worthless.
Futility, uselessness.
Futurity, time to come.
Fuzzy-wuzzy, shaggy-headed.

Gabardine, a long cloak, formerly worn by all Jews when out of doors.
Gabel, a tax, particularly a former tax on French salt.
Gable, the triangular end of a building.
Gabions, baskets filled with earth and used in fortification.
Gaelic, a Celtic language spoken by the Highland Scotch.
Gaff, a hook used by anglers for landing large fish; a cheap theatre.
Gag, to stuff something into the mouth; to close discussion forcibly; a part put in by an actor on his own responsibility.
Gaiety, merriment, lightheartedness.
Gainsay, to contradict.
Gaiter, an outer covering for the lower part of the leg.
Gala, festive; festivity.
Galantine, a dish consisting of meat or poultry boned and pressed.
Galaxy, the milky way; a bevy of gay and brilliant people.
Galilean, of or pertaining to Galilee.
Gall, the bitter fluid secreted in the liver, bile; to annoy bitterly; to chafe the skin by friction or pressure; a brown ball produced on oak-trees by insects.
Gallantry, chivalrous valour, attention to ladies.
Gallery, a long passage or corridor; a kind of balcony in a hall or theatre overlooking the rest of the room.
Galley-slave, a slave chained to his oar on board a galley.
Gallic, belonging to Gaul or France.
Gallicè, in the French tongue.
Gallicism, the adoption in England of a French idiom, as "to assist at" for "to be present at."
Galling, chafing, annoying.
Gallon, a measure of four quarts.
Gallop, the rapid springing movement of a horse.
Gallows, the framework on which those condemned to death are executed.
Galop, a quick lively dance.
Galore, in abundance.
Galosh or **galoche,** an india-rubber shoe worn over ordinary shoes.
Galvanic, belonging to galvanism.
Galvanism, the production of electric currents by chemical reaction.
Galvanometer, an instrument for estimating the strength of an electric current.
Gambit, the sacrifice of a pawn in chess early in the game to secure a good opening for attack.
Gamble, to play games of chance for money, to speculate in hopes of large returns.
Gamboge, a water-colour pigment.
Gambol, to frolic or frisk about.
Game-cock, a cock bred for fighting.
Game-laws, laws for the protection of game.
Gamester, a gambler.
Gaming-house, a gambling-house.
Gammon, the salted and dried thigh of a pig; nonsense intended to impose on the hearer's credulity.
Gamp, a large umbrella, so called after Mrs. Sarah Gamp.
Gamut, the entire musical scale.
Gander, the male of the goose.
Ganger, an overseer of a gang of navvies.
Gangetic, of or pertaining to the river Ganges.
Gangrene, an eating away of the flesh.
Gangrenous, in a state of gangrene.
Gangway, a movable bridge affording means of exit from a vessel; narrow passage between blocks of seats.
Gantlet, see gauntlet.
Gaoler or **jailer,** a prison official who has charge of prisoners.
Garage, a place for storing motor-cars.
Garbage, offal, offensive refuse.
Garçon, the French name for a waiter.
Garde-robe, the necessary offices in a mediaeval castle or building.
Gargantuan, prodigious, enormous, like the giant Gargantua.
Gargle, to wash the throat.
Gargoyle or **gargoil,** a grotesque head at the end of a projecting pipe for draining water from a roof.
Garibaldi, a loose shirt-blouse.
Garish, glaring, gaudy.
Garland, a wreath of flowers or foliage.
Garner, a barn, granary.
Garnish, to decorate a dish for the table; to ornament.
Garotte or **garrotte,** to strangle with a cord twisted tight by means of a stick; to strangle from behind.
Garret, an attic, a room immediately under the roof.
Garrison, a band of soldiers appointed to man a fortified place.
Garrulous, talkative, loquacious.
Garth, a yard, enclosure.
Gasalier or **gaselier,** a bracket suspended from the ceiling with branches for gas jets.
Gasconade, a boastful harangue in the style of the Gascons.
Gas-engine, an engine worked by the repeated admission of gas into a receiver followed by its compression.
Gaseous, in the form of gas, like gas.
Gasometer, a large cylindrical reservoir for gas; an instrument for measuring gas.
Gastric, having to do with the stomach.
Gastritis, inflammation of the stomach.
Gastronomy, the art of the epicure; the art of good living.
Gathering, an assembly of people; a formation of matter or pus.
Gauche, "left-handed," awkward, wanting in tact.
Gaucherie, clumsiness, want of tact.
Gaud or **gawd,** an article of finery or adornment.
Gaudeamus, "*Let us rejoice,*" a festival, or merry-making.
Gaudiness, showiness.
Gauge, to estimate, measure; the distance between the rails on a railroad.
Gauntlet, a glove of mail worn by knights in armour; a glove with a wrist-piece attached.
Gauze, a transparent silky material.
Gavelkind, a system of land tenure in Kent, by which estates are equally divided among the children.
Gazelle, a kind of antelope.
Gazette, an official newspaper containing a list of all public appointments; a newspaper.
Gazetteer, a dictionary of geography.
Gear, harness, tackle, equipment; connexion by means of a toothed wheel.
Gehenna, the valley of Hinnom where human sacrifices were once offered; place of destruction, hell.
Gelatine, an animal product obtained from bones and resembling jelly.
Gelid, cold, frozen.
Gelding, a castrated horse.
Gemini, "the twins," a constellation containing the twin stars Castor and Pollux.
Gendarme, the French name for a military policeman.
Gendarmerie, French military police.
Genealogy, a table of descent, pedigree.
Genealogical, belonging to genealogy.
Genealogist, a student of genealogy.
Generalissimo, a commander-in-chief.
Generality, the majority, the common run.
Generalize, to draw general conclusions from particular instances.
Generate, to beget, produce, bring into existence.
Gener'ic, belonging to or common to a genus; general as opposed to special.
Generosity, liberality, munificence; nobility of spirit.
Generous, of a liberal or noble disposition.
Genesis, the process of generating or creating; the first book of the Old Testament containing an account of the Creation.
Geneva, Hollands, a kind of gin.
Genial, cordial, warm-hearted; kindly, healthful.
Genie (*pl.* genii), a jinn or fire-spirit of Eastern mythology.
Genital, connected with birth, or the organs of generation.
Genius (*pl.* geniuses), one endowed with special gifts; a tutelary or guardian deity.
Genius loci, the presiding spirit of the place.
Genre, a term applied to pictures dealing with common or homely scenes of ordinary life.
Gens de lettres, men of letters.
Genteel, well-bred, polite.
Gentile, one of non-Jewish race, not of Jewish origin.
Gentility, the state of being genteel or well-bred.
Genuflexion, a bending of the knee.
Genuineness, freedom from spuriousness or falseness.
Genus (*pl.* genera), a term denoting a group of different species connected with one another by certain common characteristics.
Geodesy, the art of measuring and mapping large surfaces of the earth.
Geography, the science treating of the surface of the earth, its configuration, inhabitants, productions, etc.
Geology, the science dealing with the composition of the earth's crust and the changes it has undergone.
Geomancy, the art of divining future events by earthly signs.
Geometrician, any one versed in geometry.
Geordie, a safety lamp invented and named after *George* Stephenson.
Georgian, belonging to the age of the four Georges.
Georgic, a poem treating of agriculture and country life.
Germ, the most elementary form of a living organism, an embryo, the minute origin of any development.
German, belonging to Germany.
Germane, akin, relevant.
Germinal, belonging to a germ.
Gerrymander, to divide a district for voting purposes so as to give an unfair advantage to a particular party.
Gestation, the carrying of the young in the womb.
Gesticulate, to enforce one's words by making gestures.

Gesticulatory, belonging to gesticulation.
Gesture, a movement of the body to express some feeling; pose, bearing.
Gewgaw, a toy, showy trifle.
Geyser, a hot spring; a contrivance for heating a bath.
Ghastly, inspiring terror or horror.
Ghat or **ghaut,** steps leading to the Ganges for sacred bathing; a mountain pass in India.
Ghetto, the Jewish quarter in an Italian town.
Ghost, a spirit, the spirit of the dead appearing to the living.
Ghost-word, a misspelling due originally to a printer's or copyist's error.
Ghoul, a fabulous being in Eastern legends supposed to feed on human corpses.
Giantess, a female giant.
Giaour, a Mohammedan word signifying an infidel or Christian.
Gibberish, unmeaning gabble.
Gibbet, a gallows.
Gibbous, convex, like the moon when almost full.
Gibe, to jeer, mock.
Gibeonite, a "hewer of wood and drawer of water;" a labourer, a drudge.
Gibingly, in a jeering manner.
Giblets, the heart, liver and gizzard of a fowl, which are cooked apart from the bird.
Gibus, a crush hat, an opera hat.
Giddiness, dizziness; frivolity, unsteadiness.
Gigantic, huge, enormous.
Gilding, a process of covering with gold leaf.
Gillie, a Highland servant who attends his master when hunting.
Gilt-edged, of the best quality; secure as an investment.
Gimlet, a tool for boring small holes.
Gimp, braid made of twisted cord used in upholstery and for dress trimmings.
Ginger, a hot spice obtained from the ground root of a plant.
Gingerly, cautiously.
Gingham, linen or cotton fabric made of coloured thread.
Gipsy, a member of a wandering or nomadic race whose original home was in the East.
Giraffe, a camelopard, a long necked and long legged African quadruped.
Girder, a beam of iron or timber used to bind together or support other parts of a structure.
Girder-bridge, a bridge which rests on girders.
Girlishness, the bearing or manners of a girl.
Gist, the main point, the essentials.
Gizzard, the stomach of a bird.
Glacé, iced; glossy.
Glacial, icy, belonging to a glacier.
Glacier, a river of ice.
Glacis, a gradual slope; the outer slope of a fortification.
Gladden, to make glad, rejoice.
Glade, an open space in a forest.
Gladiator, one whose profession it was to fight with wild beasts in the arena of a Roman amphitheatre.
Gladiatorial, belonging to the gladiators.
Glair, a transparent substance, such as white of egg, used as size or varnish.
Glamour, fascination, magic charm.
Gland, an organic structure in the body whose function is the secretion and alteration of some substance which passes into it through the blood.
Glaring, painfully brilliant; strikingly prominent.
Glass-blower, a glass-worker.
Glass-paper, paper with a rough surface consisting of powdered glass.
Glaucous, grayish green, sea-green.
Glazier, one whose trade it is to cut glass and fix it in frames.
Glebe, land belonging to the Church and forming part of a benefice; a clod.
Gleed, a glowing ember.
Glen, a narrow valley.
Glib, voluble.
Glimmering, shining faintly.
Glimpse, a hurried view.
Glint, a passing ray.
Glissade, the descent of a snowy slope by sliding on an alpenstock.
Glisten, to shine with a bright lustre.
Glister, to glisten.
Gloaming, twilight.
Gloat, to view and brood over with unholy joy.
Globe-trotter, one who travels all over the world for pleasure.
Globular, globe-shaped, spherical.
Globule, a little globe, a tiny sphere, a round particle.
Glomerate, to gather into a ball.
Gloominess, a state of gloom, depression of spirits.
Gloria Patri, "*Glory be to the Father,*" the doxology.
Glorification, the act of glorifying or exalting.
Gloriole, a circle of light, halo, aureole or nimbus.
Glorious, full of glory, splendid; worthy of glory.
Gloss, polish or lustre; an explanation of a difficult word or passage, a comment.
Glossary, an alphabetical list of difficult words with their explanations.
Glossiness, the state of polish or lustre.
Glottal, belonging to the glottis or entrance to the windpipe.
Glover, a manufacturer of gloves, a dealer in gloves.
Glow-worm, a species of phosphorescent beetle.
Gloze, to explain away speciously.
Glucose, a form of sugar obtained from dried grapes and other fruits, or by the action of sulphuric acid on starch.
Glue, a strongly adhesive substance obtained by boiling down the horns and hoofs of animals.
Glumness, sulky silence, sullenness.
Glut, to satiate, over-stock.
Glutinous, like gluten, sticky, viscid.
Gluttonous, given to excess in eating, greedy.
Gluttony, over-indulgence in food, greediness.
Glycerine, a sweet, sticky, colourless fluid.
Gnarled (of trees), knotty, twisted.
Gnash, to strike the teeth together in rage or anguish.
Gnat, a small two-winged insect.
Gnaw, to bite off gradually, to eat into.
Gnome, a hobgoblin, an earth spirit; a proverbial maxim.
Gnomic, sententious; abounding in epigrams.
Gnomon, the rod of a dial; a geometrical figure.
Gnosis, knowledge of a refined kind; mystical knowledge.
Goad, a stick with a pointed end used in driving oxen; to urge, stimulate.
Goal, a winning-post; end or aim.
Go-between, an intermediary, one who negotiates between two parties.
Goblet, a large wine-cup.
Goblin, a malicious sprite.
God-child, a child for whom one stands sponsor at baptism.
Goddess, a female divinity.
Godliness, likeness to God, righteousness.
God's-acre, a church-yard.
Goffer, to crimp with hot irons.
Goggles, tubes with glasses to protect the eyes.
Goitre, (see *Med. Dict.*)
Gold-field, a tract of country where gold is found.
Gold-leaf, gold beaten into a thin leaf or foil.
Gold-stick, an official who attends the Sovereign on State occasions carrying a gold rod.
Golf, a game played in open country with broad-headed clubs and small balls.
Gondola, a boat used on Venetian canals.
Goods-train, a train consisting of engine and goods waggons only.
Goose-step, the act of marking time with the feet without advancing.
Goorkha, a native of Nepal in India, and an infantry soldier.
Gordian knot, a knotty problem, so called after the celebrated knot tied by Gordius and cut by Alexander the Great.
Gorge, a narrow pass between precipitous rocks; the throat, gullet; to eat to excess, gormandize.
Gorgeous, resplendent, gaudy.
Gorgon, one of three female monsters of Greek mythology, the sight of whom turned beholders to stone; terrific, hideous.
Gorgonzola, a cheese named after an Italian village.
Gorilla, a huge anthropoid ape.
Gormandize, to act like a gourmand or glutton, to gorge.
Gosling, a young goose.
Gospeller, a preacher or reader of the gospel; an evangelist.
Gossamer, fine threads of cobweb; delicate transparent gauze.
Gossip, one who indulges in idle chatter about others, a tittle-tattle.
Goth, one of a tribe of barbarians who plundered Rome in the 5th century; a barbaric uncivilized person.
Gothic, belonging to the Goths; a pointed and richly decorated style of architecture.
Gouge, a tool like a chisel with a grooved blade; to scoop out.
Gourd, a kind of pumpkin.
Gourmand, a glutton.
Gourmet, one who is fond of dainty living, an epicure.
Gout, a disease, due in some cases to luxurious living, characterised by inflammation of the joints, and acute pain (see *Med. Dict.*).
Goût, taste.
Governess, a lady who takes care of, and instructs the young.
Government, the governing body of a nation; the method or act of governing.
Governor, a member of a governing body, a ruler; a contrivance for regulating the passage of steam in an engine.
Governor-general, a governor invested with supreme authority.
Gowan, a daisy.
Grabber, one who greedily seizes.
Grace-cup, a health drunk at the close of a feast after grace is said.
Graceless, shameless, abandoned.
Gore, thick, clotted blood.
Graciously, in a gracious manner.
Gradation, ordered progress; a series of degrees or steps; the gradual merging of one tint into another.
Gradient, the slope of a railway line.
Graduate, to pass through the several grades of a university career, and thus obtain a degree.
Graft, to insert a cutting from one tree into another.
Grail or **graal,** the cup used by our Lord at the Last Supper.
Graining, painting so as to imitate the grain of wood; a kind of dance.
Gramary, magic art, enchantment.
Grammar-school, a school in which Latin grammar is taught.
Grammatical, in accordance with the rules of grammar.
Gramme or **gram,** a weight of about fifteen grains troy, the standard unit of weight in the metric system.
Grampus, a kind of porpoise.
Granary, a place where grain is stored, a barn.
Grandchild, the child of a son or daughter.
Grand-duke, the ruler of a grand-duchy.
Grandee, a noble of high rank, a very exalted person.
Grandeur, magnificence.
Grandiloquent, pompous in speech, bombastic.
Grandiose, pompous, bombastic.
Grand-jury, a special jury summoned to decide whether an accused person shall be put on trial.
Grand-piano, a large piano strung horizontally, as distinguished from an upright or cottage piano.
Grand-stand, the chief stand on a race-course.
Grange, a farm with its outbuildings, a barn.
Granitic, like granite, of the nature of granite.
Granivorous, grain eating.
Grantor, a legal term denoting the person by whom a grant is made.
Granular, consisting of grain like particles.
Granulation, the forming into grains or granules.
Grape-shot, small bullets which scatter on being fired.
Grape-sugar, sugar obtained from dried grapes, glucose.
Graph, a curve, a graphical representation of a series of changes.
Graphic, vividly descriptive.
Graphite, black lead.
Grapnel, a small anchor with several flukes for grappling.
Grass-land, pasture land.
Grass-widow, a woman temporarily parted from her husband.
Gratefulness, a feeling of gratitude.
Gratification, a feeling of pleasure or satisfaction.
Gratis, for nothing, free, without payment.
Gratitude, a feeling of thankfulness.
Gratuitous, voluntary, done without payment.
Gratuity, a tip, money-present.
Gratulation, congratulation.
Gravamen, the most serious ground of complaint, burden of the complaint.
Gravelly, composed of gravel.
Gravel-pit, a pit from which gravel is obtained.
Gravimeter, an instrument for determining specific gravities.
Gravimetric, ascertained by a gravimeter.
Graving-dock, a dock where the bottoms of ships are cleaned.
Gravitation, the mutual force of attraction which all material bodies have for one another.
Gravity, the tendency, due to the force of gravitation, which all material bodies have to fall in the direction of the centre of the earth, weight; grave demeanour.
Gravy, the juice obtained from cooked meat.
Grazier, one who rears cattle and keeps them at pasture.
Greasiness, the state of being greasy or oily.
Grecian, one of the senior boys at Christ's Hospital.
Greedily, in a greedy or voracious manner.
Greek-fire, a composite substance able to burn in water, formerly used by the Greeks in war.
Green-back, green-backed paper money first issued by the United States in 1862.
Green-eyed, having green eyes; jealous.
Green-grocer, a dealer in fruit and vegetables.
Green-horn, one who is inexperienced and easily taken in.
Green-room, the actors' room behind the scenes at a theatre.
Gregarious, in the habit of living or going about in flocks and herds.
Gregorian, a term applied to a special kind of chanting introduced by Pope Gregory.
Grenade, a shell for hurling against the enemy, filled with powder and fragments of iron.
Grenadier, a soldier belonging to the first three battalions of foot-guards.

Gride, to make a harsh, grating or whirring sound.
Gridiron, a flat utensil made of iron bars, on which meat is broiled.
Grievance, ground of complaint.
Grievous, productive of grief, deplorable.
Griffin or **griffon,** a fabulous animal represented with an eagle's head and lion's body.
Grig, a cricket; sand-eel.
Grille, an iron grating.
Grill-room, a room in a restaurant where meat is grilled.
Grilse, salmon of the first year.
Grimace, contortion of the muscles of the face.
Grimalkin, an old cat.
Griminess, the state of being grimy or dirty.
Grippe, influenza.
Grisaille, a system of painting in gray tints.
Grisette, a French term for a gay young woman of the lower orders.
Griskin, the ribs of a pig.
Grisly, terrible, causing fear.
Grist, corn brought to the mill to be ground.
Gristle, cartilage.
Gritty, full of sand or grit.
Grizzled, gray.
Groat, an old English silver coin worth fourpence.
Groceries, wares sold by grocers.
Grogginess, intoxication, staggering.
Groining, curves formed by intersecting arches.
Groomsman, a bridegroom's best man or attendant.
Grooved, having a groove or furrow.
Groschen, a German silver coin worth about a penny.
Gross, fat, coarse, glaring; entire; twelve dozen.
Grotesque, odd, bizarre.
Grotto, a cave or hollow.
Ground-bait, bait dropped to the bottom of the water to attract the fish.
Ground-ice, ice formed at the bottom of the water before the surface is frozen.
Groundless, unfounded, baseless, unjustifiable.
Ground-rent, rent paid to the owner of land for the right of building upon it.
Groundsel, a plant which grows wild and bears small yellow flowers.
Groundswell, a wide-spread and deep heaving of the sea owing to a distant storm.
Group, a collection of things or persons, a class of persons or things having some common characteristic.
Grouse, a moor fowl, ptarmigan.
Grovelling, lying on the ground, meanly stooping or cringing.
Growler, a grumbler; a four-wheeled cab.
Growth, development, increase.
Grudgingly, in an unwilling spirit.
Gruel, thin porridge made of oatmeal.
Gruesome, horrible, terrifying.
Grume, a thick sticky fluid, clot.
Gruyère, a kind of cheese made in Switzerland.
Guano, a manure consisting of the excrement of sea birds.
Guarantee, a pledge, security, warrant.
Guarantor, one who undertakes to guarantee or to become security for.
Guard-room, a room assigned to the guard, a room where military offenders are confined.
Guardian, one who takes charge of a minor; one of a board elected to supervise public institutions.
Guard-ship, a war-vessel stationed in a harbour to protect it.
Gubernator, a governor, ruler, or helmsman.
Gudgeon, a small fish easy to catch; a person easily duped or deceived.
Guerdon, a reward.
Guernsey, a close fitting knitted woollen vest worn by sailors.
Guerrilla or **guerilla,** irregular warfare carried on by small bands under independent leaders.
Guess, to conjecture, divine, solve; to opine (Americanism).
Guest, a person entertained by another, visitor.
Guffaw, a noisy burst of laughter.
Guidance, leadership, direction.
Guild or **gild,** an association of persons for the protection of their mutual interests.
Guildhall, a hall belonging to a guild or corporation.
Guileless, without guile, innocent, sincere.
Guillotine, a wooden erection fitted with an axe, first used by the leaders of the French Revolution for beheading their victims.
Guiltiness, the state of being guilty.
Guinea, an old English gold coin worth 21/-.
Guise, outward form or appearance.
Guitar, a musical instrument with strings, played by the fingers.
Gules, a term in heraldry denoting red colour, and indicated by vertical lines.
Gullet, the food-passage in the throat.
Gullible, easily gulled or duped.
Gum-arabic, gum obtained from certain varieties of acacia.
Gumminess, stickiness, adhesiveness.
Gun-boat, a small light vessel adapted for carrying one or more guns.
Gun-carriage, a wheeled support for a gun.
Gun-cotton, cotton rendered explosive by being saturated with nitric acid, and then dried.
Gun-metal, a mixed metal consisting of copper and tin used in casting guns.
Gunwale, the part of a ship's side immediately below the bulwarks.
Gusset, a three-cornered piece of material inserted in a seam to give strength and spring to a garment; a gore.
Gustatory, belonging to the sense of taste.
Gusto, keen relish; eager zest.
Gutta-percha, the dried juice of the gutta-percha tree.
Guttural, belonging to the throat; a letter sounded by the throat; harsh-sounding.
Guy, a hideous figure representing Guy Fawkes; a fright, an odd figure; a rope used in steadying a suspended weight or tent-pole.
Gymnasium, a hall supplied with apparatus for physical exercises, a school for gymnastics.
Gymnast, one skilled in physical exercises.
Gymnastics, physical exercises specially devised for the purpose of strengthening the various parts of the body.
Gynæceum, a part of a house used exclusively by the women.
Gyp, a college servant at Cambridge.
Gyration, whirling round and round.
Gyroscope, an instrument to illustrate the characteristic features of rotation.
Gyve, a fetter.

Habeas corpus, a writ ordering a jailer to produce a prisoner and account to the court for his detention.
Haberdasher, one who deals in needles, cottons, tape, and similar small wares.
Habiliment, dress, wearing apparel.
Habitable, fit to be inhabited.
Habitat, a place of abode, natural locality.
Habit-maker, a maker of riding-habits.
Habitual, customary.
Habitué, a regular frequenter of a place.
Hachure, a method of shading by means of short lines crossing one another.
Hack, an overworked horse; one engaged in the drudgery of literary work.
Hackney, a horse kept for hire.
Hackneyed, made stale or trite by constant repetition.
Haddock, a fish much used for food.
Hades, the place of departed spirits.
Hadj, a Mohammedan pilgrimage to Mecca.
Hadji, a Mohammedan who has made a pilgrimage to Mecca.
Hæmal, relating to the blood.
Hag, a witch, a beldame.
Haggard, having a face thin and drawn with suffering.
Haggis, a Scotch savoury dish consisting chiefly of minced sheep's heart and oatmeal.
Haggler, one who drives a hard bargain and argues about trifles.
Hagiocracy, the rule or dominion of priests.
Hagiology, a work treating of the lives of the saints.
Hairiness, the state of being hairy.
Hair-splitting, given to drawing trifling and unnecessary distinctions.
Hakim, an Arabian name for a physician.
Halberdier, a soldier armed with a weapon like an axe with a long handle.
Halcyon, a king-fisher; tranquil and happy.
Half-caste, the child of a mixed union between persons of European and Hindu race.
Half-calf, a style of binding in which the back and corners of a book are bound in calf.
Half-pay, a reduced allowance made to officers in the army and navy when not on active service.
Halibut, a large flat fish.
Halidom, "holiness," a word formerly used in the phrase "By my halidom."
Haliography, a treatise on the sea.
Hallelujah or **Alleluiah,** "Praise ye Jehovah."
Hall-mark, an official mark stamped on articles of gold and silver to certify the purity of the metal.
Hallow-e'en, the eve of All Hallows or All Saints.
Hallucination, an illusion or imaginary perception due to mental delusion.
Halo, a circle of light, luminous ring, aureole, nimbus.
Halt, to stop suddenly; to stand in doubt; to limp; lame.
Halter, a rope to lead a horse; a hangman's noose.
Halve, to divide in half.
Halyard, a rope by which a sail or flag is raised or lowered.
Hamadryad, a tree-nymph.
Hamlet, a little village.
Hammer-cloth, the cloth upon the seat of the coach-box.
Hammock, a swinging bed made of stout canvas or netting.
Hamstring, to lame an animal by cutting the tendon of the ham.
Handbill, a small bill or advertisement for distribution by hand; a pruning-hook.
Handbook, a small book of reference, manual.
Handbreadth, popularly 2½ inches.
Handcuffs, iron bracelets linked together for fastening on the wrists of a prisoner.
Hand-gallop, an easy gallop, one hand only being employed.
Handicapper, one who arranges a race so that the weaker competitors are allowed a corresponding advantage.
Handicraft, a trade, a manual art.
Handkerchief, a square of silk or linen for the neck or the pocket.
Handle, to feel with the hand; to deal with; the part of an implement that one grasps.
Hand-mill, a mill which can be worked by hand.
Handsel, money given as a pledge of the genuineness of a bargain.
Handsome, well-formed, good to look upon.
Hangnail, same as *Agnail*.
Hank, a number of skeins of flax or yarn fastened together.
Hanker, to crave, to long irresistibly.
Hansard, the record of Parliamentary speeches, so named from the former publisher.
Hanse, a league for commercial and defensive purposes.
Hansom, a two-wheeled cab with the driver's seat behind.
Haphazard, by chance, accidental.
Harangue, a formal speech.
Harass, to worry, annoy, trouble.
Harassment, the state or cause of worry.
Harbinger, a precursor, forerunner, herald.
Harbourage, refuge, place of shelter.
Hardihood, daring, audacity.
Hard-mouthed, not answering to the bit; stiff, obstinate; harsh.
Hare-brained, feather-headed, flighty, wild.
Harem, the women's apartments in an Eastern household.
Haricot, hash made of grilled meat and vegetables; kidney bean.
Harlequinade, a farce in which the harlequin is the chief actor.
Harlotry, prostitution.
Harmattan, an unhealthy east wind which blows at certain times from the interior of Africa.
Harmonics, the principles of harmony.
Harmonious, melodious, concordant.
Harmony, concord.
Harness, the trappings of a horse.
Harpoon, a dart with a barbed head attached to a line used for spearing whales.
Harpsichord, an old-fashioned musical instrument with a key-board and strings.
Harpy, a fabulous monster with the head of a woman and the body of a bird.
Harridan, a wanton and ill-tempered old woman.
Harrier, a keen-scented dog used in hunting the hare.
Harrow, a machine with iron spikes for breaking up the clods and levelling the soil after ploughing.
Hart, the male of the red deer. (See *hind*).
Harum-scarum, wild, heedless.
Harvest-home, a feast to celebrate the ingathering of the harvest.
Harvest-moon, a moon which is at the full about the time of the Autumn equinox.
Hasheesh, an intoxicating preparation of Indian hemp, for smoking and drinking.
Hastiness, quickness of temper, impetuosity.
Hatch, to produce from the egg; to devise or plot; a half-door, a door of lattice-work.
Hatchway, an opening leading below from a ship's deck.
Hatchments, armorial bearings within a black border put up outside a house or in a church as a memorial.
Hatred, intense dislike.
Hat trick, a cricket expression denoting that a bowler has taken three wickets with three successive balls.
Hauberk, armour for the protection of the neck and shoulders, coat of mail.
Haughtiness, arrogance.
Haul, to pull, draw, tug.
Haulm, a stalk of wheat or any other grain, straw, stubble.
Haunch, the thigh, hind part.
Haunt, a place of frequent resort; to visit frequently.
Hautboy, a wind instrument; a large species of strawberry.
Hauteur, pride, arrogance.
Havana, a cigar exported from Havana.
Haversack, a bag in which a soldier carries rations.
Havildar, the highest non-commissioned officer in an Indian native regiment.
Havoc, wide-spread ruin or devastation.
Haw-haw or **ha-ha,** a fence sunk in a trench.
Hawse, that part of the bow of a ship which contains the holes for the cables.
Hawser, a small cable.
Hawthorn, a shrub bearing a white or pink flower, often used for hedges.

Hay-fever, a summer fever attended by a running at the eyes and nose.
Hazard, risk, venture.
Hazardous, involving risk, perilous.
Hazel, a tree bearing small nuts; light brown.
Haziness, mistiness.
Headache, a pain in the head.
Head-gear, head-dress, head-covering.
Head-quarters, the quarters of the general in supreme command; the abode of the highest authority; the permanent quarters of a regiment.
Headsman, an executioner.
Headway, advance, progress.
Healthily, in a healthy manner.
Hear hear, an ejaculation signifying approval.
Hearken, to listen, give heed.
Hearsay, an idle rumour, an unconfirmed report.
Hearse, a funeral carriage for the dead.
Heart, the chief organ in the circulation of the blood in animals; the seat of the emotions.
Heart-burn, a burning sensation due to indigestion.
Hearth, the stone on which the grate rests, the fireside.
Heartiness, cordiality, warmth of heart.
Heathendom, the heathen world.
Heather, a heath shrub with bell-shaped flowers.
Heaven-born, of divine origin.
Heaver, one who heaves or lifts.
Heavy-weight, a boxing man of the heaviest class. (See *feather-weight*).
Hebdomadal, weekly.
Hebetude, dulness of perception; obtuseness.
Hebraistic, relating to Hebrew, like Hebrew.
Hebrew, a Jew; the language of the Jews.
Hebridean, belonging to the Hebrides.
Hecatomb, a sacrifice of a hundred oxen, wholesale slaughter.
Heckle, to harass with questions, badger.
Hectic, flushed, feverish.
Hector, to bully, threaten.
He'donism, the doctrine that pleasure is the supreme good.
Heedless, careless.
Heel, to cant or tilt over, as a boat.
Heelball, a black preparation of wax used by shoemakers.
Heel-tap, the liquor left in a glass.
Hege'lian, belonging to, or following the philosopher Hegel.
He'gemony, supremacy or leadership.
Heifer, a young cow.
Heighten, to raise in height; increase, accentuate.
Heinous, inordinately wicked, atrocious.
Heiress, a woman who inherits.
Heirloom, a family possession handed down from father to son.
Helical, spiral.
Heliocen'tric, having the sun as the centre.
Heliograph, an instrument for using the sun's rays as a means of signalling.
Heliotrope, a bluish-purple colour.
Heliotype, see *Dict. of Gen. Infor.*
Helix (*pl.* helices), a spiral.
Helle'nes, Greeks.
Helmsman, the man at the helm, steersman.
Help-meet, a wife.
Helot, a Spartan serf or slave.
Helter-skelter, pell-mell, in tumultuous haste.
Helvetic, belonging to Switzerland.
Hematherm, a warm-blooded animal.
Hematite, a variety of iron ore.
Hemiopia, weakened or partial sight.
Hemispherical, in shape like a hemisphere.
Hem'istich, half a line of poetry.
He'morrhage or **hæmorrhage,** an effusion of blood.
Hemorrhoids, piles (see *Med. Dict.*).
Hemstitch, a border to a fabric, formed by drawing out threads parallel to the border, and fastening the strands at intervals.
Henchman, a page, attendant.
Henna, an orange-coloured dye used by Eastern women for the teeth.
Henotheism, the belief in one god as supreme over others, the worship of a particular god.
Hepatic, belonging to the liver.
Hep'tarchy, the "seven kingdoms" into which England was divided during Saxon times.
Heraldic, belonging to heraldry.
Heraldry, the art and science of genealogies and coats of arms.
Herbaceous, of the nature of a herb.
Herbarium, a collection of dried plants arranged and classified.
Herbiferous, producing herbage.
Herbivorous, feeding on herbage.
Herculean, gigantic, strong as Hercules.
Herdsman, one who tends cattle.
Hered'itament, any property which may be inherited.
Hered'itary, derived by inheritance.
Hered'ity, inheritance of the characteristics of a preceding generation.
Heresy, erroneous and self-chosen doctrine in religion.
Heretical, guilty of heresy.
Heritage, inheritance.
Hermaph'rodite, a plant or animal possessing the characteristic properties of both sexes.
Hermeneutics, the science of interpretation.
Hermetically, absolutely sealed so as to exclude the air.
Hermitage, the abode of a hermit or recluse.
Hernia, rupture (see *Med. Dict.*).
Hero (*pl.* heroes), a brave unselfish man; a demi-god of Greek mythology; the central figure in a work of fiction.
Heroically, in a heroic manner.
Herr, a German title equivalent to Mr.
Herring-bone, a cross-stitch used in sewing flannel.
Hesitancy, hesitation.
Hesitation, indecision, uncertainty.
Hesperian, belonging to Hesperus, western.
Hest, behest, request.
Hetairism, concubinage.
Heteroclite, irregularly declined, of varied declension; irregular.
Heterodoxy, erroneous doctrine.
Heterogeneous, composed of mixed or unlike elements.
Heteron'omy, subjection to the authority of another.
Hetman, the title of a chief commander of the Cossacks.
Heuristic, with a view to discovery.
Hewer, one who hews.
Hexagon, a six-sided plane figure.
Hexameter, a line of verse consisting of six feet.
Hexahedron, a solid body having six sides, a cube.
Hex'apla, Origen's edition of the Old Testament in six parallel versions.
Heyday, an expression of astonishment; the height or bloom.
Hia'tus, a gap, a break in sound owing to two vowels coming together.
Hibernate, to remain dormant during the winter.
Hibernian, Irish.
Hiccup or **hiccough,** an involuntary convulsive catch in the respiratory muscles.
Hic jacet, "*here lies,*" a Latin inscription on a tomb.
Hidalgo, a gentleman of the lower rank of Spanish nobility.
Hideous, frightful to behold, excessively ugly.
Hi'emal, belonging to winter.
Hierarchy, the priesthood, the clergy.
Hieratic, belonging to the priests, sacred.
Hieroglyph, ancient Egyptian picture-writing; writing hard to decipher.
Hierology, the science or study of sacred writings.
Hierophant, an expounder of sacred truths.
Higgle, to haggle, to argue about the price of anything in a petty manner.
High-church, the form of churchmanship which attaches special importance to the authority of the Church in sacred matters.
High-mass, the choral celebration of the Eucharist.
High-seas, those parts of the ocean which belong to all nations in common.
Highlander, a native of the Scotch Highlands.
High-low, a kind of shoe.
High-pressure, steam-pressure which considerably exceeds the pressure of the atmosphere.
High-principled, actuated by high principles or motives.
Highwayman, a highway robber.
Hilarious, gay, uproarious.
Hilarity, gaiety, high spirits.
Hilliness, the state of being hilly.
Hilt, the handle of a sword or dagger.
Hind, the female of the red deer (see *hart*).
Hindrance, an impediment, obstacle.
Hindu or **Hindoo,** a native of India or Hindostan.
Hindustani, the language of the Hindus.
Hinge, a joint on which something turns.
Hinny, the offspring of a stallion and a she-ass.
Hippocentaur, a centaur, a mythical monster with a man's head and a horse's body.
Hippocras, a spiced wine possessing cordial properties.
Hippodrome, a modern circus; a place where chariot races were formerly run.
Hippogriff, a fabulous monster represented as a winged horse.
Hippopathology, the science of medicine in relation to horses.
Hippopotamus, the river-horse, a pachydermatous quadruped.
Hireling, a paid servant, one who serves for hire.
Hirsute, bristly, shaggy.
Hispid (botanical term), having stiff hairs.
Histology, the science of microscopic anatomy.
Historian, one who records the facts of history.
Historiographer, a writer of official historical records.
Histrionic, belonging to an actor's art.
Histrionics, the art of actors and acting.
Hoard, an accumulated store.
Hoarding, a boarding or wall of planks which serves as a background for posters.
Hoar-frost, white frost.
Hoarse, having a harsh rasping voice due to cold or sore throat.
Hoax, a practical joke.
Hobbledehoy, an ungainly youth at the awkward stage between boyhood and manhood.
Hobby, a favourite pursuit.
Hock or **hough,** the joint on the hind-leg of a horse between the knee and fetlock; to hamstring.
Hockey, an out-door game played with a ball and curved sticks.
Hocus, to out-wit, cheat.
Hocus-pocus, any kind of jugglery or trickery.
Hod, a kind of trough with a pole attached, used by labourers for carrying bricks and mortar.
Hodgepodge or **hotchpotch,** a medley.
Hodometer, an instrument attached to the axle of a wheel to register the distance traversed.
Hoe, an agricultural implement for loosening or gathering the soil.
Hoiden or **hoyden,** a rough romping girl, a tom-boy.
Hoist, to heave up; run up (a flag).
Hoity-toity, an exclamation implying that a person is full of airs and graces.
Holiday, a day of leisure and amusement; formerly a holy day or saint's day.
Holiness, goodness, piety; sacredness.
Holla, hollo, holloa, a loud call to some one at a distance.
Hollands, a kind of gin made in Holland.
Hollow, a hole or cavity; having an empty interior.
Holly, a prickly evergreen with scarlet berries.
Hollyhock, an old-fashioned garden flower.
Holocaust, a whole burnt offering; wholesale sacrifice.
Holograph, writing entirely in the hand of an author.
Holster, a case for a pistol carried in front of the saddle.
Holt, a wood, grove, or copse.
Holy Week, the week before Easter.
Homage, the profession of fealty, obeisance; reverent devotion.
Home-counties, those counties into which London extends.
Homeliness, simplicity, freedom from ostentation, plainness.
Homœopathy, a system of medicine which aims at curing diseases by means of small doses. See *Med. Dict.*
Homeric, belonging to Homer.
Home-rule, self-government of a country, a term especially used in connection with Ireland.
Home-spun, a loose fabric made to imitate cloth woven at home.
Homestead, a house with a plot of ground attached.
Homicidal, murderous.
Homiletics, the art of preaching.
Homily, a sermon.
Hominy, flour made of ground maize.
Homogene'ity, the property of being homogeneous.
Homoge'neous, similar in kind.
Homol'ogous, corresponding, relatively situated.
Homonym, a word having the same sound as another, but differing in meaning and in spelling.
Homomorphous, similar in outward form.
Homotaxis, similarity of arrangement.
Homunculus, a little man, a dwarf.
Hone, a stone used for sharpening instruments.
Honey-combed, having small cavities like a honey-comb.
Honey-moon, the first month after marriage.
Honorarium, a gift of money in recognition of professional services.
Honorary, unpaid, voluntary; conferred as a mark of honour.
Honourably, in an honourable manner.
Hoodwink, to outwit, deceive.
Hookah, a tobacco pipe used in the East, in which the smoke passes through water.
Hooligans, bands of disorderly youths who commit rowdy assaults in the streets.
Hooping-cough, see *whooping-cough.*
Hop-oast, a building, shaped like an inverted funnel, for drying hops.
Hopper, a vessel or trough open at the bottom for feeding a machine; a boat for carrying river dredgings to the sea.
Horde, a throng of people roaming from place to place.
Horizon, a line where land and sky seem to meet.
Horizontal, parallel with the horizon.
Horn-book, an old-fashioned A.B.C. for children, made of a slip of mounted parchment faced with horn to preserve it.
Hornet, a wasp with a sharp sting and horn-shaped antennæ.
Horny-handed, with hands hardened by manual labour.

Horol'ogy, the art of making clocks and watches.
Horoscope, a record of the position of the stars at the moment of one's birth, from which astrologers profess to predict the future.
Horribly, in a horrible manner.
Horrify, to inspire with horror, to shock.
Horror, a feeling of shuddering dread.
Hors de combat, put out of action.
Hors d'œuvre, an extra dish which does not form a substantial part of the menu.
Horse-artillery, mounted artillery.
Horse-guards, a mounted body-guard of the sovereign; the official quarters of the commander-in-chief at Whitehall.
Horse-play, rough play.
Horse-power, the equivalent of the strength which can be exerted by a single horse; the power required to raise 33,000 lbs. avoirdupois one foot a minute.
Hortation, exhortation, admonition.
Horticulture, the art of cultivating and tending gardens.
Hortus siccus, a collection of plants pressed, dried, and classified.
Hosanna, an expression of prayer and thanksgiving to God.
Hose-pipe, india-rubber tubing for the conveyance of water.
Hosier, a dealer in hose or stockings.
Hospice, a guest-house for the accommodation of travellers in Alpine districts.
Hos'pitably, in a hospitable manner.
Hospitality, the welcoming and entertaining of strangers.
Host, the consecrated bread of the Eucharist; an innkeeper; a vast number.
Hostage, one temporarily delivered into the hands of the enemy as a pledge of good faith.
Hostel or **hostelry,** an inn, hotel, boarding house.
Hostess, the landlady of an inn; a lady who entertains guests.
Hostility, enmity.
Hostler or **ostler,** an inn-servant who has charge of the horses.
Hot-bed, a bed of manure and earth covered with a glass frame where plants are forced.
Hôtel-de-ville, a town-hall.
Hôtel-dieu, a hospital.
Hottentot, a race of aborigines in South Africa.
Hour-glass, a glass instrument for measuring the time by the trickling of fine sand.
Houri, one of the nymphs supposed by Mahommedans to people paradise.
House-boat, a river-boat with a deck chamber for living in.
Householder, an occupant or tenant of a house.
Housel, the Holy Communion.
House-warming, an entertainment which a man gives to his friends to celebrate his entry into a new house.
Housing, providing accommodation in a house.
Housings, the trappings of a horse.
Houyhnhnms, a race of intelligent horses in Gulliver's travels who ruled the *Yahoos* or men folk.
Hovel, a shed, a wretched cottage.
Howdah, a canopied seat for several persons on an elephant's back.
Howitzer, a kind of cannon for throwing shells.
Hub, the centre of a wheel into which the spokes run.
Hubble-bubble, a tobacco pipe in which the smoke passes through water.
Hubbub, a noisy tumult, confused din.
Huckaback, strong linen towelling with an embossed pattern.
Huckster, a hawker, one who hawks his wares from place to place.
Huddle, to crowd together in disorderly confusion.
Hudibrastic, burlesque in style, like Butler's Hudibras; quaint rhymed doggerel.
Hue and cry, a clamorous pursuit.
Hueless, colourless, dull, faded.
Hugely, immensely.
Hugger-mugger, secrecy; sly, slovenly.
Huguenot, a term formerly applied to French Protestants.
Hulk, the body of a ship which is no longer seaworthy.
Hull, the body of a ship; the husk.
Hullabaloo, a loud outcry.
Humane, kindly disposed towards all living creatures; classical (of literature).
Humanity, mankind; the quality of being humane
Humanities, a term applied to classics and literary subjects of study, on account of their civilizing effect on the mind.
Humanitarian, a philanthropist; one who believes that the nature of Christ was human, not divine.
Humble-pie, a pie made of the entrails of venison, and eaten by the menials.
Humbly, in a humble or meek manner.
Humbug, insincere conduct masked by fair pretences; one whose conduct is affected and insincere.
Humdrum, tediously monotonous.
Humidity, dampness, moisture.
Humiliating, causing humiliation or degradation.
Humility, humbleness or meekness of spirit.
Hummock, a little mound, hillock; lump of ice cast up by larger blocks coming in collision.
Humorist or **humourist,** one who can see and portray the humorous side of life.
Humph, an expression of contemptuous disapproval.
Hunch, a shapeless lump.
Hunchback, a humpback or deformed person.
Hundred, a number; a division of a county, also called a wapentake.
Hundred-weight, 112 lbs. in avoirdupois weight.
Hungarian, belonging to Hungary.
Hunks, a miser.
Hunting-box, a house built for use during the hunting season.
Hurdle, a movable fence of osiers.
Hurdy-gurdy, a barrel-organ; a stringed instrument played by means of a wheel.
Hurrah, an exclamation of triumph or delight.
Hurricane, a fierce tempest.
Hurriedly, in a hurried or hasty manner.
Hurst, a wood.
Hurtling, whizzing rapidly.
Husbandry, agriculture; careful economy.
Hush-money, money paid to hush up some awkward disclosure.
Hussar, a soldier belonging to the light cavalry.
Hussif, (housewife) a needle-book.
Hussy, an impudent girl.
Hustings, a wooden erection from which candidates for a seat in parliament used to address the electors.
Hustle, to jostle.
Hyacinth, a flowering plant with a bulbous root.
Hyaline, glassy, crystalline, transparent.
Hyalography, the art of engraving on glass.
Hybrid, a mongrel; a word composed of elements derived from different languages.
Hydra, a many-headed water-serpent of mythology, which grew two heads in the place of each one cut off; prolific evil.
Hydrangea, a flowering plant which bears a very large head of flowers.
Hydrant, a pipe connected with the main, for drawing water.
Hydraulic, having to do with fluids in motion.
Hydrobarometer, an instrument which, by registering the pressure, determines the depth of the sea.
Hydrochloric, composed of hydrogen and chlorine.
Hydrodynamics, the science relating to the laws which govern fluids both in motion and at rest.
Hydrogen, a light gas which is one of the chief constituent elements of water.
Hydrography, the art of mapping out the waters of the globe.
Hydromañia, a kind of madness which leads to suicide by drowning.
Hydrometer, an instrument for determining the density of liquids by immersion.
Hydropathy, a water cure.
Hydrophobia, a form of madness due to the bite of a mad dog, of which a marked feature is a fear of water.
Hydroscope, a water-clock.
Hydrostatics, the science which treats of fluids at rest.
Hydrous, containing water.
Hyena or **hyæna,** a wild animal something like a wolf.
Hygeia, the goddess of health.
Hygiene or **hygeine,** the science of health.
Hygrometer, an instrument for ascertaining the amount of moisture in the atmosphere.
Hymene'al, belonging to Hymen god of marriage.
Hymettian, covered with flowers, like Mount Hymettus.
Hymn, a song of praise to God.
Hymnology, a collection of hymns.
Hyperbola, a curve like that formed by cutting a cone by a plane parallel to the axis of the cone.
Hyper'bole, an exaggerated expression used for the purpose of giving emphasis, and frequently found in poetry.
Hyperbolical, exaggerated.
Hyperborean, belonging to the far north.
Hypercritical, over critical, captious.
Hyphen, a straight line used to join two parts of a compound word.
Hypnotic, belonging to hypnotism.
Hypnotism, an unnatural or mesmeric sleep induced by artificial means.
Hypochon'dria, a nervous disease causing confirmed melancholy.
Hypocritical, feigning, dissembling, insincere.
Hypos'tasis, an underlying principle.
Hypostyle, an edifice supported on pillars.
Hypotenuse, the side of a right-angled triangle opposite the right angle.
Hypothesis, a preliminary assumption, a statement assumed to be true.
Hypothetical, based upon an assumption, conjectural.
Hypsometer, an instrument for measuring heights
Hyssop, a species of aromatic herb.
Hysteria, a nervous disorder which has a tendency to imitate the symptoms of other diseases, and is attended by convulsive fits.
Hysterics, a fit of hysteria.

Iambus, a poetic foot composed of a short and long syllable.
I-beam, an iron girder having its cross-section shaped like the letter I.
Iberian, Spanish.
Iceberg, a huge, floating mass of ice.
Ice-boat, a boat for travelling on, or making a way through ice.
Ich dien, "I serve;" the motto of the Prince of Wales.
Ichor, a thin watery humour like serum; the immortal fluid that coursed through the veins of the gods.
Ichthyology the science that treats of fishes.
Icicle, a hanging piece of ice.
Icing, a coating of hard sugar used on cakes.
Icon, not an image but a sacred picture used as an aid to devotion.
Icon'oclast, a breaker of images.
Idea, a mental image, a notion, thought.
Ideal, mental; perfect, a type of perfection.
Idealist, one who forms ideals, a visionary.
Identical, exactly the same.
Identify, to prove a person or thing to be the same.
Identity, the state of being the very same.
Ides, among the ancient Romans the 15th of March, May, July, October, and the 13th of the other months.
Id est, or i.e., signifies 'that is.'
Idiocy, the condition of an imbecile.
Id'iom, a phrase peculiar to a language or dialect.
Idiomatic, according to idiom.
Idiosyn'crasy, a peculiar characteristic.
Idiotic, like an idiot; extremely foolish.
Idle, unoccupied; lazy; unprofitable.
Idol, an image worshipped as God; one loved or honoured to adoration.
Idolatrous, belonging to idolatry.
Idolatry, the worship of images; an excessive devotion.
Idyl, a descriptive poem, generally pastoral.
Idyllic, belonging to idyls.
Ig neous, resulting from the action of fire.
Ignis fatuus, a light seen floating over marshes.
Ignition, the act of setting on fire.
Ignoble, of mean birth.
Ignomin'ious, mean, shameful.
Ig'nominy, public shame, disgrace.
Ignoramus, an ignorant person.
Ignorance, want of knowledge.
Ill-conditioned, in poor condition; surly.
Ill-disposed, harbouring malice; unkind.
Illegal, contrary to law.
Illegality, the quality of being unlawful.
Illegible, that cannot be read.
Illegitimacy, the state of being illegitimate.
Illegitimate, not born in wedlock; not lawful.
Ill-favoured, deformed; ugly.
Illicit, prohibited.
Illimitable, that cannot be limited, boundless.
Illiteracy, want of learning.
Illiterate, unlettered, untaught.
Illogical, contrary to the rules of reasoning.
Ill-omened, unlucky, auguring evil.
Ill-starred, destined to be unlucky.
Illuminati, a name formerly given to several secret sects; people who claim to be particularly learned.
Illuminator, that which gives light; one who illustrates with coloured letters, etc.
Illumine, to enlighten; to adorn.
Illusion, a mockery, false show, error.
Illusory, deceptive, false.
Illustrate, to explain; to adorn with pictures.
Illustrative, having the quality of explaining.
Illustrious, eminent, noble, conspicuous.
Imagery, images; pictures in the mind.
Imaginable, that may be conceived.
Imaginary, existing in the imagination.
Imam or **imaum,** a Mohammedan leader.
Imbecile, wanting strength of mind or body.
Imbecility, feebleness of mind or body.
Imbibe, to drink in; to admit into the mind.
Imbricated, arranged like the scales of a fish; overlapping.
Imbroglio, a complicated state of affairs.
Imbrue, to steep or soak.
Imbue, to tincture deeply; to impress on the mind.
Imitable, capable of imitation.
Imitative, inclined to copy.
Immac'ulate, spotless, pure, undefiled.
Im'manate, to flow in.
Immanent, inherent; internal.
Immaterial, incorporeal; of no consequence.
Immature, not mature, unripe.
Immaturity, the state of being immature.
Immediate, instant; not acting by secondary causes.
Immemorial, beyond memory or record.

Immensity, unbounded extent, infinity.
Immerge, to immerse.
Immerse, to put under water.
Immersion, the act of immersing.
Immigrant, one who comes and settles in a country.
Immigration, the act of immigrating.
Imminent, impending, at hand.
Immobile, immovable.
Immobility, the quality of being immobile.
Immoderate, passing due bounds, excessive.
Immodest, wanting in modesty.
Immolation, the act of sacrificing, a sacrifice.
Immorality, want of virtue, dishonesty.
Immortality, exemption from death; endless fame.
Immortelle, an "everlasting" flower; a wreath of such flowers.
Immovable, that cannot be moved.
Immunity, exemption; privilege, freedom.
Immure, to enclose within walls, to confine.
Immutable, unchangeable.
Imp, a mischievous little child; a little devil.
Impact, a collision.
Impair, to diminish; to injure, to make worse.
Impale, to kill by transfixing with a stake.
Impalpable, not to be perceived by the touch.
Impanel, to put on the list of jurors.
Imparity, inequality, disproportion.
Impartiality, equitableness, justice.
Impassable, that cannot be passed.
Impasse, a blind alley; a serious difficulty.
Impassible, incapable of feeling.
Impassive, unmoved, without feeling.
Impatient, not able to endure delay; eager.
Impeachment, the arraignment of an officer of state; an accusation.
Impeccable, incapable of wrong-doing.
Impecu'nious, in need of money, hard-up.
Impede, to hinder, to obstruct.
Impediment, hindrance, obstruction.
Impedimenta, baggage.
Impel, to urge forward, to incite.
Impend, to overhang; to be about to happen.
Impenetrable, that cannot be penetrated.
Impenitence, want of remorse or penitence.
Imperative, expressing command, imperious.
Imperceptible, not to be perceived; unimportant.
Imperfection, a defect, a fault.
Imperial, belonging to an empire or its ruler.
Imperialist, one imbued with the spirit of empire.
Imperil, to place in danger.
Imperiously, with disdainful authority.
Imperishable, that will not decay.
Impermeable, not to be passed through.
Impersonal, not personal, without reference to a particular person.
Impersonate, to personify, to represent a character.
Impertinence, that which has no relation to the matter in hand; rudeness.
Impertur'bable, calm and unruffled.
Impervious, impenetrable.
Impetuosity, the state of being impetuous.
Impetuous, violent, vehement, passionate.
Im'petus, momentum, force impelling towards any point.
Impi, a body of Kaffir or Zulu warriors.
Impiety, want of piety or reverence.
Impinge, to strike against; to clash with.
Im'pious, irreligious, wicked, profane.
Implacable, not to be pacified, inexorable.
Implement, a tool, an instrument, a utensil.
Implication, entanglement, something implied or included.
Implicit, inferred; unquestioning.
Imply, to involve; to give to understand.
Impolitic, imprudent, indiscreet.
Imponderable, without perceptible weight.
Import', to bring from a foreign country; to mean.
Im'port, bearing or meaning.
Important, momentous, of great consequence.
Importation, the act of importing, something imported.
Impor'tunate, incessant in solicitation, always begging.
Importune, to solicit in a pressing manner.
Importunity, the state of being importunate.
Impose, to lay or place upon.
Imposing, commanding, producing a great effect.
Imposition, the act of laying on; a punishment task; an imposture.
Impossible, that cannot exist or be done.
Impost, a tax or duty.
Impostor, one who deceives.
Imposture, a fraud; an imposition.
Im'potence, want of power.
Im'potent, wanting force or power.
Impound, to enclose as in a pound.
Impoverish, to render poor or feeble.
Impracticable, that cannot be done, unfeasible.
Imprecate, to call down evil upon.
Impregnable, not to be stormed or taken.
Impregnate, to saturate; to make fruitful.
Impresario, the manager of an opera company.
Impress, to stamp, to fix deeply; to force into the navy.
Impression, a mark made by pressure; effect produced on the mind; an idea.
Impressionist, a follower of a modern school of artists.
Imprima'tur, a permission to print a book, hence, a mark of approval.
Imprimis, in the first place.
Imprint, to impress; to fix on the mind.
Imprisonment, confinement as in a prison.
Improbability, unlikelihood.
Impromptu, off-hand, without previous thought.
Impropriety, unsuitableness; an unbecoming action.
Improvement, the act of improving; progress.
Improvidence, want of forethought.
Improvident, careless of the future.
Improvise, to sing, play, etc. extempore.
Improvisa'tion, the act of improvising.
Improvisato're, one who improvises.
Imprudence, want of prudence, indiscretion.
Impudent, shameless; insolent.
Impugn, to call in question.
Impulse, communicated force; influence acting on the mind.
Impulsive, moved or acting by impulse.
Impunity, exemption from punishment.
Impurity, want of purity; something impure.
Imputation, the act of attributing to; censure; suggestion.
Inability, want of ability or power.
Inaccessible, not to be reached or approached.
Inaccuracy, want of exactness; a mistake.
Inactivity, want of activity; idleness.
Inadequacy, the state of being insufficient.
Inadmissible, not to be allowed or received.
Inadvertence, negligence; inattention.
In æternum, for ever.
Inal'ienable, that cannot be alienated.
Inamorato, a male lover.
Inane, empty; stupid.
Inanimate, void of life or animation.
Inanition, exhaustion from lack of food; emptiness.
Inappropriate, not appropriate, unsuitable.
Inaptitude, unfitness.
Inarticulate, not uttered with distinctness.
Inattentive, careless, negligent, regardless.
Inaudible, not capable of being heard.
Inau'gural, belonging to inauguration.
Inauguration, a formal instalment into an office.
Inauspicious, ill-omened, unlucky.
In banco, before a full assembly of judges.
Inbred, inherent, natural.
Incalculable, that cannot be reckoned.
Incandescent, white with heat.
Incantation, a magic spell.
Incapable, not fit or capable.
Incapability, the state of being incapable.
Incapacitate, to disable, to disqualify.
In capite, in chief.
Incarcerate, to imprison.
Incarnadine, to dye red, as with blood.
Incarnation, the act of assuming a human body.
Incautious, unwary, heedless.
Incendiary, one who maliciously sets on fire.
In'cense, spices, etc., burned in religious rites.
Incense', to inflame with anger.
Incentive, that which incites or encourages.
Inception, a beginning.
Inceptive, noting a beginning.
Incertitude, uncertainty, doubtfulness.
Incessant, never ending, continual.
Incest, sexual intercourse between persons closely related.
Incestuous, guilty of incest.
Inchoate, incomplete, just beginning.
Incidence, a falling upon, or the direction of falling.
Incidental, casual; happening by chance.
Incip'ient, beginning.
Incision, a cut made by a sharp instrument.
Incisive, clear in expression; cutting; brief.
Incitement, a motive; an incentive.
Inclemency, the state of being inclement.
Inclement, unmerciful, harsh; stormy, rough.
Inclination, tendency towards; bent of mind.
Inclosure, the act of shutting in; that which is shut in.
Include, to contain, to comprise, to enclose.
Inclusive, encircling; including, comprising.
Incog., an abbreviation of *incognito.*
Incog'nito, under an assumed name.
Incoherence, want of connection; incongruity.
Incombustible, not to be consumed by fire.
Income-tax, a tax levied on incomes exceeding a certain amount.
Incommensurate, not reducible to one common measure.
Incommodious, inconvenient, vexatious.
Incommunicable, that cannot be imparted.
Incom'parable, beyond compare.
Incompatible, not agreeing with.
Incom'petent, inadequate; incapable, not fitted.
Incomplete, not perfect, not finished.
Incomprehensible, not to be understood.
Incompressible, that cannot be compressed.
Inconceivable, that cannot be imagined.
Inconclusive, not conclusive.
Incongru'ity, unsuitableness; inconsistency.
Incongruous, unsuitable; not fitting.
Inconsequent, illogical, inconsistent.
Inconsiderate, thoughtless, inattentive.
Inconsistence, incongruity; absence of argument.
Inconsolable, not to be comforted.
Inconspicuous, not easily noticed.
Inconstant, fickle, changeable.
Incontinence, lack of self-restraint.
Incontrovertible, indisputable.
Inconvenience, a cause of trouble or difficulty.
Incorporate, to unite into one body.
Incorporeal, immaterial, spiritual.
Incor'rigible, bad beyond correction or amendment.
Incorruptible, not admitting of decay; not open to bribery.
Increase', to grow or make larger; to multiply.
In'crease, growth; produce.
Incredibility, the quality of surpassing belief.
Incredu'lity, the state of being incredulous.
Incred'ulous, hard of belief.
In'crement, the act of increasing; increase.
Incriminate, to charge with crime.
Incrustation, a surface-crust or coating.
Incubate, to sit on eggs.
Incubus, a nightmare; a load on the mind.
Inculcate, to impress by frequent admonitions.
Inculpate, to blame; to charge with guilt.
Incumbency, the holding of a benefice.
Incumbent, the holder of a benefice; resting upon; imposed as a duty.
Incunabula, a cradle; nursery; hence, the first stages or origin of any thing.
Incur, to become liable to.
Incurable, incapable of cure.
Incurious, without curiosity.
Incursion, an inroad, invasion.
Indebted, obliged by something received.
Indecency, anything unbefitting good manners.
Indecipherable, not decipherable, impossible to make out or read.
Indecision, want of decision or determination.
Indeco'rous, contrary to good manners.
Indeco'rum, want of propriety.
Indefatigable, unwearied in effort.
Indefeasible, not to be defeated or annulled
Indefensible, unjustifiable, that cannot be defended.
Indefinable, that cannot be defined or described exactly.
Indef'inite, not limited; uncertain.
Indel'ibly, so as not to be effaceable.
Indelicacy, coarseness of behaviour.
Indelicate, not delicate or refined; coarse.
Indemnify, to secure against loss or penalty; to compensate.
Indemnity, security against loss or penalty; compensation.
Indentation, a notch or hollow.
Indented, cut in tooth-like notches.
Indenture, a written contract between two parties.
Independent, not dependent; not subject to control.
Indescribable, that cannot be described.
Indestructible, that cannot be destroyed.
Indeterminate, not defined or fixed.
Index, that which points out; the table of the contents of a book; an algebraical symbol.
Indiaman, a large ship for the Indian trade.
Indication, a mark, token; a symptom.
Indices, plural of *index* in Algebra.
Indict *(in-dite')*, to formally charge with a crime.
Indictable, that may be indicted.
Indifferent, neutral; unconcerned; passable.
Indigence, poverty, penury.
Indigenous, belonging by birth; native, not imported.
Indigestible, not easy of digestion.
Indignant, filled with anger and disdain.
Indignity, a contemptuous injury; an insult.
Indigo, a blue dye obtained from an Indian plant.
Indirect, not straight; not fair.
Indiscreet, imprudent; injudicious.
Indiscretion, want of prudence; rashness.
Indiscriminate, lacking discrimination.
Indispensable, that cannot be done without.
Indisposition, disinclination; a passing illness.
Indis'putable, that cannot be disputed.
Indissoluble, inseparable; binding for ever.
Indistinct, not clear; confused.
Indite, to compose; to dictate.
Individual, a single person or thing.
Individuality, separate or distinct existence.
Indivisible, not divisible.
Indoctrinate, to instruct in a doctrine.
Indolence, laziness, slothfulness.
Indomitable, incapable of being subdued.
Indubitable, unquestionable.
Inducement, that which persuades a person.
Induction, formal introduction into an office.
Indue, to invest; to endow.
Indulgence, a favour granted; forbearance.
In'durate, to make hard; to grow hard.
Industrial, belonging to industry.

In'dustry, diligence; assiduity; manufacture.
Indwelling, dwelling within.
Ine'briate, to make drunk; a drunkard.
Inebri'ety, drunkenness.
Ineffable, unspeakable.
Ineffaceable, that cannot be rubbed out.
Ineffective, that can produce no effect.
Ineffectual, inefficient; weak.
Inefficient, not efficient.
Inelastic, without elasticity.
Ineligible, incapable or unfit to be chosen.
Inept, unfit; foolish.
Ineptitude, the state of being inept.
Inequality, unevenness; absence of equality.
Inert, motionless, lifeless, sluggish.
Inertia, sluggishness; a property of matter.
In esse, in being.
Ines'timable, invaluable.
Inevitable, that cannot be avoided or escaped.
Inexcusable, not to be excused.
Inexhaustible, that cannot be exhausted.
Inex'orable, not to be moved by entreaty.
Inexpedient, unfit; not advisable.
Inexperience, lack of experience.
Inexpert, unskilled; not expert.
Inex'piable, that cannot be atoned for.
Inexplicable, incapable of being explained.
Inexpressible, unutterable.
In extenso, in full.
In extremis, at the point of death.
Inex'tricable, that cannot be disentangled.
Infallibility, exemption from error.
In'famous, base; publicly branded with guilt.
In'famy, public reproach; base wickedness.
In'fancy, childhood; beginning.
Infan'ta, a royal princess of Spain or Portugal.
Infanticide, the murder or murderer of an infant.
Infantry, foot-soldiers.
Infatuated, greatly enamoured, foolishly in love with.
Infect, to act upon by contagion; to corrupt.
Infectious, likely to infect.
Infelicitous, not happy or suitable.
In'ference, a conclusion drawn from previous reasoning.
Inferiority, a lower place in rank or value.
Infernal, belonging to hell, diabolical.
Inferno, the nether regions.
Infested, harassed, disturbed, plagued.
Infidel, an unbeliever.
Infidelity, want of faith; unfaithfulness.
In'finite, unbounded; immeasurably great.
Infinites'imal, infinitely small.
Infin'ity, immensity, boundlessness, endless number.
Infirmary, an establishment for the sick.
Infirmity, disease; a weakness of age or temper.
Inflammable, easily set on fire.
Inflammatory, having the power of inflaming or exciting.
Inflation, the state of being puffed out.
Inflection, the act of bending or turning; modulation of the voice; a variation in the form of a noun or other part of speech.
Inflexible, not to be bent; unyielding.
Influence, the power affecting people or things.
Influential, exerting influence or power.
Influenza, see *Med. Dict.*
Influx, a flowing in; infusion.
Informally, without ceremony.
Informant, one who gives information.
Infra dig, (*infra dignitatem*) unbecoming, beneath one's dignity.
Infrangible, not to be broken.
Infrequent, rare, uncommon.
Infringement, breach, violation.
Infuriate, to enrage, to make furious.
Infuse, to pour into; to introduce as an ingredient; to steep.
In futuro, in the future.
Ingenious, skilful; inventive.
Ingénue, an artless, candid girl; such a character when enacted on the stage.
Ingenu'ity, inventiveness, skill, acuteness.
Ingen'uous, open, candid, noble.
Inglorious, without glory, shameful.
Ingrain, to dye with a permanent colour; to impregnate.
Ingratiate, to recommend to another's favour.
Ingratitude, unthankfulness.
Ingre'dient, a component part.
Ingress, the act or means of entrance; a doorway.
Ingurgitate, to swallow with haste.
Inhabitant, one who resides in a place.
Inhale, to draw into the lungs.
Inharmonious, unmusical, discordant.
Inherent, innate, inborn, inseparable.
Inherit, to possess by inheritance.
Inheritance, a possession either hereditary or bequeathed by will.
Inhibit, to restrain, to hinder, to forbid.
Inhibitory, that prohibits or forbids.
Inhuman, barbarous, cruel, without compassion.
Inhume, to bury, to inter.
Inim'ical, hostile, contrary, repugnant.
Inim'itable, not to be imitated or copied.
Iniquitous, unjust, wicked.
Iniquity, injustice, wickedness, crime.
Initial, placed at the beginning, not complete; the first letter of a name.
Initia'tion, the act of instructing in new ideas; admission to a society.
Init'iatory, introductory, making a beginning.
Inject, to throw in; to cause to enter.
Injudi'cial, not judicial.
Injudicious, not judicious; unwise.
Injunction, a command, order, precept.
Injurious, hurtful, mischievous.
Injustice, absence of justice; an injury, wrong.
Inkling, a hint, whisper, intimation.
Inlay, to ornament with inserted pattern work.
Inlet, a creek, a narrow bay.
In limine, on the threshold.
In loco, in its proper place.
Inmate, one who is housed along with others.
In medias res, into the midst of things.
Inn, a house of call for travellers; a college of the Law Courts in London.
Innate, inborn, natural; inherent.
Innings, the period of a match during which a cricket team is at the wicket.
Innocent, free from blame; harmless.
Innocuous, harmless in its effect.
Innovation, a change by the introduction of something new.
In nubibus, in the clouds.
Innuendo, an oblique hint, an insinuation.
Innumerable, beyond counting, very numerous.
Inobtrusive, not forward, modest.
Inoculate, to ingraft; to communicate disease by the insertion of infectious matter.
Inodorous, destitute of smell.
Inoffensive, harmless; giving no offence.
Inoperative, producing no effect.
Inop'portune, inconvenient, unseasonable.
Inordinate, irregular; unbounded.
Inorganic, without the organs of a living thing; a term applied to chemical compounds that contain no carbon.
In-patient, a patient who resides in a hospital while undergoing treatment.
In perpetuam, for always.
In petto, hidden within the breast.
In posse, in possibility.
Inquest, a judicial inquiry, especially as to the cause of a sudden or violent death.
Inquietude, a disturbed or uneasy state.
Inquire or **enquire,** to ask questions.
Inquisition, inquiry; a Roman Catholic tribunal.
Inquisitive, curious; given to prying.
Inquisitor, a judicial inquirer; an official of the Inquisition.
In re, concerning the matter of.
Insanity, the state of being insane; madness.
Insa'tiable, incapable of being satisfied.
Inscription, inscribed letters or words on a monument, coin, etc.
Inscrutable, unfathomable.
Insectiv'orous, living on insects.
Insecurity, uncertainty; want of safety.
Insensate, stupid, wanting sensibility.
Insensible, void of feeling or emotion, imperceptible.
Inseparable, that cannot be divided or separated.
Insertion, the act of placing in or among; the thing thus placed.
Inshore, within three miles of the shore; near the shore.
Insidious, treacherous; acting stealthily.
Insight, intellectual penetration; intuition.
Insignia, badges of office; marks of distinction.
Insignificant, unimportant; wanting meaning.
Insincerity, dissimulation; want of truth.
Insinuation, the power of gaining access by stealth; a hint.
Insipid, without taste; dull, heavy.
Insistence, the act of persisting in or of urging doggedly or with determination.
In situ, in its original position.
Insobriety, drunkenness, intemperance.
Insolence, contemptuous pride or rudeness.
Insoluble, not to be dissolved, inexplicable.
Insolvency, the state of being insolvent.
Insolvent, unable to pay one's debts.
Insomnia, inability to sleep.
Insouciance, coolness, indifference.
Inspan, to yoke, as a team of oxen.
Inspector, a superintendent; an examiner.
Inspiration, the act of drawing in the breath the influence of a superior power; the flash of a new idea into the mind.
Inspissation, the act of thickening a fluid.
Installation, a formal introduction to an office.
Instalment, a part payment; a part of a whole produced periodically.
Instance, an example, precedent; demand (at the *instance* of).
Instantaneous, done in an instant.
Instep, the upper arch of the foot.
Instigate, to provoke or incite to a deed.
Instil or **instill,** to pour in drop by drop, to infuse slowly.
Instinct', moved; animated.
In'stinct, natural impulse unprompted by reasoning or experience.
Institute, to establish; an established law.
Instructive, conveying knowledge.
Instrument, a tool; the agent or means by which a thing is done.
Insubordinate, disobedient, unruly.
Insufferable, intolerable; detestable.
Insufficiency, a supply unequal to the purpose.
Insular, belonging to an island, narrow-minded.
Insularity, the state of being insular.
Insulate, to isolate.
Insulator, any thing through which an electric current will not pass; the earthenware caps on a telegraph pole.
Insult, to treat with insolence or contempt.
Insu'perable, invincible, insurmountable.
Insuppressible, not to be suppressed.
Insurance, security against loss or damage by payment of a sum agreed upon.
Insurgent, one who rises against authority.
Insurrection, a rising, rebellion.
Intaglio, a hollowed engraving on a stone, as distinct from a relief engraving.
Intake, the point at which water is diverted from its main course; a piece of land won for agriculture from a moor or common.
Intangible, not perceptible by the touch.
In'teger, a whole, not a fraction.
In'tegral, whole, complete.
Integ'rity, entireness; honesty.
Integument, a natural covering, a skin.
Intellect, the power of thinking, the mental faculty.
Intellectual, possessing intellect.
Intelligence, intellectual capability; news.
Intelligible, that may be understood.
Intemperance, want of moderation, inebriety.
Intemperate, immoderate; addicted to drink.
Intendant, a superintendent.
Intensify, to increase to a high pitch.
Intensity, the state of being highly strung.
Intentional, done by design or after consideration.
Inter, to bury.
Interact, an interval between two acts; to act mutually.
Inter alia, among other things.
Inter'calary, added to the calendar, as February 29th.
Intercede, to mediate; to plead for a person.
Intercept, to cut off; to seize on its way.
Intercession, the act of interceding.
Intercessory, interceding.
Interchangeable, that may be exchanged; succeeding alternately.
Intercolonial, between colonies.
Intercommunication, mutual communication.
Intercourse, reciprocal dealings; communication.
In'terdict, prohibition; a Papal prohibition of religious services.
Interest, concern; advantage; share of profit.
Interested, attracted; biassed by motives of self-interest.
Interference, an intermeddling.
Interim, the meantime, intervening time.
Interior, inner, internal; inland.
Interjection, a word thrown in, a part of speech.
Interlard, to sandwich, to mingle.
Interleave, to insert blank leaves.
Interlinear, written between lines.
Interloc'utor, a speaker in a dialogue.
Interloper, an intruder.
Interlude, a light playful piece between the parts of a more serious performance.
Intermarry, to marry the members of one family or tribe to the members of another.
Intermediary, one who intervenes.
Intermediate, lying between; interposed.
Intermezzo, a light piece of music played between pieces of greater importance.
Interminable, boundless; unending.
Intermission, cessation for a time, pause.
Intermittent, leaving off at intervals.
Intermixture, a mass formed by mixing.
Intern, to confine in the interior of a country; to imprison.
Internal, inward; not foreign.
International, existing between different nations.
Interne'cine, causing mutual destruction.
Inter nos, between ourselves.
Interpel'late, to put questions.
Inter'polate, to add a word or passage that is not genuine.
Interpose, to step in between; to place between.
Interpretation, explanation; translation.
Interpreter, one who interprets.
Interregnum, the interval between two reigns or governments.
Inter'rogate, to put questions to.
Interrog'ative, expressed as a question.
Interruption, hindrance; stop; intermission.
Inter se, between themselves.
Intersection, the point where two lines cross each other.
Intersperse, to scatter here and there.
Inter'stice, a slight space between things close together.
Interval, time or distance between.

Intervene, to come between things or persons.
Interview, a formal meeting or conference.
Intestate, dying without making a will.
Intestine, internal; a bowel.
Intimacy, close familiarity.
Intimation, an indirect declaration; a hint.
Intolerance, want of toleration or consideration.
Intonation, manner of sounding; modulation of the voice.
In toto, entirely.
Intoxicant, that which causes intoxication.
Intoxication, drunkenness.
Intractable, unmanageable; stubborn.
Intramural, within the walls.
In transitu, on the journey.
Intrepid, fearless; daring.
Intricacy, entanglement; perplexity.
Intrigue, a plot; an intricate scheme.
Intrinsic, inward, inherent; real.
Introduction, the act of making known or conducting to; a preface.
Introductory, forming an introduction.
Introit, a short hymn sung before the beginning of the Communion Service.
Introspection, the act or habit of examining one's own thoughts and feelings.
Intrude, to enter without right or invitation.
Intrusion, the act of intruding.
Intuition, power of perception without reasoning.
Intu'itive, seen by intuition.
Inundation, a flood; an overflowing.
Inure, to harden; to habituate.
In vacuo, in empty space.
Invade, to make a hostile entrance.
In'valid, one disabled by sickness or injury.
Inval'id, of no weight; without legal force.
Invalidate, to weaken, to render invalid.
Invaluable, precious above estimation.
Invariable, unchangeable, constant.
Invective, an abusive expression.
Inveigh, to utter censure or reproach.
Inveigle, to persuade to something wicked, to entice.
In'ventory, a list of articles.
Inversion, a change of place or order.
Invertebrate, having no backbone.
Invest, to dress, to surround, to confer.
Investigate, to inquire or search into.
Investiture, the act of giving possession.
Inveterate, long-established, obstinate.
Invidious, envious, likely to incur hatred.
Invigilate, to watch over, to superintend.
Invigorate, to strengthen, to animate.
Invincible, unconquerable.
Inviolable, not to be broken or profaned.
Invisibility, imperceptibleness to the sight.
Invocate, to call upon in prayer, to invoke.
Invoice, a list of goods despatched, with prices.
Invoke, to summon, to call to.
Involuntary, not willingly, without intention.
Involve, to enwrap; imply; comprise; entangle.
Invulnerable, that cannot be wounded.
Inwrought, with figures worked in.
Iota, the Greek letter *i*; hence any insignificant thing.
I O U, "I owe you," a memorandum of debt.
Ipse dixit, "he himself said it;" an affirmation, statement of opinion.
Ipso facto, in or by the fact itself.
Iras'cible, easily irritated or angered.
Irate, wrathful, enraged.
Ire, wrath, resentment.
Ireful, angry, furious.
Iridescent, rainbow-hued.
Irksome, troublesome, wearisome.
Iron-clad, a war-ship plated with iron.
Ironical, with irony, sarcastic.
Irony, a kind of sarcasm.
Irradiate, to shed rays of light upon.
Irrational, void of reason; absurd.
Irreclaimable, not to be reclaimed.
Irreconcilable, not to be reconciled.
Irredeemable, that cannot be redeemed.
Irref'ragable, incapable of being broken up; undeniable, irrefutable.
Irref'utable, not to be overthrown by argument.
Irregularity, deviation from rule; wrong conduct.
Irrelevance, the state of not being pertinent, or of not sticking to the point.
Irreligion, contempt of religion; impiety.
Irremediable, admitting of no cure or redress.
Irrep'arable, not to be recovered or repaired.
Irrepressible, not to be repressed.
Irreproachable, free from blame or reproach.
Irresistible, not to be successfully opposed.
Irresolute, not constant in purpose.
Irrespective, having no regard to.
Irresponsible, not responsible; careless.
Irretrievable, not to be repaired or brought back.
Irreverence, want of reverence.
Irreversible, not to be reversed or recalled.
Irrev'ocable, not to be recalled.
Irrigate, to water by artificial means.
Irritable, easily angered, inflamed.
Irritant, that which causes irritation.
Irritation, provocation; the act of inflaming.
Irruption, a violent inroad or invasion.
Isinglass, gelatine obtained from fish.
Islam, the Mohammedan religion.
Islander, an inhabitant of an island.
Isle, an island.
Isolate, to place in a lonely situation.
Isosceles, having two equal sides (of a triangle).
Isotherm, an imaginary line passing through places of the same average temperature.
Issue, a sending out; offspring; result.
Isthmus, a neck of land joining two larger portions.
Italic, belonging to Italy; a printing type.
Item, a separate article or detail.
Iterate, to repeat; to do over again.
Itin'erant, wandering, not settled.
Itin'erary, a book of travels; travelling.
Itin'erate, to travel about; to wander.
Ivied, overgrown with ivy.
Ivory, the hard, bony substance of which the teeth and tusks of animals consist.

Jacinth, a gem.
Jackal, a wild animal.
Jackanapes, an impudent fellow; a coxcomb.
Jack-boot, a boot reaching over the knee.
Jack-knife, a large clasp-knife used by a sailor.
Jack-straw, a man of no private resources.
Jacobin, a violent revolutionist.
Jacobite, an upholder of the cause of James II. and his descendants.
Jacquerie, a revolt of the French peasants.
Jade, a worn-out horse; a hussy; a greenish stone.
Jaguar, a South American beast of prey.
Jail or **gaol,** a place of detention.
Jalap, a purgative medicine.
Jalousie, a Venetian blind.
Jamb, the sidepiece of a door, fireplace, etc.
Janitor, a door-keeper.
Japanning, a varnishing process.
Jardinière, an ornamental flower-stand.
Jargon, unintelligible talk; gibberish.
Jargonelle, a large pear.
Jarrah, a hard, Australian wood used for wood paving.
Jasper, a precious stone.
Jaundice, a disease caused by bile.
Jaunting-car, a light two-wheeled carriage with seats facing the wheels.
Jav'elin, a spear thrown by the hand.
Jealousy, suspicious fear of rivalry.
Jejune, empty; uninteresting, dry.
Jemmy, a burglar's implement.
Jeopardize, to expose to danger; to hazard.
Jeopardy, hazard, danger, peril.
Jeremi'ad, a tale of woe.
Jerked, cut into thin pieces and dried in the sun.
Jerry-built, hastily constructed of poor material.
Jester, a buffoon formerly kept by persons of rank to amuse them.
Jesuit, a member of a religious order in the Roman Catholic Church.
Jesuitical, belonging to the Jesuits; crafty, politic.
Jet, a rich black mineral; a sudden spurting out.
Jetsam, goods cast overboard to relieve a ship.
Jettison, the throwing overboard of goods to save a ship.
Jetty, a small pier; like jet.
Jeu d'esprit, a witty saying.
Jewellery, jewels or gems collectively.
Jewess, a female Jew or Hebrew.
Jib, the foremost sail of a ship; to refuse to move forward.
Jimp, handsome; natty.
Jingoism, eagerness to go to war.
Jinriksha, a small two-wheeled carriage drawn by a man, and common in Japan.
Jobbery, the making of money by unfair means.
Job-master, a livery-stable proprietor.
Jocose, waggish; given to joking.
Jocularity, merriment; readiness to jest.
Jo'cund, merry, gay, lively.
Johnsonian, in the style of Dr. Johnson, pompous in literary style.
Joint-stock, stock held by a number of persons.
Jointure, a husband's provision for his widow.
Joists, timbers supporting a floor or ceiling.
Jollification, a merry-making.
Jollity, merriment; festivity.
Jorum, a flowing bowl.
Joss-house, a Chinese temple.
Joss-stick, a small stick burned before idols.
Journal, a diary; a newspaper issued daily; a magazine.
Journalism, work connected with journals.
Journey, to travel from one place to another.
Journeyman, a workman hired by the day.
Jovial, gay, merry.
Jubilant, shouting for joy or triumph.
Jubilation, a great rejoicing.
Jubilee, a 50th anniversary; a time of rejoicing.
Judgment or **judgement,** the act of judging; opinion; sentence.
Judicature, the power and system of administering justice.
Judicial, relating to courts of justice.
Judicious, prudent, wise.
Juggernaut, a Hindu idol; a custom to which people sacrifice themselves.
Juggler, one who practises sleight of hand; a trickster.
Jugular, belonging to the throat.
Juice, the fluid part of many substances.
Jujube, a spiny shrub; a sweetmeat.
Julienne, a clear soup containing small pieces of vegetables and herbs.
Jumper, an outer jacket worn by a sailor.
Junction, union; a place of union.
Juncture, a joining; a critical point of time.
Junk, a Chinese ship; pieces of old cable.
Junta, a Spanish council of state.
Junto, a secret assembly; a faction.
Jurid'ical, used in courts of justice.
Jurisdiction, legal authority; the district over which any authority is exercised.
Jurisprudence, the science of law.
Jurist, one skilled in civil law.
Juror, one who serves on a jury.
Jury, a company of men sworn to decide a matter in court.
Jus gladii, the right of the sword.
Justiciary, one that administers justice.
Justifiable, that can be shown to be just.
Justification, defence, vindication.
Jute, the fibre of an Indian plant.
Juvenescent, growing young.
Juvenile, youthful.
Juxtaposition, the state of being placed near.

Kadi, a Turkish magistrate.
Kaftan, a loose garment worn in the East.
Kail or **kale,** a variety of cabbage.
Kaiser, a German emperor.
Kaleidoscope, an optical instrument showing a number of beautiful colours and forms.
Kamptulicon, a kind of floor-cloth.
Kangaroo, a marsupial mammal of Australia.
Kaolin, a porcelain clay.
Karoo or **Karroo,** the high, arid plains of South Africa.
Katydid, an American grasshopper.
Kavass, a Turkish armed constable or attendant.
Kayak, an Eskimo fishing-boat.
Keblah, the point towards which Mohammedans turn when praying.
Kedge, a small anchor.
Keel, the timber at the bottom of a ship.
Keepsake, a gift kept for the giver's sake.
Kelp, the ashes of seaweed.
Kelpie, a water-spirit in the form of a horse.
Kennel, a house for dogs; a gutter.
Kerchief, a square of muslin, etc., used in dress.
Kern, an Irish foot-soldier.
Kernel, the edible substance in a nut or fruit-stone.
Kerosene, a lamp-oil.
Kersey, a coarse woollen material.
Kestrel, a kind of hawk.
Ketchup, or **Catsup,** a sauce
Keystone, the middle stone of an arch.
Khaki, a yellowish cloth used for soldiers' uniforms.
Khan, an Eastern prince or governor; an Eastern inn.
Khedive, the ruler of Egypt.
Khit'mutgar, an under-butler in India.
Kibble, a strong bucket used in a mine.
Kickshaw, something fantastical.
Kidnap, to steal and carry off a person.
Kilderkin, a small barrel.
Kiln, a large oven for drying or burning.
Kilogramme, a French measure of weight.
Kilt, the short skirt worn by a Highlander.
Kindergarten, a school for young children.
Kine, the old plural of *cow.*
Kinematics, the science of pure motion.
Kinetic, causing or concerned with motion.
King's-evil, a scrofulous disease.
Kink, a twist in a rope preventing it from running freely, or in a pipe causing an obstruction.
Kinsfolk, relations.
Kiosk, an Eastern garden-pavilion; an ornamental hut used as a shop for tobacco, etc.
Kirk, a church in Scotland.
Kirtle, an upper garment; a gown.
Kismet, an Eastern term for fate.
Kit, a tub; an outfit, as of sailors; a small violin.
Kith, one's acquaintances.
Kittiwake, a species of gull.
Kleptomania, a mania for stealing.
Knack, a petty contrivance; a lucky dexterity.
Knacker, a dealer in old horses.
Knag, a knot in wood.
Knap, a protuberance; to break short.
Knapsack, a bag carried on the back.
Knavery, dishonesty; petty villainy.
Knickerbockers, loose knee-breeches.
Knick-knack, an ornamental trifle.
Knight, a non-hereditary title; a champion.
Knight-errant, a knight who wandered in search of adventures.
Knitting, a kind of close network done with needles.
Knoll, a hillock; to knell, to sound as a bell.
Knot, the interlacing or tying of a cord, etc.; a nautical mile.

Knotty, full of knots; intricate; rugged.
Knout, a Russian instrument of punishment.
Knowledge, certain belief; learning; skill.
Knuckle-duster, an iron instrument to cover the knuckles and give greater effect to a blow.
Kobold, an underground spirit.
Koran, the Mohammedan scriptures.
Kow-tow, the Chinese ceremony of prostration before the Emperor.
Kraal, a South African native village.
Kreutzer, an Austrian copper coin.
Kriegspiel, a German war-game.
Krone (-ne), a Danish, Norwegian, and Swedish coin.
Kudos, fame, credit.
Kumiss, fermented mare's milk.
Kümmel, a liqueur made in Russia, flavoured with caraway.
Kursaal, a public hall at German health resorts.
Kyle, a Scotch name for a strait.
Kyrie, "Lord have mercy upon us," a phrase in the Communion Service.

Laager, the Boer name for an encampment fenced in by ox-waggons.
Labefaction, becoming ruinous, tottering.
Label, a descriptive ticket attached to an object.
Labial, formed with the lips; a letter of the alphabet so formed.
Laboratory, a place where chemical work and chemical experiments are conducted.
Laborious, hard-working; involving hard toil.
Labour, toil, exertion; childbirth, travail.
Labyrinth, a maze.
Lac of rupees, a hundred thousand rupees.
Lacerate, to rend, mangle.
Lâche, loose, slack; cowardly.
Laches, remissness, negligence.
Lachrymal, belonging to tears.
Lachrymose, given to tears.
Lackadaisical, affectedly languid, languishing.
Lackey, an attendant, footman.
Laconic, sparing of words, concise.
Lacquer, varnish made of shellac.
Lacrosse, a game of Canadian origin played with a kind of racquet.
Lactation, the act of suckling; period of suckling.
Lacu'na, a small pit, a gap, hiatus.
Lacus'trine, belonging to lakes.
Lading, loading.
Lady-chapel, a chapel dedicated to the Virgin Mary, and usually situated behind the high altar.
Lady-day, "day of our Lady," March 25th.
Lager-beer, a kind of light beer largely manufactured in Germany.
Laggard, one who lags or loiters.
Lagoon, a shallow lake formed near the coast by the overflowing of the sea, or near a river by the overflow of its waters.
Laic, belonging to the laity.
Lair, a den or lurking-place of wild beasts.
Laird, a Scotch title for the owner of an estate.
Laisser-faire, the principle of letting others alone to do as they please without interference.
Laity, people generally as distinct from the clergy.
Lama, a Buddhist priest of Tibet.
Lambent, licking or playing over a surface like a tongue of flame.
Lam'entable, worthy to be lamented, deplorable.
Lamina, *pl.* **laminæ,** a thin plate or layer.
Lammas, "Loaf mass," August 1st, the day on which first-fruits used to be offered.
Lamp-black, an oily soot of which the smoke of a lamp consists.
Lampoon, a scurrilous personal satire.
Lance-corporal, a private soldier invested with the temporary rank of corporal.
Lancet, a surgical instrument used for lancing; lance-shaped.
Land-agent, one employed to manage landed property for the owner.
Landau, a carriage which may be opened or closed.
Lande, a French name for a sandy plain.
Landing-net, a net for landing fish when they are caught.
Landing-stage, a platform at which boats discharge their passengers.
Landlocked, almost surrounded by land.
Landlubber, a sailor's contemptuous term for a landsman.
Landmark, a sign or post erected to mark a boundary.
Landscape, a view or prospect of the country; a picture representing the same.
Landscape gardening, laying out grounds with a view to picturesque effect.
Land-shark, one who swindles sailors when they come ashore; a swindler.
Landsturm, the local German militia.
Land-surveyor, one who surveys and maps estates.
Landwehr, the German reserve soldiery.
Langsyne, "long since," long ago.
Language, the expression of thought in words; speech of a particular race.
Languid, listless, lacking in energy.
Languish, to become weak or listless.
Languor, weakness, listlessness.
Lanigerous, wool-bearing.
Lanoline, an oily substance extracted from wool.
Lantern, a transparent case for holding a light; the lantern-shaped top of a dome through which light and air are admitted.
Lanyard, a short piece of rope used on board ship.
Lapel or **lapelle,** the lappet on a coat front.
Lapidary, one who cuts and polishes precious stones.
Lapis-lazuli, a rich ultramarine blue stone used for necklaces and various ornamental purposes.
Lapsed, fallen; void, forfeited.
Lapsus linguæ, a slip of the tongue.
Larboard, port, or left side of a vessel if one faces the bow.
Larceny, theft.
Lares, household gods.
Largess, a liberal gift or bounty.
Larghetto, a musical direction to play a movement rather slowly.
Largo, a musical term indicating a slow movement.
Larva, *pl.* **larvæ,** the first or partially developed stage in the life of an insect after leaving the egg; a grub.
Laryngi'tis, inflammation of the larynx.
Larynx, the voice organ.
Lascar, a native sailor belonging to the East Indies.
Lascivious, lustful, wanton.
Lassitude, listlessness, weariness, languor.
Lasso, a rope or leather noose used in South America for catching cattle.
Latent, hidden, dormant, potential.
Lateral, belonging to the side, on the side.
Lathe, a turning-machine for shaping wood and other substances.
Latin, belonging to the Latins; the language spoken by the ancient Romans who were Latins.
Latinity, Latin style or idiom; knowledge of Latin.
Latitude, distance north or south of the Equator; breadth, freedom, scope, laxity.
Latitudinarian, a person with broad or lax religious views.
Latrine, a water-closet in castles, barracks and public institutions.
Lattice, an open framework of laths crossing one another.
Laudable, praiseworthy.
Laudanum, tincture of opium.
Lau'datory, expressing praise, eulogistic.
Laughable, ridiculous, ludicrous.
Laughter, the act of laughing.
Launch, to thrust a vessel into the water; a large boat usually propelled by steam.
Laundress, a woman who washes and gets up linen and other wearing apparel.
Laureate, crowned with a laurel wreath; the official poet of the nation.
Laurel, a bay tree.
Lava, molten matter cast up by a volcano.
Lavatory, a place for washing.
Laver, a vessel used by Jewish priests for ceremonial purification; a kind of edible seaweed.
Lavishly, in a profuse or unstinting manner.
Lawlessness, defiance of the law, disregard for the law.
Lawn-tennis, an outdoor game played across a net with balls and racquets on a court marked in rectangles.
Lawsuit, legal proceedings.
Lawyer, a legal practitioner.
Laxative, an aperient.
Laxity, looseness, slackness.
Lay-figure, a dummy used by artists as a stand for drapery.
Lay'man, one of the laity.
Lazar, a leper.
Lazaretto, a public hospital or a place of quarantine for those suffering from infectious diseases.
Laziness, sloth, sluggishness, idleness.
Lea, a meadow or pasture.
Leaderette, a short leading article for a paper or magazine.
Leafage, foliage.
Leaflet, a small leaf or slip of paper containing printed matter.
Leaf-mould, soil enriched by decaying leaves.
League, a confederation, union.
Leakage, the gradual loss of a liquid through a small aperture.
Leakiness, the state of being leaky or not water-tight.
Leap-year, a year, which recurs every fourth year, of 366 days, when February contains an extra day.
Learning, knowledge.
Leasehold, a tenure on lease, for a term of years.
Leash, a lash or strap by which an animal is held.
Leasing, lying.
Leat, a mill-stream.
Leathern, made of leather.
Leaven, any substance which causes fermentation.
Lecherous, lustful.
Lectern, a reading-desk from which the lessons are read in church.
Lection, a special passage of Scripture appointed to be read in churches at a stated time; a variation in the reading of a passage.
Lecture, a formal address or discourse; a reproof.
Ledger, a tradesman's account-book in which all business transactions are entered.
Lee, the direction towards which the wind is blowing.
Lee-board, a board attached to the lee-side of a ship to prevent it from drifting.
Leech, a blood-sucking insect; a doctor.
Leeward, towards the lee.
Leeway, the distance which a vessel is driven out of her course by the wind.
Legacy, a bequest, a gift bequeathed by will.
Legality, lawfulness.
Legate, an official representative, an ambassador, especially of the Pope.
Legatee, one who receives a legacy.
Legatine, belonging to a legate.
Legation, an embassy, the official residence of an ambassador.
Legato, a musical term indicating that the passage is to be performed smoothly.
Legendary, mythical.
Legerdemain, sleight of hand.
Legibility, the state of being readable or distinct.
Legion, a body of soldiers in the ancient Roman army originally numbering 6,000 men, a vast number.
Legislation, the framing or enacting of laws.
Legislative, belonging to legislation.
Legitimacy, legality; the state of being the offspring of lawful union.
Leisure, spare time.
Lemonade, a cooling drink made from lemon-juice.
Lengthen, to make longer, prolong.
Leniency, quality of being lenient or merciful.
Lenity, mercifulness of disposition.
Lens, a piece of glass or other transparent substance curved so as to alter the direction of rays passing through it, thus magnifying or diminishing the apparent size of an object.
Lent, the forty days preceding Easter.
Lenticular, doubly convex.
Lento, a musical term denoting "slowly."
L'envoi, a kind of epilogue in which an author sometimes commends his book to the reader.
Leonine, like a lion; a form of rugged Latin verse consisting of alternate hexameters and pentameters.
Leopard, a kind of panther.
Leper, one suffering from leprosy.
Leprosy, a name for various diseases which affect the face and skin and gradually cause mortification.
Lese-majesty, high treason, especially in Germany.
Lesion, a wound, injury.
Lessee, a person to whom a lease is granted.
Lethal, causing death.
Lethar'gic, sleepy, heavy, torpid.
Lethe, forgetfulness, oblivion, named after an imaginary river in hell.
Letter-press, the printed matter in a book as distinct from the illustrations.
Lettre-de-cachet, a French term for a warrant for imprisonment for an unlimited time.
Lettuce, a juicy vegetable used for salad.
Levant, to decamp for the purpose of avoiding the payment of a debt.
Levantine, belonging to the Levant or Eastern Mediterranean.
Levee, a formal reception held in the morning by a monarch or person of rank; an embankment by a river.
Levelling, reducing to the same level.
Leverage, motive power resulting from the use of a lever.
Leveret, a young hare.
Leviathan, a huge sea beast.
Levitical, belonging to the priestly caste of the Levites.
Levity, lightness, frivolity.
Levy, the raising of a troop or of a tax by the authority of the government.
Lewdness, lust, impurity.
Lex talionis, the law of retaliation.
Lexicographer, the writer or compiler of a dictionary.
Lexicon, a dictionary.
Liability, the state of being accountable or responsible.
Liaison, a French term for the attaching of the final consonant of one word to the initial vowel of the next; an amour, intrigue.
Libation, a drink offering to a deity.
Libel, an injurious statement intended to or calculated to injure another.

Libellous, of the nature of a libel, slanderous.
Liberal, generous, open minded; a member of the Liberal party.
Liberalism, the principles of the Liberal party.
Liberate, to set at liberty, to free.
Liberticide, one who destroys liberty.
Libertine, an unrestrained or licentious person.
Libidinous, full of lusts or passions.
Libra, "the balance," one of the signs of the Zodiac.
Library, a collection of books; a room where books are housed.
Libration, a state of equipoise or of a slightly swaying motion.
Librettist, one who writes librettos or books of words to accompany music.
License or licence, a permit or authorisation; wantonness, excess.
Licentiate, one vested with special authority to preach or to teach.
Licentious, throwing off all restraint, wanton, dissolute.
Lichen, a kind of moss or fungus which sometimes spreads over the surface of rocks and trunks of trees; a skin disease.
Lich-gate, a gate with a porch at the entrance of a churchyard.
Lickerish, tempting, pleasing to the palate; having a keen relish.
Lief, gladly, willingly.
Liege, one bound by feudal obligations as lord or vassal.
Lien, a legal term denoting the right to retain the property of another as security for the payment of a claim.
Lieu, place or stead.
Lieutenant-general, the officer next in rank to a general.
Life-annuity, a fixed sum of money paid yearly during a person's lifetime.
Ligament, a strong fibrous band by which the bones in the body are attached to one another.
Ligature, something that binds, a bandage.
Lighter-man, a man employed on a lighter or flat, open boat, used in loading and unloading vessels.
Light-fingered, nimble with the fingers, thievish.
Light-infantry, infantry lightly armed for ease in skirmishing.
Lightning, the electric flash which precedes thunder.
Lightning-conductor, a rod and wire-cord for directing the course of the lightning current from a building into the earth.
Light-ship, an anchored vessel carrying a light for the guidance of sailors.
Ligneous, wooden; like wood.
Lignite, a kind of coal or fossil wood.
Lignum vitæ, a South American tree with very hard wood.
Likelihood, probability.
Lilac, a shrub bearing mauve or white flowers; mauve.
Lilliputian, diminutive, like the Lilliputians in *Gulliver's Travels.*
Lily-livered, white livered, cowardly.
Limb, an arm or leg of the body; a branch.
Limber, flexible, pliant; the forepart of a gun carriage.
Limbo, a place on the borders of hell, according to early theologians, where the souls of unbaptised infants and of the just who died before the Christian dispensation await the coming of Christ.
Lime-juice, the juice of the citron, used to make a cooling drink and as a preventive against scurvy.
Limitation, restriction.
Limner, a painter, especially a portrait painter.
Limpid, clear, transparent.
L'inconnu, the unknown.
Linch-pin, a pin to prevent a wheel from slipping off the axle.
Linden, a lime-tree.
Lineage, race, descent.
Lineal, belonging to a line, in a direct line.
Lineaments, features, outward form.
Lingerer, a loiterer, one who is slow in coming or going.
Lingo, a dialect.
Lingua franca, a mixed dialect used by Europeans as a means of intercourse with eastern nations.
Linguist, one versed in many languages.
Linguistics, the comparative study of languages.
Liniment, an embrocation or oily lotion.
Link-boy, one who carries a torch to light pedestrians or passengers.
Links, commons where golf is played; fastenings for cuffs; units of measurement ·22 yds.
Linoleum, oil-cloth for covering floors.
Linseed-cake, the residue of the linseed after the oil has been pressed out.
Linsey-woolsey, a mixed material made of wool and linen.
Linstock, the stick that formerly held the gunner's match.
Lintel, the stone or wooden coping above a door.
Lionize, to treat as a lion or celebrity.
Liquefaction, the process of becoming liquid, or making liquid.
Liquefy, to melt or make liquid.
Liqueur, an alcoholic cordial.
Liquidate, to settle or wind up (business affairs).
Liquidator, one who winds up a business.
Liquor, a liquid, alcoholic drink.
Liquorice, "sweet root," a root possessing medicinal properties.
Lira, an Italian coin worth about tenpence.
Lissom, lithe, graceful, pliant.
Listener, one who listens, a hearer.
Litany, a form of prayer containing a repeated supplication.
Literal, according to the letter, following the actual words.
Literary, belonging to, or versed in, letters or literature.
Literate, educated, cultured.
Literature, the collective literary productions of a country; the history of letters.
Lithesome, lissom, graceful.
Lithography, the art of engraving on stone.
Litigant, one engaged in a lawsuit.
Litigation, the act of carrying on a lawsuit.
Liti'gious, fond of litigation.
Litterateur, a man of letters.
Little Go, the name by which the Cambridge Previous Examination is known.
Littoral, belonging to the coast.
Liturgical, belonging to a liturgy.
Liturgy, a set form of prayer or ritual.
Livelihood, means of living.
Liveliness, vivacity, sprightliness.
Livelong, lasting long, entire, whole.
Liveried, wearing a livery.
Livery, a special uniform, a distinctive dress.
Livery-stable, a place where horses are kept for hire.
Livid, leaden in hue.
Llama, a wool-bearing quadruped something like a camel, found in Peru.
Load-line, a line painted on the outside of a vessel to show the depth to which she may sink without being over-loaded.
Loadstar or lodestar, the pole-star.
Loamy, having rich soil.
Loan, something lent.
Loathing, abhorrence, shrinking, repulsion.
Loathsomeness, repulsiveness.
Lobby, an entrance-hall.
Lobe, the rounded part of an organ, a term applied to the lower part of the ear, also to each half of the brain and lungs.
Lobster, an edible shell-fish.
Locality, situation, position, neighbourhood.
Localize, to determine the locality of; to restrict to a certain locality.
Locate, to place, to station; to determine the locality of.
Loch, a Scotch name for a lake or inlet.
Lock-jaw, a disease which causes the muscles of the jaw to contract so that they can no longer act.
Lock-out, the act on the part of a master of shutting his employés out from his works in order to enforce his claims.
Locomotion, the act of moving from place to place.
Locum tenens, one who undertakes temporary duty for another.
Locus, a line marked out by a point moving according to a fixed rule.
Locus standi, a recognized position.
Lodgment, the act of lodging; the occupation of a military position.
Log, a piece of a tree trunk; a piece of wood or an instrument attached to a line used in measuring the rate of a ship's progress.
Loggerhead, a wooden head, a blockhead.
Loggia, a corridor or arcade supported on one side by pillars and open to the air on that side.
Logic, the art of reasoning.
Logical, in accordance with logic, consistent.
Logician, one skilled in logic.
Logos, the Divine Word, the word of God incarnate.
Log-rolling, a working with others to secure one another's own personal ends.
Logwood, the wood of a Mexican tree from which a red dye is obtained.
Loiterer, one who is tardy or lags behind.
Lollard, a term applied to the followers of Wycliffe.
Loneliness, the state of being lonely.
Lonesome, feeling lonely.
Long-boat, the principal boat on board a ship.
Longeval, long-lived.
Longevity, length of life.
Longitude, the distance east or west of a given meridian expressed in degrees.
Longitudinal, going from east to west; lengthwise.
Long-shoreman, a wharf-labourer, stevedore.
Long-suffering, patient, enduring.
Looby, a clumsy hulking fellow.
Loofa, a fibrous substance used in bathing.
Loom, a weaving-machine; to appear large and indistinct in the distance.
Loophole, a small hole in a fortification through which bullets may be fired from within; a way of escape.
Loose-box, a place where horses are kept untethered.
Loot, plunder.
Loquacious, talkative.
Loquacity, talkativeness.
Lorcha, a light vessel, a Chinese junk.
Lord-lieutenant, one who acts as a viceroy or deputy-governor.
Lore, learning, wisdom.
Lorgnette, an opera-glass, spectacles fitted into a handle.
Loricated, coated over with plates like a coat of mail.
Lorn, forlorn, desolate, lonely.
Lorry, a four-wheeled waggon without sides.
Losel, a good-for-nothing, a lazy worthless fellow.
Lothario, a gay rakish fellow.
Lotion, a wash or embrocation.
Lottery, a game of chance in which the prizes are drawn by lot.
Louis d'or, an old French coin roughly equivalent to 20 francs.
Lounge, to loll, lie at ease; to stroll idly; a kind of sofa.
Lout, a clumsy, unmannerly fellow.
Louvre, a window with sloping boards in a tower or building for light and ventilation, and to allow the sound of bells to go out.
Loveliness, the state of being lovely, beauty.
Loving cup, a large cup of wine passed from guest to guest.
Lowering, cloudy, threatening, sullen.
Lowlander, a native of lowlands, especially of the Scotch Lowlands.
Lowliness, humility.
Loyalist, a faithful adherent of the ancestral line of sovereigns.
Loyalty, fidelity.
Lozenge, a diamond-shaped object, a medicinal sweetmeat.
Lubricate, to lessen friction by oiling.
Lubricity, oiliness, slipperiness, shiftiness; wantonness.
Lucidity, clearness.
Lucifer, "light-bearer"—Satan's name before his fall; the morning star.
Lucrative, profitable, productive of gain.
Lucubration, a work composed with the help of the midnight oil, a carefully studied composition.
Ludicrous, laughable, ridiculous, absurd.
Luff, the side of a vessel facing the wind; to sail near the wind.
Luggage, travellers' baggage.
Lugubrious, doleful.
Lukewarm, tepid.
Lullaby, hush-a-by, a slumber song.
Lumbago, rheumatism in the lower part of the back.
Lumbar, belonging to the loins.
Luminary, that which gives light; a star, the sun or moon.
Luminosity, the power of giving light, brilliancy.
Luminous, light-giving, shining.
Lunacy, madness, insanity.
Lunar, belonging to the moon.
Lunatic, a madman, an insane person.
Luncheon, a light meal between breakfast and dinner.
Lunette, a high window in the walls of a building with a vaulted roof.
Lungs, the organs of respiration.
Lunge, to thrust.
Lupus, a disease that mortifies the flesh, usually affecting the face.
Lurch, to heel over, sway to one side.
Lure, to entice, inveigle, decoy.
Lurid, wan and gloomy, ghastly pale.
Luscious, sweet and juicy to taste.
Lustiness, robustness, vigour.
Lustration, the rite of purification.
Lustre, brilliancy, polish.
Lustrum, a period of five years.
Lusus naturæ, a freak of nature.
Lute, a stringed instrument like a guitar.
Lutheran, a follower of Luther.
Luxuriance, profuse growth, exuberance.
Luxurious, abounding in luxury, fond of luxury, voluptuous.
Luxury, the state of abundance or ease, dainty living.
Lyce'um, a place of higher education where lectures are given, named after the place where Aristotle taught.
Lymph, water; an almost colourless fluid found in animal bodies.
Lymphatic, conveying lymph; colourless.
Lynch, to inflict summary punishment without recourse to law.
Lynch-law, summary justice, exercised by unauthorised people.
Lynx-eyed, sharp-sighted as a lynx.
Lyre, a musical instrument like a harp, with strings.
Lyrical, of the nature of a lyric or song dealing with the emotions.
Lyrist, one who plays the lyre; a lyric poet.

Macadamize, to cover a road with small broken stones which when rolled produce a smooth hard surface.
Macaroni, wheat flour made into long narrow tubes; a fop, a dandy.
Macaroon, a biscuit made of flour, almonds, eggs and sugar.
Macassar-oil, a kind of hair-oil.
Mace, a spice made of the outer network which coats a nutmeg; a staff of office.
Macerate, to make lean, to soften by steeping.
Machiavellian, cunning and unprincipled like the doctrines of Machiavelli the Italian statesman.
Machine-gun, a gun which can fire many shots in succession.
Machinery, mechanical contrivances for reducing labour, machines.
Mackerel, a salt-water fish which forms an important article of diet.
Mackintosh, a waterproof cloak or coat.
Macrocosm, "the great world," the universe.
Madam, "my lady," a formal and respectful mode of addressing a lady.
Madder, a red vegetable dye.
Madeira, a choice kind of sherry.
Mademoiselle, a French term used as a formal mode of addressing a young lady.
Madonna, the Virgin Mary, a painting of the Virgin.
Madrepore, coral.
Madrigal, a graceful lyric arranged for several voices.
Mænad, a Bacchante, a frenzied woman.
Maes'tro, a master of any art, a composer.
Magazine, a periodical; a storehouse, a warehouse.
Magenta, a deep pink colour.
Maggoty, full of maggots; full of whims.
Magi, the wise men of the East.
Magically, in a magic or mysterious manner.
Magician, a sorcerer, an enchanter.
Magisterial, belonging to a magistrate; severe, authoritative.
Magistracy, a body of magistrates, the office of a magistrate.
Magnanimity, nobility or generosity of spirit.
Magnanimous, large-hearted, generous.
Magnate, a person of importance, a dignitary.
Magnetic, having the properties of a magnet, attractive.
Magnetism, the properties of the magnet, attractive force.
Magnificat, "My soul doth magnify the Lord"—the Virgin Mary's song of thanksgiving.
Magnificence, splendour, grandeur.
Magnifico, a Venetian grandee.
Magnify, to make great; extol.
Magniloquent, grandiloquent, bombastic.
Magnitude, size.
Magnum, a two quart measure.
Magnum opus, the great work of a man's life, a masterpiece.
Magyar, a Hungarian.
Maharajah, the title of an Indian prince.
Mahatma, one versed in occult mysteries.
Mahdi, a great religious leader expected by the Mohammedans; a false prophet claiming to be this leader.
Mahl-stick or maul-stick, a painter's stick used to steady the hand.
Mahogany, a reddish wood of a South American tree, much used for furniture.
Mahout, an elephant driver.
Maidenliness, girlishness, girlish modesty.
Mail-train, a train which carries the post-office mails.
Maimed, disfigured, mutilated, crippled.
Mainland, the main body of land as opposed to islands.
Maintain, to support, uphold.
Maintenance, means of support; the upholding or continuance.
Maize, Indian corn.
Majestically, in a dignified or stately manner.
Majesty, dignity, stateliness.
Majolica, a kind of enamelled china.
Major-domo, a house-steward.
Major-general, the title of the officer who ranks next to a lieutenant-general.
Majority, the greater number; the age of 21.
Make-shift, a temporary expedient.
Maladjustment, a wrong or unsatisfactory adjustment.
Maladministration, mismanagement (of public affairs).
Maladroit, awkward, clumsy.
Malady, illness, disease.
Malaise, discomfort, uneasiness.
Malapert, saucy.
Malapropos, ill-timed, out of place.
Malarial, of the nature of malaria, or fever due to poisonous exhalations.
Malcontent, one discontented with the government.
Mal de mer, sea-sickness.
Mal de tête, headache.
Malediction, a curse, an imprecation.
Malefactor, an evil-doer, a criminal.
Malevolent, malicious, spiteful, vindictive.
Malfeasance, evil doing.
Malformation, a deformity, a faulty formation.
Malice, spite, ill-will.
Malicious, spiteful.
Malign, to speak evil of, slander; baneful, ill-disposed.
Malignant, malicious, deadly.
Malingerer, one who evades duties by feigning illness.
Malison, curse, imprecation.
Malleable, capable of being hammered into shape.
Malmsey, a kind of Canary wine.
Malpractice, an evil practice.
Malt-liquor, any liquor made of malt or barley steeped and dried.
Maltreat, to ill-treat, injure.
Malversation, fraud, peculation, corrupt practices when in office.
Mammal, an animal that suckles its young.
Mammon, wealth, riches.
Mammoth, an extinct monster resembling a huge elephant.
Manacle, a fetter for the wrist.
Management, the act of managing or administering.
Manchet, a small loaf of fine white bread.
Manchu, a Manchurian.
Mandamus, a writ issued by a high court ordering a person or society to carry out some duty.
Mandarin, a Chinese magistrate; a small and choice species of orange.
Mandate, an official order.
Mandible, the jaw of an insect.
Mandoline, a musical instrument resembling a guitar.
Mandrake, a plant possessing narcotic properties.
Manducate, to chew.
Manège, the art of training horses.
Manes, the spirits or shades of the departed.
Mange, a skin disease to which dogs and other animals are liable.
Mangrove, a tree which grows in the Indies, the bark of which is used in tanning.
Man-hole, an opening in a drain for convenience in repairing it.
Mania, madness, insanity, a craze.
Maniac, a madman, a raving lunatic.
Manicure, the care of the hands.
Manifestation, a making visible, a revelation or display.
Manifesto, a proclamation, a public statement or declaration.
Manifold, many in number, numerous.
Manikin, a little man, a dwarf.
Manipulate, to handle, to work upon with the hands.
Manna, the food given by God to the Israelites in the wilderness.
Mannerism, a trick of speech or gesture.
Manœuvre, a clever device to gain an end; a skilful movement of men or ships.
Manor, that part of a nobleman's lands which he retained for his own use.
Mansard, a roof with a broken slope.
Manse, a Scotch name for the minister's house.
Manslaughter, the act of killing a person without deliberate intention.
Mantel-piece, a projecting ledge over a fireplace.
Mantilla, a piece of lace drapery worn over the head and shoulders.
Mantua-maker, a dress-maker.
Manual, a hand-book or handy treatise on a subject.
Manufactory, the works where certain goods are manufactured.
Manufacture, to make or produce.
Manumission, the act of releasing from slavery.
Manumit, to set free.
Manuscript, a document written by hand.
Manx, belonging to the Isle of Man.
Maori, an aboriginal of New Zealand.
Marauder, one who makes a plundering raid.
Marchioness, the wife of a marquis.
Margarine, an oily substance used as a substitute for butter.
Marginal, in the margin.
Mariage de convenance, a marriage from motives of interest.
Marine, belonging to the sea; a soldier in the navy.
Marine store, a store where materials belonging to old ships are sold.
Mariolatry, the worship of the Virgin Mary.
Marionette, a dancing puppet.
Marital, belonging to a husband.
Maritime, belonging to the sea.
Markedly, in a pronounced manner, pointedly.
Marketable, saleable.
Marline, a small rope used for winding round another rope.
Marlinespike, a spiked instrument used for separating the strands of a rope.
Marmalade, preserve made of oranges.
Maroon, to put ashore on an uninhabited place and leave to shift for oneself.
Maroon or marone, a kind of red colour.
Marque (letters of), a permit from the sovereign authorising a private person to seize an enemy's ship as a prize.
Marquetry, work inlaid with various coloured words, ivory and other ornamental substances.
Marquess or marquis, a noble who ranks next to a duke.
Marriageable, fit for marriage.
Marshal, to set in order, array; a military officer of high rank.
Marshalling, the act of arranging in order or putting in array.
Marsupial, a pouched animal.
Martello-tower, one of a number of circular towers built along the coast for defensive purposes.
Martial-law, special laws enforced in a district in war time.
Martingale, a strap connecting a horse's bit with the girth; a spar under a bowsprit.
Martinmas, the feast of St. Martin, November 11th.
Martyr, a witness for the faith; one who suffers for a cause; one who dies for his religion.
Martyrology, a book or history of martyrs.
Marvel, a wonder.
Marvellous, wonderful.
Mascotte or mascot, a lucky penny; any thing or person supposed to bring good luck.
Masculine, of male gender; manly, virile.
Masonic, belonging to a mason.
Masonry, mason's work; the profession of a freemason.
Masquerade, an entertainment in which the performers are masqued.
Massacre, wholesale slaughter.
Massage, a course of medical treatment consisting of the application of friction to the affected parts.
Masseur *m.*, **masseuse** *f.*, one who practises massage.
Massiveness, bulkiness.
Mass-meeting, a monster meeting, a general, open meeting.
Massy, massive, bulky.
Master-key, a key able to open many locks.
Master-piece, a supreme work of art.
Mastery, the upper-hand.
Masticate, to chew.
Mastication, the act of chewing.
Mastiff, a large strong dog used as a house-dog.
Matador, the one who despatches the bull in a bull-fight.
Match-making, attempting to bring about a marriage.
Material, corporeal as opposed to spiritual, substantial; the substance of which anything is made.
Mate'rially, in a substantial or material degree.
Matériel, the sum total of the instruments employed for any purpose.
Maternal, belonging to a mother.
Maternity, motherhood.
Mathematically, in a mathematical or exact manner.
Mathematics, the science which deals with magnitude and number.
Matins, morning service according to the book of Common Prayer.
Matinée, an afternoon performance of a play or concert.
Matricide, one guilty of the murder of his mother.
Matriculate, to pass a college entrance examination and thus become an undergraduate.
Matrimonial, belonging to marriage.
Matrimony, marriage.
Matrix, the womb; the cavity of a mould or of a seal.
Matronly, like a married woman; staid.
Mattress, a bed-case stuffed with wool or horse-hair and quilted.
Maturity, ripeness.
Matuti'nal, belonging to the morning.
Maudlin, foolishly sentimental, mawkish.
Maugre, in spite of.
Maxim, a precept, a wise saying.
Maximum, the fullest amount, the highest number attainable.
Mayonnaise, a rich white sauce used for fish and poultry.
Mayor, the chief magistrate of a town.
Mayoralty, the office of a mayor.
Maze, a labyrinth.
Mazurka, a Polish dance.
Mea culpa, mine is the fault, the blame is mine.
Meadow, rich pasture land.
Meagre, scanty, poor.
Mealies, maize or Indian corn.
Meanness, lack of generosity; base or ignoble conduct; low condition.
Measles, an infectious disease marked by a red rash and attended with fever.
Measurable, able to be measured or estimated; moderated.
Measure, extent, degree; dimensions; standard of measurement; metre; means to an end; a legal enactment.
Mechanically, in a mechanical or perfunctory manner.

Mechanic, an artisan; belonging to a machine.
Mechanician, one skilled in mechanics; one who constructs machinery.
Medal, a metal disc containing a device or inscription.
Medallion, a large medal, a round tablet with a portrait or inscription.
Meddle, to interfere.
Medial, middle, intervening.
Mediate, to intervene between two parties at variance in order to bring about a reconciliation.
Me'diator, one who intervenes to bring about a reconciliation.
Medical, belonging to medicine.
Medicate, to render medicinal.
Medic'inal, having medical properties.
Medie'val, belonging to the middle ages.
Me'diocre, ordinary, commonplace.
Mediocr'ity, the state of being mediocre or commonplace.
Meditation, thought, reflection.
Med'itative, thoughtful, reflective.
Medium, middling, not extreme; anything which serves as a bridge or ground of communication; a person by whom communications are conducted.
Medul'lary, of the nature of marrow.
Meerschaum, a light clay much used for pipe bowls.
Meeting-house, a place of assembly, conventicle.
Megaphone, an instrument for magnifying the sounds of a speaker.
Megrim, sick headache; a sudden attack to which horses are subject.
Meister-singer, a member of a German guild of poets.
Melancholia, a nervous disease attended by confirmed melancholy.
Melancholy, depression of spirits, gloom.
Mélange, a medley.
Melanism, darkness of skin; a deepening of the colours of the skins of living animals.
Mêlée, a confused fight in which the combatants intermingle in a hand-to-hand encounter.
Meliorate, to ameliorate, make better, improve.
Mellif'luent, flowing sweetly along.
Melodic, pertaining to melody.
Melodrama, a sentimental and sensational drama.
Melody, a musical air or tune.
Melon, a juicy fruit of the cucumber genus.
Membrane, a thin tissue which covers or lines various organs in the body.
Memento, a token of remembrance, a souvenir.
Memoir, a biographical record.
Memorabilia, things worthy of note.
Memorandum (*pl.* -da), a record or note of things to be remembered.
Memorial, something which commemorates the dead; a written petition.
Memory, the faculty of remembering; remembrance.
Menace, a threat.
Menacing, threatening.
Menage, a household, household arrangements.
Menagerie, a collection of wild beasts kept for show; general management.
Mendacious, guilty of falsehood, lying.
Mendacity, untruthfulness, falsehood.
Mendicancy, a state of beggary.
Mendicant, a beggar.
Menial, servile, mean; a domestic servant.
Meningi'tis, inflammation of the coatings of the brain and spinal cord.
Menses, see *Med. Dict.*
Menstrual, occurring every month, monthly.
Mensurable, capable of being measured.
Mentally, in the mind.
Mentor, a monitor, counsellor, guide.
Menu, a bill of fare, a list of the dishes ready at a restaurant.
Mephistophelian, cynically wicked like Mephistopheles in *Faust.*
Mephitic, poisonous or noxious (to smell).
Mercantile, belonging to trade or commerce.
Mercenary, greedy for gain, avaricious; a soldier who enters foreign service for hire.
Mercery, silk or woollen goods.
Merchandise, goods for sale.
Merciful, full of mercy or pity.
Merciless, pitiless, ruthless.
Mercurial, like mercury or quicksilver; resembling mercury, sprightly.
Mere, a lake; only.
Meretricious, wanton, alluring.
Merge, to cause to be absorbed, to be absorbed.
Meridian, belonging to mid-day; an imaginary great circle passing through the poles and any given place.
Meritorious, possessing merit, worthy, deserving.
Merriment, gaiety.
Merry-andrew, a clown or mountebank.
Merry-thought, a V shaped bone in the breast of a fowl.
Mésalliance, a marriage with one of lower station.
Mesmeric, pertaining to mesmerism.
Mesmerism, the power of subjugating the will of a person acted upon to the will of the operator; hypnotism.
Mesne (*meen*), intermediate, coming in between.
Message, a communication written or verbal sent by one to another.
Messenger, one who carries a message.
Messieurs, *Messrs.*, plural of *Mr.*
Messuage, a dwelling house with out-buildings and land attached.
Mestizo, a person of mixed birth, the offspring of Spanish and American-Indian parents.
Metallic, made of metal, like metal; lustrous; clear-sounding.
Metallurgy, the art of working metals.
Metamorphosis, transformation.
Metaphor, a condensed simile with the word expressing likeness omitted.
Metaphorical, figurative.
Mete, to measure out, allot, apportion.
Metempsycho'sis, the transmigration of souls from one bodily form into another.
Meteor, a shooting star.
Meter, a mechanical device for registering the amount of gas consumed.
Metheg'lin, mead.
Methodical, systematic.
Methodist, a follower of John Wesley.
Methylated, mixed with methyl or spirits of wood.
Metre, the regular recurrence of accent in lines of verse; the unit of length (about 39 inches) in the metric system.
Metric, pertaining to the metre.
Metronome, an instrument for beating time in music.
Metropolis, the mother city, capital.
Metropolitan, belonging to the metropolis, the bishop of the chief ecclesiastical city, an archbishop.
Mezzo, an Italian term meaning "half" or "middle."
Mezzo-tint, a process of engraving on metal.
Mica, mineral rock consisting of thin transparent plates.
Miasma, a poisonous exhalation from swamps.
Michaelmas, the feast of St. Michael, September 29th.
Microbe, a minute organism present in diseased organic matter.
Microcosm, the world in miniature (said of man).
Microm'eter, an instrument for measuring small distances.
Microscope, an instrument for magnifying the size of minute objects so as to render them clearly visible.
Microsco'pist, one skilled in the use of the microscope.
Midden, a dust heap, manure heap.
Middleman, an agent between the producer and the consumer.
Midriff, the diaphragm.
Mid'wifery, the art of a midwife, the nursing of a woman in childbirth.
Mien, expression of countenance, bearing.
Mignonette, an annual which bears a flower with a very sweet scent.
Migration, the act of passing from one region to another.
Mi'gratory, given to migrating.
Mikado, the Emperor of Japan.
Mildew, a parasitic fungus, blight.
Mileage, the number of miles traversed.
Militant, fighting.
Militarism, military despotism, a military spirit.
Military, belonging to the army.
Militate, to conflict, contend, fight.
Militia, a body of men trained to serve for home defence.
Milk-sop, an unmanly effeminate person.
Millboard, strong cardboard or paste-board.
Millenarian, one who believes in the millennium or the reign of Christ on earth for 1000 years.
Millennial, belonging to the millennium.
Millimetre, the thousandth part of a metre.
Millinery, the art of making and trimming hats and bonnets; articles made by milliners.
Millionaire, one who possesses at least a million pounds.
Mill-wright, a workman who constructs or repairs the machinery of mills.
Milt, the soft roe of a fish, the spleen.
Mime, a burlesque or farce; an actor in a farce.
Mimetic, imitative.
Mimicry, imitation, a burlesque representation.
Mimosa, a shrub with delicate, sensitive leaves, and bearing a beautiful yellow flower.
Minaret, a tall slender turret.
Min'atory, threatening, menacing.
Mincing, affected in speech or gait.
Mineral, a name given to all inorganic substances found in the earth, or to those substances which are neither animal nor vegetable.
Mineralogy, the science which treats of minerals.
Miniature, on a small scale, a minute portrait generally painted on ivory.
Minimum, the smallest quantity or number possible.
Minion, a fawning favourite; a size of type.
Minister, one who serves or ministers: a pastor, a clergyman; the head of a department in the government.
Ministe'rial, belonging to the ministry.
Ministrant, one who ministers.
Ministrative, serving.
Ministry, the act of serving; the duties or office of a clergyman; the body of ministers who govern the country.
Minor, less or inferior in size or importance; a person under the age of 21.
Minority, the lesser of two numbers into which the whole is divided; the condition of being under 21.
Minster, an abbey church, cathedral.
Minstrel, a bard.
Minstrelsy, the art of a minstrel.
Mint, a place where money is coined by government authority; a plant with fragrant leaves from which a sauce is prepared.
Minuend, the upper or larger number in a subtraction sum.
Minuet, a stately old-fashioned dance for two persons.
Minus, less, without; the sign of subtraction.
Min'ute, 60th part of an hour or of a degree; a brief note of some transaction.
Minu'te, exceedingly small.
Minutes, the records of business transacted at a meeting.
Minutiæ, minute details.
Miracle-play, an early form of the drama in which scriptural subjects are represented.
Miraculous, having the nature of a miracle.
Mira'ge, an inversion of images and other optical illusions due to certain atmospheric conditions.
Miriness, muddiness.
Mirror, a glass or polished surface which reflects images.
Misadventure, a mishap, accident.
Mis'anthrope, one who hates, despises, or distrusts his fellow men.
Misan'thropy, dislike of mankind.
Misapplication, an erroneous application.
Misapprehension, a misunderstanding.
Misappropriating, appropriating wrongfully, applying to wrong purposes.
Misbegotten, ill-begotten, unlawfully begotten.
Misbehaviour, ill behaviour, misconduct.
Misbelief, erroneous belief.
Miscalculation, an error in calculation.
Miscarriage, mismanagement, failure in the conduct of an affair, unsuccessful issue; the act of giving birth prematurely.
Miscellaneous, of various kinds, heterogeneous.
Mischief, harm, injury; the intention to injure; playful annoyance.
Mis'chievous, harmful, injurious; intending to injure; teasing.
Misconception, a misunderstanding.
Misconduct, improper or unbecoming conduct.
Misconstruction, a misinterpretation.
Miscon'strue, to interpret amiss, to put a wrong construction upon.
Miscount, to miscalculate.
Miscreant, an evil-doer, scoundrel.
Misdeed, an evil deed.
Misdemeanour, an offence against the law; an act of misconduct.
Misdirect, to direct wrongly.
Misdoer, an evil-doer.
Mise-en-scène, the putting on the stage, the staging.
Miser, one who loves money and hoards it, a penurious person.
Miserable, wretched, unhappy.
Misere're, the 51st Psalm, a penitential psalm.
Misery, wretchedness, unhappiness, misfortune.
Misfit, an article of dress which does not fit.
Misfortune, trouble, distress, ill-fortune.
Misgiving, fear, apprehension.
Misguided, mistaken, led astray.
Misinterpretation, an erroneous explanation, misconstruction.
Mislay, to lay aside and forget the place of.
Mismanagement, error in management, bad management.
Misnomer, a name wrongly or inappropriately applied.
Miso'gamist, one who hates marriage.
Miso'gynist, a woman-hater.
Misprint, a printer's error, an error in print.
Misprision, a mistake; neglect to recognize a criminal offence; failure to give information about the capital crime of another.
Mispronunciation, incorrect pronunciation.
Misquote, to quote wrongly or inaccurately.
Misrepresent, to represent unjustly or untruly.
Misrule, misgovernment, disorder.
Missal, a mass-book.
Misshapen, ill-shapen, deformed.
Missile, a weapon for hurling to a distance.
Missionary, one who goes on a mission, usually for the spread of religion.
Missive, something sent, a note.
Misspell, to spell incorrectly.

Mistakable, capable of being mistaken, easy to mistake.
Mistletoe, a parasitic plant bearing a wax-like berry, found on oaks and apple-trees.
Mistral, a violent north-west wind prevalent in the south of France.
Misunderstanding, a misconception causing estrangement.
Misuse, to use wrongly; to ill-use; to misapply.
Mite, a minute quantity; a minute insect.
Mitigation, an alleviation, amelioration.
Mitred, wearing a mitre or conical bishop's cap.
Mixture, a compound of various ingredients.
Mizzle, to drizzle.
Mnemonics, a system of aids to memory.
Moat, a ditch or trench originally for defensive purposes.
Mobile, able to be moved easily.
Mobilization, a gathering of troops in readiness for active service.
Mob-rule, the supremacy of the disorderly rabble.
Moc'casin, a shoe worn by North American Indians.
Mockery, derision; a travesty, an empty pretence.
Mock-heroic, a composition in which the heroic style is burlesqued.
Mock-turtle, a soup flavoured so as to resemble turtle soup.
Model, a pattern to be imitated; a miniature reproduction of some object; one who sits to artists as a model of the human form.
Modeller, one who shapes or fashions objects in clay.
Moderate, to check or restrain.
Moderator, one who restrains within due limits; the president of the Presbyterian Church Council.
Modern, belonging to the present day.
Modernness, state of being modern.
Modesty, humility, delicacy, purity.
Modicum, a small or scanty amount.
Modification, a slightly altered form, an alteration.
Modish, fashionable, up to date.
Modist, one who follows the fashions.
Modiste, a fashionable dressmaker.
Modulate, to vary the voice or the key.
Modus operandi, method of procedure.
Modus vivendi, an arrangement by which living together is rendered possible.
Mogul, the title of the former native rulers of the Mogul empire in Hindostan.
Mohair, a silky fabric made of the hair of the Angora goat.
Mohammedanism, adherence to the doctrines of Mohammed, the Mohammedan religion.
Moiety, a half, a share.
Moire, watered silk, any watered material.
Moire antique, a rich watered silk like those worn in former days.
Moisten, to make moist.
Molar, one of the back teeth, a grinder; pertaining to the mass or whole of a body.
Molasses, treacle.
Molecule, the smallest particle of a substance that may be looked upon as having separate existence.
Molest, to harass, annoy.
Mollify, to soften, appease.
Mollusc, one of a class of invertebrates including oysters and mussels.
Momentary, lasting only a moment.
Momentous, of serious import, critical.
Momentum, impetus, the combined effect of the mass and velocity of a body.
Monachism, monastic life, the system of monasticism.
Monarch, a supreme ruler, sovereign.
Monastery, an abode where monks live, a convent.
Monastic, belonging to monks.
Monasticism, the adoption of a monastic life; the system of life in monasteries.
Monetary, financial.
Money-market, business done on the Stock Exchange.
Money-order, a post-office order, a postal order.
Monger, a dealer, vendor.
Mongrel, an animal of mixed breed.
Monitor, one who admonishes, exhorts or warns; a senior scholar invested with limited authority and having special duties.
Monitory, admonitory, hortatory, in a warning manner.
Monitress, a senior pupil in a girls' school who has special duties and limited authority.
Monochord, a musical instrument with one string.
Monochrome, a painting in one colour.
Monocle, a single eyeglass.
Monody, a sad song or lament arranged for a single voice.
Monogamy, the custom of marrying one wife only.
Monogram, two or more letters interwoven in one design.
Monograph, a treatise on one special theme.
Monolith, a single block or pillar of stone.
Monologue, a soliloquy.
Monomaniac, a person who is mad on one point.
Monopoly, the exclusive right of selling, exclusive possession.
Monosyllable, a single syllable.
Monotheism, the belief in one God.
Monotint, a painting in one tint.
Monotone, an utterance in a uniform tone or pitch.
Monot'onous, lacking in variety, tedious.
Monot'ony, tedious uniformity.
Monseigneur, a French title, "my lord," used of Bishops.
Monsieur, *Mr.*, a French title.
Monsoon, a wind which blows periodically in the Indian Ocean.
Monstrance, a sacred vessel in which the consecrated host is presented to the people for adoration in Roman Catholic churches.
Monstrosity, an abnormal being; something huge or enormous.
Monstrous, abnormal, unnatural; huge, enormous.
Mont-de-piété, a French pawn-shop.
Monumental, like a monument, memorable.
Moodiness, sullenness, gloominess.
Moon-calf, a deformed thing; a fool.
Moon-lighter, one of a band of lawless ruffians who were guilty of agrarian outrages by night in Ireland.
Moon-struck, crazy, mad.
Moor, one of mixed African and Arabian descent.
Mooring, anchors and cables by which a ship is held fast.
Moot, to bring forward or introduce a subject at a meeting, for discussion.
Mope, to pine, to be downcast.
Mopish, given to pining or moping.
Moraine, the débris of boulders and gravel brought down by a glacier.
Morale, moral tone, the degree of courageous endurance in danger.
Moralist, one who moralises or points a moral.
Morality, obedience to moral laws; virtue.
Morally, in a moral manner.
Morass, a marsh, quagmire.
Moravian, a member of a small Protestant sect.
Morbid, diseased, unhealthy-minded.
Morceau, a fragment, a small piece.
Mordacious, inclined to bite, sarcastic.
Mordant, biting, caustic.
Morganat'ic, a term applied to the marriage of a prince with one who is not of royal birth.
Morgue, a French name for a place where the bodies of those found dead are exposed to view for identification.
Moribund, in a dying condition, effete.
Mormon, one of a polygamous American religious sect.
Morning-star, a star which is visible early in the morning, especially the planet Venus; a cruel mediæval weapon.
Morocco, a fine grained leather made of goat-skin.
Morose, surly.
Morphia, a narcotic drug obtained from opium.
Morphology, the science which treats of the forms of organic life.
Morsel, a little bit.
Mortality, the state of being mortal or liable to death; the death-rate.
Mortally, fatally, or in a deadly manner.
Mortar, cement for binding stones; a vessel in which ingredients are pounded with a pestle; a kind of cannon.
Mortar-board, a mason's board for holding mortar; a square college cap.
Mortgage, to pledge lands or buildings as security for money lent.
Mortification, the process of becoming gangrened; annoyance, humiliation.
Mortise, to join boards together by means of a projecting wedge on one, and a corresponding aperture on the other, to dovetail.
Mortuary, a chamber where the bodies of the dead are placed.
Mosaics, artistic designs or pictures wrought in inlaid stone or glass work.
Moslem, Mohammedan.
Mosque, a Mohammedan temple.
Mosquito, a kind of gnat with a poisonous bite.
Moss-trooper, a raider who infested the bogs on the borders of England and Scotland.
Mot, a witty saying, an epigram.
Mote, a particle of dust.
Motet or **motett,** a musical composition usually dealing with a sacred subject.
Mother-of-pearl, the pearly substance which lines the shell of the pearl-oyster.
Mother Church, a Church which has been instrumental in establishing daughter Churches.
Mother-tongue, one's native language.
Mother-wit, natural inborn wit, common sense.
Motif, the leading theme of a musical or dramatic composition.
Motion, the act of moving; a proposal before a meeting.
Motive, that which moves or actuates.
Motivity, the ability to produce motion; capacity for movement.
Motley, a jester's parti-coloured dress; heterogeneous.
Motor, a machine which produces motion.
Motto, a short pithy phrase, the characteristic phrase attached to a coat of arms; the verse in a Christmas cracker.
Moujik, see *mujik*.
Mould, soil or earth; the hollow case in which liquid or soft substances take their shape before they are hardened.
Moulder, to crumble away; decay.
Mouldiness, the state of being decayed or mildewed.
Moult, to cast or shed the feathers.
Mound, the orb surmounted by a cross which forms part of the regalia.
Mountain-dew, whisky.
Mountaineer, one who climbs mountains, one who dwells on the mountains.
Mountebank, a quack, charlatan.
Mourn, to lament, grieve.
Moustache, the hair on the upper lip.
Movable, able to be moved.
Mucilage, a solution of gum.
Mucus, a viscous fluid secreted by the mucous membrane.
Muezzin, one who at stated times calls the Mohammedans to prayer.
Muffettee, a woollen cuff for the wrist.
Mufti or **muftee,** civilian dress as opposed to military costume.
Mujik or **moujik,** a Russian peasant.
Mulatto, one who is of mixed race, having one white and one black parent.
Mulct, to punish by a fine.
Muleteer, a mule-driver.
Mulish, like a mule, stubborn.
Mullion, a vertical division between two panes of a window.
Multifarious, diversified, of manifold variety.
Multiform, having many forms.
Multiple, a number which contains another number an exact number of times.
Multiplication, the process of adding a number to itself; repetition; reproduction; increase.
Multiplicity, manifold repetition.
Multitudinous, containing a vast number.
Multum in parvo, a great deal in a small compass, a compendium.
Mummer, a masquerader; an actor.
Mummery, masquerading, buffoonery, empty show.
Mummy, a dead body which has been embalmed.
Mumps, a disease causing a swelling of the glands of the neck.
Mundane, earthly, terrestrial.
Muni'cipal, belonging to a free town or municipality.
Municipality, a town or district which has the right of self-government.
Munificence, liberality on a large and generous scale.
Muniment, means of defence; charter or title-deeds.
Munitions, military stores.
Mural, belonging to a wall.
Murderous, bloodthirsty, cruel.
Murmur, a low indistinct sound; a complaint.
Murrain, a foot and mouth disease which attacks cattle.
Murrey, mulberry colour.
Muscatel, a grape with a choice flavour.
Muscle, fibrous tissue which, by contracting, produces bodily movements.
Muscovite, belonging to Moscow, Russian.
Muscular, belonging to the muscles, having strong muscles.
Muse, to ponder, meditate; one of the Nine Muses; poetic inspiration.
Museum, a building containing a classified collection of antiquities or of artistic or scientific objects of interest.
Musically, in a musical or harmonious manner.
Musician, one skilled in music.
Musing, pondering, meditating.
Musketry, the practice of firing with hand guns.
Muslin, a thin, gauzy, cotton material.
Mussulman, a Mohammedan.
Mustard, a pungent condiment prepared from the seed of a plant.
Muster, to gather together, collect.
Mustiness, mouldiness, staleness.
Mutability, liability to change.
Mutation, the process of changing.
Mutatis mutandis, the necessary alterations having been made.
Mute, silent; a dumb man; an attendant at a funeral; a small clip used to deaden the sound of stringed instruments; a non-continuant consonant sound.
Mutilate, to disfigure, maim, mangle.
Mutineer, one who rebels against constituted authority.
Mutinous, rebellious.
Mutiny, a rebellion or revolt against recognised authority.

Mutual, reciprocal.
Muzzle, the mouth and nose of a dog; a cage of wire or leather fastened on to the mouth of a dog to prevent its biting; the mouth of a gun.
Muzzy, confused or dazed through drink.
Mynheer, a Dutch title equivalent to *Mr.*
Myology, the science which treats of the muscles.
Myope, one who is short-sighted.
Myopia, near sight or short sightedness.
Myriad, ten thousand, a countless number.
Myr'midon, one who carries out another's orders without scruple or hesitation.
Myrrh, an aromatic gum obtained from an Arabian shrub.
Myrtle, a flowering evergreen shrub with glossy leaves and a sweet scent.
Mysterious, full of mystery.
Mystery, something strange and secret or beyond comprehension; an early form of the drama dealing with sacred subjects.
Mystical, belonging to a sacred mystery.
Mysticism, a tendency to seek direct communion with God by ecstatic contemplation.
Mystify, to puzzle, confuse.
Myth, a legend dealing with an early period of the life of a nation; a fictitious story.
Mythical, fabulous, fictitious.
Mythology, the myths of a people; the study and investigation of myths.

Nabob, a governor under the Mogul Empire in India; a very wealthy man.
Nacre, mother-of-pearl.
Nadir, the point of the celestial sphere exactly opposite the zenith.
Naiad, a water nymph.
Naïf *m.*, **naïve** *f.*, unaffected, artless.
Naïveté, simplicity of manner, artlessness.
Namby-pamby, silly; foolishly sentimental.
Namesake, one who is named after another.
Nankeen, a cotton cloth of a yellowish colour.
Napery, household linen.
Naphtha, an inflammable liquid.
Napkin, a cloth used at table to wipe the hands.
Narcissus, a spring flower.
Narcotic, a drug which produces torpor.
Nard, an aromatic plant.
Narghile, a tobacco-pipe used in the East.
Narra'tion, the act of telling or writing.
Nar'rative, an account of an event; a story.
Narrow-minded, not liberal in one's views.
Narwhal, a member of the whale family.
Nasal, belonging to the nose; sounded through the nose.
Nascent, coming into existence; growing.
Nastiness, filthiness, obscenity; a display of ill-temper.
Nasturtium, a genus of plants.
Natal, belonging to one's birth.
Natation, the act of swimming.
Natatorial, adapted to swimming.
National, belonging to a nation; public; general.
Nationalist, an advocate of national independence.
Nativity, birth; time, place, etc., of birth.
Nattiness, neatness, trimness.
Natural, produced by nature; unaffected; an idiot.
Naturalist, a student of natural history.
Naughtily, wickedly; mischievously.
Nausea, sickness of the stomach; disgust.
Nauseously, loathsomely.
Nautch-girl, an Indian dancing-girl.
Nautical, belonging to ships or sailors.
Nautilus, a mollusc of southern seas.
Nave, the centre part of a church; the hub of a wheel.
Navel, the centre of the abdomen.
Navigable, admitting of the passage of ships.
Navigation, the art of managing a ship.
Navvy, a labourer engaged in digging, etc.
Navy, the warships of a nation; a fleet.
Nazarite, a Jew vowed to an austere life.
Neapolitan, belonging to Naples.
Neap-tides, the lowest tides.
Neat-herd, a cow-herd.
Nebula (*pl.* nebulæ), a misty patch of light in the heavens; a mistiness in the eye; a fine cloud as of dust.
Nebular, akin to nebulæ.
Nebulous, misty, cloudy.
Necessary, essential; needful; inevitable.
Necessitate, to make necessary; to force.
Necessitous, poverty-stricken; in need.
Necklace, a string of beads, etc., worn on the neck.
Necrology, a list or register of deaths; obituary records.
Necromancy, the art of revealing future events by communication with the dead.
Necromantic, relating to necromancy.
Necropolis, a cemetery.
Nectar, the beverage of the gods; the honey of plants.
Née, born; a term denoting a married woman's maiden name.
Neediness, want, poverty.
Needle-gun, a breech-loading rifle fired by the impact of a needle.
Needlessness, unnecessariness.
Ne'er-do-well, a good-for-nothing fellow.
Nefarious, wicked, abominable.
Negation, denial.
Negative, a word implying denial as "not"; a developed photograph.
Neglect, to omit by carelessness; to slight.
Negligence, an act of neglect; carelessness.
Negociate or negotiate, to treat with, to bargain.
Negotiation, the act of negotiating.
Negress, a black woman.
Negus, a spiced drink of wine, etc.
Neighbour, one who lives near to another.
Nem. con., no one dissenting.
Nem'esis, the goddess of vengeance or ultimate justice.
Neology, the introduction of new words or doctrines.
Neophyte, a recent convert.
Neoterism, the introduction of new words or expressions.
Nepenthe, a drug that drives away pain.
Nephew, the son of a brother or sister.
Nepotism, favouritism to relatives.
Nerveless, without strength; lacking will.
Nervous, relating to the nerves; timid.
Nescience, ignorance.
Nest-egg, an egg left in the nest to keep the hen from forsaking it; something laid by as a beginning.
Net or nett, allowing of no deduction; clear (profit).
Nethermost, lowest.
Neuralgia, nerve pain.
Neuri'tis, inflammation of a nerve
Neurot'ic, acting on the nerves; liable to nerve complaints.
Neutrality, the state of giving no support to either side.
Neutralize, to render neutral, and of no effect.
Neutral-tint, a dull grayish tint.
Newsmonger, one who circulates news.
Nialserie, foolishness; nonsense.
Niblick, a golf-club with an iron head.
Nicety, accuracy; delicate management.
Niche, a recess for a statue, etc.
Nickel, a whitish metal.
Nicotine, a poisonous alkaloid in tobacco.
Niece, the daughter of a brother or sister.
Niggardliness, avarice, stinginess.
Nightingale, a bird that sings at night.
Ni'hilism, nothingness; the principles of the Nihilists.
Nihilist, a member of a secret Russian society.
Nimbleness, quickness, activity.
Nimbus, a halo; a rain-cloud.
Nimrod, a great hunter.
Nincompoop, a fool, a simpleton.
Niobe (ni'-o-be), a grief-stricken woman.
Nirva'na, the final state of absolute repose as taught by Buddhism.
Nisi prius, a court for the trial of civil cases.
Nitre, saltpetre or nitrate of potash.
Nitrogen, a gas which forms nearly four-fifths of the atmosphere.
Nitro'genous, containing nitrogen.
Niveous, snowy; like snow.
Nobility, persons of high rank; dignity; greatness of character.
Nocturnal, belonging to the night.
Nodule, a small lump.
Noetic, pertaining to the intellect.
Noggin, a small mug; a measure equal to a gill.
Noisome, noxious, unwholesome, offensive.
Nolens volens, whether you will or no; in any case.
Nomad, one of a wandering tribe.
Nom de plume, a name assumed by an author.
No'menclature, the system of names used in any science.
Nominal, not real, existing merely in name.
Nominate, to appoint; to suggest as a candidate.
Nominee, a person nominated.
Non-acceptance, refusal to receive or agree to.
Nonage, minority, childhood.
Nonagenarian, a person ninety years old.
Nonce, the present occasion.
Nonchalance, indifference, carelessness.
Nonconformist, one who refuses to conform to the established Church.
Nondescript, difficult to describe; odd.
Nonentity, non-existence; a person of no importance whatever.
Nonesuch, that which is unequalled.
Nonjuring, not swearing allegiance.
Nonpareil, of unequalled excellence; a small printing type.
Nonplus, to confound, to puzzle.
Nonsensical, meaningless, foolish.
Non-seq'uitur, an erroneous conclusion.
Nonsuit, the abandonment of a lawsuit.
Noontide, mid-day.
Noose, a running knot which ties the tighter the more it is drawn.
Norm, a rule; a model.
Normal, according to rule, usual, regular.
Norse, belonging to Scandinavia.
Northern lights, the aurora-borealis.
North-seeking pole, the end of a magnet that points to the north.
Norwegian, a native of Norway.
Nostalgia, home-sickness.
Nostrils, the apertures of the nose.
Nostrum, a patent medicine.
Nota bene, mark well.
Notability, the quality of being remarkable; a well-known person.
Notary, a legal officer who attests contracts, etc.
Noticeable, meriting or likely to attract notice.
Notification, the act of making known.
Notional, ideal; imaginary.
Notoriety, public knowledge or exposure; doubtful fame; ill-repute.
Notorious, publicly known (usually in a bad sense).
Nought, nothing.
Nourishment, food; sustenance.
Nous, the intellect; common sense.
Novelist, a writer of novels.
Novice, a beginner; one in a religious house who has not yet taken the vow.
Novitiate, the time of being a novice.
Novus homo, one who has risen in the world.
Nowhere, not in any place.
Noxious, harmful, injurious.
Nuance, a gradation of hue or tint.
Nubile, marriageable.
Nucleus, a central part round which matter gathers; the body of a comet.
Nudity, nakedness.
Nu'gatory, trifling; futile.
Nuisance, something that annoys or offends.
Nullah, a mountainous watercourse in the East Indies.
Null and void, of no legal validity; invalid.
Nullify, to annul; to make void.
Nullity, without validity; nonentity.
Numbness, the state of being without sensation.
Numeral, expressing a number; a figure.
Numeration, the art of numbering.
Numer'ical, denoting number.
Numismatic, relating to coins or medals.
Numskull, a dunce, a blockhead.
Nuncio, an envoy from the Pope.
Nunnery, a religious house for women.
Nuptials, a marriage.
Nurseryman, a man who rears plants for sale.
Nurture, to educate; to bring up; the act of nourishing, education.
Nutriment, nourishment; food.
Nutri'tious, nourishing.
Nu'tritive, nourishing.
Nymph, a youthful goddess of the woods and waters, etc.

Oaf, a changeling; a dolt.
Oakum, old ropes unravelled.
Oarsman, one who pulls at an oar; a boating man.
Oa'sis, a fertile spot in the midst of a desert.
Oasthouse, a building where hops are dried.
Oaten, made of oats.
Oath, a solemn declaration with an appeal to God to witness its truth; an imprecation.
Obbligato, a free musical accompaniment.
Ob'durate, hardened; stubborn.
Obedience, submission to authority.
Obeisance, a bow or act of reverence.
Obelisk, a lofty four-sided pillar tapering as it rises.
Obese, fat; corpulent.
Obesity, extreme fatness.
Obey, to show obedience to.
Obfuscate, to darken; to bewilder.
Obit, a death, the anniversary of a death.
Obiit, a Latin word meaning "he (or she) died."
Obiter dictum, a casual remark.
Obituary, relating to the death of a person.
Objectionable, liable to be opposed or disapproved of; unpleasant.
Objective, relating to an object; external.
Objuration, a binding by oath.
Objurgation, reproof; censure.
Oblate, flattened at the poles.
Oblation, an offering; a sacrifice.
Obligation, the binding power of a vow or contract; indebtedness for a favour.
Ob'ligatory, imposing an obligation; binding.
Obliging, civil, complaisant.
Oblique, not perpendicular or horizontal, inclined; wanting in directness.
Obliquity, obliqueness; wrong conduct.
Obliteration, effacement; extinction.
Oblivion, forgetfulness; the state of being lost to memory; complete pardon.
Ob'loquy, censorious speech; disgrace; slander.
Obnoxious, disagreeable; offensive.
Oboe, a wind instrument.
Obscene, offensive; indecent; ill-omened.
Obscenity, the quality of being obscene.
Obscu'rantist, an opponent of the progress of knowledge.
Obscurity, darkness; unintelligibleness; lowly condition.
Obsecrate, to entreat, to implore.
Obsequies, funeral rites.
Obsequious, compliant; servilely submissive.

Observance, attention; the performance of a religious duty.
Observation, the act of observing; a remark.
Observatory, a place for astronomical observations.
Obsession, the state of being assailed by an evil spirit.
Obsolescent, becoming obsolete or out of date.
Obsolete, gone out of use.
Obstacle, a hindrance, an obstruction.
Obstetric, belonging to midwifery.
Obstinacy, stubbornness; persistency.
Obstreperous, loud, clamorous, turbulent.
Obstruction, something which blocks the way.
Obtainable, that may be procured.
Obtrude, to push or be pushed where one is not wanted.
Obtrusive, inclined to obtrude.
Obtuse, not pointed; not acute; dull, stupid.
Obverse, the face or head of a coin, or medal.
Obviate, to avoid, to prevent, to remove.
Obvious, evident; easily discovered.
Occasional, happening at intervals; incidental; befitting a special occasion.
Occident, the west.
Occiput, the hinder part of the head.
Occlude, to shut up; to absorb.
Occlusion, the act of occluding.
Occult, secret; hidden; unknown.
Occultation, the state of being concealed.
Occupant, one who has possession.
Occupier, an occupant.
Occur, to happen; to come to one's mind.
Occurrence, an event; something that occurs.
Oceanic, belonging to the ocean.
Ochlocracy, government by the common people.
Ochre, clay usually yellow, used as a pigment.
Octagonal, having eight sides and angles.
Octave, consisting of eight; an interval in music; the week after a Saint's day.
Octavo, a book in which a sheet is folded into eight leaves.
Octogenarian, a person eighty years old.
Oc'topus, a species of cuttle-fish.
Octoroon, the child of a quadroon and a white.
Octroi, a tax on goods as they are brought through the gates of a city.
Ocular, depending on the eye; known by the eye.
Oculist, an eye-specialist.
Odalisk, a female slave in a Turkish harem.
Oddfellow, a member of a secret, mutual society.
Oddity, a strange person or thing; singularity.
Oddment, a thing left over.
Odious, hateful, detestable; causing hate.
Odium, hatred, the quality of provoking hate.
Odorif'erous, fragrant, perfumed.
Odorous, having a sweet scent.
Odour, scent, fragrance; repute.
Offal, waste; carrion; refuse; dung.
Offence, crime; injury; displeasure; attack.
Offensively, disagreeably; by way of attack.
Offertory, alms collected in church.
Officialism, exaggerated official routine.
Official receiver, an official who examines bankrupts.
Officiate, to discharge an office; to preside.
Officious, forward in assisting; interfering.
Offing, the horizon at sea.
Offscouring, matter rubbed off in cleaning; refuse.
Offspring, children; production of any kind.
Ogee, a moulding with an outward and an inward curve, like a modified S.
Ogham, ancient Irish writing.
Ogre, a monster who figures in fairy tales.
Ointment, a fatty substance applied as a salve.
Olea'ginous, oily, unctuous.
Oleograph, an imitation of an oil painting.
Olfactory, relating to the sense of smell.
Oligarchy, a form of government which places the supreme power in the hands of a few.
Olive-branch, the branch of an olive-tree; the emblem of peace.
Olla-podri'da, a sort of hash made in Spain; a curious mixture.
Olympiad, the interval of four years between two celebrations of the Olympic games, used in reckoning time in ancient Greece.
Omega, the last letter of the Greek alphabet.
Omelet, a kind of pancake made with eggs.
Omen, a sign of a coming event; a prognostication.
Ominous, foreshowing evil; inauspicious.
Omission, neglect to do something; a leaving out.
Omnibus, a large passenger vehicle.
Omnip'otence, almighty power; unlimited power.
Omnipresent, present in every place at the same time.
Omniscience, boundless knowledge.
Omnium-gatherum, a mixed collection of people or things.
Omniv'orous, all-devouring.
Oneness, unity; the quality of being one.
Onerary, fitted for carrying burdens.
Onerous, burdensome; oppressive.
Onion, a plant and its edible bulbous root.
Onomatopœia, the forming of words in imitation of sounds, as in *crunch, patter.*
Ontology, a branch of metaphysics dealing with the idea of existence.
Onus, a load of responsibility; the burden.
Onyx, a gem.
Oolite, a variety of limestone.
Ooze, to pass through gradually; to flow slowly.
Opacity, want of transparency.
Opacous, obscure, dull.
Opal, a precious stone of varying hue.
Opalescent, resembling the opal in colour, like the northern horizon on summer evenings.
Opaque, not transparent; dark.
Op'era-bouffe (*pl.* op'eras-bouffes), comic opera.
Opera-cloak, a lady's evening cloak.
Operate, to act; to produce an effect; to perform an operation upon a person; to work a machine.
Operatic, belonging to the opera.
Op'erative, having the power of acting; effective; a workman.
Operator, one who operates.
Operetta, a short, light, musical drama.
Ophthalmia, a disease of the eye-lids.
O'piate, a medicine that causes sleep.
Opine, to think, to judge.
Opinion, mental view, judgment.
Opinionative, having undue faith in one's opinion.
Opium, a narcotic drug.
Oppidan, a student at Eton College boarded in a house.
Oppo'nent, an antagonist; an adversary.
Opportune, seasonable, convenient, occurring at a convenient time.
Opportunist, one who waits upon opportunities to turn them to his own advantage.
Opposite, placed in front; adverse, contrary.
Opposition, position facing something; resistance; a party opposed to another.
Oppression, unjust treatment; severity; lassitude.
Opprobrious, reproachful; disgraceful.
Opprobrium, scurrility; disgrace.
Oppugn, to oppose, to resist.
Optic, relating to the sense of sight.
Optician, a dealer in optical instruments.
Optimism, the doctrine that everything in nature is ordered for the best; persistent good nature; hopefulness.
Optional, left to one's own choice.
Opulence, wealth, affluence.
Opulent, wealthy, affluent.
Opuscule, a small work.
Oracle, the answer given by a god; the god himself, or the place where he was consulted; a wise person.
Oracular, relating to oracles; seemingly wise.
Oral, uttered, not written.
Orangeman, a member of an Irish Protestant Society.
Oration, a public speech delivered with care.
Oratorical, befitting an orator; rhetorical.
Or'atory, eloquence; a place of worship.
Orb, a circle; a sphere; a celestial body; the eye.
Orbit, the line described by the revolution of a planet; the hollow containing the eye.
Orchard, a garden of fruit-trees.
Orchestral, relating to an orchestra or body of musicians.
Orchestration, the arrangement of music for an orchestra.
Ordain, to appoint; to decree; to admit to holy orders.
Ordeal, a severe trial or test.
Orderliness, regularity.
Orderly, methodical, regular; a soldier employed as an officer's messenger or servant.
Ordinance, a law, a rule; a rite.
Ordinarily, according to custom.
Ordination, the act of ordaining.
Ordnance, cannon, guns.
Ordnance survey, the official construction of plans and maps of the United Kingdom.
Ordure, dung, filth.
Ore, metal as it is taken from the mine.
Organ'ic, belonging to organs or parts performing some function.
Organism, an organic structure, anything possessing organic life.
Organization, the act of arranging.
Orgasm, excessive excitement.
Orgy (*pl.* orgies), a drunken revel.
Oriel window, a projecting window.
Orient, the East; bright.
Oriental, belonging to the East.
Orientation, the eastward position of the chancel of a church; the determination of the eastern point by a compass.
Orifice, an opening.
Oriflamme, the ancient royal standard of France.
Origin, the beginning or source of anything.
Originally, in the beginning, at first.
Originator, one who begins or gives origin to anything.
Or'ison, a prayer, a supplication.
Ornamental, serving to ornament or adorn.
Ornate, decorated; elaborately finished.
Ornithology, the science of birds.
Orphan, a child bereft of one or both parents.
Orphanage, a home for orphans.
Orrery, a structural device which shows the motions of the planets.
Orthodox, holding recognized doctrines or opinions; strictly correct.
Orthography, the art of spelling and writing correctly.
Orts, refuse; that which remains.
Oscillation, a moving to and fro like a pendulum.
Osculation, the act of kissing; the act of touching like two curves.
Osiery, a place where osiers or willows are grown.
Osseous, bony; consisting of bone.
Ossification, the process of changing into a bony substance.
Ostensible, apparent; seeming, not real.
Ostentation, outward show; ambitious display.
Ostentatious, fond of show; showy.
Ostracism, banishment from ancient Athens.
Ostrich, the largest living bird.
Otiose, idle, without employment.
Otology, the study of the ear.
Ottoman, relating to the Turks; a kind of couch.
Oust, to expel; to dislodge.
Outbid, to bid higher than another.
Outcrop, the rising of a layer of rock to the surface.
Outfitter, a provider of outfits.
Out-herod, to surpass in cruelty or wickedness.
Outlander, a foreigner.
Outlaw, one excluded from the benefit of the law; a robber.
Outlawry, the act of outlawing a man.
Outmanœuvre, to gain advantage in manœuvring; to out-wit.
Out-put, the produce of a factory or mine.
Out'rage, unprovoked violence; injury; insult.
Outrance, the final extremity.
Outré, exaggerated; singular.
Outspan, to unyoke oxen from a waggon.
Outwit, to get the better of by stratagem.
Outwork, an outer part of a fortification.
Ovation, an enthusiastic public reception.
Overalls, loose trousers worn over others.
Overbearing, arrogant, imperious.
Overdue, not paid or arrived at the proper time.
Overestimate, to place too high a value on.
Overhaul, to inspect closely; to examine.
Overreach, to reach too far; to deceive.
Overseer, a superintendent.
Oversight, superintendence; a mistake.
Overt, open, public; apparent.
Overture, an introductory piece of music; a proposal.
Overweening, arrogant, vain.
Overwork, to work too hard.
Overwrought, worked too much; over-excited.
Oviform, having the shape of an egg.
Ovum (*pl.* ova), an egg.
Owlet, a small owl.
Oxonian, a member of the University of Oxford.
Oxygen, a gas forming part of the atmosphere.
Oyer, a hearing in a court of law.
Oyez, the cry of a public crier or officer of a court of law before he makes his proclamation.
Oyster-patty, a small pie of oysters.
Ozone, a kind of oxygen, forming a very small part of the atmosphere.

Pabulum, food for the mind or body.
Pace, a step; gait; degree of speed; to accompany competitors in a race to set the speed.
Pachydermatous, thick-skinned.
Pacific, peacemaking, mild, appeasing.
Pacification, the act of making peace.
Pacify, to appease, to quiet.
Package, a bundle; something packed up.
Pack-ice, large floating masses of ice collected together.
Pack-saddle, a saddle on which burdens are laid.
Pact, a contract; a covenant.
Paddle-box, the case of a steamer's paddle-wheel.
Paddock, a small grassy enclosure; a toad.
Paddy, rice in the husk; an Irishman.
Pa'dishah, a title of the Sultan of Turkey and Persia.
Padre, father, a term applied to a priest in some lands.
Pæan, a song of triumph.
Paganism, heathenism.
Pa'geantry, pomp; showy display.
Pagoda, a Hindu temple or idol; an Indian coin.
Paillasse, an under-mattress.
Painstaking, laborious; taking great care.
Pair-royal, three cards of the same kind in some games.
Pal, a chum, a partner.
Palace, the residence of a sovereign or bishop.
Paladin, a knight-errant, a champion.
Palæography, an ancient mode of writing; the art of reading ancient manuscripts.
Palæolithic, relating to the earlier stone age.
Palæontology, the science of fossil remains.
Palanquin, an Eastern carriage borne on the shoulders of men.

Palatable, pleasing to the taste.
Palate, the roof of the mouth; the sense of taste.
Palatial, belonging to or like a palace.
Palat'inate, the area governed by a count-palatine.
Pal'atine, one invested with royal rights.
Pala'ver, idle chatter; a conference; to flatter.
Pales'tra, a place for wrestling, etc.
Palestrian, relating to wrestling.
Pal'ette, a light board on which a painter mixes his colours.
Palfrey, a lady's saddle-horse.
Pali, the sacred language of the Buddhists.
Pal'impsest, parchment from which the writing has been erased and again written on.
Pal'indrome, a word or sentence which is the same read backwards or forwards.
Palisade, a protective fence of stakes.
Pall-bearer, one who walks beside the coffin at a funeral and formerly held the corners of the pall.
Palladium, a statue of Pallas; a defence; a metal.
Pallet, a small bed.
Palliate, to excuse; to lessen guilt; to alleviate.
Palliative, extenuating; mitigating.
Pallid, pale, sickly-looking.
Pallor, paleness.
Palmer, a pilgrim come back from the Holy Land.
Palmistry, the telling of fortunes by the hand.
Palm Sunday, the Sunday before Easter.
Palpable, perceptible by the touch; plain.
Palpitation, a violent throbbing of the heart.
Palsy, paralysis.
Paltriness, meanness; worthlessness.
Palu'dal, marshy.
Pampas, the treeless plains of South America.
Pamper, to glut; to overfeed.
Pamphleteer, a writer of pamphlets.
Panace'a, a universal remedy.
Pan-Anglican, representing all those holding the doctrines of the Anglican Church.
Pandect, a treatise that comprehends the whole of a science.
Pandemonium, the abode of devils; an unruly gathering.
Panegyr'ic, a laudatory speech or writing.
Panel, a board enclosed in a frame; a roll containing the names of those summoned to serve on a jury.
Panelling, work done in panels; a structure of panels.
Panic, sudden fear; great fright.
Pannage, food for swine in the forests.
Pannel, a kind of rustic saddle.
Pannier, a basket thrown over a horse's back
Panoply, complete armour.
Panopticon, a kind of prison in which the cells are all visible from one point; an exhibition room.
Panorama, an extensive view represented by a series of pictures.
Pantaloons, trousers; clowns in a pantomime.
Pantechnicon, a place for the storing of furniture, or for the sale of manufactured articles of every kind.
Pantheism, the doctrine that God and the universe are one.
Pantheon, a temple of all the gods.
Pantile, an earthenware tile of an ogee shape.
Pantisoc'racy, a community in which all are equal.
Pantol'ogist, a writer on general knowledge.
Pantomime, dumb show; a Christmas theatrical entertainment.
Pantomimic, relating to pantomime.
Panton, a horseshoe of a special kind.
Panurgy, ability to perform all kinds of work.
Papacy, the office and authority of the Pope.
Paper-money, bank-notes, etc.
Papier-mâché, the pulp of paper made into various articles and japanned.
Papist, a Roman Catholic.
Papoose, a North American Indian baby.
Papulous, spotty, pimply.
Papy'rus, an Egyptian plant from which paper was made in ancient times.
Par, state of equality; equal value.
Parable, an allegory told to point a moral.
Parab'ola, a geometrical curve; the curve made by a projectile.
Parachute, a sort of umbrella by aid of which a descent is made from a balloon.
Paraclete, one who assists; the Comforter.
Paradigm, an example; an example of inflection.
Paradox, a statement which, though appearing contradictory, is nevertheless true.
Paradoxical, having the nature of a paradox.
Paraffin, a fatty substance obtained from shale and coal.
Paragon, a model; a pattern of perfection.
Paragraph, a passage in a book or writing begun on a fresh line.
Parallax, a seeming change in the position of anything, caused by the observer changing his position.
Parallel, extended in the same direction and preserving the same distance.
Paral'ogism, false reasoning.
Paralyse, to strike with paralysis; to render powerless.
Paralysis, loss of power in any part of the body.
Paralytic, one affected with paralysis; pertaining to paralysis.
Paramount, above all the rest; chief.
Paramour, a lover; a mistress.
Parapet, a wall breast-high.
Paraphernalia, articles of adornment, etc.
Paraphrase, to express the meaning of a passage in other words.
Parasite, a hanger-on; a plant or animal which lives upon another.
Parasitic, resembling a parasite; fawning.
Parasol, a small umbrella for the sun.
Parcæ, the three Fates.
Parchment, skins prepared for writing on.
Pard, a leopard or panther.
Parentage, extraction, birth.
Paren'thesis (*pl.* parentheses), a clause inserted in a sentence without being necessary to its completeness.
Parenthetical, pertaining to a parenthesis.
Par excellence, above all, pre-eminently.
Pariah, an outcast; one of the lowest orders of the Hindus.
Pari'etal, belonging to the sides or walls.
Pari passu, with equal steps.
Parishioner, one belonging to a parish.
Parisienne, a female native of Paris.
Parity, equality; resemblance.
Parlance, conversation; manner of speech.
Parliamentary, pertaining to parliament.
Parlour, a sitting-room for common use.
Parnassian, relating to Parnassus, a mountain sacred to the Muses.
Parochial, belonging to a parish.
Parody, a comic imitation of a poem, etc.
Parole, word of honour; a password.
Paroquet, a small parrot.
Paroxysm, a sudden fit of pain or anger.
Par'quetry, inlaid woodwork used for flooring.
Parricide, the murder or murderer of a parent.
Parry, to turn aside, to evade.
Parsimonious, frugal, sparing, stingy.
Parsonage, the residence of a parish minister.
Parterre, flower-beds with paths between.
Par'thenon, an Athenian temple.
Parthian arrow, a parting shot.
Partiality, a preference; a tendency to favour without reason.
Participation, a sharing in common.
Particle, a small part; an uninflected word.
Particoloured, of various colours.
Particularly, especially.
Parti-pris, having one's mind made up.
Partisan, an adherent of a party; a kind of pike.
Partition, the act of separating; a division.
Partitive, separating; signifying a part.
Partnership, joint interest; the union of two or more persons in business.
Part-song, a song for several voices.
Parturition, the bringing forth of young.
Party-spirit, the spirit that binds a party; intolerance.
Parvenu, one lately risen from obscurity.
Paschal, relating to the passover or to Easter.
Pasha, a Turkish governor or military officer.
Pashalic, the jurisdiction of a pasha.
Pasquinade, a lampoon, a satire.
Pass-book, a book in which entries are made of goods bought on credit; a book kept by each customer of a bank.
Passé, passée, no longer in one's youth.
Passe-partout, a master-key.
Passenger, a traveller on a boat, railway, etc.
Passible, capable of feeling pain or pleasure.
Passim, in many places; here and there.
Passing-bell, a bell tolled for a death.
Passion, violent emotion; great suffering.
Passionate, moved by passion; easily angered.
Passionists, a religious order.
Passive, unresisting; suffering, not acting.
Passive resister, one who declined to pay rates for the support of voluntary schools after the Education Act of 1903.
Passover, a Jewish festival.
Paste and scissors, literary work lacking originality; cutting and pasting extracts.
Pastel, a dye; a coloured crayon.
Pastern, a part of a horse's foot.
Pastor, a shepherd; a clergyman.
Pastoral, belonging to a pastor; rural; pertaining to a bishop.
Pastry, pies, tarts, etc.
Pasturage, lands grazed by cattle.
Pasty, a small pie; resembling paste.
Patchou'li, an Eastern plant, and the perfume obtained from it.
Patefaction, the act of making manifest.
Patella, the knee-cap; a little dish.
Patentee, one who has taken out a patent.
Paterfamilias, the father of a family.
Paternal, fatherly; hereditary.
Paternoster, the Lord's Prayer.
Pathetic, moving, containing pathos.
Patho'geny, the study of the development of disease.
Pathol'ogy, the study of the causes, symptoms, and effects of diseases.
Pathos, that which excites pity or sympathy.
Patience, the power of enduring, forbearance.
Patois, a dialect.
Patriarch, the head of a family; a very old man.
Patrician, a nobleman.
Patrimony, a heritage from one's ancestors.
Patriotic, animated by a love of country.
Patristic, relating to the fathers of the Christian Church.
Patrol', the guard that goes the round of a camp at night.
Patronage, support; protection; the right of appointing to a living.
Patronizing, having the air of bestowing a favour.
Patronymic, a name derived from an ancestor.
Patten, a wooden shoe raised high on an iron ring to walk in mud.
Pattern, a model for copying; an example.
Paucity, smallness of number or quantity.
Pauperism, the state of living on charity.
Pause, a short stop in action, speech, etc.
Pavement, a roadway paved with stone, etc.
Pavilion, a tent; a building having a tent-shaped roof.
Pavior, one occupied in laying pavements.
Pav'onine, resembling a peacock's tail; belonging to a peacock.
Pawl, a short piece of metal acting as a catch to a ratchet wheel, so as to allow it to move in one direction only.
Pax, a tablet with a sacred picture on it, and kissed after Mass.
Paynim, a heathen, a Moor.
Peaceably, without disturbance.
Pea-jacket, a short woollen coat worn by seamen.
Pearlash, a crude carbonate of potash.
Pearliness, the quality of resembling pearls.
Peasantry, peasants, country people.
Pease-cod, a pea-pod.
Pebbly, full of pebbles or small stones.
Peccable, liable to sin.
Peccadillo, a petty fault; a small crime.
Peccant, guilty, wrong, erring.
Pec'cary, an American animal resembling a hog.
Pecca'vi, literally, "I have sinned," a term of confession.
Pec'toral, belonging to the breast.
Peculation, the appropriating of another's money to one's own use.
Peculiarity, something singular; an oddity; something distinctive and not common.
Pecuniary, relating to money.
Pedagogics, the art of teaching.
Pedagogue, a teacher of the young.
Pedagogy, the office of a pedagogue.
Pedal, belonging to a foot; part of a machine, etc., worked by the foot.
Pedan'tic, marked by pedantry.
Ped'antry, ostentatious display of learning.
Pedestrian, one who goes on foot; a walker.
Pedigree, genealogy, lineage.
Pedom'eter, an instrument fixed to the leg, to measure the distance covered in walking.
Peduncle, a flower-stalk.
Peduncular, belonging to a peduncle.
Peeress, a peer's wife; a lady holding a title of nobility.
Peevishness, fretfulness; querulousness.
Peg'asus, a mythical winged horse.
Pelican, a bird which feeds on fish.
Pelisse, a kind of cloak.
Pellet, a little ball, or shot.
Pellicle, a thin skin.
Pellucid, clear, transparent.
Pelt-monger, a dealer in skins.
Peltry, skins in their undressed state.
Pelvis, the lower part of the abdomen.
Pemmican, meat dried and pressed into cakes.
Pe'nal, enacting punishment.
Penalty, punishment; a fine.
Penance, punishment suffered voluntarily in expiation of a sin.
Pena'tes (-ēz), the ancient Roman household gods.
Penchant, a leaning toward; a liking.
Pencilled, marked as with a pencil.
Pendant, a hanging ornament; an earring; a flag.
Pendulous, hanging, swinging.
Pendulum, a weight hung so that it may easily swing backwards and forwards, as in a clock.
Penetrable, that may be pierced or penetrated.
Penetration, the act of entering; acuteness; the power of piercing.
Peninsula, a piece of land nearly surrounded by water.
Penitent, repentant, contrite.
Penitential, expressing penitence.
Penitentiary, a house of correction and reform.
Penniless, poor; having no money.
Pennon, a small pointed flag.
Penny-a-liner, a writer paid by the line.
Pennyweight, twenty-four grains (troy weight).
Pensile, hanging, suspended.
Pension, an allowance granted for past services.
Pensionary, maintained by a pension.

Pensive, sorrowfully thoughtful.
Pentagon, a figure with five angles.
Pentateuch, the first five books in the Bible.
Pentecost, Whitsuntide; a Jewish festival.
Penthouse, a shed jutting out from a building.
Penultimate, belonging to the last syllable but one.
Penumbra, an imperfect shadow.
Penurious, niggardly; sordidly mean; poor.
Peony, a plant with large brilliant flowers.
People, a nation; persons in general; kinsfolk.
Peppermint, a species of mint and the liquor distilled from it.
Pepsin, an extract of gastric juice taken from animals, used as an aid to digestion.
Peptic, helping digestion.
Perambulation, the act of wandering over; a travelling survey.
Perambulator, an infant's carriage; one who perambulates.
Per annum, by the year.
Perceive, to discover by the senses; to observe.
Per cent, by the hundred.
Percentage, rate per cent.
Perceptible, that may be perceived.
Perceptivity, the power of perceiving.
Percipient, having the power of perceiving.
Percolation, the act of filtering through.
Percussion, the shock of collision, impact.
Perdition, destruction, ruin; eternal death.
Perdu, perdue, in ambush; hidden.
Perdurable, lasting; long continuing.
Peregrination, a roundabout journey.
Per'emptory, positive; not admitting of argument; dictatorial.
Perennial, lasting through the year; lasting more than two years (botany); annual.
Perfectibility, the ability to attain perfection.
Perfervid, very fervid; extremely ardent.
Perfidious, treacherous; false to a trust.
Per'fidy, treachery; breach of faith.
Perforation, the act of boring a hole.
Performance, something done; completion; an acting, etc.
Perfu'mery, perfumes collectively.
Perfunctory, careless; negligent.
Peri, an elf descended from a fallen spirit.
Pericardium, the membrane surrounding the heart.
Perigee, the point of the moon's orbit nearest the earth.
Perihelion, the point of a planet's orbit nearest the sun.
Perilous, dangerous, hazardous.
Perim'eter, the sum of all the sides of a figure.
Period'ic, relating to a period; happening at stated intervals.
Periodicity, the quality of being periodic.
Peripatetic, a follower of Aristotle; one who walks around from place to place.
Periph'ery, the boundary line of a figure.
Periph'rasis, circumlocution.
Periplus, a sailing round.
Perishable, liable to perish; subject to decay.
Peristaltic, belonging to the vermicular motion of the intestines.
Peristyle, a series of columns round a court, etc.
Peritone'um, the lining of the abdomen.
Peritoni'tis, inflammation of the peritoneum.
Perjury, the crime of false swearing.
Permanence, continuance in the same state.
Permeability, the state of being permeable or not water-proof.
Permeate, to pass through the pores of.
Permian, a name given to certain strata of rocks.
Permissible, allowable.
Permit', to allow; to give permission.
Per'mit, a written permission.
Permutation, the exchange of one thing for another; interchange.
Pernicious, destructive; harmful.
Peroration, the conclusion of an oration.
Peroxidize, to oxidize in a high degree.
Perpend, to weigh in the mind; to consider.
Perpendicular, at right angles to the horizon; upright.
Perpetration, the act of committing a crime.
Perpetually, continually; incessantly.
Perpetu'ity, something to which there is no end; indefinite duration.
Perplexity, intricacy; bewilderment.
Perquisite, something gained in an office or situation over and above the settled wages.
Per se, by itself.
Persecute, to harass; to pursue with intent to injure.
Perseverance, persistence in any design.
Persiflage, frivolous talk; banter.
Persistence, perseverance, obstinacy.
Personality, individuality; an uncomplimentary remark passed on an individual.
Personally, in person; individually.
Personation, the counterfeiting of another person.
Personifica'tion, impersonation; a figure of speech attributing personality to things.
Personnel, the members of a staff.
Perspective, the art of representing objects in a picture as they would appear to an observer.
Perspicacious, quick-sighted; keen of apprehension.
Perspicacity, quickness of discernment.
Perspicu'ity, freedom from obscurity.
Perspiration, moisture emitted from the pores of the skin.
Persuade, to induce; to influence by argument, etc.
Persuasion, the act of persuading; belief.
Persuasiveness, the quality of being able to persuade.
Pertinacious, obstinate; resolute; determined to cling.
Pertinacity, the state of being pertinacious.
Pertinent, quite to the purpose; apposite.
Perturbation, disturbance of mind; cause of disquiet.
Peruke or **Perruque,** a cap of false hair.
Perusal, the act of reading carefully.
Peruvian, belonging to or a native of Peru.
Pervade, to pass over or through; to be well diffused.
Perversion, a leading astray; a turning from the right way.
Perversity, stubbornness; peevishness.
Per'vert, one who has turned from the supposed truth.
Pervert', to lead astray.
Pervicacious, extremely obstinate.
Pervious, admitting passage; penetrable.
Pesa'de, the motion of a horse when rearing.
Pessimism, the habit of taking a despondent view of life.
Pestif'erous, infectious; noxious.
Pestilence, a fatal contagious disease.
Pestilential, pertaining to pestilence; destructive.
Pestle, an instrument for pounding in a mortar.
Petard, an instrument of war formerly used to blow up a barrier, etc.
Petit, petite, small.
Petition, an entreaty, a supplication.
Petrel, a sea bird.
Petrifaction, the act of changing into stone.
Petro'geny, the study of the origin of rocks.
Petroleum, an inflammable liquid obtained from the earth.
Petrol'ogist, one versed in the study of rocks.
Pettifogging, doing petty legal business.
Pettiness, smallness; meanness.
Petty jury, common jury.
Petulance, peevishness; frowardness.
Pew, an enclosed seat in church.
Pewterer, a smith who works in pewter.
Phaeton, an open four-wheeled carriage.
Phalanx, a body of troops in close order.
Phantasm, a phantom; an imaginary vision.
Phantas'magoria, shadow pictures; shadowy imaginings.
Phantasy, imagination; a whim.
Phantom, a spectre; a fancied vision.
Pharisaic, pertaining to the Pharisees; hypocritical.
Pharmaceutical, relating to the art of preparing medicines.
Pharmacopœ'ia, a book of rules for the preparation of medicines.
Pharmacy, the art of preparing medicines.
Pharos, a light-house; a beacon.
Phase, appearance; aspect.
Pheasant, a game-bird.
Phenom'enal, remarkable; out of the ordinary.
Phial, a small glass bottle.
Philander, to play at love.
Philanthropic, showing a love of mankind.
Philat'elist, a collector of postage-stamps.
Philharmonic, loving harmony or music.
Philhellenist, one friendly towards Greece.
Philip'pic, a speech full of invective; an oration.
Phil'istine, one of an ancient people of Palestine; a person without culture.
Philis'tinism, the manners, etc., of modern Philistines.
Philol'ogy, the study of languages.
Philomath, one fond of learning.
Philomel, the nightingale.
Philosophical, belonging to philosophy; calm.
Philosophy, mental science.
Philtre, a love-potion.
Phlebi'tis, inflammation of a vein.
Phlebotomy, the practice of letting blood.
Phlegm, the slimy matter discharged from the throat by coughing; apathy.
Phlegmatic, abounding in phlegm; dull, cold.
Phlogiston, an element formerly supposed to exist in every combustible body.
Phœbus, Apollo; the sun.
Phœnix, a unique, fabulous Egyptian bird which died in giving birth to its successor.
Phonetics, the science of sounds, particularly of the voice.
Phonic, belonging to sound.
Phonograph, an instrument which records and reproduces sounds; a mark representing a sound.
Phonology, the science of vocal sounds.
Phonom'eter, an instrument for measuring sound.
Phosphorescence, the quality of becoming luminous without combustion.
Photog'raphy, the art of producing pictures by the action of light on a sensitized surface.
Photogravure, a process for reproducing pictures.
Photom'eter, an instrument for measuring light.
Photosphere, the luminous envelope round the sun.
Phrase, a mode of speech; an expression.
Phraseology, mode of expression; diction.
Phrenet'ic, mad, frantic.
Phrenitis, inflammation of the brain.
Phrenology, the science of reading the character from protuberances on the skull.
Phthisis *(thisis)*, pulmonary consumption.
Phylactery, a charm or amulet.
Physic, the science of healing; a medicine.
Physical, relating to nature or to natural philosophy; material; bodily.
Physician, one skilled in medicine; a doctor.
Physicist, one versed in physics.
Physics, the science which treats of the laws of nature.
Physiocratic, belonging to a school of political economy.
Physiognomy, the art of telling the character from the face.
Physiolatry, the worship of nature.
Physiology, the science which treats of the laws of life in plants and animals.
Physique, bodily structure.
Piacular, expiatory; needing expiation.
Pia mater, a thin membrane covering the brain.
Pianissimo, very softly and quietly.
Pianist, a pianoforte-player.
Pianoforte, a musical instrument.
Piastre, a silver coin of various values.
Piazza, a walk under a roof supported by pillars.
Pibroch, martial music played on the bagpipe.
Picador', a horseman at a bull-fight whose duty it is to excite the bull.
Picaroon, a plunderer, a cheat.
Piccalilli, a pickle of mixed vegetables.
Piccolo, a small flute.
Pickaninny, a little negro child.
Picket-guard, a guard always prepared for an alarm or attack.
Pick-thank, an officious fellow working for his own interests.
Pic-nic, a pleasure outing where the members of the party take their provisions with them.
Pictorial, relating to or containing pictures.
Picturesque, like a picture.
Piebald, spotted with various colours.
Piecemeal, in pieces; by degrees.
Piece-work, work done by the piece instead of by the hour.
Pied à terre, a resting-place, temporary lodgings.
Pier, the support of a bridge or arch; a jetty; a landing-place.
Piercing, penetrating; sharp.
Pietist, one who expresses extreme piety; a member of a religious order.
Piety, the quality of being pious.
Pigeon-hole, an entrance hole in a pigeon-house; a division in a case to hold papers.
Piggin, a small vessel to hold liquids.
Pig-iron, unforged iron.
Pigment, a colouring substance; paint.
Pilaster, a square column generally set within a wall.
Pilgrimage, a journey to some sacred spot.
Pillage, plunder; the act of plundering.
Pillar, a column-like support.
Pillion, a cushion behind a horseman for a woman to ride on.
Pillory, an old instrument of punishment consisting of a wooden frame with holes, through which the head and hands of the offender were put.
Pillow, a cushion on which the head rests in bed.
Pilose, hairy.
Pilotage, the work or fee of a pilot.
Pilot-engine, a locomotive sent in advance of a train to see that the line is clear.
Pimp, one who procures lewd women.
Pinafore, a kind of apron worn by a child.
Pince-nez, eye-glasses which fit on the nose with a spring.
Pinchbeck, an alloy resembling gold.
Pine'tum, a collection of various kinds of pines.
Pinfold, an enclosure for stray cattle.
Pinion, a wing; a part of a bird's wing; to fetter.
Pin-money, an allowance made to a wife for her private use.
Pinnace, a man-of-war's boat; a small vessel.
Pinnacle, a turret; a pointed summit.
Pioneer, one of a band of soldiers who go before an army to clear the way; one who prepares the way for those who come after.
Pious, devout; religious; showing deep filial respect.
Pipette, a small tube used by chemists.
Piquancy, tartness; liveliness.
Pique, slight anger caused by one's pride being hurt.
Piquet, a game of cards.
Piracy, the act of robbing on the high seas; an offence against the laws of copyright.

Piratical, belonging to piracy.
Pirouette, to whirl round on one foot.
Pis aller, the last shift; the worst.
Piscatorial, relating to fishing.
Pisciculture, the artificial rearing of fish.
Pisci'na, a stone basin in Roman Catholic churches.
Pistol, a small hand-gun.
Piston, a close-fitting, sliding rod in an engine or pump.
Pitch-dark, extremely dark.
Pitch-pipe, a small pipe used to give the key-note.
Piteous, mournful; exciting pity.
Pithiness, energy; force.
Pitiable, deserving pity.
Pitiless, without pity; merciless.
Pittance, a small portion; a scanty allowance.
Pivot, a pin on which anything turns; that on which a matter depends.
Pizzicato, a term in violin playing, denoting that the strings must be plucked by the fingers.
Placable, capable of being appeased.
Placard, a bill stuck on a wall, etc., to attract public attention.
Place-hunter, one who tries hard to obtain a public office.
Placeman, one holding a government office.
Placenta, the after-birth.
Placid, gentle; quiet; serene.
Placket, a petticoat; a slit in a skirt, etc.
Pla'giarism, the act of stealing from the works or thoughts of another.
Plague, a malignant epidemic disease; anything troublesome; a great evil.
Plague-spot, a mark of plague.
Plaguy, vexatious, troublesome.
Plaice, a flat fish.
Plaid, a striped woollen wrap worn in Scotland.
Plain-song, a simple chant.
Plaintiff, one who sues another in a court of law.
Plaintive, expressive of sorrow; complaining.
Plait, to fold; to braid.
Planchet, a flat piece of metal for a coin.
Plane, a level surface; a joiner's tool; a kind of tree.
Planet, a heavenly body which moves round the sun.
Planetary, pertaining to the planets.
Plantigrade, walking on the sole of the foot; flat-footed.
Plaque, an ornamental plate or disc.
Plasma, a variety of quartz; elementary matter in plant and animal bodies.
Plaster, lime and sand mixed with water for overlaying walls, etc.; an adhesive substance spread on cloth, etc., and applied to the body.
Plastic, having the power to give form; capable of being moulded.
Plateau, an elevated plain.
Plate-rack, a frame for plates, etc., when not in use.
Platinoid, a metal with which platinum is associated.
Plat'inum, a heavy silver-coloured metal.
Platitude, dulness; a vapid remark; a truism.
Platon'ic, belonging to the philosophy of Plato.
Platonic love, affection unmixed with carnal desires.
Plaudit, applause.
Plausible, seemingly right or praiseworthy.
Play-bill, a bill advertising a play.
Play-wright, a writer of plays.
Pleasance, gaiety; a secluded part of a garden.
Pleasantry, gaiety; lively talk; a trick.
Pleasurable, delightful; giving pleasure.
Plebe'ian, of mean birth; vulgar; not aristocratic.
Pleb'iscite, the vote of an entire nation.
Plectrum, a small piece of horn, etc., for striking the strings of certain instruments.
Plenary, full, complete.
Plenipotentiary, a negociator invested with full power.
Plenitude, fulness, completeness.
Plenteous, copious, abundant, fruitful.
Pleonasm, the use of unnecessary words.
Pleth'ora, fulness, especially of blood.
Pleurisy, a chest disease (see *Med. Dict.*).
Pliability, flexibility.
Pliancy, the state of being pliant.
Pliant, easily bent; easily influenced.
Plication, a fold; a plait.
Pliers, a small kind of pincers.
Plighted, pledged, promised.
Plinth, the square foundation of a column, etc.
Plodder, a dull, heavy, laborious man.
Plough-share, the blade of a plough.
Plumage, a bird's feathers.
Plumbago, a mineral used for lead pencils; a plant.
Plumber, a worker in lead.
Plumb-line, a line with a weight attached to show the perpendicular.
Plunge, to put suddenly under water; to dive; to rush into.
Plural, implying or consisting of more than one.
Pluralist, a clergyman holding more than one benefice.
Plus, the name of the mathematical sign of addition.
Plutoc'racy, the rule or power of the wealthy.
Pluvious, rainy, relating to rain.
Ply, to practise or work at diligently; to solicit.
Pneumatic, pertaining to air; worked by air; filled with air.
Pneumonia, an inflammation of the lungs.
Po'cocurant'ism, indifference; carelessness; apathy.
Pod'agra, gout in the foot.
Podesta, an Italian magistrate.
Poesy, the art of the poet; poetry.
Poetaster, an indifferent poet; a bad rhymer.
Poetically, in a manner suitable to poetry.
Poet-laureate, a poet who has been chosen by the sovereign to celebrate events of regal or national importance.
Poignant, stimulating the palate; keen; painful.
Point d'appui, point of support.
Poise, to balance; to weigh.
Poisonous, having the qualities of poison.
Polemical, controversial, disputative.
Pole-star, a star near the North Pole of the celestial sphere; a guide.
Policy (*pl.* policies), the art of government; skill in management; line of conduct; a written insurance contract.
Pol'ish, to render smooth and glossy; to refine; refinement; gloss.
Po'lish, belonging to Poland and its people.
Politeness, good-breeding; elegance of manners.
Political, relating to the art of government.
Politician, one skilled in politics.
Pollard, a tree with the top cut off; an animal that has cast its horns; a hornless ox.
Poll-clerk, a clerk who assists at an election.
Poll-tax, a tax per head.
Pollution, defilement; corruption.
Polo, a game at ball played on horseback.
Poltroon, a coward; a scoundrel.
Polyandry, the practice of having more than one husband at a time.
Polychrome, having many colours.
Polyg'amy, the practice of having more than one wife at a time.
Polyg'amous, practising polygamy.
Polyglot, speaking many languages; in many languages.
Polysyllabic, having many syllables.
Polytechnic, relating to, or instructing in, many arts.
Polytheism, the doctrine of a plurality of gods.
Pomade or **pomatum,** a fragrant ointment for the hair.
Pommel, the raised projection on a sword-hilt or on the front of a saddle.
Pompous, magnificent, grand; boastful.
Poncho, a simple cloak worn by horsemen in South America.
Ponderous, heavy, weighty; forcible.
Pongee, a soft silk of Eastern manufacture.
Poniard, a dagger.
Pontiff, a high priest; the pope.
Pontifical, belonging to a pontiff; a book of ecclesiastical rites and ceremonies.
Pontoon, a light structure used to support a temporary bridge.
Pony, a small horse; £25, in betting language.
Popery, the Roman Catholic religion.
Popinjay, a parrot; a woodpecker; a fop.
Populace, the multitude; the common people.
Popularity, the state of being in favour with people.
Populous, full of people, thickly inhabited.
Porcelain, a semi-transparent earthenware.
Pores, the minute openings in the skin for perspiration.
Pornography, obscene literature.
Porosity, the state of being porous.
Porous, having pores or minute passages.
Porphyry, a hard, igneous rock.
Porringer, a small vessel for porridge.
Portage, the act or price of carrying.
Portcullis, a strong grating hung over a gateway and let down to keep out an enemy.
Porte, the Turkish government.
Portentous, prodigious; foreshadowing evil.
Portfolio, a case to hold loose papers, etc.; the office of a minister of state.
Port-hole, an opening in a vessel's side.
Portico, a porch supported by rows of columns.
Portière, a door curtain.
Portion, a part, a share; an inheritance.
Portmanteau, a travelling bag or trunk.
Portraiture, the art of portrait-painting.
Portrayal, the art of portraying or describing.
Position, situation; a principle laid down; attitude; social standing.
Positivism, a system of philosophy based on the acceptance of experienced facts.
Positively, absolutely, certainly, indubitably.
Posse, a body of men.
Possession, the state of owning; that which is owned.
Possessor, he that possesses; a proprietor.
Possibility, the state of being possible.
Post-chaise, a travelling-carriage.
Post-date, to date later than the real time.
Poste restante, a department in a post-office where letters are kept till called for.
Posterior, happening or placed after; later or hinder.
Posterity, succeeding generations.
Postern, a small door or gate; a covered passage under a rampart.
Pos'thumous, born after the death of the father; published after the author's death.
Postilion, one who rides one of the horses in a carriage and guides them.
Post-mortem, after death.
Post-obit, a bond for repayment of money on the death of a person by whose will the borrower hopes to benefit.
Postponement, the act of putting off.
Post-prandial, occurring after dinner.
Postcript, a paragraph added after the signature to a letter.
Postulate, a position to be accepted without proof, an essential condition.
Posture, situation; attitude; state.
Posture-master, one who teaches or practises artificial attitudes.
Potable, drinkable.
Potash, an alkali procured from the ashes of plants.
Potation, a draught; a drinking-bout.
Pot-boiler, a literary or artistic effort produced merely to earn money.
Potency, power, influence, strength.
Potential, powerful; existing in possibility not in act.
Potently, powerfully.
Potion, a draught; a dose of medicine.
Pot-pourri, a dish of meats, etc., cooked together; a mixture of dried flowers, etc.; a medley.
Potsherd, a broken piece of earthenware.
Pot-walloper, an elector of slight qualifications, before the year 1832.
Poulterer, a dealer in poultry.
Poultice, a soft application of meal, etc., for relieving a sore.
Poundage, a certain sum deducted from a pound; payment rated by the weight of the commodity.
Pourparler, a conference to arrange the terms of a treaty.
Poverty, indigence; necessity.
Powerlessness, the state of lacking power.
Practicability, the state of being feasible or possible.
Practice, the habit of doing anything; customary use; the exercise of any profession; performance.
Practise, to do habitually; to exercise any profession; to perform.
Practitioner, one who practises a profession, particularly that of medicine.
Pragmatic, meddling; impertinently busy; interfering.
Prairie, a wide tract of grassy, treeless land.
Praiseworthy, deserving praise.
Prandial, pertaining to a dinner.
Pratique, permission for a vessel to trade with a port after quarantine.
Praxis, practice; an example for practice.
Prayer, a petition to God; an entreaty.
Preach, to discourse publicly on sacred subjects; to proclaim.
Preamble, a preface or introduction.
Prebend, a clerical office in cathedral churches.
Preb'endary, the holder of a prebend.
Precarious, uncertain; depending on another's will.
Prec'atory, relating to prayer; beseeching.
Precaution, a preventive measure; caution exercised beforehand.
Precede, to go before in time, rank, etc.
Prece'dence, the act or state of going before.
Prece'dent, going before.
Prec'edent, anything said or done that may serve as an example to be followed in the future.
Precentor, the leader of a choir.
Preceptor, a teacher; the head of certain houses of the Knights Templars.
Precinct, a boundary; a district within certain limits.
Precious, valuable; of great price.
Precipice, a headlong descent; a steep cliff.
Precipitancy, rash or headlong haste.
Precipitate, to throw headlong; to hurry blindly; to settle at the bottom of a vessel (*chem.*); that which so settles.
Precipitation, the act of precipitating.
Précis, a summary.
Precise, exact; strict; nice; finical.
Precisianism, exaggerated exactness.
Precision, the quality of being precise.
Preclude, to shut out; to hinder.
Precocious, ripe before time; forward.
Preconceive, to form an opinion beforehand.
Preconcerted, arranged beforehand.
Precursor, a forerunner; a harbinger.
Precursory, serving as a forerunner.
Predaceous, in the habit of preying on other animals.
Predatory, plundering; practising rapine.
Predecessor, one who has preceded another in any place or state.

Predestination, the doctrine that everything has been finally foreordained by God.
Predial, relating to farms or land.
Pre'dicable, that may be affirmed of something.
Predicament, a difficult situation; a category or class (*Logic*).
Predict, to foretell.
Predilection, a prepossession in favour of something.
Predominance, prevalence; superiority.
Pre-eminent, surpassing others.
Pre-emption, the right of purchasing before another.
Preen, to adjust the feathers as a bird does.
Preface, an introduction to a book, etc.
Pref'atory, introductory.
Prefect, a governor; the head of a French department.
Pref'erable, more to be desired.
Preference, choice; higher regard.
Preferential, having a preference.
Preferment, advancement to a higher station.
Preglacial, earlier than the glacial period.
Pregnant, being with young; full of meaning.
Prehensile, adapted for grasping.
Prehistor'ic, before the earliest period mentioned in history.
Prejudice, a judgment already formed without proper consideration; bias.
Prelacy, the office of a prelate.
Prelate, an ecclesiastic of the highest order, a bishop.
Prelection, a lecture read in public.
Preliminary, previous; introductory.
Prel'ude, something introductory: an introductory air.
Prelude', to serve as a prelude; to introduce.
Premature, ripe too soon; done, said, etc., before the proper time.
Premeditation, the act of meditating or planning beforehand.
Premier, first, chief; the Prime Minister.
Premise', to say or write previously; to lay down premises.
Prem'ise, proposition antecedently supposed or proved.
Premises, houses or tenements.
Premium, a reward; a sum paid for insurance; payment made for instruction in a trade, etc.
Premonition, previous warning.
Premonitory, giving previous notice.
Preoccupation, previous occupation.
Prepar'atory, serving to prepare; introductory.
Prepense, premeditated.
Preponderance, superiority of weight, power, etc.
Prepossession, previous possession; preconceived opinion; prejudice.
Preposterous, contrary to reason; absurd.
Pre-Raphaelite, belonging to the style of art before Raphael's time; pertaining to the Preraphaelite brotherhood.
Prerogative, an exclusive privilege.
Presage, a foreboding of some future event.
Presbyterian, a member of a religious sect.
Pres'bytery, a body of elders.
Pre'science, foreknowledge.
Prescribe, to lay down authoritatively; to write directions for a remedy.
Prescription, that which is prescribed; a custom continued until it has the force of law.
Prescriptive, established by long use.
Presentation, the act of presenting.
Presentiment, anticipation of something about to happen.
Preservation, the state of being kept from harm or decay.
Preservative, having the power of preserving.
Presidency, the office, etc., of a president.
Presidential, belonging to a president.
Press (the), newspaper literature.
Press-gang, a band of sailors employed to force men into the naval service.
Pressman, a man in charge of a printing press; a journalist.
Prestidigitator, a juggler.
Prestige, literally illusion or fascination; the influence proceeding from recognition of past achievements.
Prestissimo, very quickly (*music*).
Presto, quick; at once.
Presumably, that may be supposed; probably, perhaps.
Presumption, a supposition; over-boldness.
Presumptive (heir), an heir who may be ousted from his right by the birth of a nearer relative.
Presumptuous, arrogant, over-bold, insolent.
Presuppose, to suppose beforehand; to premise.
Pretension, a claim.
Preter'ita, the past; things finished.
Preterite, past; the past tense.
Pretermission, the act of omitting.
Preternatural, different from what is natural.
Pretext, an excuse; a pretence.
Prevailing, predominant; having greater influence.
Prevalence, the state of being predominant or wide-spread.
Prevaricate, to quibble; to avoid a direct reply.
Preventive, tending to hinder.
Previously, beforehand; antecedently.
Prevision, foresight.
Prey, something to be seized and devoured; plunder.
Priceless, invaluable; beyond price.
Prie-dieu, a desk to kneel at in prayer.
Priesthood, the office of a priest; priests.
Priggish, full of conceit or affectation.
Primacy, the office of a primate.
Prima donna, the principal female singer in an opera.
Prima facie, at first sight or appearance.
Primal, first.
Primary, first; chief; original; elementary.
Primate, an archbishop.
Primeval, belonging to the earliest times.
Priming, the powder in the pan of a gun.
Primitive, relating to the beginning; original; old-fashioned; not derivative.
Primogeniture, the state of being the first-born.
Primordial, first, existing from the beginning.
Principal, chief; first in rank, power, etc.
Principia, first principles.
Principle, a fundamental truth; an element; a motive; a rule of conduct.
Prink, to adorn for show.
Priority, precedence in time, place, etc.
Priory, a religious house.
Prism, a solid figure whose two ends are similar, equal and parallel, and its faces parallelograms.
Pristine, ancient, primitive; original.
Privacy, secrecy; retirement, retreat.
Privateer, a private ship fitted out to plunder an enemy's ships.
Privation, the state of being deprived; want.
Privilege, an advantage; right or immunity.
Privily, secretly, privately.
Privy Council, a body of councillors selected by the sovereign to advise him in cases of emergency.
Probability, likelihood; appearance of truth.
Probate, the proving of a will.
Probationer, one who is on trial; a novice.
Probe, a surgeon's instrument; to examine.
Probity, honesty; integrity.
Problematic, uncertain; open to dispute.
Proboscis, the trunk of an elephant; a snout.
Procacity, petulance; insolence.
Pro-cathedral, a church used as a temporary cathedral.
Procedure, the manner or act of proceeding.
Proceeds, produce; the money derived from anything.
Processional, relating to a procession.
Procès-verbal, a statement of facts in connection with a legal proceeding; the minutes of a meeting.
Proclaim, to announce publicly; to promulgate.
Proclamation, announcement by authority.
Proclivity, tendency; inclination.
Procrastination, a putting off; dilatoriness.
Procreation, generation; production.
Procrustean, making conformable by force; bullying.
Proctor, the manager of another's affairs; a university official.
Procumbent, lying down, prone.
Procurator, one who manages another's affairs.
Procure, to obtain; to contrive.
Procuress, a bawd; a female pimp.
Prodigality, waste; excessive liberality.
Prodigious, amazing; monstrous.
Prodigy, a precocious person; something very much out of the ordinary.
Prod'uce, product; that which is yielded.
Produce', to bring forth; to offer to view; to make.
Productivity, the power to produce.
Proem, a preface, an introduction.
Profanation, the violating of anything sacred.
Profanity, irreverent conduct or speech.
Professedly, by open avowal.
Professional, relating to a profession.
Professorial, relating to a professor.
Proffer, to offer; to propose.
Proficient, advanced in any study, art, etc.
Profile, the side-view of the human face.
Profit, gain; pecuniary advantage; benefit.
Prof'ligacy, the quality of being profligate.
Profligate, dissolute; lost to virtue.
Pro forma, for form's sake.
Profundity, depth; depth of knowledge.
Profuseness, lavishness, prodigality.
Profusion, lavishness; abundance.
Progenitor, an ancestor; a parent.
Progeny, offspring; descendants.
Prognostication, a foretoken, a forecast.
Programme, a plan of the order to be followed in an entertainment or series of events.
Progression, motion forward; progress.
Progressive, going forward; improving.
Prohibition, the act of forbidding; an interdict.
Prohibitive, implying prohibition; impossible; excessive.
Pro'ject, a scheme; a plan.
Project', to throw forward; to propose; to scheme; to draw in outline on a new plane.
Projectile, a body impelled forward; a shot.
Prolapse, a displacement of an internal organ.
Prolegom'ena, introductory observations.
Proletarian, relating to the lowest or poorest class of the nation.
Proletariate, the lower classes.
Prolific, fruitful, productive.
Prolix, long, tedious; not concise.
Prolixity, wearisome length.
Proloc'utor, the chairman of Convocation.
Prologue, a preface; an introduction to a play, etc.
Prolongation, a lengthening or delaying.
Promenade, a walk; a place for walking; to stroll in public.
Prominent, standing out; very easily seen.
Promiscuous, mingled in confusion; indiscriminate.
Prom'issory, containing a promise.
Prom'ontory, a headland, a cape.
Promoter, one who promotes; one who advances or assists a movement.
Prompter, one who suggests the words to an actor when he falters.
Promptitude, readiness; quickness.
Promulgate, to publish; to make known.
Prone, lying face downwards; inclined.
Prong, the sharp point of a fork, antler, etc.
Pronoun, a word used instead of a noun.
Pronouncement, a formal declaration.
Pronunciation, the act or mode of utterance.
Procemium, an introduction, a preface.
Proof-sheets, a printer's proofs, i.e., first impressions in printing for correction.
Propaganda, a society for the spreading of principles and opinions.
Propagation, the act of propagating or spreading.
Pro patria, for one's country.
Propeller, that which propels; the screw that drives a vessel forward.
Propensity, a leaning towards; tendency.
Prophecy (*pl.* prophecies), an inspired utterance; a declaration of something to come; a forewarning, a premonition.
Prophesy, to predict, to foretell.
Prophetical, foretelling future events.
Prophylactic, guarding against disease.
Propinquity, nearness in place, time, or blood.
Propitiate, to conciliate; to make propitious.
Propit'iatory, able to propitiate.
Propitious, favourable, kind.
Proplasm, a mould, a matrix.
Proportional, in proportion; corresponding magnitude.
Proposal, an offer; a plan; an offer of marriage.
Proposition, an offer of terms; a proposal; a problem, a theorem (*math.*); a motion before a meeting.
Propound, to offer for consideration.
Propri'etary, an owner; relating to an owner.
Proprietress, a female owner.
Propriety, conformity with established laws of conduct; fitness.
Propulsion, the act of driving forward.
Pro rata, in proportion.
Prorogation, the act of proroguing.
Prorogue', to put off; to adjourn (Parliament).
Prosa'ic, resembling prose; commonplace.
Proscenium, the part of a stage in front of the curtain.
Proscribe, to outlaw; to condemn; to prohibit.
Proscription, the act of proscribing.
Prose, writing or speech not in verse.
Prosecution, legal proceedings against a person; the prosecutors.
Prosecutor, one who institutes legal proceedings against another; one who carries on any scheme, etc.
Proselyte, a convert to some religion, party, etc.
Proselytize, to make proselytes.
Prosiness, the state of being dull or tedious.
Prosody, that part of grammar treating of the laws of versification.
Prosopopœia, a figure by which things are spoken of as persons.
Pros'pect, a view, aspect; expectation.
Prospect', to explore for gold, etc.
Prospective, looking forward; in the future.
Prospectus, a plan of some proposed enterprise.
Prostitute, a base hireling; to misuse for base purposes.
Prostrate, lying at full length; lying at mercy.
Prostration, the act of prostrating; weakness.
Protagonist, a leading character.
Prote'an, changing form with ease; variable.
Protection, defence; shelter; a passport; the supporting of home industries by taxing imports.
Protectionist, one who favours protection, an anti-free-trader.
Protectorate, government by a protector; a system of government involving the protection of a weak nation by a strong one.
Protégé, one under the care or patronage of another.
Protein or **Proteid,** an essential principle in nitrogenous foods.
Pro'test, a solemn declaration of opinion against something.
Protest', to make a protest; to affirm solemnly.
Protestant, one of the reformed faith; a supporter of the Reformation.

Protestation, a solemn declaration; a protest.
Pro'tocol, the original draft of an agreement; a record.
Protomartyr, the first martyr,
Protoplasm, the essence or basis of living matter.
Prototype, the original of a copy; a model.
Protozo'a, the lowest forms of animal life.
Protracted, drawn out; delayed.
Protraction, the act of protracting; delay; a plan.
Protractor, a mathematical instrument.
Protrude, to thrust forward; to project.
Protrusion, the act of protruding.
Protuberance, a prominence, a swelling.
Proven, proved.
Provençal, belonging to Provençe in Southern France.
Proverbial, relating to, or used as a proverb; as well known as a proverb.
Providence, divine care; God; prudence.
Providential, effected by providence; prudent.
Provider, one who provides or supplies.
Provincial, relating to a province; unpolished.
Provincialism, a mode of expression peculiar to a country district.
Provisional, temporarily established.
Provi'so, a condition; a stipulation.
Provocation, that which rouses anger.
Provoc'ative, serving to provoke.
Provoke, to incense; to rouse; to stir up.
Provost, the head of certain bodies; a chief magistrate in Scotland.
Provost-marshal, a military officer who attends to breaches of discipline.
Prowess, bravery; military valour.
Proximate, next; near and immediate.
Proximo, in the next month.
Proxy, a person acting for another; a written authority so to act.
Prude, a woman affecting exaggerated modesty.
Prudent, cautious, discreet.
Prudential, characterised by prudence.
Prudery, the behaviour of a prude.
Prurience, itching desire or appetite.
Pry, to peep narrowly; to peer inquisitively
Psalmist, a writer of psalms or sacred songs.
Psalmody, the singing of psalms; a book of psalms.
Psalter, the Book of Psalms; a psalm-book.
Pseudo, a prefix meaning false or counterfeit.
Pseudonym, an assumed name.
Psyche, a maiden beloved by Cupid; the soul.
Psychical, belonging to the soul or mind.
Psychology, the science of the soul or mind.
Ptomaine, a term for those bodies, generally poisonous, generated in putrefying animal matter.
Puberty, the transition stage from childhood to manhood or womanhood.
Pubescent, arriving at puberty.
Publican, a collector of taxes; an inn-keeper.
Publicity, the state of being generally known.
Public-minded, having regard to the public welfare.
Publisher, one who issues books.
Puce, a brownish shade.
Pucelage, a state of virginity.
Puddler, one who works at converting cast-iron into wrought-iron.
Puerile, childish; foolish.
Puerility, the state of being puerile.
Puerperal, belonging to childbirth.
Pugilism, the act of boxing or fighting with the fists.
Pugilist, one who fights with his fists.
Pugnacious, quarrelsome; inclined to fight.
Pugnacity, quarrelsomeness.
Puisne *(puny)*, younger; lower in rank.
Pu'issance, power, strength, force.
Pu'issant, powerful, strong.
Puke, to vomit.
Puling, whining, crying.
Pullet, a young hen.
Pulley, a wheel moving on an axis with a groove in which a rope runs.
Pullman-car, a well-furnished railway car.
Pul'monary, affecting the lungs.
Pulpit, a stand in church from which the sermon is delivered.
Pulsation, the beating of the pulse; a throb.
Pulverize, to reduce to powder.
Pumice, a hard, porous, volcanic substance.
Puncheon, a perforating tool; a liquid measure.
Punchinello, a buffoon; Punch.
Punctilio, nicety in behaviour and forms.
Punctilious, particular in matters of etiquette.
Punctuality, exactness with regard to time.
Punctuation, the art of putting in the stops in writing.
Puncture, a hole made with a sharp point.
Pundit, a learned Brahmin.
Pungent, sharp to taste or smell; keen.
Punic, relating to the Carthaginians; faithless.
Puniness, feebleness; pettiness; smallness.
Punishable, that may be punished.
Punitive, inflicting punishment.
Punkah, a large fan for ventilating Indian houses.
Punster, one given to making puns.
Pupil, a scholar; a ward; the central portion of the eye encircled by the iris.
Pupilage, the state of being a pupil; wardship.
Pupil-teacher, a pupil learning to teach.
Puppet, a small image moved by wires in a mock drama; one who is made a tool of.
Purblind, near-sighted.
Purchasable, that may be bought.
Purchase, to buy; to acquire by contract; leverage; point d'appui.
Purely, in a pure manner; merely.
Purgative, having the power to purge.
Purgatory, according to the Roman Catholic Church, a state after death in which souls are purified,
Purge, to cleanse; to clear from guilt; to evacuate the bowels.
Purification, the act of making pure.
Purifier, that which purifies.
Purism, exactness in the use of words.
Puritan, a member of a Protestant religious body in the 16th and 17th centuries.
Puritanical, relating to the Puritans; strict.
Purity, freedom from guilt or admixture.
Purlieu, the boundaries of any place; the outskirts.
Purloin, to steal, to take by theft.
Pur'port, to signify, to imply; design, meaning.
Purring, the low murmuring of a cat.
Purse-proud, puffed up with pride of wealth.
Pursuant, conformably with; as a consequence to; in accordance with.
Pursuit, the act of pursuing; endeavour to attain; an occupation.
Pur'suivant, an attendant on the heralds; a State messenger.
Purveyance, the procuring of victuals.
Purveyor, one who provides victuals.
Pus, matter secreted in a festering sore.
Puseyite, a follower of Dr. Pusey; a ritualistic High-Churchman.
Pusillanim'ity, cowardice.
Pusillanimous, cowardly; lacking spirit.
Puss, a name for a cat or a hare.
Pustule, a pimple containing matter.
Putrefac'tion, the state of putrefying.
Putrefy, to decay; to make rotten.
Putrescent, growing putrid.
Putrid, rotten, decaying; corrupt.
Pygmy, a dwarf; very small.
Pyramid, a solid figure tapering to a point; a sepulchral monument in Egypt.
Pyram'idal, having the form of a pyramid.
Pyre, a funeral pile.
Pyretic, a medicine for cases of fever.
Pyrites, a metal containing sulphur in combination.
Pyrom'eter, an instrument for measuring degrees of heat.
Pyrotechnic, belonging to fireworks.
Pyrrhonism, scepticism; universal doubt.
Pythoness, the priestess of the oracle at Delphi; a kind of witch.
Pyx, the sacred box in which the host is kept; the box of specimen coins at the British Mint.

Quackery, pretended skill, especially in medicine.
Quadragesima, the Latin name for Lent; the first Sunday in Lent.
Quadrangle, a square encircled by buildings; a figure having four sides and four angles.
Quadrant, the fourth part of a circle; an instrument for measuring altitudes.
Quadrate, square; divisible into four equal parts; to square with.
Quadrilateral, having four sides.
Quadrille, a dance; a game of cards.
Quadripartite, divided into four parts.
Quadroon, the child of a mulatto and a white.
Quad'ruped, a four-footed animal.
Quad'ruple, fourfold; four times told.
Quaff, to drink; to swallow in large draughts.
Quagmire, a shaking marsh; a bog.
Quail, a bird; to lose courage.
Quaint, out of the common; old-fashioned.
Quaker, a member of the religious Society of Friends.
Qualification, that which makes a person or thing fit for any duty or office; restriction, modification.
Qualify, to fit for anything; to restrict; to modify.
Qualitative, relating to quality.
Qualm, a sudden fit of sickness; a scruple.
Quandary, a difficult situation; a dilemma.
Quantitative, relating to quantity.
Quantity, mass, amount; bulk; a large portion.
Quantum, a quantity; an amount.
Quarantine, a period during which a ship arrived from an infected port is forbidden to hold intercourse with the shore.
Quarrel, a brawl; a falling out between friends.
Quarrelling, disputing, discord, wrangling.
Quarry, a pit from which stone is taken; a hawk's prey; an animal pursued in the chase.
Quart, the fourth part of a gallon.
Quarter-Day, the day when quarterly payments are due; a day occurring four times a year.
Quarter-deck, a part of the upper deck abaft the main-mast.
Quartering, the uniting of two or more coats of arms on a shield; providing with quarters or lodgings.
Quarter-master, an officer in charge of the soldiers' quarters and the stores; a petty officer in the navy.
Quartern, the fourth part of a pint or peck.
Quarter-sessions, a court held quarterly in every county or borough to try criminal cases.
Quarto, a book having the sheet folded into four leaves.
Quartz, a crystalline mineral.
Quash, to crush; to subdue; to make void.
Qua'si, as it were.
Quatrain, a stanza of four lines rhyming alternately.
Quaver, to shake the voice; to vibrate; a note in music.
Quay, a landing-place; a wharf.
Quean, a worthless woman.
Queasy, sick; causing nausea; fastidious.
Queerish, somewhat queer or odd.
Quell, to subdue; to crush.
Quench, to extinguish; to allay; to still.
Querist, one who asks questions.
Querulous, fretful; complaining.
Query *(pl.* queries), a question, an inquiry.
Quest, search; the act of seeking; inquiry.
Questionable, doubtful; disputable; suspicious.
Queue, a pigtail; a string of people waiting to gain admission to a place.
Quibble, to argue over trifling points.
Quicken, to become alive; to stimulate; to hasten.
Quicksand, moving sand; unsolid ground.
Quickset, a living plant set to grow to form part of a hedge.
Quiddity, essence; a trifling nicety.
Quidnunc, one eager to know or pretending to know all the news.
Quid pro quo, a return for something given.
Quiescence, the state of being quiescent.
Quiescent, resting; calm.
Quietude, rest, repose; calmness.
Quie'tus, a final settlement; death.
Quill-driver, a slang term for a clerk or writer.
Quilting, the making of or materials for a quilt.
Quinquagesima, the fiftieth; the name of the Sunday before Lent.
Quinsy, inflammation of the throat.
Quintes'sence, an extract from anything containing all its virtues in a small quantity.
Quire, twenty-four sheets of paper.
Quirk, a cunning evasion; a taunt; a quibble.
Quittance, discharge from a debt or obligation.
Quiveringly, tremblingly.
Qui vive, who goes there? *(military)*; alert.
Quixot'ic, exaggeratedly romantic or chivalrous.
Quizzical, given to quizzing or making fun of.
Quodlibet, a nice point; a subtlety.
Quoit, a flattish ring of iron used in a throwing game.
Quondam, former.
Quorum, a sufficient number of the members of a body to transact business.
Quota, a share; a proportion assigned to each.
Quotation, the act of quoting; a passage quoted; a suggested price.
Quoth, say, said (I); says, said (he).
Quotidian, daily; returning every day.

Rabbi *(pl.* rabbis), a Hebrew word meaning "Master," a teacher of the Jewish Law.
Rabbinical, belonging to the rabbis.
Rabbit-warren, a place where rabbits burrow and breed.
Rabble, a disorderly mob.
Rabidly, in mad fury.
Rabies, a form of madness to which dogs are subject.
Racial, characteristic of a race, peculiar to a race.
Racily, in a smart or jaunty manner; with zest.
Racket, a tennis bat; a tumultuous uproar.
Rack-rent, an unreasonably high rent.
Racy, lively, smart.
Radial, belonging to a ray or to a radius.
Radiance, brightness, glory.
Radiation, act of emitting rays.
Radically, in a thorough manner.
Radish, the root of a plant which is used as salad.
Radium, see *Dict. of Gen. Infor.*
Radius *(pl.* radii), a straight line joining the centre of a circle to any point on its circumference.
Radix, a root.
Rafter, a slanting beam forming one of the supports of the roof of a building.
Ragout, a highly spiced stew.
Ragstone, a kind of siliceous rock.
Raid, an inroad, incursion, descent.
Raillery, mockery, banter.
Rail-chairs, iron blocks in which rails rest and by which they are clamped to the sleepers.
Raiment, dress, apparel.

Rain-gauge, an instrument for measuring the rain-fall.
Raise, to lift.
Raisin, a dried grape.
Raison d'être, justification for existence, justification.
Rajah, a native Indian prince.
Rajpoot, a descendant of the old royal race of Hindostan.
Rake of a ship, the projection of the stern beyond the extreme ends of the keel; the deflection of a mast from the perpendicular.
Rallentando, a musical term denoting that the passage is to be played more slowly.
Rally, to reassemble after a rout; to recover strength after an illness; to banter.
Ramadan, the ninth month of the Mohammedan year, observed as a fast.
Ramification, the spreading out like the branches of a tree.
Ramose, abounding in branches.
Rampant, standing on the hind-legs; aggressive, overleaping bounds.
Ramrod, a rod used for ramming down the charge of a gun.
Ranche, an American term for a grazing farm.
Rancid, putrid.
Rancorous, cherishing ill-will, virulent.
Random, hap-hazard, chance.
Rapacious, greedy, grasping.
Rapacity, greed, voracity.
Rapidity, swiftness.
Rapier, a long slender dagger.
Rap'ine, plunder, violent seizure.
Rappee, a kind of snuff.
Rapprochement, a friendly approach, an approach to a friendly understanding.
Rapt, carried away by ecstasy.
Raptores, birds of prey.
Rapture, ecstasy.
Rapturous, ecstatic.
Rara avis, "a rare bird," some one especially rare and exquisite.
Raree-show, a peep-show.
Rarefaction, the becoming less dense, the expansion of a gas.
Rarefy, to render less dense, to cause to expand.
Rarity, scarcity; something uncommon or rare.
Rascally, villainous, scoundrelly.
Rasure, erasure, scraping out.
Ratable, liable to be taxed; able to be valued at a certain price.
Ratafi'a, a flavouring essence obtained from the kernels of fruits.
Ratchet, a bar which works on a toothed wheel.
Rate, a fixed proportion; a local tax; speed degree of motion; to estimate; to chide.
Rath or **rathe,** early.
Ratification, the act of confirming.
Ratio (*pl.* ratios), proportion.
Ratioc'ination, the act or process of reasoning.
Rational, in accordance with reason, reasonable.
Rationa'le (a-le), the theoretical justification or explanation.
Ratlin or **ratline,** the short horizontal rope forming one of the steps of the rigging.
Rattan, a tall palm with a smooth slender stem used for walking-sticks.
Rattlesnake, a poisonous snake which makes a rattling sound with its tail.
Raucous, hoarse, harsh-sounding.
Ravage, to devastate.
Ravel, to fray out.
Ra'ven, a kind of crow.
Rav'en or **Rav'in,** to go eagerly in quest of prey.
Ravenous, voracious.
Ravine, a rocky defile, chasm.
Ravishment, ecstasy, extreme delight.
Razzia, an Arabic term for a plundering raid.
Reachable, able to be reached; attainable.
React, to act in a counter direction, to act mutually.
Reactionary, acting in the opposite direction, retrogressive, opposing progress.
Readdress, to address anew or afresh.
Readership, the office or function of a reader; a professorship.
Readiness, willingness; state of preparation; ease, facility.
Readjourn, to adjourn again.
Readjustment, a fresh adjustment; a new arrangement.
Readmit, to admit again.
Ready-reckoner, a book of arithmetical tables to aid in speedy calculation.
Reaffirm, to affirm over again or anew.
Reafforest, to turn into forest land again.
Reagent, a chemical substance which by its action serves as a test of the presence of other substances.
Realgar, a compound of sulphur and arsenic.
Realism, the representation in art or literature of things as they are without idealization; the doctrine that general terms represent real existences
Realist, one who in art or literature represents things as they are without idealization.
Reality (*pl.* realities), that which is true or really exists
Realization, the actual attainment of some end; the faculty of realizing.
Realm, kingdom, dominion, sphere.
Real-school, a German school in which modern subjects are taught.
Ream, twenty quires.
Reanimate, to inspire with fresh life.
Reaper, one who cuts and gathers in the harvest.
Reappear, to appear again.
Rear-admiral, the third degree of admiral rank, Admiral, Vice-Admiral, and Rear-Admiral.
Rear-guard, a body of troops appointed to protect the rear of a column.
Rear-mouse, see *reremouse.*
Rearrangement, a fresh arrangement, a readjustment.
Reasonable, in accordance with reason.
Reasoning, the exercise of the reason; the chain of an argument.
Reassemble, to assemble again.
Reassert, to assert over again, to repeat.
Reassurance, a statement which gives renewed confidence; a second insurance.
Rebate, a sum allowed as discount.
Rebeck, a stringed musical instrument.
Rebellion, a revolt against recognized authority
Rebellious, revolting against recognized authority.
Rebuff, a check, a repulse.
Rebus, a pictorial device to illustrate a name, like a picture puzzle.
Rebut, to violently repel.
Recal'citrant, restive, refractory.
Recant, to withdraw a statement.
Recapitulate, to recount the heads of a discourse, to sum up.
Recede, to draw back.
Receipt, a written acknowledgment of money or goods received; the act of receiving.
Recension, the critical re-editing or revision of a text or manuscript.
Recent, late, of late occurrence.
Receptacle, a place for the reception of something.
Reception, the act of receiving.
Receptivity, the power of understanding or of absorbing.
Recess, an interval, vacation: a niche.
Réchauffé, something heated and served up a second time; a tedious reproduction of old ideas.
Recherché, rare and choice.
Recipe, a list of ingredients.
Recipient, the receiver.
Reciprocal, done by each to the other.
Reciprocate, to mutually interchange.
Reciprocity, mutual interchange.
Recital, a narration or enumeration; a musical performance on the organ or piano.
Recitation, the act of reciting.
Re'citative, narrative in song, musical declamation.
Reckless, heedless, daring.
Reckoning, calculation; an account.
Reclaim, to recover; recall to the path of duty.
Recluse, a hermit.
Recognition, the act of knowing again; the act of acknowledging or admitting.
Recog'nizance, a formal obligation undertaken in the presence of a magistrate.
Recoil, to rebound, shrink back.
Recollection, remembrance.
Recommencement, a beginning anew, a renewal.
Recommend, to speak on behalf of, or in favour of.
Recommitment, a second committal.
Recompense, a reward.
Reconcilable, capable of being reconciled.
Reconciliation, the renewal of friendly relations after a quarrel.
Recondite, far-fetched, abstruse; learned.
Recon'naissance, scouting, preparatory observations in military tactics.
Reconnoitre, to take a military survey, to scout.
Reconquest, a winning back by conquest.
Reconstruct, to construct anew.
Recorder, an official who records or registers.
Recoup, to compensate for a loss.
Recourse, resort.
Recovery, a winning back; restoration to health.
Recreant, a coward, a renegade.
Recreative, affording recreation or amusement.
Recrimination, a retort, a counter accusation.
Recrim'inative, making counter charges.
Recrudescent, becoming sore again, breaking out anew.
Recruit, a newly enlisted soldier.
Rectangular, having its angles right angles.
Rectify, to set right, to correct.
Rectilineal, contained by right lines or straight lines.
Rectitude, uprightness, integrity.
Recto, a printer's term for the right-hand page.
Rector, an incumbent of the Church of England who is entitled to the tithes of his benefice; the head of a college.
Recumbent, in a reclining posture.
Recu'perative, restorative.
Recur, to occur again.
Recurrent, occurring again at intervals.
Recurring, occurring again.
Rec'usant, one who obstinately refuses to conform.
Redactor, one who arranges and edits literary material.
Redan', a V shaped field work with the projecting arms facing the enemy.
Red'argue, to refute.
Redeemable, able to be redeemed or reclaimed.
Redemption, the act of buying back or reclaiming.
Redintegration, the act of making whole again.
Rediscovery, a second discovery of the same thing.
Redistribution, the act of distributing anew or in a different manner.
Redivi'vus, restored to life again.
Red'olent, smelling strongly (of).
Redoubt or **redout,** an inner fortification or field-work surrounded by a parapet and detached from the outer defences.
Redoubtable, formidable.
Redound, to turn out, to result, conduce.
Redress, compensation, reparation.
Reductio ad absurdum, the process of reducing an hypothesis to an absurdity and thus proving the truth of the counter hypothesis.
Reduction, the act of reducing, diminution.
Redundancy, excess, superfluity.
Reduplicate, to redouble, repeat.
Re-echo, resound.
Reef, a ridge of rock projecting above the waves.
Re-election, the repetition of an election; the being elected for a second time.
Re-enactment, an enacting again or anew.
Reeve, a bailiff.
Refection, a repast, refreshment.
Refectory, a room in a monastery or other institution, where meals are taken.
Ref'erable, able to be referred or attributed.
Referee', one to whom reference may be made to decide a moot point, an umpire.
Referendum, see *Dict. of Gen. Infor.*
Refinement, delicacy of feeling; an unnecessarily subtle distinction.
Refinery, a factory where sugar and other substances are purified.
Reflection, thoughtful meditation; a reflected image; implied censure.
Reflective, referring back, or bending back.
Reflex action, involuntary movements due to the action of a stimulus from the surface upon a nerve centre.
Reformation, an amendment.
Reformatory, an institution for the reclaiming of youthful criminals.
Refraction, the bending or deflection of a ray of light as it passes through a new medium.
Refractory, perversely obstinate, recalcitrant.
Refrain, to abstain; the burden of a song.
Refrangible, able to be refracted or deflected.
Refreshment, that which refreshes, food.
Refrigerator, an ice machine, a freezing machine.
Refugee, one who has fled for refuge.
Refulgence, a bright glow.
Refund, to pay back again.
Refurbish, to polish up or deck out anew.
Refusal, the act of refusing or rejecting.
Refuse, to withhold consent; to reject.
Ref'use, rejected rubbish.
Refutation, the act of disproving.
Refute, to disprove.
Regal, royal, kingly.
Regale, to feast.
Regalia, the crown jewels.
Regally, in a royal manner.
Regardless, heedless, careless (of).
Regatta, a series of yacht or boat races.
Regency, the rule of a regent.
Regeneration, the process of recreating or being recreated, reformation.
Regent, a deputy ruler.
Regicide, one guilty of the murder of a monarch.
Regi'me, rule, government.
Regimen, regulated or prescribed diet.
Regiment, a body of troops under the command of a colonel.
Regimentals, the uniform of a regiment.
Region, a district.
Registered, inscribed in an official register.
Registration, the act of recording or being recorded in a register.
Registry, an official record of names.
Regius, royal, appointed by the crown.
Regius professor, a professor whose chair was founded by the Crown.
Regnal, belonging to the reign of a sovereign.
Regnant, ruling or reigning.
Regrate, to buy and then resell in the same market at a higher price.
Regression, the act of returning to the original position.
Regrettable, deplorable.
Regularity, conformity to rule, uniformity.

Regulate, to reduce to rule, to put in order.
Regulation, a rule, an ordinance.
Regurgitation, the process of being reabsorbed.
Rehabilitate, to reinstate.
Rehearsal, a preliminary performance.
Rehearse, to perform beforehand.
Reichsrath, legislative assembly of Austria.
Reichstag, legislative assembly of Germany.
Reilluminate, to re-enlighten.
Reimbursement, a refunding, recouping.
Reindeer, a deer which is a native of Arctic regions.
Reinforcement, an additional force sent to strengthen an army.
Reins, bridle-straps; the kidneys.
Reinsert, to insert again.
Reinstate, to restore to a former position, rehabilitate.
Reiterate, to repeat continually.
Reiteration, the act of continually repeating.
Rejection, refusal to accept.
Rejoicing, joy or exultation.
Rejoinder, a reply or retort.
Rejuvenate, to restore to youth.
Rejuvenescent, growing young again.
Relapse, a falling back.
Relate, to narrate; refer, concern.
Relation, narration; connexion; one who is related or akin.
Relaxation, relief from strain or tension; recreation.
Relay, a relief supply.
Release, a setting at liberty, deliverance.
Relegate, to banish, dismiss.
Relent, to relax severity, to feel compunction for past severity.
Relentlessly, without compunction or pity, ruthlessly.
Relevance, pertinency.
Reliable, trustworthy.
Reliance, confidence, trust.
Relic, that which remains as a personal memorial, souvenir.
Relict, a widow.
Relief, release from something arduous or painful; a raised design.
Relieving, affording relief or release.
Relievo, a raised design.
Religieuse, a nun.
Religion, the belief in a supernatural power governing the universe and claiming obedience and adoration.
Religious, belonging to religion; devout, pious.
Relinquish, to give up, abandon.
Reliquary, a casket for holding sacred relics.
Reli'quiæ, remains, especially fossil remains.
Reluctance, unwillingness, disinclination.
Relumine, to rekindle.
Rely', to depend.
Remainder, that which remains or is left.
Remand, to commit to prison again pending trial.
Remarkably, in a marked manner, noticeably, extremely.
Reme'diable, able to be remedied.
Rem'ediless, without remedy, past cure, hopeless.
Rem'edy, a cure.
Remember, to bear in mind, call to mind.
Remembrance, the act or faculty of remembering; memory; a memento, souvenir.
Reminis'cence, a recollection.
Reminis'cent, recalling to the memory.
Remission, the act of remitting or excusing.
Remissness, laxity, neglect of duty.
Remit, to pardon, excuse; to send or despatch.
Remittance, a sum of money sent or despatched.
Remnant, what is left.
Remon'strance, expostulation, dissuasion.
Remon'strate, to expostulate.
Remorse, compunction, unavailing regret.
Remorseless, ruthless, pitiless.
Remote, far removed, distant.
Remould, to cast in a new mould, to fashion anew.
Removable, able to be removed.
Removal, the act of removing.
Remunerate, to recompense.
Remu'nerative, profitable, paying.
Renaissance, a revival, especially the 'revival of learning.'
Renascence, a coming to life again, a revival.
Rencontre, an unexpected meeting.
Rendezvous, an appointed or customary place of meeting.
Renegade, a cowardly deserter of his party, a traitor to his cause.
Renewal, the act of renewing.
Rennet, a preparation used for curdling milk.
Renounce, to forswear, give up, abandon.
Renovate, to renew.
Renovation, the process of restoring or repairing.
Renowned, celebrated, famous.
Rental, the annual rent.
Rentes, funds or government stock.
Rent-roll, a record or register of rents due to the owner.
Renunciation, the act of renouncing.
Reoccupy, to occupy anew.
Reorganization, the process of reconstituting or setting on a fresh footing.
Repair, to mend, restore; to betake oneself.
Rep'arable, able to be repaired.
Repartee', a witty retort.
Repast, a meal.
Repatriate, to restore to one's country.
Repayable, able to be repaid.
Repeal, to revoke, rescind.
Repeatedly, time after time, constantly.
Repel, to repulse; to cause repulsion.
Repellent, repulsive; repelling.
Repentance, sorrow for wrong-doing, contrition.
Repercussion, reverberation.
Rep'ertoire, a list of works which a performer is ready to perform.
Rep'ertory, a store-house, treasury.
Repetition, the act of repeating; recitation; tautology.
Repine, to complain, to murmur.
Replenishment, the act of renewing a supply.
Replete, fully supplied or furnished.
Repletion, satiety.
Replevin, the recovery of goods seized for debt under a pledge to submit the case to legal decision.
Rep'lica, a copy of a work of art made by the original artist.
Reporter, one who takes notes of public speeches with a view to publication.
Repository, a warehouse, a place where goods are stored.
Repoussé, raised designs on beaten metal.
Reprehend, to blame, censure.
Reprehensible, culpable, blamable.
Representation, the act of representing; a pictorial or dramatic reproduction; the statement of a case.
Representative, one who stands in the place of another; one who is deputed to represent the views of others, a delegate; characteristic.
Repressible, able to be repressed or checked.
Reprieve, the postponement or suspension of capital punishment; a temporary respite.
Reprimand, to reprove, censure.
Reprisal, an act of retaliation.
Reproachful, expressing reproach or disapproval.
Rep'robate, a hardened sinner.
Reproduce, to make a copy or a reproduction; to beget.
Reproduction, a copy, a representation.
Reproof, a reprimand.
Reprove, to reprimand, censure.
Reptation, the act of crawling or creeping.
Reptile, an animal that crawls on its belly.
Republic, a state in which the supreme authority is in the hands of representatives chosen by the people.
Republican, one who is in favour of a republic.
Republication, a second publication, a reissue.
Repudiation, the act of disclaiming or refusing to acknowledge.
Repugnant, displeasing, repellent, distasteful.
Repulsive, causing repulsion or strong dislike.
Rep'utable, of good report.
Repute, report, hearsay.
Reputedly, by report or hearsay.
Request, a petition.
Requiem, a mass for the dead.
Requiescat in pace, "may he rest in peace."
Require, to need; demand, request.
Requisite, needful, necessary.
Requisition, a formal demand.
Requi'tal, the act of requiting, paying back or recompensing.
Reredos, a decorative screen at the back of an altar.
Rescind, to repeal, abrogate.
Rescission, the act of rescinding.
Rescript, the official answer of a pope or monarch, an imperial edict.
Rescue, to deliver, to reclaim.
Research, investigation, especially scientific investigation.
Resemblance, likeness, similarity.
Resentment, anger caused by a sense of injury.
Reservation, the act of keeping back or withholding.
Reservoir, a huge tank where water is stored up for the supply of the public.
Residence, a place of abode.
Residential, belonging to residences, containing residences.
Residentiary, one who by virtue of his office is obliged to have a certain residence, or to reside for a fixed time.
Residual, consisting of the residue or what is left.
Residuary, belonging to the residue.
Residue, what is left; the remainder.
Residuum, what is left behind, the lees, sediment.
Resignation, patient submission.
Resilience, a rebounding, elasticity.
Resinous, like resin.
Resistance, the act of holding out or withstanding.
Resistless, not to be resisted, irresistible.
Resolute, firm, determined.
Resolution, firmness, determination; a formal decision.
Resolvent, able to cause solution.
Resonance, the power to give back or reflect sound.
Resonator, a board or device for causing resonance.
Resorption, the gradual absorption of an organ.
Resource, a source of help, something to have recourse to.
Respectability, state of being respectable or reputable.
Respectfully, in a respectful manner.
Respiration, the act of breathing.
Respiratory, belonging to respiration.
Res'pite, temporary relief from pain or anxiety.
Resplendent, splendid, gorgeous.
Respondent, one who replies to a charge or a challenge in court of law.
Responsible, accountable, liable; involving responsibility.
Responsions, the preliminary examination at the Oxford University.
Responsory, returning answer.
Restaurant, a place where refreshments are served.
Restau'rateur, one who keeps a restaurant.
Restitution, the act of restoring, or making reparation for, what has been wrongfully taken.
Restive, chafing at restraint.
Restor'ative, something which has power to restore.
Restraint, check, controlling power.
Restrictive, limiting, imposing restrictions.
Resultant, that which results from a combination of causes.
Resume, to take up again; repeat.
Résumé, a brief summary.
Resumption, the act of resuming.
Resurgam, "I shall rise again."
Resurgent, rising again.
Resurrection, the act of rising again after death.
Resuscitate, to restore to life again, reanimate.
Resuscitation, the act of bringing to life again, restoring.
Re'tail, the sale of small quantities of an article.
Retail', to pass on second-hand information.
Retaliation, the rendering of evil for evil.
Retal'iatory, returning evil for evil.
Retardation, the diminution of the rate of motion.
Retention, the act of retaining.
Retentiveness, tenacity of memory.
Reticence, silence, reserve.
Reticular, in structure like the meshes of a net.
Reticule, a small work-bag; a telescope glass covered with a fine net-work of lines.
Retiform, like the meshes of a net in structure.
Ret'ina, the inner coating of the eye which receives impressions from without.
Retirement, seclusion; the act of withdrawing.
Retouch, to put the finishing touches to.
Retract, to withdraw (a statement).
Retraction, the act of withdrawing a statement.
Retreat, a place of retirement or seclusion; to go back.
Retrenchment, a curtailing of expense.
Retribution, inevitable punishment following upon wrong-doing.
Retrib'utive, of the nature of retribution.
Retrievable, capable of being retrieved.
Retrieve, to regain, to recover what has been morally lost.
Retriever, a dog specially trained to find out and fetch game which has been shot.
Retroactive, having a backward action.
Retrocession, the act of receding or going back.
Retrograde, moving backward.
Retrospect, a survey of the past.
Retrospective, of the nature of a retrospect.
Retroussé, up-turned.
Returning-officer, an officer who superintends an election and announces the result.
Return-match, a second match played by the same opponents.
Reunion, a meeting again after parting.
Revaccinate, to vaccinate again.
Reveal, to disclose, make manifest.
Reveille (re-vell-y), the morning bugle-call to the soldiers, or summons to awake.
Revelation, a disclosure, a manifestation.
Revelry, riotous feasting or merriment.
Revengeful, vindictive.
Revenue, annual income, especially the income of a state.
Reverberation, a resounding, re-echoing.
Revere, to regard with reverence.
Reverence, a feeling of veneration.
Reverend, worthy to be revered; the title accorded to ministers of religion.
Reverent, full of awe or veneration.
Reverential, behaving with reverence.
Reverie, deep absorption, meditation.
Reverse, the exact opposite; a defeat.
Reversible, able to be reversed.

Reversion, the act of reverting or going back to an original type; a postponed right to possession.
Revetment, a retaining or facing wall.
Review, to look at carefully, inspect; to pass a criticism upon.
Revile, to abuse, to address in scurrilous language.
Revision, a looking over again carefully; a reconsidering.
Revival, a reawakening, a recovery of life.
Revivalist, a preacher who strives to effect a religious awakening.
Revivify, to inspire with new life and vigour.
Revocation, the repeal or recall.
Revoke, to repeal or annul.
Revolt, to rebel; to produce a feeling of repulsion.
Revolting, repulsive.
Revolutionary, tending to, or favouring, revolution.
Revolutionize, to put on an entirely new footing, to reconstitute.
Revolve, to travel round in a circle; to turn over and over in the mind, to ponder.
Revolver, a pistol.
Revulsion, a sudden change of feeling causing a recoil.
Reynard, a fox.
Rhabdomancy, divination by means of a rod.
Rhadamanthine, stern, severe.
Rhapsodical, extravagant in language.
Rhapsody, a wild excited utterance.
Rhenish, belonging to the Rhine.
Rheom'eter, an instrument for measuring the strength of an electric current.
Rhetoric, the art of persuasive oratory, art of eloquence.
Rhetor'ical, belonging to rhetoric; eloquent.
Rhetori'cian, one skilled in oratory.
Rheum, phlegm, catarrh.
Rheumatism, (see *Med. Dict.*).
Rhinal, pertaining to the nose.
Rhinoc'eros, a thick-skinned African river quadruped.
Rhododendron, an evergreen shrub which bears beautiful rose-like flowers.
Rhomboidal, shaped like a rhomboid, i.e., a parallelogram, which is neither equiangular nor equilateral.
Rhubarb, a juicy plant much used for food; a root used as a medicine.
Rhyme, similarity of sound in the final syllable or syllables of lines of verse.
Rhymster, an indifferent poet who writes rhyming verses.
Rhythm, the regular recurrence of accent.
Rhythmical, having rhythm.
Ribaldry, scurrility, vulgar and offensive language.
Ribbon or **riband,** silk or velvet woven into a narrow strip.
Riches, wealth, opulence.
Ricochet (ric-o-shay), to rebound and skim along the surface of the ground.
Riddance, the act of freeing from an encumbrance.
Ridicule, mockery.
Ridiculous, absurd.
Rife, prevalent.
Rifle-corps, a body of men armed with rifles.
Rifle-range, a practising-ground for rifle shooting.
Rigadoon, a lively French dance for two people; the music for this dance.
Right of way, legal right to pass through another man's property.
Righteous, upright.
Rigidity, stiffness.
Rigmarole, a long confused story.
Rigorous, strict, exacting.
Rigour, severity.
Rind, the outer husk or skin of a fruit.
Rinderpest, a disease which attacks cattle.
Ring-fence, an encircling fence.
Ringleader, one who takes the lead in mischief.
Ringworm, a skin disease which attacks the head especially and appears in rings.
Rinse, to cleanse with water.
Riotous, disorderly, tumultuous.
Riparian, belonging to the bank of a river.
Risibility, tendency to laugh.
Ritual, a series of prescribed rites; formality in religious practices.
Ritualism, love of ritual.
Rivage, the banks of a river.
Rivalry, emulation.
Riveter, one who fastens or clinches bolts and rivets.
Road-metal, small broken stones used for making roads.
Roadstead, a place where ships can ride at anchor.
Roan, reddish brown.
Robbery, the act of robbing.
Roburite, a kind of explosive.
Robust, strong, hale.
Rochet, a bishop's surplice.
Rock-crystal, a transparent variety of quartz.
Rocket, a firework which can be hurled through the air with a line attached for saving life at sea.
Roco'co, a form of architecture characterized by excessive ornament.
Rodent, gnawing; one of a class of animals to which the rabbit and squirrel belong.
Rodomontade, empty boasting, foolish ranting.
Roe, a female deer; the spawn of fishes.
Rogation, supplication.
Rogue, a dishonest person; a child full of fun and mischief.
Roguery, dishonesty.
Roguish, like a rogue, mischievous, frolicsome.
Roister, to be riotously noisy, to bluster, bully.
Rôle, the special part which a person plays or is fit to play.
Romaic, a modern form of Greek.
Romance, a term applied to those modern languages which are derived from Latin; a highly imaginative tale which borders on the impossible.
Romanesque, a style of architecture based on the Roman style.
Romanic, belonging to, or derived from, the Romans.
Romanticism, romantic or imaginative style in literature.
Ro'many or **rommany,** the language of the gipsies.
Rondeau, a short rhymed poem containing a refrain.
Ronion or **ronyon,** an animal or person subject to mange.
Rood, a cross.
Rood-screen, a screen separating the choir from the nave, and surmounted by a cross.
Rookery, a place where rooks congregate; a thieves' quarter.
Rooster, the domestic fowl.
Rope-walk, a long narrow walk where ropes are made.
Rosary, a string of beads with the help of which some count their prayers.
Roscius, an actor.
Roseate, rosy in hue.
Rose'mary, a fragrant plant.
Rosette, a rose-shaped ornament.
Rosewood, the rose-scented wood of a Brazilian tree.
Rosicrucian, belonging to the secret society of the Rosicrucians.
Rosinante, a worthless nag, like Don Quixote's Rosinante.
Roster, an official list of names, a roll.
Rostrum, a raised platform from which a speaker addresses an assembly.
Rotary, revolving like a wheel.
Rotation, regular order or sequence which recurs, movement like that of a wheel.
Ro'tatory, having a circular or wheel-like motion.
Rote, the mechanical repetition of something to be, or already, learnt.
Rotund, round in shape.
Rotunda, a round building with a dome.
Rotundity, roundness.
Roué, a dissipated man.
Rouge, a red powder used as a cosmetic.
Rouge-et-noir, a game of chance played with cards.
Rough-cast, roughly moulded; a kind of mortar containing gravel used as a coating for walls.
Rough-hewn, roughly shaped, unfinished.
Rough-riders, men who can ride horses which have not been broken in; irregular cavalry.
Roulette, a game of chance played with an ivory ball on a green table.
Roundelay, a song in which the various parts are repeated.
Roundhead, a name given to the Parliamentary soldiers in the time of Charles I.
Round-number, an approximate calculation, a rough estimate.
Round-robin, a written protest from a number of people to which their signatures are appended in the form of a circle.
Roup, a Scotch term for a sale by auction.
Rousing, having the power to rouse, startling.
Route, the road taken, the line of march.
Routine, the daily round of duties.
Rowan, the mountain ash.
Rowdyism, rough disorderly conduct.
Rowel, the sharp pointed wheel of a spur.
Rowlock, the groove on the side of a boat in which the oar rests.
Royalist, an advocate of the monarchical form of government; an adherent of the royal cause.
Royalty, the state of being royal; the royal family.
Rubescent, growing red, blushing.
Rubicon, the dividing line, the boundary line, named after a river in Italy.
Rubi'ginous, rust-coloured, mildewed.
Rubbing, friction; an impression obtained by rubbing from a brass or other engraved surface.
Rubi'go, mildew, a kind of rust on plants.
Rubric, the directions in the prayer-book for the conduct of services originally printed in red type.
Ruby (*pl.* rubies), a dark red transparent stone of great value.
Rudder, the blade of the steering apparatus; the handle is called the tiller.
Ruddiness, a red glow, a red complexion.
Rudiment, a first beginning, an element.
Rudimentary, elementary, embryonic.
Rueful, full of rue or sorrow, piteous.
Ruffianly, like a ruffian, brutal.
Rugose, wrinkled.
Rugosity, the state of being wrinkled.
Ruination, act of ruining; ruin.
Ruinous, causing ruin; in a ruined condition.
Ruminant, an animal that chews the cud.
Ruminate, to chew the cud; to ponder, reflect.
Rummage, a disorderly heap, a state of confusion or disorder.
Rumour, an unconfirmed report.
Rum-shrub, an alcoholic drink containing rum and lemon juice.
Runic, the old Gothic and Scandinavian writing or character.
Rupee, an Indian coin of varying value, nominally worth about two shillings, but actually worth considerably less.
Rupture, a breach; hernia (see *Med. Dict.*).
Rural, rustic, belonging to the country.
Ruridecanal, belonging to a rural dean.
Russ, Russian.
Russophile, a friend or lover of Russia.
Russophobia, fear of Russia.
Rustic, rural, countrified.
Rustication, the temporary banishment of a student from a university for misconduct.
Ruthless, merciless, pitiless.

Sabaoth, a Hebrew word meaning "hosts" or "armies."
Sabbatarian, one who observes the Sabbath strictly.
Sabbath, the day of rest.
Sable, a costly brown fur; black, dark in hue.
Sab'ot, a wooden shoe.
Sabre, a cavalry sword with a one-edged curved blade.
Sabretache, a leather pocket worn by a cavalry officer suspended from the belt.
Sabulous, sandy.
Saccharin, a substitute for sugar obtained from coal-tar.
Saccharine, of the nature of sugar.
Sacerdotal, belonging to the priesthood.
Sachet, a little packet of perfume, a scented case for gloves or handkerchiefs.
Sackcloth, coarse cloth of which sacks are made, once worn as a sign of mourning.
Sacramental, belonging to, or of the nature of, a sacrament.
Sacred, hallowed, holy.
Sacrifice, a victim slain and offered to a deity; the giving up of something for the benefit of another.
Sacrificial, belonging to a sacrifice.
Sacrilege, the act of profaning or laying violent hands upon some sacred object.
Sacrilegious, guilty of sacrilege, of the nature of sacrilege.
Sacring, consecrating.
Sacristan, a church official who has charge of the sacred vessels.
Sacristy, the chamber in which the sacred vessels of a church are kept.
Sacrosanct, peculiarly sacred.
Sacrum, the triangular bone at the lower end of the spinal column.
Saddlery, leather goods such as saddles and bridles.
Saddle-tree, the wooden framework of a saddle.
Sadducee, a member of a Jewish sect who maintained that there was no resurrection.
Safe-conduct, a permit to pass through a district in safety without being molested.
Safety-lamp, a lamp with a wire-gauze covering for use in mines where there may be dangerous gases.
Safety-valve, an escape valve for steam to relieve the strain of undue pressure.
Saffron, a deep yellow dye obtained from a kind of crocus.
Saga, a national story embodying the early history of the Scandinavian nations.
Sagacious, intelligent, shrewd, discerning.
Sagacity, shrewdness, intelligence.
Sagittate, arrow-headed.
Sahara, a sandy desert in the north of Africa.
Sahib, a title of respect applied by natives of India to Europeans.
Saint Simonism, a socialistic system named after its originator, Count de St. Simon.
Saintliness, saintly conduct, holiness of life.
Salaam, "Peace," an Eastern word of greeting.
Salacious, lustful.
Salamander, a metal utensil for browning meat; a fabulous animal supposed to live in flames.
Salangane, a swift that builds an edible nest.
Salaried, endowed with a salary.
Salary, regular payment for services rendered.
Saleable, fit for sale, able to be sold.
Salesman, a shopman.
Salient, prominent, striking; any angle less than two right angles.

Sali'ne, having the properties of salt, consisting of salt.
Sali'va, the fluid secreted in the mouth.
Salle-à-manger, a dining-room.
Sallow, pale yellowish white; a kind of willow.
Sally (*pl.* sallies), the act of rushing out unexpectedly upon the enemy.
Sally-port, a gate in a fortress through which a sally may be made.
Salmagundi, a savoury dish of several ingredients, a medley.
Salmon, a fish with deep pink flesh.
Saloon, a large reception room.
Saltation, a leaping or bounding.
Saltire, a diagonal cross.
Salt-junk, hard salt beef, a staple article of sailors' diet.
Salt-pan, a shallow pan in which salt is obtained from sea-water by evaporation.
Saltpetre, a compound of nitric acid and potash.
Salubrious, beneficial to health.
Salutary, wholesome, morally beneficial.
Salutation, a greeting.
Salute, to greet, to offer a formal greeting to.
Salvage, money paid by the owner of goods to those not in his employment for saving them from fire or shipwreck.
Salvation, the act of saving; safety, redemption.
Salve, ointment.
Salver, a tray.
Salvo, a volley fired as a salute.
Sal-volatile, salts of ammonia.
Samaritan, a native of Samaria, a charitable person.
Samian, belonging to the island of Samos; a kind of earthenware.
Samite, a heavy rich silk fabric.
Samovar, a Russian tea urn.
Sample, a representative specimen.
Sampler, a piece of canvas embroidered in cross-stitch with the alphabet and name and age of the worker.
Sanatorium, an institution to which people resort for medical treatment.
Sanatory, connected with health, healthful.
Sanctify, to make holy.
Sanctimonious, affectedly pious.
Sanctimony, an affectation of piety.
Sanction, permission.
Sanctity, holiness.
Sanctuary, a sacred building; a place of refuge.
Sanctum, a private room.
Sanctus-bell, a bell rung at the sacring of the mass.
Sandal, a shoe consisting of a sole furnished with straps for binding on the foot.
Sand-bag, a bag of sand used as a protection against the enemy's fire.
Sand-blast, sand propelled by a current of air against a glass or metal surface to mark it.
Sand-blind, semi-blind, purblind.
Sandwich, two slices of bread and butter put together with a layer of meat, etc., between.
Sang-froid, coolness, calmness, freedom from agitation.
Sanguinary, involving much bloodshed.
Sanguineous, like blood, sanguine.
Sanguin'olent, sanguine, blood-red.
Sanhedrin, the national council of the Jews.
Sanitary, relating to health, health-promoting.
Sanitation, the arrangements for keeping houses in a wholesome condition by the removal of waste products.
Sanity, the state of being sane, soundness of mind.
Sanscrit, the ancient language of India, now a dead language.
Sans-culotte, a republican at the time of the French Revolution.
Santon, a dervish.
Sapient, wise.
Saponaceous, soapy.
Sapor, taste or flavour.
Sapper, a soldier who saps or mines, a soldier in the Royal Engineers.
Sapphire, a transparent gem of a rich blue colour.
Saraband, a stately Spanish dance.
Saracen, a name formerly given to the Mohammedans of Palestine and Arabia.
Sarcasm, biting satire or irony.
Sarcastic, caustic, ironical, bitterly satirical.
Sarcenet, a thin silk.
Sarcoph'agus, a stone coffin.
Sard, a deep red variety of quartz.
Sardine, a small fish much used for food preserved in oil.
Sardon'ic, bitterly mirthful.
Sargasso, a sea-weed which has given its name to the Sargasso Sea, a portion of the Atlantic.
Sartorial, belonging to a tailor's craft.
Sassafras, a North American aromatic shrub possessing medicinal properties.
Sassenach, the Highland name for a Saxon.
Satanic, belonging to Satan, fiendish, diabolical.
Satchel, a little sack or bag, generally worn suspended by a strap.
Sateen, a cotton material with a glossy surface like satin.
Satellite, a small orb which revolves round a larger planet; one who always follows in the wake of another.
Sati'ety, surfeit, repletion.
Satirical, sarcastic, ironical.
Satirist, one skilled in satire, a writer of satire.
Satisfaction, contentment; amends, reparation.
Satisfactory, giving satisfaction.
Satisfying, productive of satisfaction, appeasing hunger.
Satrap, a Persian title for the ruler of a province.
Saturate, to steep or soak thoroughly.
Saturnalia, a festival of Saturn, a wild unrestrained revel.
Sat'urnine, gloomy in disposition.
Satyr, a mythological woodland deity half man half goat, a wanton person.
Saucer, a shallow basin to hold a cup.
Sauciness, pertness, impertinence.
Sauer-kraut, a dish common in Germany made of a preparation of fermented cabbage.
Saunterer, one who strolls along in a leisurely manner.
Saurian, a scaly reptile such as the lizard and crocodile.
Sausage, a skin filled with meat chopped and seasoned.
Savagery, the state of being uncivilized or barbarous.
Savanna, one of the treeless plains of North America.
Savant, a learned man.
Saveloy, a kind of sausage.
Saviour, one who saves, the Redeemer.
Savoir-faire, the knowledge of how to act in social matters, readiness, tact.
Savoir-vivre, the knowledge of how to behave, good-breeding.
Savory, an aromatic herb resembling thyme.
Savour, taste, flavour.
Savouriness, state of being savoury or pleasing to the taste.
Savoyard, an Italian organ-grinder.
Saw, a proverbial saying or maxim; a toothed implement for sawing.
Sawyer, one who saws.
Saxifrage, a kind of rock plant.
Scabbard, sword-sheath.
Scaffolding, a temporary erection of planks and wooden poles.
Scagliola, a kind of plaster polished and coloured so as to resemble marble.
Scald, a Scandinavian poet who in olden times recited his songs on great occasions.
Scale-beam, the beam of a scale or balance.
Scalene, a triangle having its sides and angles unequal.
Scaling-ladder, a ladder used in scaling an enemy's wall.
Scallop or **scollop,** a shell-fish with two fan-shaped and fluted shells.
Scalpel, a small surgical knife.
Scan, to scrutinize; to divide a line of poetry into feet and mark the accented syllables.
Scandalize, to shock.
Scandal-monger, one who retails scandal.
Scandalous, shameful, outrageous.
Scandinavian, belonging to Scandinavia (Norway and Sweden).
Scansion, the division of a line of poetry into metrical feet and the marking of the accented syllables or the quantities (in classical verse).
Scantiness, scarcity.
Scantling, a little bit, a small portion.
Scape-goat, a goat which was annually sent away into the wilderness by the Jewish High Priest after the sins of the people had been symbolically laid upon it; one who suffers for the sins of another.
Scapula, a shoulder-blade.
Scapular, a monastic garment worn on the shoulders.
Scarab or **scarabee,** a beetle, a jewel cut in the shape of a beetle.
Scarcity, dearth.
Scare-crow, a grotesque figure set up to scare the crows; any person dressed in an unsightly manner.
Scarf, a long strip of silk, lace or wool for wearing round the neck.
Scarlatina, a contagious fever characterized by a scarlet rash.
Scarlet, bright red.
Scarp, a steep incline.
Scarpines, instruments of torture for the feet.
Scathe, harm, injury.
Scaur, a steep rocky cliff.
Scavenger, a street cleaner.
Scene-painter, one who paints stage scenery.
Scenery, a view, landscape.
Scenic, belonging to a scene, dramatic.
Scent, odour; sense of smell.
Sceptic, a disbeliever.
Scepticism, a state of disbelief.
Sceptre, a rod used as a symbol of sovereignty.
Schedule, a list, catalogue.
Scheme, a plan, design.
Scheming, planning, designing.
Scherzo, a lively movement forming part of a musical composition.
Schiedam, a kind of gin.
Schism, a sundering, division, a breach of unity in religious matters.
Schismatic, one guilty of schism, a heretic.
Schist, rock such as slate composed of plates or layers one above another.
Schnapps, a kind of gin.
Scholar, a learned and cultured person; a pupil; one who holds a scholarship.
Scholastic, belonging to learning.
Scholasticism, a love of abstruse and subtle criticism.
Schoolast, one of the early commentators on the classics.
Scholium, a critical note on the ancient classics by one of the early commentators.
Schooner, a swift sailing vessel with two or three masts.
Schottische, a dance something like a polka.
Sciagraphy, the art of shading correctly or delineating shadows; a design showing a vertical section of a building; the art of telling the hour by means of the shadow of the sun.
Sciatica, (see *Med. Dict.*).
Science, knowledge, systematic knowledge arrived at by a series of close observations and experiments.
Scientific, belonging to science, in accordance with science.
Sci'entist, one who is versed in science or occupied in scientific investigation.
Scimitar, a curved and single-edged Eastern sword.
Scintillate, to sparkle, to emit sparks.
Sciolism, superficial knowledge.
Sciolist, one who has a superficial knowledge of many subjects.
Sciomachy, a fighting with shadows, a vain strife.
Sciomancy, the attempt to prophesy by means of the shades of the dead.
Scion, graft, shoot; offspring, descendant.
Scission, a sundering, division.
Scissors, a two-bladed steel implement for cutting.
Scoffer, one who mocks or jeers.
Sconce, a bracket to hold a candle; a small fort.
Scorbu'tic, suffering from scurvy.
Scorch, to parch, to singe; to ride a bicycle at a dangerous speed.
Score, a notch, the number twenty; the reckoning; a register of the points gained in a game; the manuscript or printed reproduction of a piece of music; to make a deep line or groove.
Scoriaceous, like cinders from a volcano.
Scornful, contemptuous.
Scorpion, a reptile with lobster-shaped claws and a powerful sting.
Scot, one of Scotch race; a tax or contribution.
Scotch, belonging to Scotland (see *Scottish.*)
Scot-free, free from payment of *scot.*
Scotticism, an idiom or form of speech peculiar to Scotland.
Scottish, a form preferable to Scotch, as *Scotsman* is to *Scotchman.*
Scoundrel, a rascal, villain.
Scour, to make clean by friction; to traverse hastily.
Scourge, a whip of leather thongs; a plague.
Scout, to go out to obtain information about the enemy; to reject contemptuously.
Scowl, an angry frown.
Scrabble, to scrawl; to scratch; to withdraw from competition.
Scragginess, leanness.
Scrannel, thin, piping, squeaking.
Scrap-iron, bits of old iron for melting down again.
Scratch, to scrape the surface; to scrape together.
Scrawl, to write carelessly.
Scream, to utter a sharp shrill cry.
Screech, to utter a harsh scream.
Screed, a long wordy written narrative.
Screen, to conceal by means of a movable partition; to shelter; to sift.
Screenings, dust or refuse left behind after sifting.
Screes, loose shale which collects on the side of a mountain.
Screw-propeller, a revolving fan-wheel by the working of which a steamship is propelled.
Screw-steamer, a steamer driven by a screw.
Scribbler, one who writes hurriedly and carelessly.
Scribe, a copyist; one of a sect of teachers of the Jewish law.
Scrimmage, a tussle, a mêlée.
Scrimp, to stint, to eke out.
Scrip, a stock certificate; a small bag.
Scriptural, in accordance with, or belonging to, Scripture.
Scrivener, a professional copyist.
Scrofula, a disease once known as king's evil.
Scrofulous, affected with scrofula.
Scrutineer, one appointed to examine and count votes.
Scrutinize, to look closely at.
Scrutiny, a careful survey, a close investigation.
Scud, to run along, or to be carried along, swiftly; a driven cloud.

Scull, to row with short oars or sculls.
Scullion, a kitchen boy.
Sculpsit, "carved" or "engraved," a word preceded by the name of the sculptor, on a statue.
Sculptor, an artist who carves images in stone or marble.
Sculptural, belonging to or resembling sculpture.
Scum, froth which rises and settles on the surface of a liquid.
Scumble, to temper the effect of a colour by covering it with a thin wash of another colour.
Scupper, a hole in the side of a vessel through which water may be drained off the deck.
Scurf, dandriff.
Scurrile, using vulgar offensive language.
Scurrility, offensive language, low abuse.
Scurrilous, using unseemly and offensive language.
Scurry, to hurry, to bustle about.
Scurvily, shabbily, meanly.
Scurvy-grass, grass possessing medicinal properties useful in cases of scurvy.
Scutch, to beat flax in order to separate the woody parts of the stalks.
Scutcheon, a shield emblazoned with a device.
Scutiform, shield-shaped.
Scuttle, to sink a ship by cutting a hole in the bottom; a coal-box.
Scuttle-butt, a cask specially constructed for holding the daily supply of fresh water used on board ship.
Scythe, a sharp curved iron blade with a long handle for mowing.
Sea-board, a strip of land bordering on the coast line.
Sea-coal, coal, as distinct from charcoal.
Sea-cow, a term applied to huge sea beasts like the walrus.
Sea-farer, a traveller by sea.
Sea-faring, going to sea.
Sea-girt, surrounded or girded by the sea.
Sea-island, a term applied to cotton grown on the islands off the coasts of Georgia, South Carolina, and Florida.
Sea-level, the level of the surface of the ocean.
Sealing-wax, a resinous substance used for sealing letters.
Seamanship, the art of navigation.
Seamstress, a woman who earns her living by needlework.
Seamy, full of seams; squalid; the under or worst (side of anything).
Seance, a sitting or meeting, especially of spiritualists.
Sea-nymph, a sea-maiden, a goddess of the sea.
Sea-piece, a painting of the sea, a seascape.
Sear, yellow, withered; to brand with a hot iron.
Searching, thorough.
Search-warrant, a legal warrant authorising an officer of the law to search premises for stolen property or incriminating documents.
Seascape, a sea-piece, a painting of the sea.
Seasonable, befitting the season, appropriate.
Season-ticket, a ticket available for frequent use for a fixed period.
Sea-way, the head-way made by a vessel in its course.
Sea-worthy, in proper repair for a voyage.
Sebaceous, excreting an oily substance.
Secede, to withdraw from membership of some association, or from adherence to some cause.
Secession, the act of withdrawing from membership.
Seclude, to place in retirement.
Seclusion, a state of retirement.
Secondary, minor, less important, subordinate.
Second-cousins, the children of first cousins.
Seconder, one who supports a motion proposed by another.
Seconds, an inferior quality of flour; those who support the principals in a duel; the lower part of a song.
Second-sight, the supposed power of seeing into the future attributed by some to the Scottish Highlanders.
Secrecy, concealment, reserve.
Secret, hidden, concealed.
Secretarial, belonging to a secretary.
Secretariate, the office or position of a secretary.
Secretary-bird, a kind of crane with a tufted crest suggestive of pens behind the ear.
Secrete, to store up secretly; to separate some product from the blood or from some other circulating fluid.
Secretion, a substance secreted by a gland.
Secretiveness, a tendency to be secret and reserved.
Sect, a body of persons holding peculiar views about religion.
Sectarian, belonging to a sect, a bigoted partisan of a sect.
Sectary, a member of a sect.
Sectile, able to be cut.
Section, a piece cut off; a division.
Secular, belonging to this world, not spiritual.
Secularist, one who devotes himself to this world only; one who wishes to separate secular from religious education.
Secularize, to make secular.
Secure, safe, sure.
Security, safety; a guarantee.
Sedan'-chair, a popular carriage of a century ago consisting of a covered chair for one person, borne on poles.
Sedate, grave, composed, dignified.
Sed'ative, a composing draught.
Sed'entary, involving much sitting.
Sedilia, seats in a recess in the walls of a chancel.
Sediment, that which settles at the bottom of a vessel containing a liquid; dregs, grounds, lees.
Sedimentary, of the nature of sediment.
Sedition, disloyal conduct, revolt against the authority of the State.
Seditious, disaffected, disloyal.
Seduce, to entice away, to allure to evil.
Seductive, alluring, enticing.
Sedu'lity, diligent application.
Sed'ulous, persistently industrious.
Seediness, shabbiness; the state of being out of sorts.
Seemliness, that which is seemly or becoming.
Seethe, to boil.
Segregation, separation, isolation.
Seguidilla, a Spanish dance.
Seigneur, a lord.
Seigniorial, belonging to a lord, lordly.
Seismol'ogy, the science of earthquakes.
Seismom'etry, the art of measuring the intensity of earthquakes.
Seize, to take possession of forcibly.
Seizin, the act of taking legal possession.
Seizure, the act of taking forcible possession of.
Selection, a choice.
Selenology, the science of the moon.
Self-assertion, assertiveness, self-importance.
Self-confidence, a belief in self, self-assurance.
Self-conscious, unduly sensitive as to the impression one makes on others.
Self-contained, reserved.
Self-control, self-restraint; moderation.
Self-denial, the refusal to indulge oneself.
Self-esteem, a high opinion of oneself.
Self-important, pompous, puffed up.
Self-indulgence, excessive indulgence of self.
Self-interest, one's own personal advantage.
Selfish, loving self unduly.
Self-possession, the possession of one's faculties in times of difficulty or emergency.
Self-reliant, having confidence in oneself.
Self-righteous, virtuous in one's own opinion, pharisaical.
Self-sacrifice, a giving up of oneself for others.
Self-same, the very same.
Self-sufficiency, the state of being independent of others, self-confidence.
Self-willed, determined to have one's own way, obstinate.
Selvedge or **selvage,** the woven border or edge of a fabric.
Semaphore, a signal post with arms.
Sematology, the study of communicating by signs.
Semblance, likeness, outward resemblance.
Semeiology, the science of signs or symptoms.
Semination, the act of sowing, propagation.
Semibreve, a musical note equivalent in length to two minims or four crotchets.
Semicircle, a half-circle.
Semicolon, a punctuation mark representing a pause of half the length of a colon.
Semicolumnar, like a half-column in shape, flat on one side and rounded on the other.
Semi-detached, (of a villa) detached from other houses on one side.
Seminal, belonging to seed, germinal.
Sem'inarist, an English Roman Catholic priest trained in a foreign seminary.
Seminary, a school, place of instruction.
Semi-official, partially official.
Semit'ic, belonging to the descendants of Shem, a race including the Hebrews.
Semolina, a farinaceous food consisting of granules of wheat flour.
Semper eadem, "always the same."
Semper paratus, "always ready."
Sempervirent, evergreen.
Sempiternal, everlasting.
Senate, an upper legislative assembly; the title of the governing body of certain universities.
Senatorial, belonging to a senate.
Senes'cent, growing old.
Seneschal, an official who had the management of affairs in some great household in former times.
Senile, belonging to, or characteristic of, old age.
Senior, the elder.
Seniority, superiority in age or position.
Senna, a medicinal herb used as an aperient medicine.
Sensational, causing sensation, startling, melodramatic.
Senseless, foolish.
Sensibility, susceptibility, sensitiveness to impressions; common sense, wisdom.
Sensitive, keenly alive to impressions, having delicate perceptions.
Sensitive-plant, a kind of mimosa whose leaves shrink when touched.
Sensitize, to render sensitive to the chemical action of rays of light.
Sensual, under the dominion of the senses, carnal.
Sensuality, sensual indulgence, voluptuousness.
Sensuous, sensitive to impressions received through the senses.
Sententious, full of proverbial wisdom, didactic.
Sentient, alive to physical impressions.
Sentimental, full of affected sentiment.
Sentimentality, the affectation of high-flown feelings.
Sentinel, a watchman, a sentry.
Sentry, a soldier on guard.
Separable, able to be separated.
Separatist, one who withdraws from his Church or political party, a dissenter.
Sepia, brown colouring matter obtained from a species of cuttle-fish.
Sepoy, a native soldier in the British Indian army.
Septenary, happening every seven years, lasting seven years.
Septen'trional, northern.
Septett, a musical composition for seven voices or instruments.
Septuagesima, the third Sunday before Lent.
Septuagint, the Greek translation of the Old Testament made at Alexandria in the third century B.C. by seventy-two translators.
Sepul'chral, belonging to a sepulchre, ghostly, funereal.
Sepulchre, place of burial, tomb.
Sep'ulture, the act of burying.
Sequel, that which follows, the issue, continuation.
Sequence, regular order or succession.
Sequester, to withdraw or seclude; to confiscate.
Sequestration, confiscation.
Seraglio, an Eastern harem, the women's apartments.
Seral (se-ri'), an Eastern palace, an inn for travellers in the East.
Seraph (*pl.* seraphs or seraphim), an angel belonging to the highest of the angelic orders.
Seraph'ic, like a seraph, angelic.
Serb, Servian.
Sere or **sear,** yellow, withered; to scorch.
Serenade, the musical address of a lover to his mistress performed under her window at night.
Serene, calm, clear, unruffled.
Seren'ity, calmness, clearness, tranquillity.
Serf, one bound to the soil, a bondman.
Sergeant or **serjeant,** a non-commissioned officer ranking above a corporal.
Sergeant-major, a non-commissioned officer of the highest rank.
Serial, belonging to a series; a story that appears in parts at regular intervals.
Seriatim, in successive order, one after another.
Sericulture, the rearing of silkworms.
Series, a regular succession or sequence governed by a fixed law, or in accordance with certain principles of classification.
Serio-comic, having grave and humorous elements.
Serious, grave, momentous; solemn.
Sermonize, to lecture, moralize.
Serpentine, winding, meandering; a stone used for ornamental purposes consisting of a silicate of magnesia.
Serration, saw-like indentation.
Serried, in dense array.
Serum, the fluid which separates from blood clot.
Serviceable, useful, profitable.
Serviette, a table-napkin.
Servile, slavish, obsequious, cringing.
Servility, slavish cringing.
Servitor, a servant, attendant.
Servitude, a state of bondage or slavery.
Sesame (am-e), an Arabian plant with an oily seed; 'Open Sesame,' the magic pass-word in the tale of Ali Baba, hence denoting an infallible means of solving a difficulty.
Sesquipedalian, consisting of a metrical foot and a half, a term applied to very long words.
Session, a sitting, the period during which Parliament sits without prorogation; an academic year.
Setaceous, having bristles; resembling bristles.
Setose, bristly.
Settee, a seat with a back for two or three persons; a kind of brigantine used in the Mediterranean.
Several, many, separate, distinct.
Severe, stern, stringent, strict.
Severity, sternness, strictness, austerity.
Sèvres, a costly china named after the place near Paris where it is made.
Sewage, waste products carried off by sewers.
Sewer, an underground channel for drainage.

Sewing-machine, a machine for saving hand-labour in sewing and worked either by means of a handle or a treadle.
Sex, the natural distinction between male and female.
Sexagenarian, a person who has reached the age of sixty.
Sexagesima, the second Sunday before Lent.
Sextant, an instrument used for the measurement of angular distances.
Sexton, a subordinate official who has charge of a church and churchyard, a grave-digger.
Sexual, relating to sex.
Shabbiness, dinginess; meanness.
Shabrack, the saddle-cloth of a cavalry soldier.
Shadoof, a simple contrivance for raising water by means of a bucket attached to a long pole which acts as a lever, commonly used on the banks of the Nile.
Shadowy, like a shadow, dim, unsubstantial.
Shagreen, a grained leather obtained from certain skins.
Shako, a plumed circular cap worn by an infantry soldier.
Shale, loose slaty rock.
Shallop, a light skiff, a fishing smack.
Shallot', a kind of onion.
Shamanism, a religion involving the belief in magic prevalent among the non-Aryan races of the north-east of Asia.
Shambles, a slaughter-house.
Shamefaced, shy, modest.
Shampoo, to apply friction to the head or body after bathing with or in hot water.
Shamrock, a plant with a clover-shaped leaf which is the national emblem of Ireland.
Shandrydan, a jolting two-wheeled Irish cart drawn by one horse.
Sha'n't, a contracted form of "shall not."
Shapeliness, comeliness, symmetry.
Shard, a broken piece of pottery, a potsherd; the hard case which protects a beetle's wings.
Share-broker, a dealer in shares.
Shareholder, one who holds shares in a company.
Sharp-shooter, a rifleman who is skilled in shooting.
Shatter, to shiver, to break to pieces.
Shawl, a warm covering for the shoulders.
Shawm, an ancient musical instrument, a pipe of reeds.
Sheaf (*pl.* sheaves), a bundle, especially a bundle of grain.
Shealing or **shieling,** a little hut or shanty.
Shearing, the process of clipping the wool of a sheep.
Shearling, a sheep that has been sheared for the first time.
Sheathe, to put into a sheath or scabbard.
Shebeen, an unlicensed house where alcoholic drinks are sold.
Sheen, brightness, lustre.
Sheep-walk, a grazing-place for sheep.
Sheer-hulk, an old dismasted ship supporting a kind of crane for hoisting masts.
Sheers, a kind of crane for hoisting or lowering masts.
Sheet-anchor, a ship's main anchor.
Sheet-lightning, lightning which flashes over a broad expanse as opposed to forked lightning.
Sheik, an Arab chief.
Shekel, a Hebrew word indicating a weight of about half an ounce, or a coin worth about half-a-crown.
Shellac, a clear resinous substance used as varnish.
Shelterless, without shelter.
Shelve, to put on the shelf, lay aside; to slope downward.
Shepherd, one who tends sheep.
Sherbet, an effervescing summer drink.
Sheriff, the chief magistrate of a county.
Sherry, a white wine named from Xeres where it is made.
Shib'boleth, the test-word by the pronunciation of which Jephthah distinguished between friend and foe, hence, the language peculiar to a party.
Shield, a piece of defensive armour which soldiers used to carry on the left arm.
Shillelah, an Irish name for a cudgel.
Shingles, a skin disease which appears as a half girdle round the waist.
Shiny, glossy, lustrous.
Ship-broker, an agent who negotiates the sale of ships.
Shipment, the act of putting on board ship.
Shipping, a collection of ships; all that concerns ships.
Ship's-husband, the agent employed by the owner of a vessel to look after its repairs and see that it is furnished with all necessaries.
Shivering, shaking, quivering; shattering.
Shoal, a vast throng, a crowd (especially of fishes); a shallow, a sand-bank.
Shock, the nervous exhaustion following upon a sudden and painful emotion, the vibration caused by a violent collision; the effect produced by an electric stimulus; a number of sheaves of corn standing together.
Shoddy, coarse inferior cloth made of old woollen material rewoven; worthless trash.
Shoemaker, one who makes and repairs boots and shoes.
Shooting-box, a small house temporarily occupied during the shooting season.
Shooting-star, a meteor.
Shop-lifter, one who lifts or steals goods from shops.
Shop-walker, a shop official who conducts customers to the various departments and sees that they are properly served.
Shore, the sea-shore, coast, beach; to prop up with beams.
Short-circuit, the path of least resistance between two points of a circuit.
Shorthand, a system of rapid reporting with the help of symbols which represent words and phrases.
Short-horn, a special breed of cattle.
Short-sighted, able to see for only a short distance; unable to look ahead.
Shot tower, an elevated place from which shot is made by dropping molten lead through a sieve into the water below.
Shovel-hat, a soft felt hat with a low crown and broad brim.
Shoveller, a species of duck with a broad bill.
Showiness, gaudiness.
Shrewd, sagacious, acute.
Shrewish, waspish, ill-tempered, vixenish.
Shriek, a shrill scream.
Shrievalty, the office or position of a sheriff.
Shrift, confession and absolution.
Shrill, high-pitched, piercing.
Shrine, the tomb of a saint, a casket containing sacred relics.
Shrive, to administer absolution after hearing a confession.
Shrove-Tuesday, the Tuesday before Ash Wednesday.
Shrubbery, a plantation.
Shrunken, shrivelled, diminished in size.
Shuddering, shivering with horror or repulsion.
Shunt, to turn the wheels of a car from one line on to another.
Shyly, in a shy or timid manner.
Siamese, belonging to Siam.
Siberia, a vast tract of country in the north of Asia belonging to Russia.
Sibilant, having a hissing sound like the letters *s* and *z*.
Sibyl, a prophetess of classical mythology who under the influence of the god Apollo was inspired to utter oracles.
Sibylline, prophetic, oracular.
Siccative, having the property of drying.
Sickle, a reaping-hook.
Sickliness, unhealthiness, delicacy.
Sick-list, a list of those who are ill.
Sideboard, a piece of dining-room furniture standing on one side of the room for holding dishes and decanters.
Side-dish, an extra dish, an entrée.
Sidelong, in a slanting direction, towards the side.
Sidereal, belonging to the stars.
Sidesman, one who shares the duties of a churchwarden.
Side-wind, a wind blowing from one side; an indirect rumour.
Siding, a railway line by the side of the main line used for shunting.
Sidle, to nestle up to the side, to move sideways.
Siege, a blockade of a fortified place.
Siege-train, the necessary apparatus for conducting a siege.
Sienna, a reddish brown colouring matter.
Sierra, a Spanish name for a mountain range.
Sies'ta, an afternoon nap.
Sieve, a utensil for sifting.
Sigh, a long deep breath expressing sorrow or relief.
Sigillaria, the name of a genus of fossil plants.
Sightliness, comeliness.
Signal, a sign; striking, remarkable.
Signalize, to render memorable.
Signatory, one who signs a document as a pledge that he will abide by its provisions.
Signature, the name of a person written by his own hand.
Signet, a seal, an instrument for sealing.
Significance, the thing signified, the bearing, the importance.
Signification, the act of indicating; the meaning.
Signify, to indicate; to matter.
Sign-manual, signature, the signature of the sovereign.
Sikh, a member of a warlike race in the north of India.
Silence, absence of sound, absence of speech.
Silhouette, a black profile portrait.
Silica, an oxide of silicon such as quartz and flint.
Silkworm, a worm from whose cocoon silk is obtained.
Sillabub, a dish consisting of milk curdled with wine or cider.
Silliness, foolishness.
Silvan or **sylvan,** belonging to the woods, woodland.
Silvery, like silver.
Simian, ape-like.
Similarity, resemblance, likeness.
Simile, a comparison of things generally unlike which resemble each other in some particular.
Similitude, likeness; comparison, figure.
Simony, the sin of buying or selling the presentation to a sacred office.
Simoom, a fierce hot wind from the desert prevalent in the north of Africa.
Simpering, smiling in an affected manner.
Simplicity, guilelessness; freedom from ostentation.
Simplification, the act of making clear and simple, or less complex.
Simula'crum, an image, a phantom.
Simulation, a deceptive pretence of what does not really exist.
Simultaneous, happening at the same moment.
Sinapism, a mustard-plaster.
Sincere, true, genuine.
Sincerity, genuineness, reality.
Sinecure, a paid appointment with merely nominal duties.
Sine die, an adjournment "without a day" being named.
Sine quâ non, an essential condition.
Sinewy, brawny, stalwart.
Singe, to scorch.
Single-minded, sincere in intention.
Single-stick, a method of fencing with sticks; a stick so used.
Singular, single, relating to one; peculiar, strange.
Singularity, peculiarity, eccentricity.
Sinister, "left-handed," boding ill, ill-omened.
Sinless, without sin.
Sinologue, one skilled in the Chinese language.
Sinuate, wavy, winding.
Sinuosity, the property of being winding.
Sinuous, winding.
Siphon, a bent tube with a long and short arm for drawing off a liquid over the edge of a vessel.
Sirdar, the title of the commander-in-chief of the Egyptian army.
Sire, a title of respect used in addressing a sovereign.
Siren, one of the sea-nymphs of classical mythology who lured the passing voyager to his death by their songs of bewitching sweetness.
Sirloin, the upper part of a loin of beef.
Sirocco, a hot and often dust-laden wind which blows over Italy from the south.
Sirrah, a modification of the word "sir," an angry and chiding form of address.
Site, the position or situation of a building.
Sitology, the science relating to diet.
Situate, situated, located.
Sitz-bath, a bath taken sitting, a hip-bath.
Sixteenmo, sexto-decimo, the size of a book consisting of leaves formed by folding each sheet into sixteen equal parts.
Sizable, of reasonable or fitting size.
Sizar, a student belonging to the Cambridge or Dublin University who is received on lower terms than ordinary students.
Skean-dhu, the knife stuck in the stocking which is a characteristic feature of the Highland dress.
Skein, a knot of yarn, silk or thread.
Skeleton-key, a key so constructed that it can pick locks.
Sketchiness, the quality of being indicated slightly in mere outline.
Skew-bald, having white and coloured spots.
Skewer, a pin made of wood or iron for trussing poultry or keeping meat in shape.
Skilful, expert.
Skimming, passing lightly over the surface; removing what rises to the surface of a liquid.
Skirmish, a slight and irregular encounter between small parties of two opposing forces.
Skittles, a game played with nine-pins in a long covered alley.
Skull-cap, a cap fitting close to the head.
Skunk, a kind of otter which has a very offensive smell; its fur; a mean, low person.
Sky-larking, indulging in frolicsome pranks.
Slake, to assuage, quench; to moisten with water.
Slanderous, defamatory, calumnious.
Slang, terms invented and popularly used but not recognized as belonging to the language.
Slate, a laminated rock, thin plates of which are used for roofing and for writing-tablets; to scold, chide.
Slatternly, like a slattern or sloven.
Slaughter, the act of slaying, carnage.
Slaughterous, murderous.
Slav, one of the Slavonic race to which Russians, Poles, and Bohemians belong.
Slavery, bondage.
Slave-trade, traffic in slaves.
Slayer, one who slays, a destroyer.
Sleepiness, drowsiness.
Sleeve, that part of a garment which covers the arm.
Sleigh, a sledge or wheelless carriage for sliding over snowy ground.
Sleight, skilful manipulation, dexterity.

Sleuth-hound, a blood-hound.
Sliding-rule, a mathematical instrument for aiding calculation, consisting of two graduated parts which can slide along one another.
Slight, insignificant, trifling; slender; a mark of disregard or contempt.
Sliminess, the quality of being slimy or sticky.
Slippery, causing to slip owing to its smooth surface; unreliable, not to be depended on.
Slogan, the ancient battle-cry of the Scottish Highlanders.
Sloop, a light one-masted vessel.
Sloth, indolence, sluggishness.
Slough, a miry place, a bog.
Slough, a skin which is cast.
Slovenliness, slatternliness, untidiness.
Slow-worm, a kind of lizard.
Sloyd, a Swedish system of technical instruction.
Sluggard, a slothful person who is fond of lying in bed.
Sluice, a movable barrier for shutting off or admitting a stream of water; a violent rush of water.
Slumbering, sleeping, dormant.
Sluttish, like a slut, dirty and slovenly.
Small-arms, rifles and other light weapons that can be carried by hand.
Small-bore, of small calibre (used of a gun), small in the barrel.
Small-clothes, tight knee-breeches.
Smaragdus, an emerald.
Smattering, a mere superficial or trifling knowledge.
Smelling-salts, salts of ammonia.
Smiling, showing pleasure by the expression of the countenance, especially of the mouth.
Smirch, to make smutty, to smear.
Smirk, a forced unnatural smile.
Smock-frock, a kind of coarse linen over-all worn by agricultural labourers in some parts of England.
Smoking, the act of emitting fumes of smoke, the act of inhaling and emitting tobacco smoke.
Smooth-bore, a gun with a smooth barrel.
Smother, to stifle, to suffocate.
Smoulder, to burn away slowly without flame.
Smug, wearing a self-satisfied expression.
Smuggling, unlawfully importing or exporting goods secretly in order to evade the import and export duties.
Smut, a fragment of soot, a black; a kind of mildew which attacks some plants.
Snaffle-bit, a light slender bit attached to a bridle which crosses the nose.
Snap-dragon, the plant known as antirrhinum; a Christmas pastime consisting in snatching raisins out of a dish of burning brandy and eating them.
Snappish, irritable.
Snap-shot, an instantaneous photograph.
Snare, a running noose for entrapping animals; something which entraps or beguiles.
Sneak, a mean cowardly tell-tale or thief.
Sneeze, a noisy and convulsive involuntary emission of air through the nose.
Snivelling, whining, whimpering.
Snobbism or **Snobbery,** vulgar imitation of persons of high station.
Snooze, to doze.
Snow-line, the line of perpetual snow.
Snuffer, a kind of scissors for snuffing wicks.
Snuggery, a cosy retreat, sanctum.
Soaking, steeping, saturating.
Soap-boiler, a manufacturer of soap.
Soar, to fly to a great height, to mount aloft.
Sobri'ety, soberness.
Sobriquet, a nickname; an assumed name.
Soc, the right of holding a court in a certain district.
Soccage, land tenure by virtue of definite service.
Sociable, fond of society, of a friendly disposition.
Socialism, the theory that all men should be on an equal footing in point of wealth and property.
Socially, with reference to society.
Society, an association of persons for some common aim.
Socinian, an adherent of the doctrines of Socinus who denied the divinity of Christ.
Sociology, the science of the origin and development of human society.
Socratic, belonging to Socrates.
Sofa, a couch.
Soffit, an ornamental ceiling formed by the under part of a balcony or staircase; the under part of an arch.
Soi-disant, so called by himself, self-styled.
Soirée, an evening reception or entertainment, a conversazione.
Sojourn, to stay, abide, tarry.
Solace, a source of consolation.
Solar, belonging to the sun.
Soldiery, a collective term for soldiers.
Sole, a choice flat fish; single, only.
Solecism, a grammatical error, a social error, an impropriety.
Solemnity, gravity, seriousness; a solemn rite.
Solemnization, the celebration of a solemn rite.
Sol-fa, to sing the notes of the musical scale.
Solfeggio, the act of practising the notes of the musical scale.
Solicit, to entreat.
Solicitor, a lawyer, an advocate.
Solicitor-general, a crown lawyer who ranks next to the attorney-general.
Solicitous, anxious, concerned.
Solicitude, a feeling of concern or anxiety.
Solidarity, a unity based upon mutual interests or joint responsibility.
Solidungulate, having an uncloven hoof.
Soliloquize, to give expression to one's thoughts when alone.
Soliloquy (*pl.* soliloquies), the act of talking aloud to oneself.
Solitaire, a stud; a game to be played by one person with marbles on a board.
Solitary, alone, lonely.
Solitude, the state of being alone; a lonely place.
Solstice, one of the two periods of the year when the sun is at its greatest distance north or south of the equator.
Solstitial, belonging to a solstice.
Soluble, able to be dissolved.
Solution, a fluid containing a solid dissolved in it; an explanation of a difficulty or a problem.
Solve, to find the solution or explanation.
Solvency, the ability to pay one's debts.
Somatology, that branch of science which treats of the properties of matter.
Sombre, dull in colour, gloomy.
Sombre'ro, a shady felt-hat worn by Spaniards.
Somersault, a turning head over heels.
Somnam'bulist, one who walks in his sleep.
Som'nolence, sleepiness, drowsiness.
Sona'ta, a musical composition in several movements arranged for instruments just as a *cantata* was for voices.
Songster (*f.* songstress), a singing-bird; one who sings.
Sonnet, a poem consisting of a fourteen lined stanza in which the metre is usually iambic pentameter.
Sonneteer, a writer of sonnets.
Sonorous, full-sounding.
Soothe, to calm, allay, assuage.
Soothsayer, a prophet diviner.
Sootiness, smuttiness, griminess.
Sophism, a specious saying.
Sophisticate, to make specious or insincere; to render artificial.
Sophistry, the art of making what is false seem true by specious arguments.
Soporif'ic, sleep-producing.
Sopra'no, a treble voice.
Sorcerer, a wizard, a magician.
Sorcery, the art or practice of magic.
Sordid, mean, base, squalid.
Sorghum, sorgho grass or Indian millet.
Sororal, sisterly.
Sorrowful, sad.
Sortie, the sallying forth of a body of soldiers from a besieged place to attack the enemy.
Sortilege, the act of drawing lots for the purpose of divination.
Sottish, dull, stupid, dazed with drink.
Sotto voce, in an undertone, in an aside.
Sou, a French coin worth a halfpenny.
Soubrette, a pert intriguing maid-servant, one of the stock characters in French comedy.
Soughing, the sighing of the wind in the trees.
Soul, the animating spirit.
Source, origin, that from which anything springs.
Sour, acid or sharp to the taste.
Souse, to steep in a liquid, to saturate, to pickle.
Southerly, belonging to the south.
Southing, motion towards the south, the time at which the moon or other planet passes the meridian of a given place.
Souvenir, a memento, a token of remembrance.
Sovereignty, kingship, kingly power, supremacy.
Sowar, a native cavalry soldier in the Indian army.
Spa, a well with medicinal properties; a place where there are mineral springs.
Spacious, roomy, vast.
Spade, an iron implement for digging.
Spandrel, the flat space between the head of a door or arch and the enclosing frame or moulding.
Sparingly, in a sparing manner, frugally.
Sparkling, glittering, scintillating.
Sparse, scanty, scattered here and there.
Spasmodic, occurring in fits or spasms, convulsive.
Spatial, relating to space.
Spatula, a broad knife used for spreading plasters or pastes.
Spavined, suffering from a disease of the hock joint, a disease to which horses are subject.
Speaker, one who speaks; one who makes a speech; the president of the House of Commons.
Specialist, one who possesses special knowledge of a particular subject.
Specialize, to devote oneself to the study of a special subject; to indicate in a specific manner.
Specialty, a characteristic product, article of sale, or pursuit.
Specie, gold and silver coin.
Species, a class of beings or objects which have certain characteristics in common which differentiate them from others of the same genus.
Specif'ic, special, precise; a sovereign remedy for a special complaint.
Specification, a precise definition or description.
Specimen, a representative of a class of objects, a typical example, a sample.
Specious, having a false appearance of truth, fallacious, plausible.
Spectacle, a sight, pageant.
Spectacular, of the nature of a show or pageant.
Spectator, an onlooker.
Spectral, like a spectre or phantom, ghostlike.
Spectre, a ghost, a phantom.
Spectrum, light split up into the coloured rays of which it is composed.
Speculation, cogitation, theorising about future possibilities; a commercial venture involving risk of loss.
Speculative, given to theorising; meditative; of the nature of speculation.
Speedily, rapidly; in a short time.
Spendthrift, an extravagant person, a prodigal.
Sperm-oil, oil obtained from the sperm whale.
Sphere, a globe; range or province.
Spherical, globe-shaped.
Sphinx, a mythological monster with a woman's head and a lion's body; a mysterious person who is hard to comprehend.
Spicily, in a spicy or piquant manner.
Spigot, a wooden pin or spile for stopping a vent-hole in a cask.
Spikenard, a costly and fragrant oil.
Spindrift, fine spray blown by the wind.
Spinach, a plant whose leaves are boiled as a vegetable.
Spinnaker, a kind of sail carried by a yacht.
Spinney, a thicket or plantation.
Spinous, having spines or spikes, thorny.
Spiral, winding round and upward at the same time.
Spirit-level, an instrument for testing whether the level of a given surface is true by means of the position of a bubble of air in a small glass tube filled with alcohol.
Spiritual, belonging to the spirit or the soul, immaterial, holy.
Spiritualist, one who believes in intercourse with disembodied spirits.
Spirituality, the love of spiritual or holy things; the domain of spiritual authority.
Spirituel, witty.
Spirituous, alcoholic.
Spirom'eter, an instrument for measuring breathing-power.
Spissitude, thickness or density.
Spiteful, malicious.
Splash-board, a board in front of a vehicle to act as a mud-guard.
Spleen, a gland near the stomach formerly supposed to be the seat of melancholy; spite, anger.
Splendid, magnificent.
Splendour, magnificence.
Splenet'ic, ill-tempered, spiteful.
Splice, to join, as two ropes by interweaving their strands.
Spoke, one of the supports proceeding from the hub to the rim of a wheel.
Spolia opi'ma, the name given by the Romans to the spoil taken by a Roman general.
Spoliation, the act of spoiling or plundering.
Spondee, a metrical foot consisting of two long syllables.
Sponge, a many-celled marine organism which attaches itself to rocks, and which is largely made use of for washing purposes.
Sponsor, a god-parent, one who stands surety for another.
Spontane'ity, the quality of being spontaneous or voluntary.
Spontaneous, of one's own accord, natural, instinctive.
Spook, a ghost.
Spoor, trail.
Sporadic, scattered, breaking out only here and there.
Sporran, an ornament worn by Highlanders in front of the kilt.
Spouse, a husband or wife.
Sprain, an excessive straining of the muscles or tendons.
Sprightly, nimble, active, lively.
Sprightliness, nimbleness, vivacity.
Spring-bok, a South African antelope.
Springe, a snare, trap.
Sprite, a mischievous little spirit, an elf.
Spruce, smart, dapper.
Spume, foam, froth.
Spuminess, frothiness.
Spurious, not genuine.

Sputum, matter expectorated.
Squadron, a body of cavalry; a division of the fleet.
Squalid, sordid, grimy.
Squalor, griminess and sordidness.
Squander, to waste, to lavish.
Square, having four equal sides and all its angles right angles.
Square-toes, a nickname for a very prim and precise person.
Squatter, a settler.
Squaw, the wife of a Red Indian.
Squeak, a sudden short and shrill cry.
Squeamish, sensitive, fastidious.
Squeeze, to press tightly together.
Squirearchy, the whole body of squires or landed gentry.
Squinch, a small arch across the angle of a square tower to strengthen it.
Squirm, to writhe.
Squirrel, a nimble little woodland rodent with bright eyes and a large bushy tail.
Squint, the act of looking askew; a hagioscope.
Stability, firmness, constancy.
Stablish, to establish, to make firm or secure.
Stadium, the Greek name for a race-course, a Greek measure equivalent to nearly six hundred feet.
Staff-sergeant, a senior sergeant on a regimental staff.
Stage, a raised platform on which plays are performed; a step or degree of progress.
Stage-coach, a public coach for conveying travellers from stage to stage of their journey.
Stage-manager, one who has the management of the staging of a play.
Stage-struck, seized with an irresistible longing to go on the stage.
Stage-whisper, a loud theatrical aside.
Stagnant, not flowing, foul through standing.
Stagnation, inactivity; foulness caused by inactivity.
Staid, sedate, grave.
Stain, to discolour; to dye; defile.
Staithes, the end of a line of rails for discharging coals into a ship.
Stalac'tite, an icicle-shaped deposit pendent from the roof of a cavern.
Stalag'mite, a formation similar to a stalactite but deposited upright on the floor of a cavern.
Stale-mate, a position in chess when any move will place the king in check.
Stalking-horse, a dummy horse under the cover of which the hunter stalks the game.
Stallage, the sum paid for the right of erecting a stall or booth.
Stalwart, muscular, well-grown.
Stamina, strength of constitution, staying power.
Stammering, stuttering, hesitating speech.
Stamp-duty, a duty imposed on certain stamps necessary for legal documents.
Stampede, a wild rush of cattle under sudden panic.
Stamping-machine, a machine for crushing ore; a machine for stamping coins.
Stanchion, an upright iron pillar or support.
Standard-bearer, the soldier who bears the flag or standard.
Stand-point, point of view.
Stanhope, a two-wheeled uncovered vehicle; a kind of printing-press.
Stannary, belonging to tin mines.
Stannif'erous, rich in tin.
Stanza, a representative verse or division of a poem.
Staple, chief or principal; the iron groove to receive a bolt.
Stapler, a dealer in wool or some other staple commodity.
Starboard, the right-hand side of a vessel when one faces the bow.
Star-chamber, a famous unconstitutional court instituted in the reign of Henry VII.
Starchiness, stiffness, primness.
Stare, to look fixedly.
Star-gazer, one who keeps his gaze fixed on the stars, an unpractical, visionary person.
Stark, stiff, rigid; completely.
Starling, a bird something like a thrush.
Starred, decorated with stars; fated.
Star-spangled, ornamented with stars, star-sprinkled.
Starstone, a kind of sapphire.
Starvation, lack of food, famine.
Starveling, a half-starved puny creature.
State-craft, the art of a statesman.
State-house, a senate house, a parliament house.
Stateliness, dignity of demeanour, majesty.
State-room, a grand reception room in a castle or mansion; a daintily fitted cabin in a vessel.
States-general, the French legislative assembly prior to the French Revolution.
Statesman, one occupied in the management of affairs of state; a Cumberland farmer.
Statics, the science relating to bodies at rest.
Stationary, fixed, at a stand-still.
Stationer, one who sells paper, pens and other writing materials.
Stationery, goods sold by a stationer, paper and envelopes, etc.
Station-master, the superintendent of a railway station.
Statistician, one versed in statistics.
Statuary, a collection of statues, sculpture.
Statue, a figure in bronze or marble.
Statuesque, like a statue, calm, motionless.
Statuette, a little statue.
Stature, height (of a human being).
Status, rank, standing.
Status quo, the existing condition.
Statute, a law, ordinance.
Statute-roll, a record of statutes.
Stat'utory, belonging to a statute.
Staunch or **stanch,** faithful, reliable; to stop a flow of blood.
Steadfast, constant, firm.
Steadiness, constancy, firmness, soberness.
Stealth, secrecy.
Steam-launch, a light boat propelled by steam.
Steam-navigation, the use of the steam engine in propelling boats and ships.
Steam-packet, a mail steamer.
Steed, a poetical term for a charger or riding horse.
St. Elmo's fire, a curious phenomenon in the form of a light sometimes seen, during a thunderstorm, on the top of masts.
Steelyard, a balance with a lever arm for heavy weights.
Steeple, a spire.
Steeple-chase, a horse race across open country over all intervening obstacles.
Steerage, the art of steering; a cabin in the forepart of a vessel where passengers may be accommodated at a very low fare.
Steganog'raphy, the art of writing in cipher.
Stellar, belonging to the stars.
Stench, a strongly offensive odour.
Stencil, to decorate with a design by painting over a perforated metal plate.
Stenog'raphy, the art of writing in shorthand.
Stentorian, loud (of a voice).
Step-child, the child of husband or wife by a former marriage.
Steppes, the barren plains of Southern Russia.
Stercoraceous, a term applied to animals which are manure hunters.
Stereoscope, an optical instrument with two eye-pieces for viewing photographs.
Stereotype, a solid metal plate cast from a sheet of movable type.
Sterility, barrenness, unfruitfulness.
Sterilize, to free from bacteria and other germs.
Sterling, genuine; a term applied to coin.
Stern-chase, a chase in which one ship follows in the wake of another.
Stern-sheets, that part of a vessel which is nearest the stern.
Sternum, the breast-bone, the bone to which the ribs are attached.
Sternutation, the act of sneezing.
Stertorous, breathing noisily, snoring.
Stethom'eter, an instrument for testing the powers of respiration of the various parts of the chest.
Stethoscope, an instrument used in testing the condition of the heart and lungs.
Stevedore, a labourer employed to load or unload vessels.
Stewardess, a female attendant on board ship.
Sthenic, producing strength, invigorating.
Stichom'etry, the estimation of the length of a book or manuscript by the number of lines.
Stickleback, a tiny fresh-water fish with spikes or spines on its back.
Stigma, a brand, a mark of disgrace.
Stigmata, the bodily marks of Christ's passion.
Stigmatize, to brand with infamy or contempt.
Stile, a ladder over a fence or wall.
Stiletto, a short sharp Italian dagger.
Still, motionless; continually; nevertheless.
Still, the main apparatus used in distillation.
Still-born, born dead.
Still-life, the pictorial representation of fruit, flowers, and other inanimate objects.
Stilted, affectedly grand or pompous in expression.
Stilton, a choice variety of cheese made in the midlands.
Stimulant, whatever acts as a stimulus, especially alcoholic drink.
Stimulate, to apply a stimulus, to goad, to incite.
Stimulus (*pl.* stimuli), an incentive, a motive power.
Stinginess, parsimony, meanness.
Stingo, old ale, strong malt liquor.
Stingy, parsimonious, mean.
Stipendiary, one who receives a stipend or annual income, especially a clergyman receiving a fixed income.
Stipple, to use dots instead of lines in engraving or painting.
Stipulate, to bargain, to make a proviso, to make conditions.
Stipulation, a condition, proviso.
Stirring, active, energetic.
Stirrup-cup, a farewell cup drunk on horseback.
Stithy, an anvil, a blacksmith's forge.
Stiver, a farthing; a Dutch coin worth only a trifle.
Stock, a supply; goods on hand for sale; shares in government funds; a tree trunk, a block of stone, a lifeless inert being.
Stockade, a defensive work consisting of a palisade.
Stock-breeder, a sheep and cattle breeder.
Stock-broker, a dealer in stocks and shares.
Stock-fish, cod or hake dried and salted.
Stock-holder, one who has shares in government stock.
Stock-jobber, one who makes a business of speculating in stocks and shares.
Stock-taking, the process of making an inventory of goods in stock.
Stoical, having the fortitude of a stoic, unmoved by pleasure or pain.
Stoicism, the doctrines of the stoics; stoical fortitude.
Stole, a narrow strip of silk worn over the shoulders as a vestment by the clergy.
Stolid, impassive, stupidly heavy in manner.
Stomach, a bag-shaped organ in the body in which the food is principally digested.
Stom'acher, the lower part of a bodice.
Stomach'ic, belonging to the stomach, for the stomach.
Stomatitis, inflammation of the mouth.
Stook, a group of corn-sheaves standing together.
Stop-cock, a device for opening or closing a pipe by means of a cock or key.
Storage, the housing of goods.
Storax, an aromatic resin obtained from a plant and used medicinally.
Storied, famed in story.
Storm-signal, a coast signal giving warning of the approach of a storm.
Stoup, a jar or flagon.
Stove, an apparatus for heating or cooking.
Stowage, the act of laying by or storing up for future use.
Stowaway, one who lies in hiding on board a ship that he may secure a passage without payment.
Strabism, squinting.
Strabot'omy, the cutting of a muscle to cure squinting.
Straggler, a loiterer, one who lags behind or or wanders away from the rest.
Straight, direct, not curved or crooked; straightforward.
Strain, a melody; to pour through a strainer; inherent tendency, natural disposition.
Strainer, a perforated utensil for straining, a colander.
Strait, a narrow neck of water joining two larger bodies (of water); a difficult position, a difficulty.
Strait-laced, prim, unnecessarily punctilious.
Strait-waistcoat, a stiff jacket for violent lunatics to prevent their harming others.
Stramineous, like straw.
Strangeness, unfamiliarity; oddity, eccentricity; unusual character.
Strangles, a throat disease to which horses are subject.
Strangulation, the act of strangling; suffocation by strangling.
Stratagem, a cunning device, a wily artifice.
Strate'gic, belonging to, or of the nature of, strategy.
Strat'egy, the art of directing an army.
Strath, a Scotch term for a valley traversed by a river.
Strathspey, the name of a national Scotch dance.
Stratification, the formation of rock in successive layers in the earth's crust.
Stratum (*pl.* strata), a layer.
Stratus, a low-lying cloud which is frequently seen on summer evenings.
Straw-board, a kind of stout cardboard.
Streaky, containing lines or streaks.
Streamlet, a little stream, a brooklet.
Stream-tin, tin found as an alluvial deposit.
Strengthening, making stronger, acting as a tonic.
Strenuous, arduous, active, vigorous.
Stress, accent, emphasis; strain.
Stretcher, a light framework on which to carry the sick or wounded; a framework upon which a picture canvas is stretched.
Strewn, scattered, sprinkled about.
Stria (*pl.* striæ), a narrow streak or line, a narrow furrow.
Striation, the condition of being striated or marked with narrow lines or furrows.
Stricture, censure, severe comment; an abnormal contraction of the intestines or other internal canal.
Strident, harsh-sounding, grating.
Strigil, a flesh-scraper used in the baths by the ancient Romans.
Strikingly, in a striking manner, remarkably, impressively.
Stringency, severity, strictness.
Stringent, severe, strict.

String-halt or spring-halt, a disease among horses causing a spasmodic jerking of the hind-legs.
Stringiness, the condition of being stringy.
Stripling, a youth just passing out of boyhood.
Strolling, walking leisurely, roaming about.
Strong-room, a secure chamber for valuables.
Strop, a strip of leather on which razors are sharpened.
Strophé, the name given by the Greeks to the first of the two corresponding stanzas of a choric ode, the answering stanza being called the antistrophe.
Structural, belonging to form or structure.
Structure, a building; the process of construction; organic formation.
Strum, to play on the piano or other musical instrument in loud and unskilful manner.
Strumose or **Strumous,** scrofulous.
Strychnine, a poisonous drug.
Stubbornness, obstinate persistency in one's own way.
Stucco, a fine plaster used for facing walls.
Stud, a collection of race horses; a fastening for a collar or cuff.
Stud-book, a book in which the pedigrees of race-horses are recorded.
Student, one who studies, a scholarly person.
Studio, an artist's workroom.
Studious, devoted to study.
Studies, objects of study.
Stuffing-box, a device by which a piston-rod is made to closely fit the groove in which it works.
Stultify, to make foolish, to place in a ridiculous position.
Stultil'oquy, foolish babble.
Stump-orator, one who makes a ranting oration to a chance audience from an open-air platform.
Stunning, causing bewilderment, stupefying.
Stupe, cloth steeped in a fomentation.
Stupefaction, a state of dull stupidity, a dulling of the senses.
Stupefy, to reduce to a condition of dull insensibility.
Stupendous, overwhelmingly great, amazing.
Stupidity, dullness of comprehension.
Stupor, torpor, dullness of sensation.
Sturdiness, robustness, hardiness; resolution, determination.
Sturgeon, a large Russian fresh-water fish from which both caviare and isinglass are obtained.
Stutterer, a stammerer.
Sty (*pl.* sties), a place where pigs are kept; a painful boil on the eyelid.
Stygian, belonging to the Styx, a fabled river of Hades, hence dark, gloomy.
Style, mode of expression in literature or art; fashion in dress or behaviour; a pointed instrument for writing on wax; the stem of a pistil.
Stylish, smart, fashionable.
Stylist, a writer who pays attention to style, a master of style.
Stylite, one of a class of fanatical ascetics who passed their lives standing on a pillar.
Stylus, a style or pointed instrument used by the ancients for writing on waxed tablets.
Styptic, having the power to check the flow of blood.
Suasion, persuasion.
Suave, bland in manner, affable.
Suavity, sweetness of manner, affability.
Subacid, slightly acid.
Subacrid, somewhat pungent.
Subaërial, exposed to the sky or atmosphere.
Sub'altern, a junior officer in the army who has not reached the rank of captain.
Subaquatic, below the surface of the water.
Subarctic, near the arctic region.
Sub-committee, a committee selected from the members of a larger committee.
Subcutaneous, below the skin.
Subdivide, to divide into smaller divisions.
Subdue, to subjugate, to repress; to allay.
Sub-editor, an under-editor.
Suberic, belonging to cork, obtained from cork.
Subinfeudation, the re-letting of property held on feudal tenure.
Subjacent, lying below.
Subjective, arising out of the inner consciousness, not derived from external objects.
Subjectively, in a subjective manner.
Subject-matter, the theme.
Sub judice, still under judicial consideration.
Subjugation, the holding or being held under subjection, the act of reducing to submission.
Sublease, a lease granted to an under-tenant.
Sublimation, the process of vaporising a substance by heat to free it from impurities.
Sublime, lofty in idea or conception; grand.
Sublimity, loftiness of thought; grandeur.
Sublineation, the act of underlining.
Sublu'nary, under the moon; belonging to the earth, mundane.
Submarine, below the surface of the sea.
Submaxillary, belonging to the lower jaw.
Submerge, to plunge below the surface of the water.
Submersion, the state of being submerged, the act of submerging.
Submission, the act or state of submitting.
Submissive, obedient, yielding.
Submit, to yield; to refer.
Submultiple, a number which is contained in another number an exact number of times, a factor.
Subordinate, in an inferior or dependent position; secondary.
Suborn, to procure false witness.
Subpœna, a writ requiring the attendance of a person in a court of law under penalty of a fine.
Sub rosa, "under the rose," secretly.
Subscribe, to sign one's name below; to contribute regularly.
Subscription, a sum of money voluntarily contributed.
Subsection, a section of a section, a subdivision.
Sub'sequent, following.
Subservient, servile, submissive; helping in a minor degree.
Subside, to sink, settle down, abate.
Subsidence, settling or sinking down, abating.
Subsidiary, helping in a subordinate manner.
Subsidize, to make a money-grant to a State in order to secure its services.
Subsidy, a grant of money paid by a State, usually to another State, on a definite understanding.
Subsist, to exist, to support life.
Subsistence, means of sustenance.
Subsoil, the soil immediately underneath the surface stratum.
Substantial, possessing substance, solid, important, well-founded.
Substantiate, to make good, to verify, prove.
Substantive, having real existence, a noun.
Substitute, a person or thing taking the place of another.
Substratum, the underlying stratum or layer, the fundamental basis.
Substructure, the underlying structure or foundation.
Subsultus, a sudden convulsive movement.
Subtenant, an under tenant, the tenant of a tenant.
Subterfuge, a cunning evasion, a ruse.
Subterranean, underground.
Subterraneous, subterranean, underground.
Subtilization, the act of rarefying or making less dense, rarefaction; the process of drawing over-fine distinctions.
Subtle, delicately discriminating; cunning.
Subtlety, refined cunning; delicate discrimination.
Subtorrid, subtropical, near the tropics.
Subtraction, the process of withdrawing or subtracting.
Subtrahend, the number to be subtracted from another.
Subtropical, near the tropics.
Subulate, awl-shaped.
Suburban, on the outskirts of a town.
Subvene, to arrive or intervene so as to effect some purpose.
Subversion, the overthrow, the total ruin.
Subvert, to overthrow, upset, ruin.
Subway, an underground passage or tunnel.
Succedaneous, acting as a substitute.
Succeed, to follow in order; to be successful.
Success, the attaining of one's aim.
Succession, the following in due sequence or regular order.
Successor, one who succeeds or follows another in holding some office.
Succinct, terse, concise.
Succory, a kind of chicory plant.
Succour, to help, aid.
Succulent, juicy.
Succumb, to yield.
Succursal, subordinate, supplementary.
Succussion, the act of shaking, a shock.
Suckling, a child or young animal which is still suckled.
Sucrose, a form of sugar obtained from beetroot and sugar-cane.
Suction, the act of sucking or drawing in by first forming a vacuum.
Sudatorium, a hot-air chamber in the baths which acts as a sweating-bath.
Su'datory, producing sweat.
Suddenness, unexpectedness, swiftness.
Sudorif'ic, producing sweat.
Sue, to prosecute, to lay a claim against a person in a court of law.
Sufferance, endurance; forbearance.
Suffice, to be sufficient, to satisfy.
Sufficiency, a sufficient quantity, an adequate amount, competency; self-assurance.
Sufficient, enough, adequate.
Suffix, a particle attached to the end of a word or root to vary its meaning.
Suffocate, to stifle.
Suffragan, an assistant (bishop).
Suffrage, the right of voting for a representative in Parliament, vote of approval.
Suffruticose, woody or bushy at the base.
Suffumigate, to burn fumes underneath.
Suffuse, to overspread.
Sugar, a saccharine substance used for sweetening.
Sugar-baker, a sugar-refiner.
Sugary, like sugar, sweet.
Suggestion, proposal.
Suggestive, containing a suggestion, abounding in ideas.
Suici'dal, tending to self-destruction.
Suicide, self-destruction.
Sui generis, in a class by itself, peculiar, not to be classed with others.
Suint, the natural oil in wool.
Suitable, appropriate, fitting, becoming.
Suite, a train of attendants or followers; a set of rooms, a set of furniture for a room.
Suitor, one who sues or petitions, one who pays his addresses to a woman.
Sulcate, furrowed.
Sulkiness, sullenness, gloomy anger.
Sullenness, moroseness, sulkiness, surliness.
Sully, to stain, soil.
Sul'phurous, of or like sulphur.
Sulphu'ric acid, a strong acid popularly known as vitriol.
Sultan, the title of the supreme ruler of a Mohammedan State, especially applied to the ruler of Turkey.
Sultriness, oppressive heat.
Sultry, oppressively hot.
Sum'marily, in a prompt or conclusive manner.
Summary, rapid and complete; a concise abstract.
Summation, the process of finding the sum total of a series of numbers.
Summit, the highest point, the top, the culminating point.
Summon, to demand the presence of.
Summons (*pl.* summonses), an imperative call, an order to appear in a court of law.
Summum bonum, the "supreme good," highest aim of existence.
Sump, a reservoir used in salt works; the bottom of the shaft of a mine.
Sumpter, a baggage (mule).
Sumptuary, regulating expense, especially in connexion with dress and luxuries.
Sumptuous, luxurious, costly.
Sunder, sever, separate.
Sun-dew, an insect-eating plant.
Sun-dial, an instrument for indicating the time of day by means of the shadow of a rod cast by the sun upon a graduated dial.
Sundown, sunset.
Sunspot, a dark spot on the surface of the sun.
Sunstroke, an affection of the brain produced by exposure to the sun.
Sun-worship, a form of religion involving worship of the sun as a divinity.
Super, an actor who appears on the stage without having anything to say.
Superabundant, over abundant, exuberant.
Superannuation, removal from office on account of old age.
Superb, splendid, magnificent.
Supercargo, the official in charge of a ship's cargo.
Supercilliary, above the eyebrow.
Supercilious, contemptuous, disdainful.
Superdominant, the note immediately above the dominant fifth.
Superer'oga''tion, the act of going beyond the call of duty.
Su'pererog''atory, beyond what is required.
Superexcellent, more than excellent, excessively good.
Superfetation, the conception of a second embryo during the period of gestation.
Superficial, on the surface, lacking in thoroughness.
Superficies, a surface.
Superfine, exceedingly fine, extra fine.
Superflu'ity, excess, superabundance.
Super'fluous, excessive, unnecessary, superabundant.
Superheated, heated above the degree possible under normal conditions.
Superhuman, more than human, supernatural.
Superimpose, to place on the top of something.
Superincumbent, lying on the top of something else.
Superintendent, one who exercises control or supervision.
Superior, higher, better in quality.
Superiority, the quality of being higher or more excellent.
Superjacent, lying above.
Super'lative, of the highest degree.
Supernaculum, ale of the best quality.
Supernal, belonging to what is above, relating to things heavenly.
Supernatural, miraculous, transcendental.
Supernumerary, an extra person or thing; one who appears on the stage without speaking.
Superpose, to place above or on the top.
Supersaturated, saturated to excess.
Superscription, an inscription written above, a title.
Supersede, to set aside and replace by another; to take the place of another.
Supersensible, beyond the range of the senses.
Supersensitive, over-sensitive.

Superstition, irrational belief and foolish observances based upon ignorance.
Superstructure, a structure reared upon something else as foundation.
Supervise, to exercise watchful control over, to superintend.
Supervisor, an overseer, one who exercises supervision.
Supine, lying down, lax, indolent.
Supination, the position of lying on the back; indolence.
Supplant, to forcibly or fraudulently take the place of, to oust.
Supplement, an extra part added to supply a deficiency.
Supplementary, additional, supplying deficiencies.
Suppleness, lissomness, pliancy.
Suppliant, one who makes a petition or entreaty.
Supplication, an entreaty, prayer.
Supplicatory, of the nature of a supplication or entreaty.
Supporter, one who supports, an adherent.
Supposition, that which is supposed, a hypothesis.
Suppositious, stealthily and dishonestly substituted.
Suppress, to put down, to quell; to conceal; to withhold.
Suppressible, able to be overpowered; able to be concealed.
Suppuration, the formation of pus or matter due to inflammation.
Supremacy, the state of being supreme or having the mastery.
Supreme, exercising supremacy, absolute; the highest.
Sural, belonging to the calf of the leg.
Surcease, to cease, refrain.
Surcharge, to overburden, to overweight.
Sur'cingle, a horse's girth; the girdle of a cassock.
Surd, an algebraical quantity or root which cannot be expressed in rational numbers.
Sure, certain; safe, secure.
Surety, one who makes himself answerable for another, bail, security.
Surf, sea-foam caused by the breaking of the waves.
Surfaceman, a man employed on the railway to see that the railroad is in proper repair.
Surfeit, an excess in eating causing distaste or satiety.
Surge, to seethe like the waves of the sea.
Surgeon, a doctor who treats surgical cases and performs operations.
Surgery, the surgical art; a room where a doctor compounds his medicines.
Surgical, belonging to surgery.
Surlily, in a morose or sullen manner.
Surloin or **sirloin,** a joint of beef.
Surmise, a conjecture.
Surmount, to overcome.
Surpassing, exceeding, excelling.
Surplice, a white robe worn by the clergy during divine service.
Surplus, the excess, what is left over.
Surprise, astonishment, something unexpected.
Surrebut'ter, the answer of the plaintiff to the defendant's rejoinder.
Surrender, to yield, to capitulate.
Surreptitious, underhand, unauthorized.
Surrogate, one deputed to act for another.
Surround, to encircle, encompass.
Surtax, an extra or additional tax.
Surtout, an overcoat.
Surveillance, watchful supervision.
Surveyor, one who measures land.
Survival, that which survives.
Survivor, one who survives or outlives another.
Susceptible, sensitive to impressions, impressionable.
Susceptivity, a state of sensitiveness to impressions.
Suspect, to distrust, to think evil of; to imagine, fancy.
Suspend, to cause to hang; to remove from office temporarily; to withdraw (a law) for a time; to withhold.
Suspense, anxiety arising from uncertainty.
Suspension, temporary abrogation (of a law); temporary deprivation of office; the act of suspending or causing to hang.
Suspicion, distrust; slight idea.
Suspicious, prone to think evil of others, distrustful.
Sustain, to uphold, maintain; endure.
Sustenance, that which sustains, nutriment, nourishment.
Sustentation, maintenance, support.
Sutile, stitched or sewn.
Sutler, a camp-follower who sells provisions and other requisites to the troops.
Suttee, the practice once prevalent among high-caste Hindus of burning the widow on her husband's funeral pyre.
Sutural, belonging to a suture.
Suture, the natural joining together of the bones of the skull by dovetailing or overlapping.
Suzerain, an over-lord.
Su'zerainty, the exercise of supreme or paramount authority by one State over another.
Swab, a mop.
Swaddling-band, a bandage for wrapping round the body of an infant.
Swaggerer, a boaster, a braggart.
Swain, a youth, a lover.
Swannery, a place where swans are reared.
Swan-skin, the skin of a swan with the down on it; a fine flannel with a downy surface.
Sward, an expanse of grass or turf.
Swart, black, swarthy.
Swarthy, dusky in hue.
Swashbuckler, a blustering boisterous fellow.
Swath, a layer of grass cut with one sweep of the scythe.
Swathe, to bandage, to wrap round and round.
Sweating-system, the custom of paying employés or work people a starvation wage in order to make large profits, or produce a cheap article.
Swedenborgian, a follower of Swedenborg, a Swedish philosopher of the 18th century, who founded a religious sect.
Swedish, belonging to Sweden.
Sweepstakes, a form of gambling in which the stakes contributed by all the players go to the winner or winners.
Sweetmeat, confectionery in which sugar is the chief ingredient.
Swelter, to perspire with heat, to be overcome with heat.
Swerve, to turn aside from the straight course; to depart from rectitude.
Swimming, the act of moving through the water; floating on the surface; dizziness.
Swindler, a fraudulent person, a rogue.
Swing-bridge, a bridge so constructed that it can be swung open.
Swinge, to beat, to flog.
Swingle, to separate the flax from the tow by beating it.
Swirl, to sweep round in an eddy.
Switch, a pliant twig; a short movable rail used for shunting waggons or railway-carriages from one set of rails to another; a device for turning on or shutting off an electric current.
Swivel, a hook or ring that turns round upon a pivot.
Sword-dance, a favourite dance of the Scotch Highlanders performed between two crossed swords.
Sword-play, skilled use of the sword, fencing with the sword.
Swordsman, one skilled in the use of the sword.
Sybarite, a luxurious or voluptuous person.
Sycophant, an obsequious flatterer, one who curries favour by tale-bearing.
Syllabarium, a list of the primitive syllables in a language.
Syllabic, consisting of a syllable.
Syllable, a single sound consisting of one or more letters and forming a word or part of a word.
Syllabus, a short summary of a prescribed course of study, or of a series of lectures.
Syllogism, an argument in a logical form consisting of two premises followed by a conclusion.
Sylph, an imaginary spirit of the air; a slender graceful woman.
Sylvan, wooded, abounding in trees.
Symbol, a sign or token.
Symbolism, the use or language of signs and symbols.
Symboi'ical, of the nature of a type or emblem, figurative.
Symmet'rical, having its parts in harmonious proportion.
Symmetry, harmonious proportion.
Sympathet'ic, entering into the feelings of another kindly; having kindred feeling.
Sympathize, to enter into another's feelings, to express sympathy.
Sympathy, compassion, kindred feeling; reciprocal or harmonious relations.
Symphony, an elaborate orchestral composition of movements.
Symposiarch, one who presides at a banquet.
Symposium, a banquet.
Symptom, a sign or indication, especially of disease.
Synæ'resis, the combining of two vowels or syllables so as to form one.
Synagogue, a Jewish place of worship.
Syn'chronize, to make to agree in point of time.
Syn'chronous, happening at the same time.
Syncli'nal, inclined towards one another in a downward direction so that they finally meet.
Syn'cope, a fainting fit; contraction due to the elision or omission of one or more letters in a word.
Syndic, a chief magistrate; a member of the senate of a university.
Syndicate, a council, a senate, a board of managers.
Synod, a council, especially an ecclesiastical council.
Synonym, a word identical in meaning with another word.
Synon'ymous, identical in meaning.
Synop'sis (*pl.* synopses), a general view or summary of a subject.
Synop'tic, representing a subject from the same point of view.
Syntax, that branch of grammar which deal with the arrangement of words in sentences.
Syn'thesis, the process of building up or constructing, as opposed to analysis.
Synthet'ic, of the nature of synthesis; a term applied to highly inflected languages.
Syriac, the language of Syria, a form of Aramaic.
Syrian, belonging to Syria, a native of Syria.
Syringe, an instrument consisting of a cylinder fitted with a piston for drawing in and forcibly ejecting fluid.
Syrinx, a musical instrument of reeds known as Pan's pipes; a fistula.
Syrup, a strongly sweetened juice thickened by boiling.
System, method, plan; orderly arrangement; the bodily constitution.
Systemat'ic, according to system, methodical.
Syzygy, the conjunction of two heavenly bodies in a line with the earth.

Tabard, a tunic worn over armour; a herald's coat.
Tabby, a kind of waved silk; a brindled cat.
Tabefaction, the act of wasting away.
Tabernacle, a tent; a place of worship; an altar cupboard.
Tabes, a wasting disease.
Tableau (*pl.* tableaux), a picture.
Tableau vivant, a representation of a scene by people dressed in character.
Table d'hôte, dinner in the public room of a hotel.
Tablet, a flat piece of wood, etc., to write on; a medicine or sweetmeat in a small square.
Table-talk, conversation at table; familiar talk.
Table-turning, the moving of tables by supposed spiritual agency.
Taboo, to forbid approach to or use of.
Tabor, a small drum to accompany a pipe.
Tabular, set down in the form of tables; formed in laminæ.
Tabulate, to reduce to tables or synopses.
Tachom'eter, an instrument to measure velocity.
Tacit, implied, not expressed by words.
Taciturn, silent; not given to conversation.
Taciturnity, habitual silence.
Tact, skill in doing or saying the right thing.
Tactician, one skilled in tactics.
Tactics, the art of manœuvring troops on the field of battle; method of action.
Tactless, wanting in tact.
Tædium vitæ, weariness of life.
Tael, a Chinese coin worth about 5/-; a weight.
Taf'feta, a thin silk material.
Taffrail, the upper part of the stern of a ship.
Tafia, rum distilled from molasses.
Tailor-bird, a small bird which sews leaves together for its nest.
Tailoring, the calling of a tailor.
Tail-race, the flow of water from a mill after it has turned the wheel.
Taint, to stain; to infect; to corrupt.
Talc, a mineral.
Tale-bearing, the act of informing with intent to injure.
Talented, possessing considerable ability.
Talion, the law of retaliation.
Talipes, the disease known as club-foot.
Talisman, a charm to preserve from harm.
Talkative, fond of talking.
Tallow-chandler, a maker of tallow candles.
Tally (*pl.* tallies), a stick to keep accounts by; anything made to suit another.
Talmud, a book containing the Jewish traditions and explanations.
Talon, the claw of a bird of prey.
Tamable or **tameable,** that may be tamed.
Tamarind, a tropical tree and its fruit.
Tambourine, a kind of small drum.
Tamil, the language spoken in parts of India and Ceylon.
Tamper, to meddle; to experiment with unfairly
Tamping, the filling up of a hole in a rock for blasting.
Tandem, a vehicle drawn by two horses harnessed one behind the other.
Tangent, a straight line which touches a curve but does not cut it.
Tangible, perceptible to the touch; real.
Tankard, a large drinking-vessel.
Tannery, a place where hides are made into leather.
Tan-pit, a vat in which hides are laid.
Tantalize, to torment by raising false hopes.
Tan'talus, a mythical personage; a genus of birds; a locked case of decanters.
Tantamount, equivalent.
Tantivy, with great swiftness.
Tape-line, a measuring tape marked with inches, etc.

Tapestry, an ornamental fabric used for covering walls, etc.
Tapioca, a farinaceous food obtained from the cassava plant.
Tapis, tapestry, carpeting.
Tap-room, a room in an inn where drink is served.
Tarboosh, a red cap or fez.
Tardily, in a slow or dilatory manner.
Tare, a weed; vetch; the weight of a cask in which goods are contained.
Target, a small shield; a mark for firing at.
Tariff, a list of the duties on goods; a list of charges.
Tarnish, to soil; to dim the brightness of.
Tarpan, the small wild horse of Tartary.
Tarpaulin, canvas tarred to keep out the wet.
Tarry, to stay; to delay; to wait.
Tartan, a checked cloth worn in the Highlands of Scotland; a small sailing vessel.
Tartar, a native of Tartary; a formidable person.
Tartarean, belonging to Tartarus or hell.
Tartness, sharpness; sourness; acidity.
Tasselled, adorned with tassels.
Taster, one who tests the quality by tasting.
Tattered, ragged; full of rents.
Tatting, the making of a kind of lace.
Tattler, an idle talker; a gossip.
Tattoo, the beat of drum to summon soldiers to their quarters.
Tattoo, to mark the skin with figures, etc.
Taunt, to reproach with insult or sarcasm.
Taurine, belonging to a bull.
Taut, tight, not slack.
Tautol'ogy, repetition of the same idea in different words.
Tavern, an inn, a public-house.
Tawdriness, gaudy finery.
Tawny, of a yellow colour like things tanned.
Taxable, that may be taxed.
Taxation, the act of levying taxes.
Tax'idermy, the art of preserving and mounting the skins of animals.
Tea-caddy, a small box to hold tea.
Teacher, one who teaches; an instructor.
Teamster, one who drives a team.
Tear-stained, showing traces of tears.
Teasel, a plant with large burs.
Teaser, one who teases; that which puzzles.
Teat, the nipple.
Techily or **tetchily,** in a fretful manner.
Technical, belonging to the arts, or to a particular art.
Technicality, anything technical.
Technol'ogy, the knowledge of industrial arts.
Tecton'ics, the art of constructing.
Tedder, an implement for spreading hay.
Tedious, wearisome; slow; irksome.
Tedium, tediousness.
Teethe, to cut the teeth.
Teetotaler, one pledged to total abstinence.
Tegument, a natural covering.
Telautograph, a telegraph for copying writings at a distance.
Telegram, a telegraphic message.
Telegraph'ic, belonging to or sent by telegraph.
Teleg'raphy, the art of sending messages by telegraph.
Telem'eter, an instrument for determining distances.
Teleology, the science of final causes.
Telep'athy, the transmission of thoughts from one person to another at a distance.
Telephone, an instrument for transmitting sound, especially that of the human voice.
Telephonic, belonging to the telephone.
Telescope, an instrument for viewing distant objects.
Telic, denoting the end or aim.
Tel'lural, belonging to the earth.
Temerarious, rash; careless.
Temerity, rashness; contempt of danger.
Temperament, state with respect to the predominance of any quality; disposition.
Temperance, moderation; sobriety.
Temperate, moderate; free from ardent passion.
Temperature, degree of any quality, especially of heat or cold.
Tempered, of a certain temper; hardened.
Tempestuous, stormy, turbulent.
Temporal, belonging to this world; measured by time.
Temporalities, revenues of an ecclesiastic from lands, etc.
Temporarily, only for a time.
Temporize, to comply with the time or occasion.
Tempt, to entice to evil; to provoke.
Temptation, the act of tempting; an enticement.
Tempus fugit, "time flies."
Tenable, that may be held or maintained.
Tenacious, inclined to hold fast; retentive.
Tenacity, the state of being tenacious.
Tenancy, temporary possession of lands, etc.
Tenant, a temporary occupant.
Tenantry, the tenants on an estate.
Tendency, direction towards; inclination.
Tender, an offer; a small vessel; the carriage attached to a locomotive to carry the fuel and water; sensitive to touch or in feeling.
Tender, to offer for acceptance; to offer to supply goods or do certain work at a certain price.
Tenderness, kind attention; caution; fondness.
Tendon, that which connects a muscle with a bone.
Tendril, a slender clinging shoot of a plant.
Tenebrosity, darkness; gloom.
Tenement, anything held by a tenant; a set of apartments.
Tenet, a principle or opinion.
Tennis, a game with rackets and balls.
Tenon, the end of a piece of timber shaped to fit into a cavity prepared for it.
Tenor, continuity of state; general course or drift; the higher adult male voice.
Tense, stretched tightly; not lax.
Tensile, capable of extension.
Tension, the act of stretching; strain.
Tentacle, a thread-like organ of touch possessed by certain insects.
Tentatively, as an experiment.
Tenter-hooks, in a state of great strain.
Tent-pegging, a cavalry sport.
Tenuirostral, slender-beaked.
Tenu'ity, thinness; rarity.
Tenure, the manner of holding lands, etc.
Tepefaction, the act of making tepid.
Tepid, lukewarm.
Tercen'tenary, a three hundredth anniversary.
Tergiversation, subterfuge, evasion.
Termagant, furious; a turbulent woman.
Terminable, limitable; that may be terminated.
Terminal, relating to an end or boundary.
Termination, the act of terminating; limit; end.
Terminology, the arrangement of terms and names.
Terminus, a boundary; the station at either end of a railway.
Terpsichore'an, relating to the art of dancing.
Terrace, a raised walk usually turfed; a row of houses.
Terra-cotta, a kind of earthenware.
Terra incognita, an unexplored country.
Terraqueous, composed of land and water.
Terrestrial, relating to land; earthly.
Terribly, in a dreadful manner; violently.
Terric'olous, living on the earth.
Terrier, a variety of dog.
Terrific, dreadful, causing terror.
Territorial, relating to land; confined to a district.
Terrorism, government by fear; intimidation.
Terse, neat, concise.
Tertium quid, a third something.
Tesselated, formed in small squares.
Tes'sera (*pl.* tesseræ), a small piece of marble, etc., used in tesselated work.
Testacean, relating to shelled animals.
Testamentary, relating to a will, or bequeathed by will.
Testator, a man who leaves a will.
Testatrix, a woman who leaves a will.
Tester, an old coin; a canopy above a bed, etc.
Testicle, a seed organ; part of the organs of generation in males.
Testify, to certify; to give evidence.
Testily, fretfully, peevishly.
Testimonial, a certificate of character or capabilities; a gift subscribed for and bestowed as a token of esteem.
Testimony, proof, evidence; open attestation.
Tet'anus, lock-jaw.
Tête-à-tête, an interview between two persons.
Tether, a rope for tying grazing cattle.
Tetrahedron, a solid figure bounded by four triangles.
Tetrapod, a four-footed animal.
Tetrasyllabic, a word of four syllables.
Teuton, one of the Germanic family of races; a German.
Teutonic, relating to the Teutons.
Text, that on which a comment is written; a Scriptural verse; an author's own words.
Text-book, a book giving the chief points of a certain branch of study.
Textile, woven; capable of being woven.
Textual, relating to or contained in the text.
Texture, a thing woven; manner of weaving; disposition of the parts of any body.
Thaler, a German coin worth about 3s.
Thanatol'ogy, the study of doctrines of death.
Thanksgiving, the act of returning thanks, especially for divine favours.
Thaumaturgical, relating to thaumaturgy or magic.
Thean'thropism, the state of being both divine and human.
Theatre, a play-house; a place of exhibition.
Theat'rically, in a manner suiting the stage.
Theatricals, a dramatic performance.
Their, of them; belonging to them.
Theism, the belief in a God.
Theistic, belonging to theism.
Theme, a subject on which one speaks or writes.
Theocracy, government immediately superintended by God.
Theod'olite, an instrument used in surveying land.
Theog'ony, the origin of the gods.
Theolo'gian, one versed in theology.
Theologically, according to the principles of theology.
Theology, the science of divine things.
Theoph'any, the appearance of God to man.
Theorem, a proposition to be proved.
Theoretical, depending on theory; speculative.
Theorist, one who forms theories.
Theosoph'ical, relating to theosophy, the knowledge of divine things.
Therapeutic, curative; relative to the art of healing.
There, in that place.
Therefore, for that reason.
Thermæ, hot springs or baths.
Thermal, relating to heat.
Thermometer, an instrument for determining the temperature.
Thermometrical, pertaining to the thermometer.
Thesau'rus, a treasury of knowledge.
Thesis, a proposition to be maintained.
Thespian, relating to the drama.
Theurgy, a kind of magic.
Thews, sinews; muscles.
Thicket, a small close wood.
Thieving, stealing.
Thigh, the upper part of the leg.
Thill, the shaft of a cart.
Thimble-rig, a sleight-of-hand trick.
Thinness, the state of being thin or meagre.
Thirsty, in want of drink; parched; hotly desirous.
Thirty-twomo, a small size in books, the sheet being folded into 32 parts.
Thistle, a prickly plant.
Thither, to that place; to that end.
Thole-pin, a pin in the gunwale of a boat to keep the oar in place.
Thoroughfare, a passage through; a public way.
Thought-reader, one who professes to read the thoughts of another.
Thousand, the number of ten hundred.
Thraldom, bondage; slavery.
Thrall, a slave; servitude.
Thrashing or **threshing,** the process of beating grain from the husk; a beating.
Threadbare, worn out; trite.
Threatening, using threats, menacing.
Three Rs, reading, writing, and arithmetic.
Three-decker, a war-vessel having guns on three decks.
Threnet'ic, sorrowful; doleful.
Thren'ody, a song of lamentation.
Threshold, the step under a door; entrance; beginning.
Thrice, three times.
Thriftily, frugally, with economy.
Thrilling, causing a tingling sensation; exciting.
Thriving, prosperous, flourishing.
Throe, extreme pain or anguish.
Throttle, the wind-pipe; to suffocate.
Throughout, everywhere, in every part.
Thrush, a singing bird; an infantile disease; a horse's foot disease.
Thunder-bolt, a powerful flash of lightning; a severe reproof or menace.
Thurible, a censer.
Thurifer, one who carries the thurible.
Thwart, transverse; a rower's seat placed athwart a boat; to cross; to oppose.
Thyme, a fragrant herb.
Thymy, full of thyme; fragrant.
Thyrsus, the staff of Bacchus.
Tiara, an ornament for the head.
Tic-douloureux, painful affection of a nerve, generally in the face.
Ticklish, tottering; difficult; easily tickled.
Tidal, relating to the tides; influenced by the tides.
Tide-waiter, an officer who watches the landing of goods to collect the duties.
Tidiness, neatness; trimness.
Tidings, news, intelligence.
Tie-beam, a beam to secure the rafters.
Tiers état, the third estate; the commons.
Tiffin, an Anglo-Indian lunch.
Tighten, to make tighter; to straiten.
Tillage, the art of cultivating the soil.
Tiller, a husbandman; the bar by which a rudder is turned.
Tilth, husbandry, tillage.
Timbered, furnished with timbers; wooded.
Timbre, the sonorous quality of a voice or instrument.
Timbrel, a kind of drum or tambourine.
Time-fuse, a fuse which will explode a charge at a certain moment.
Time-honoured, honoured on account of long use or age.
Timeliness, seasonableness.
Time-server, one who follows the opinions of the times to serve his own ends.
Timidity, fearfulness; habitual cowardice.
Timorous, full of fear; full of scruples.

Tincture, a colour or taste superadded; a solution of medicinal substances in spirits.
Tin-foil, tin beaten into thin leaves.
Tinge, to colour slightly.
Tinker, a mender of kettles, pots, etc.
Tinning, the process of coating with tin.
Tintinnabulation, a sound as of the tinkling of bells.
Tippet, a sort of shoulder cape.
Tippler, one who drinks to excess.
Tipstaff, a staff tipped with metal, or the officer carrying it.
Tipsy-cake, a sponge cake saturated with wine.
Tirade', an outburst of reproof or abuse.
Tire, *(noun)* a head-dress; attire; a hoop of iron or rubber round the rim of a wheel.
Tiresomeness, the state of being wearisome.
Tiring-room, the room in which players dress for the stage.
Tissue, a fine gauzy fabric; the fabric composing the organs of the body.
Titan'ic, belonging to the Titans; gigantic.
Tithe, the tenth part; the part assigned for the maintenance of the clergy.
Tithing, an ancient district of ten householders each responsible for the good conduct of the rest.
Titillate, to tickle.
Title-deed, a document proving the right to property.
Title-page, the page of a book containing the title.
Title-role, the character which gives a play its title.
Titular, nominal; having the title only of an office.
Tmesis, the separation of a compound word by the addition of other words between.
Toady (*pl.* toadies), one who fawns; a hanger-on.
Toast-master, one who announces the toasts at public dinners.
Tobacconist, a dealer in tobacco.
Toboggan, a sled for sliding down snowy slopes in Canada.
Tocsin, an alarm-bell.
Toddy, a liquor obtained from certain palms; spirit and water mixed and sweetened.
Toffee or **toffy,** a sweetmeat.
Toga, the loose robe of adults among the ancient Romans.
Toilet, the cover of a dressing-table; dress; the act of dressing.
Toilet-glass, a mirror on the dressing-table.
Toil-worn, worn out with hard work.
Tokay, a wine made at Tokay in Hungary.
Tolerable, that may be endured; passable.
Tolerance, the power or act of enduring.
Toleration, forbearance towards opponents in matters of opinion.
Tolerator, one who tolerates.
Toll-bar, a barrier across a road where toll is collected.
Toll-booth, a place where tolls were collected; a prison.
Tomahawk, an Indian war-hatchet.
Tomato (*pl.* tomatoes), a plant and its fruit.
Tombstone, a stone over a grave.
Tome, a volume; a book.
Tomtom, an Indian drum.
Ton, a measure of weight or capacity; the fashion.
Tonal, relating to tone.
Tongs, an instrument for taking hold of anything.
Tongue, the organ of speech and taste; a language.
Tonic, relating to tones or sounds; a medicine which restores vigour to the system.
Tonite, a powerful explosive.
Tonnage, the weight a ship can carry; a duty on ships.
Tonsil, one of two glands in the throat.
Tonsilli'tis, inflammation of the tonsils.
Tonsorial, pertaining to the barber's art.
Tonsure, the act of shaving the head; the shaven patch on the top of a priest's head.
Tontine, a kind of life-annuity.
Tooling, ornamental work done with a tool.
Toothsome, palatable; pleasing to the taste.
Topaz, a gem, generally yellow.
Top-draining, the draining of the surface of land.
Top-dressing, a surface dressing of manure.
Toper, an excessive drinker.
To'piary, clipped into fantastic shapes.
Topical, local; relating to a topic or theme.
Topog'rapher, one who describes a particular place, etc.
Topog'raphy, the art of the topographer.
Topon'omy, the place-names of a locality.
Top-sawyer, the sawyer who stands above the timber in a saw-pit.
Toque, a kind of bonnet.
Torch-light, the light given by torches.
Tor'eador, a Spanish bull-fighter.
Toreutic, pertaining to carved and similar work.
Tor'ment, anything which gives pain; anguish.
Torment', to put to pain; to tease; to harass.
Tormentor, one who torments; a kind of harrow.
Tornado (*pl.* tornadoes), a hurricane.
Torpe'do (*pl.* torpedoes), a fish; a submarine engine of war.
Torpedo-boat, a vessel which discharges torpedoes.
Torpescent, growing torpid.
Torpid, numbed; not active.
Torpids, the Lent boat-races at Oxford.
Torpor, numbness, dulness, inactivity.
Torrent, a violent and rapid stream.
Torricellian vacuum, the vacuum in the barometer.
Torrid, parched; dried with heat; burning.
Torsion, the act of twisting.
Torso, a headless, limbless statue.
Tortoise, an animal covered with a shell.
Tortuous, winding; twisted; roundabout.
Torture, anguish; pain inflicted to punish.
Tory (*pl.* Tories), one of the Conservative party.
Tot, anything extremely small; to add.
Total'ity, the complete sum or quantity.
Totem, the symbol or badge of a savage tribe or family.
Totemism, the practice of having totems.
Totterer, one who threatens to fall.
Touch-hole, the hole in a gun by which the charge is ignited.
Touchiness, peevishness.
Touch-stone, a stone for testing gold and silver; a test.
Touch-wood, decayed wood used as tinder.
Toughen, to grow or make tough.
Tour, a ramble; a long journey.
Tour de force, a feat of strength.
Tourist, one who travels for the purpose of sight-seeing.
Tournament, an ancient military contest of skill; a contest to prove superiority of skill in a game.
Tournure, figure, contour.
Tout, to seek customers in a pushing manner; one who touts.
Tout-à-fait, entirely, quite.
Tout ensemble, the whole effect.
Toward, in the direction of; nearly; regarding.
To'wardly, ready to do or learn; docile.
Towelling, material for making towels.
Towing-path, a path by a river or canal for horses towing boats.
Town-clerk, the clerk to a town-council.
Town councillor, a member of a town-council.
Toxical, relating to poisons; poisonous.
Toxicology, the science of poisons.
Traceable, capable of being traced.
Tracery, ornamentation in Gothic windows.
Trache'a, the windpipe.
Tracheot'omy, the cutting of an opening in the windpipe.
Tracing-paper, transparent paper used in copying drawings, etc.
Trackless, untrodden; having no path.
Tract, anything drawn out; an expanse of land or water; a treatise.
Tractable, easily led or managed.
Tractarian, one of the writers of the famous Oxford tracts; one holding the views contained therein.
Tractate, a tract; a treatise.
Traction, the act of drawing; the state of being drawn.
Trade-mark, a distinguishing mark placed on goods by the manufacturer.
Trade-price, price charged to retail dealers.
Tradesfolk, people employed in trade.
Trades-union, a union of the workmen in a trade to defend their interests.
Trade-wind, an ocean wind which blows constantly in one direction.
Tradition, opinions, etc., handed down from age to age by word of mouth.
Traduce, to calumniate, to slander.
Traducianism, the doctrine that the soul as well as the body is begotten.
Traffic, commerce; trade; goods and people on a railway, road, etc.
Tragedian, a writer or actor of tragedy.
Tragedienne, an actress of tragedy.
Tragedy, a dramatic representation of a tragic nature; a mournful or dreadful event.
Tragic, calamitous; mournful; dreadful.
Tragi-comedy, a drama containing both tragedy and comedy.
Trailer, a climbing plant; a wicker carriage drawn by a bicycle.
Train-band, a body of militia formerly used in London.
Training-ship, a vessel on which boys are trained for the sea.
Train-mile, mile done by a train, a unit in railway reckonings.
Train-oil, oil from the blubber of whales.
Trait, a feature; a stroke; a touch.
Traitor, one guilty of treachery.
Traitress, a female traitor.
Trajec'tory, the path described by a body, such as a comet, under the force of attraction.
Trammelled, fettered; hampered.
Tramway, a street rail-road for cars.
Trance, a state of profound insensibility; an ecstasy; catalepsy.
Tranquil, quiet; peaceful; undisturbed.
Tranquillity, the state of being tranquil.
Transaction, any matter carried out; negotiation.
Transatlantic, beyond or crossing the Atlantic.
Transcend, to surpass; to rise above.
Transcendent, excellent; surpassing others.
Transcendental, supereminent; speculative.
Transcribe, to copy; to write again.
Transcript, a copy from an original.
Transept, one of the aisles at right angles to the nave.
Transfer, to convey or make over from one to another.
Trans'ferable, that may be transferred.
Transference, the act of transferring.
Transfigure, to change the outward appearance of.
Transfix, to pierce through.
Transformation, a complete change in form.
Transgress, to offend by violating a law.
Transgression, the violation of a law; a sin.
Transgressor, one who transgresses.
Transhipment, the act of removing goods to another ship.
Transient, passing, fleeting.
Transit, a passing across or through.
Transition, change from one state or topic to another.
Transitory, continuing a short time; fleeting.
Translate, to remove; to turn into another language.
Translation, the act of translating.
Translucent, transparent, clear.
Transmarine, lying beyond the sea.
Transmigration, passage from one place or state into another.
Transmission, the act of transmitting.
Transmit, to send from one place to another; to permit the passage of.
Transmutation, the act of transmuting.
Transmute, to change from one nature or substance to another.
Transoceanic, across or crossing the ocean.
Transom, a cross-beam in a window or other structure.
Transparent, clear; that can be seen through.
Transpire, to emit in vapour; to happen; to become known.
Transplant, to remove and plant in another place.
Transportation, removal; banishment.
Transpose, to change the order of.
Transposition, the act of transposing.
Transubstantiation, the Roman Catholic doctrine that the elements of the Eucharist are changed into the body and blood of Christ.
Transverse, being in a cross direction.
Trapeze, a sort of swing used in gymnastics.
Trappings, ornaments, specially for horses.
Trappist, a member of an order of monks.
Travail, labour; toil; labour in childbirth.
Traveller, one who journeys, especially in a foreign land; a travelling agent.
Traveller's tree, a tree of Madagascar.
Traverse, to pass across; to thwart; crosswise.
Travesty, a ridiculous misrepresentation of a serious work or subject.
Trawler, a fishing-boat dragging a net along the bottom of the sea.
Treacherous, faithless, perfidious.
Treachery, perfidy, breach of faith.
Treacle, the syrup obtained in refining sugar.
Treadmill, a wheel used as a prison punishment.
Treason, treachery against the State.
Treasure-trove, treasure discovered in the earth, the owner being unknown.
Treasury, a place where riches are kept; a government financial department.
Treatise, a written discourse on a particular subject.
Treaty (*pl.* treaties), negotiation; an agreement between two or more States.
Treble, threefold; the highest part in music.
Trefoil, a three-leaved plant, as clover.
Trellis, an openwork structure of iron or wood.
Tremendous, such as to inspire fear or wonder.
Tremolo, a quavering effect in music.
Tremor, a quivering or trembling motion.
Tremulous, trembling; feeling fear; shaking.
Trenchant, sharp, cutting.
Trencher, a wooden plate for cutting on.
Trencher-man, a good eater.
Trend, to lie in any particular direction; to turn.
Trental, an office for the dead.
Trepan', a surgical instrument; to catch, ensnare.
Trepanning, the operation of removing a portion of the skull to relieve the brain.
Trepidation, a trembling; a state of terror.
Trespass, to transgress; to enter unlawfully on another's land.
Tresses, ringlets or locks of hair.
Trestle, the frame of a table; a movable frame for the support of anything.
Triad, a body of three.
Triangular, having three angles.
Tribal, belonging to a tribe or family.
Tribulation, distress; deep affliction.
Tribu'nal, the seat of a judge; a court of justice.
Tribune, an ancient Roman magistrate chosen by the people; a platform.

Trib'utary, paying tribute; subordinate; a stream flowing into another stream.
Tribute, an annual payment made to another nation; homage.
Trice, a short time; to haul or tie up with a rope.
Trickster, one who cheats.
Tri'colour, the three-coloured flag of France.
Tricycle, a three-wheeled velocipede.
Trident, the three-pronged sceptre of Neptune; a three-pronged instrument.
Tridentine, relating to the Council of Trent.
Triennial, lasting three years; happening every third year.
Trifling, of little worth or consequence.
Trigamist, one who has three husbands or wives at a time.
Trigonom'etry, a branch of mathematics dealing with angles.
Trillion, a million twice multiplied by itself.
Trilogy, three dramas forming a whole, yet each complete in itself.
Trimestral, occurring every three months.
Trimmer, one who trims; a time-server.
Trinal, three-fold.
Trinity, the union of the three persons of the Godhead.
Trinket, a small ornament of no great value.
Trio, a musical composition for three performers; three together.
Tripar'tite, divided into three parts.
Tripe, the intestines; a dish prepared from he stomach of ruminating animals.
Triple, threefold; three times repeated.
Triplet, three of a kind; three lines rhyming together.
Trip'licate, threefold.
Tripod, a stand, etc., with three feet or legs.
Tripos, an examination for honours at Cambridge.
Triptych, three pictures, etc., joined together by hinges.
Trisect, to divide into three equal parts.
Trite, worn out, stale, not new.
Triton, a sea-god; a genus of molluscs.
Trituration, the act of grinding to a powder.
Triumphal, used in celebrating a victory.
Triumvirate, a coalition of three men in power.
Triune, three in one.
Trivial, trifling; of little worth or moment.
Triviality, the state of being trivial; a trifle.
Trivially, in a trivial manner.
Troglodyte, a cave-dweller.
Trojan, a native of Troy; a brave fellow.
Troll, to move circularly; to run round; to sing heartily.
Trolley or **trolly,** a small cart or truck.
Trooper, a horse-soldier.
Trope, a word used in a different sense from that which really belongs to it.
Trophy, something taken and kept in memory of a victory.
Tropics, the space between the tropics of Cancer and Capricorn.
Tropical, belonging to the tropics.
Troth-plight, the act of betrothing; betrothed.
Troubadour, one of the early poets of Provence.
Troublesome, tiresome; vexatious; uneasy.
Troublous, tumultuous; disordered.
Trough, a long hollow vessel; anything shaped like a trough.
Troupe, a party of performers.
Trousering, material for trousers.
Trousseau, the outfit of a bride.
Troy, a weight in which 12 ounces go to the pound.
Truancy, the act of playing truant.
Truant, an idler; a boy who stays away from school without leave.
Truce, a temporary cessation of hostilities by agreement.
Truckle, a small castor; to give way servilely.
Truculent, savage; cruel; terrible of aspect.
True, not false; genuine; faithful; exact.
Truism, a self-evident truth.
Truly, really; according to truth; faithfully.
Trumpery, rubbish; something of no value.
Truncated, cut short, lopped.
Truncheon, a short staff; a cudgel.
Trundle, to roll or bowl along.
Trunk-hose, wide breeches gathered in near the knee.
Trunnions, the knobs of a gun that support it on the carriage.
Truss, a bundle; a bandage worn for rupture; to pack close; to skewer ready for cooking.
Trustee, one chosen to manage property in trust for another.
Tryst, a promise to meet.
Trysting-place, the place chosen for a meeting.
Tsetse, a fly of South Africa.
T-square, a ruler shaped like a T.
Tube, a pipe; a hollow cylindrical body.
Tubercle, a small swelling or growth; a pimple.
Tuber'culosis, tuberculous disease.
Tubing, material for making tubes; tubes.
Tubular, resembling a tube; long and hollow.
Tuft-hunter, one who toadies to persons of rank.
Tui'tion, guardianship; teaching.
Tulle, a kind of thin silk net.
Tumbler, an acrobat; a large drinking-glass; a kind of pigeon.
Tumbrel or **tumbril,** a cart; a ducking-stool.
Tumid, swollen; protuberant; pompous.
Tumour, a morbid swelling.
Tumult, the commotion of a multitude; an uproar.
Tumultuous, full of tumult; turbulent.
Tu'mulus (*pl.* tumuli), a burial-mound.
Tunable, that may be put in tune; harmonious.
Tundra, one of the vast plains of Siberia.
Tune, a melody; an air; the state of giving the proper sounds.
Tunic, a loose garment.
Tunnel, an under-ground passage cut through a hill, under a river, etc.
Tunnelled, having a tunnel through.
Tunny, a fish.
Turanian, a term for a group of languages.
Turban, a head-dress worn in the East.
Turbid, thick, muddy.
Turbine, a horizontal water-wheel.
Turbot, a flat fish.
Turbulence, tumultuousness; confusion.
Tureen, a vessel for holding soup or vegetables.
Turf, earth covered with grass; a kind of fuel; the racecourse.
Turgescent, swelling, becoming turgid.
Turgidity, the state of being swollen.
Turkey, a large domestic fowl.
Turmoil, trouble, disturbance; agitation.
Turn-coat, one who forsakes his party or principles.
Turn-cock, a man who turns the water on or off from the main.
Turnery, wood-work done with a turning-lathe.
Turning-lathe, a lathe for shaping wood, etc.
Turnip, an esculent root.
Turnkey, one in charge of the keys of a prison.
Turn-over, a small pie; money received from customers during a certain period.
Turnstile, a barrier on a pivot which turns as any one passes through.
Turpentine, a resinous substance which exudes from certain trees.
Turpitude, base wickedness.
Turps, shortened form of turpentine.
Turquoise, a gem of a greenish-blue colour.
Turret-ship, an ironclad with its guns mounted on revolving turrets.
Turtle-soup, a soup made from turtle-flesh.
Tutelage, guardianship.
Tu'telary, having the guardianship of any person or thing.
Tutor, one who instructs another.
Tutorial, pertaining to a tutor.
Tweezers, small pincers.
Twelfth-night, the eve of the Epiphany.
Twilight, the faint light before sunrise and after sunset.
Twinge, a short, sudden, sharp pain; a pinch.
Twin-screw, a steamer having two propellers on separate shafts.
Twitter, to chirp.
Type, an emblem, a mark; a model; a letter in metal, etc., to print from.
Type-metal, a metal used for types.
Type-setting, the process of placing types ready for printing.
Type-writer, a machine to do the work of writing.
Typhoid, enteric fever.
Typhoon, a violent hurricane on the Chinese and Japanese seas.
Typhus, a contagious fever.
Typical, emblematic; characteristic.
Typify, to represent by an emblem or model.
Typographic, belonging to printing.
Typog'raphy, the art of printing.
Tyrannical, acting like a tyrant; despotic.
Tyran'nicide, the act of killing, or he who kills a tyrant.
Tyr'annous, tyrannical; arbitrary; severe.
Tyrant, a despotic ruler; an oppressor.
Tyro or **tiro,** one who has not yet mastered an art or subject.
Tyrolese, a native of the Tyrol.
Tzar, Tzarina, the Emperor and Empress of Russia.

Ubiq'uitous, present everywhere.
Ubiq'uity, the state of being ubiquitous.
Udder, the organ of the cow, etc., which secretes the milk.
Udometer, a rain-gauge.
Ugliness, lack of beauty; moral deformity.
Uhlan, a light cavalryman in continental armies.
Ukase, an imperial decree in Russia.
Ulcer, a sore which discharges matter.
Ulterior, lying beyond; not openly declared.
Ultimate, final; most remote.
Ultimatum, a final condition or offer.
Ultimo, the month preceding the present one.
Ultramarine, beyond the sea; a blue colour.
Ultramontane, beyond the mountains; one who strongly advocates the papal claims.
Ultroneous, voluntary.
Umber, a brown colouring matter.
Umbles, the entrails of a deer.
Umbra, the complete shadow in an eclipse.
Umbrage, a shade, a shadow; resentment.
Umbrageous, shady.
Umlaut, (German) the modification of a vowel.
Umpire, one called upon to decide a dispute by the mutual consent of the parties at variance.
Unaccented, having no stress laid on it.
Unaccompanied, not attended; without accompaniment.
Unaccredited, not authorized.
Unaccustomed, not habituated; not used.
Unacknowledged, not owned.
Unacquainted, without previous knowledge; strange.
Unadvisable, not advisable or prudent.
Unaffected, free from affectation; sincere.
Unalloyed, not mixed; perfect.
Unalterable, that cannot be altered.
Unane'led, without receiving extreme unction.
Unanim'ity, the state of being unanimous.
Unan'imous, being of one mind.
Unanswerable, not to be refuted.
Unappropriated, not appropriated or claimed.
Unassailable, not to be assailed or contested.
Unassuming, modest; not forward.
Unatoned, not expiated or atoned for.
Unattached, not attached to any particular regiment, etc.
Unauthenticated, not attested as genuine.
Unauthorized, not duly sanctioned.
Unavailable, not available.
Unavailing, useless; vain.
Unavoidably, inevitably.
Unawares, unexpectedly; without warning.
Unbalanced, not balanced; unsteady.
Unbecoming, unsuitable; indecorous.
Unbeliever, an infidel; one who does not believe.
Unbiased or **unbiassed,** free from prejudice.
Unbosom, to reveal in confidence.
Unbounded, without limit or restraint.
Uncanny, weird, mysterious.
Uncanonical, not according to the canons.
Unceasing, endless, continual.
Unceremoniously, without ceremony.
Unchangeable, without change.
Uncircumcised, not circumcised.
Uncle, the brother or brother-in-law of one's father or mother.
Uncomfortable, affording no comfort; not at ease.
Uncommunicative, reserved.
Uncom'promising, not allowing of compromise; unyielding.
Unconcern, want of interest or anxiety.
Unconditioned, unlimited; infinite.
Unconscionable, beyond reasonable limits.
Unconscious, without consciousness; unknowing.
Unconstitutional, contrary to the constitution.
Uncontrollable, that cannot be controlled.
Uncouple, to loose.
Uncouth, odd; awkward.
Unction, the act of anointing; the ointment used; warmth of devotion; pretended fervour.
Unctuous, oily; fawningly affable or fervid.
Undeceive, to make known a deception.
Undemon'strative, not given to showing one's feelings.
Undeniable, that cannot be denied.
Undenominational, not denominational.
Underbuy, to buy at a lower price than another.
Undercroft, a vault under the chancel of a church.
Undercurrent, a current running below the surface; a hidden influence.
Underestimated, not valued highly enough.
Undergraduate, a university student who has not taken his first degree.
Underhand, secretly; by fraudulent means.
Underpinning, the placing of supports under a building.
Underrate, to rate too low.
Under-secretary, a subordinate secretary.
Undersigned (the), the person or persons signing some document.
Undertaker, one who manages funerals.
Undertow, an undercurrent running in a different direction from the surface current.
Underwrite, to write under something else.
Underwriter, an insurer of ships.
Undesirable, not to be wished.
Undeterred, not deterred or prevented.
Undeviating, not deviating; regular.
Undiluted, not diluted.
Undiscerning, lacking discernment.
Undisciplined, lacking discipline; untrained.
Undistinguishable, not to be distinctly seen; not to be known by any peculiar property.
Undiversified, not diversified.
Undoing, ruin; destruction.
Undoubtedly, without question.
Undress, ordinary dress.
Undulation, a waving motion.
Undulatory, moving in the manner of waves.
Uneasiness, trouble; a state of disquiet.
Unembarrassed, not embarrassed.
Unendowed, not endowed.
Unequi'vocal, not equivocal; clear.
Unerring, committing no mistake; certain.

Unexcelled, not surpassed.
Unexceptionable, not liable to objection.
Unexhausted, not exhausted; not spent.
Unfamiliar, unaccustomed; strange.
Unfathomable, that cannot be fathomed.
Unfavourable, not propitious.
Unfeigned, not feigned; sincere.
Unfilial, undutiful towards parents.
Unforeseen, not foreseen.
Unfrequented, rarely visited.
Unfunded, not funded.
Unfurl, to unfold; to expand.
Ungainliness, the state of being awkward.
Ungodliness, wickedness; neglect of God.
Ungovernable, not to be ruled or restrained.
Ungrammatical, not in accordance with the rules of grammar.
Ungrudgingly, willingly; cheerfully.
Ungual, belonging to a nail, claw, or hoof.
Unguent, an ointment.
Unhallowed, unholy; profane.
Unhoused, not having received the sacrament.
Unicorn, a fabulous one-horned animal.
Uniformity, conformity to one pattern.
Unify, to make or view as one.
Unimpassioned, not moved by passion; calm.
Unimpeachable, not to be impeached.
Unimpugnable, not to be called in question.
Uninhabitable, unfit to be inhabited.
Unintentional, happening without design.
Unintelligibly, so as not to be understood.
Uninterruptedly, without interruption.
Union, the act of joining and making one; concord; conjunction of mind or interests.
Unionist, a member of a union; a member of a political party opposed to Irish Home Rule.
Unique, peculiar, incomparable.
Unison, concord of sound.
Unit, a single person, number, or thing; a standard of measurement.
Unitarian, a member of a religious sect opposed to belief in the Trinity.
Unity (*pl.* unities), the state of being one; concord; uniformity.
Universal, general, extending to all.
Universalist, one who holds the doctrine of universal salvation.
Universe, the entire system of created things.
University (*pl.* universities), an educational institution which confers degrees.
Unjustifiable, not to be justified or defended.
Unkempt, uncombed; not polished.
Unlade, to unload; to discharge a cargo.
Unleavened, not leavened.
Unlettered, unlearned, untaught.
Unlicensed, having no legal permission.
Unlikelihood, improbability.
Unlimber, to take off the limbers; not easy to bend.
Unman, to deprive of courage; to dishearten.
Unmanageable, not easily governed.
Unmerited, not deserved.
Unmistakable, not to be mistaken.
Unmitigated, not softened or lessened.
Unmoor, to set free from moorings.
Unnavigable, that cannot be navigated.
Unnecessarily, without necessity.
Unoccupied, not occupied; not engaged in any work.
Unofficial, not official.
Unorthodox, not orthodox.
Unpalatable, not palatable; disagreeable.
Unparalleled, having no equal.
Unparliamentary, contrary to the rules of parliament.
Unplumbed, unfathomed.
Unprecedented, having no precedent.
Unpremeditated, not thought of beforehand.
Unprepossessing, not of a pleasing appearance.
Unpresentable, not presentable.
Unprincipled, with no settled principles; wicked.
Unprivileged, without certain privileges.
Unquestionably, without doubt.
Unreasoning, without reasoning powers; illogical, unreasonable.
Unregenerate, not brought to a new life.
Unreliable, that cannot be relied on.
Unrequited, not recompensed; not returned.
Unrighteous, unjust; wicked.
Unrivalled, without an equal.
Unruly, ungovernable, turbulent.
Unsavoury, tasteless; ill-smelling; unpleasing.
Unscathed, unharmed.
Unscriptural, not according to the Scriptures.
Unscrupulous, unprincipled; without scruple or consideration.
Unsearchable, inscrutable; beyond knowledge
Unseasoned, not seasoned; without seasoning.
Unsectarian, belonging to no one sect in particular.
Unseemliness, indecency; indecorum.
Unserviceable, useless; not fit for use.
Unsightly, disagreeable to the sight; ugly.
Unsized, not arranged by size; not containing size or glue.
Unslaked, not slaked or moistened, not quenched.
Unsociable, not fond of company.
Unsolicited, not solicited, not asked for.
Unsophisticated, not adulterated; simple, unaffected.
Unstable, not fixed; inconstant; irresolute.
Unsuitable, not suitable; unfit.
Unswerving, not swerving; firm.
Unsymmetrical, lacking symmetry.
Untenable, that cannot be held or defended.
Untidiness, want of neatness.
Untimely, happening at an unnatural time.
Unto'ward, froward, perverse; awkward.
Untractable, not easily managed; difficult.
Untrammelled, not fettered, free.
Untutored, uninstructed, untaught.
Unutterably, inexpressibly, ineffably.
Unvarying, not liable to change.
Unwarily, without caution.
Unwarrantable, not justifiable.
Unwary, wanting caution, imprudent.
Unwholesome, injurious to health.
Unwieldy, unmanageable; ponderous, bulky.
Unwonted, unusual; unaccustomed.
Unyielding, not yielding; obstinate.
Upbraid, to charge with anything disgraceful; to reproach.
Upheaval, a lifting up from beneath.
Upholsterer, one who makes or provides carpeting, sofas, mattresses, etc.
Upland, high ground above valleys.
Uprightness, honesty, integrity.
Uproarious, making a great noise or tumult.
Upstart, one suddenly raised to wealth or power.
Uranium, a hard metal.
Urban, belonging to a town or city.
Urbanity, civility; politeness, suavity.
Urchin, a hedgehog; a name for a child.
Urgency, pressing necessity for action.
U'rinal, a place for passing urine.
Ursine, relating to or like a bear.
Usage, treatment; custom, practice.
Usance, use; usury; interest paid for money.
Usher, an officer to introduce strangers; a schoolmaster.
Usual, common, frequent, customary.
Usufruct, life-interest in lands, etc.; enjoyment of the use of a possession.
Usurer, one who practises usury.
Usurious, practising excessive usury.
Usurp, to seize and hold without legal right.
Usury, the practice of lending money at an exorbitant rate of interest.
Utensil, an article of usefulness; a household vessel.
Uterus, the womb.
Utilitarianism, the doctrine that actions are right or wrong according to their utility.
Utility, usefulness; advantageousness.
Utilize, to make profitable use of.
Utopia, "nowhere"; a perfect condition of things, a place where everything is perfect.
Utterance, manner of speaking; pronunciation.
Uxorious, exaggeratedly fond of a wife.

Vacancy, empty space; an unfilled situation.
Vacant, empty; unfilled; empty of thought.
Vacation, the act of vacating; the interval between two terms; holidays.
Vaccinate, to inoculate against small-pox.
Vaccine, belonging to or obtained from cows; lymph obtained from cows.
Vacillation, a wavering of mind.
Vacu'ity, emptiness; space unoccupied; inanity.
Vacuum, a space unoccupied by matter.
Vade-mecum, a hand-book.
Vagabond, a vagrant; a good-for-nothing fellow.
Vaga'ry, a wild freak; a caprice.
Vagrancy, the state of being a vagrant.
Vagrant, a worthless wanderer; a tramp.
Vague, unsettled; not clear as to meaning.
Vagueness, the quality of being vague.
Vainglory, empty pride; boastfulness.
Valance, the drapery round a bed, etc.
Valedictory, bidding farewell.
Valetudinarian, one of a weak constitution; constantly ailing.
Valhalla, see *Walhalla.*
Valiant, brave, heroic.
Valid, having force; conclusive; legal.
Validity, the state of being valid.
Valise, a travelling bag.
Valorous, brave, valiant.
Valuable, precious; deserving regard.
Valuation, the value set upon anything; appraisement.
Valueless, being of no value.
Valve, a leaf of a folding-door; a kind of lid to an aperture which admits the passage of a fluid but prevents its return.
Vandalism, damage done to works of art wilfully or in ignorance.
Vanguard, the troops who precede the main body of an army.
Vanity, idle show; petty pride; empty pleasure; conceit; fruitless desire.
Vanquish, to conquer; to overcome.
Vantage-ground, superiority of place or opportunity.
Vapid, spiritless, dead.
Vaporous, full of vapour; flatulent.
Vapour, visible steam; vain imagination.
Variability, the state of being variable.
Variable, changeable, inconstant.
Variance, discord, disagreement.
Variant, a different form or reading.
Variation, change; difference; deviation.
Varicose, dilated, as a vein.
Variegate, to diversify with various colours.
Variegation, diversity of colours.
Variety, change; difference; a kind.
Variorum, an edition of a work containing notes by different commentators.
Variously, in different ways.
Vary, to change; to deviate; to disagree.
Vaseline, a substance obtained from petroleum and used as a liniment, etc.
Vassalage, the state of a vassal; servitude.
Vatican, the Pope's palace at Rome; the papal authority.
Vaticination, prophecy.
Vaudeville, a popular song; a play containing such songs.
Vault, a continued arch; a cellar; an underground chamber for the interment of the dead; a leap.
Vaunt, to boast; to display with ostentation.
Veda, the ancient Hindu sacred books.
Veering, turning about, shifting.
Vegetable, a plant; belonging to plants.
Vegetarian, one who excludes animal food from his diet.
Vegetate, to grow as plants; to lead a dull life.
Ve'hemence, the state of being vehement.
Ve'hement, violent; ardent; eager.
Vehicle, a carriage; a means of conveyance.
Vehic'ular, relating to a vehicle.
Veil, a cover for the face; a cover; a disguise.
Veldt, open country in South Africa.
Velocity, speed, swiftness.
Velvet, a fabric having a short soft pile.
Venal, ready to take bribes.
Venality, a spirit of greed or mercenariness.
Vendee, the person to whom a thing is sold.
Vender, one who sells.
Vendetta, the practice in Corsica of avenging the death of a relative.
Vendor, one who sells.
Veneer, a thin coating as of superior wood over inferior wood; outward show or polish.
Venerable, worthy of veneration.
Veneration, reverent regard or respect.
Venereal, relating to sexual intercourse.
Venetian-blind, a blind made of overlapping slips of wood.
Vengeance, punishment inflicted for an injury.
Vengeful, vindictive, revengeful.
Venial, pardonable; allowable.
Venison, the flesh of deer.
Venom, poison; spite.
Venomous, poisonous; malicious.
Venous, pertaining to the veins.
Ventilate, to let in fresh air; to discuss.
Ventilator, a contrivance to let in fresh air.
Ventriloquial, relating to ventriloquism.
Ventriloquist, one who speaks in such a manner as to give the impression that the sound proceeds from some other source.
Venturesome, daring, bold.
Venue, a thrust *(fencing)*; the place of trial *(law)*; a scene of encounter.
Veracious, true; observant of truth.
Veracity, the quality of being veracious.
Veranda, a gallery with sloping roof built out from a house.
Verbal, spoken, not written; literal.
Verba'tim, word for word.
Verbiage, superfluity of words.
Verbose, containing or using too many words.
Verbosity, the state of being verbose.
Verdant, green, fresh; ignorant.
Verderer, an officer of the royal forests.
Verdict, the decision of a jury; judgment.
Verdigris, the rust of brass or copper.
Verdure, greenness of vegetation.
Verification, the act of verifying.
Verify, to prove the truth of; to confirm.
Verisimilitude, probability, likelihood.
Veritable, true, agreeable to fact.
Verity, truth; a true assertion.
Vermeil, see *vermilion.*
Vermicelli, paste rolled into little worm-like forms.
Vermilion, a brilliant red pigment.
Vermin, any noxious animal or insect.
Vernac'ular, native, of one's own country.
Vernal, belonging to the spring or youth.
Versatile, changeable; able to apply oneself easily to a new task or to any accomplishment.
Versification, the art or system of making verses.
Version, a translation; an account or description.
Ver'tebral, relating to or having a spine.
Vertex (*pl.* vertices), the top; the point overhead.
Vertical, relating to the vertex; immediately overhead.
Verti'go, giddiness; a swimming in the head.
Vertu, objects of art, etc.
Vesper, the evening star; evening.
Vespers, evening service in the Roman Church.

Vestibule, an entrance-hall; a lobby.
Vestige, a footprint; a trace or remains of anything.
Vestment, a garment.
Vestry, a room adjoining a church in which the vestments, etc., are kept; a parochial assembly.
Vesture, dress; a garment; covering.
Veteran, experienced; an old soldier.
Vet'erinary, relating to the treatment of the diseases of domestic animals.
Veto, prohibition; refusal to assent to.
Vexation, uneasiness; annoyance.
Via media, a middle course.
Viaduct, a long bridge over a valley.
Vial, a small bottle.
Viand, food; meat dressed.
Viaticum, provisions for a journey; the last rites to the dying.
Vibrant, vibrating; resonant.
Vibrate, to quiver; to move to and fro; to cause to shake.
Vibration, the act of vibrating.
Vibratory, vibrating; causing vibration.
Vicarage, the benefice or house of a vicar.
Vicar-general, an officer who assists a bishop.
Vicarious, delegated; acting in the place of another.
Vice, a fault; evil conduct; a kind of iron press; taking the place of, or next in rank to.
Vice-admiral, an officer next in rank to an admiral.
Vice-chancellor, an officer next in rank to a chancellor.
Vicegerent, one intrusted with the power of a superior.
Vice-regal, belonging to a viceroy.
Viceroy, one who governs in place of the king with royal authority.
Vicinity, nearness; neighbourhood.
Vicious, devoted to vice; faulty; spiteful.
Vicissitude, unlooked-for change.
Victimize, to make a victim of; to swindle.
Victor, a conqueror.
Victoria Cross, see *Dict. of Gen. Infor.*
Victorious, successful in battle, etc.
Victual, food; to supply with food.
Victualler, one who provides victuals.
Vide, see, look at.
Videlicet, to wit, that is, viz.
Viduity, widowhood.
Vie, to endeavour to rival; to contend.
Viennese, a native or natives of Vienna.
View-halloo, the huntsman's cry at sight of the fox.
Viewless, not visible; dark.
Vigil, watch; devotion performed in the customary hours of rest.
Vigilant, watchful; circumspect.
Vignette, a small illustration at either end of a chapter; a small photograph.
Vigorous, full of strength; forcible.
Vigour, strength; mental force; energy.
Viking, an ancient Scandinavian sea-rover.
Vile, base; mean; worthless; wicked.
Vilify, to debase; to defame.
Villa, a country seat; a suburban residence; a Roman house.
Villager, an inhabitant of a village.
Villain, a wicked wretch; a serf in feudal times.
Villainy, wickedness; depravity; a crime.
Villeinage, the state of a villain; base servitude.
Vinculum, a tie; a bond.
Vindicate, to justify; to maintain.
Vindication, justification; defence.
Vindictive, revengeful.
Vine-clad, covered with vines.
Vinegar, an acid liquid used as a condiment; anything really or metaphorically sour.
Vinous, having the qualities of wine.
Vintager, one who gathers the harvest of the vine.
Vintner, one who sells wine.
Vi'ola, a large kind of violin; a genus of plants.
Violation, infringement; desecration; rape.
Violence, force; injury; outrage.
Violinist, one who plays the violin.
Violoncellist, one who plays the violoncello.
Violoncello, a stringed instrument.
Viperous, venomous.
Vira'go, a vixenish woman.
Virginity, maidenhood; chastity.
Viridity, greenness.
Virile, manly.
Virility, manhood.
Virtually, in effect.
Virtue, moral excellence; power, efficacy.
Virtuoso, a skilled musician; an authority on the arts.
Virtuous, morally good; chaste.
Vir'ulence, the state of being virulent.
Virulent, poisonous; bitter, malignant.
Virus, poisonous or contagious matter.
Visage, the face; look.
Vis-à-vis, face to face.
Viscid, glutinous, sticky.
Viscosity, the quality of being viscous.
Viscount, a nobleman next in rank below an earl.
Viscous, glutinous, sticky, tenacious.
Visé, an indorsement on a passport showing that it has been passed by an official.
Visible, that can be seen; apparent.
Visionary, affected by phantoms; imaginary; a day-dreamer.
Visitant, one who visits another.
Visitation, the act of visiting; an official visit of inspection; communication of divine love or anger.
Vista, a view; a prospect through an avenue.
Visual, relating to sight; used in sight.
Vital, containing or necessary to life; essential.
Vitality, vital power.
Vitals, internal organs essential to life.
Vitiate, to spoil; to make less pure.
Vitreous, consisting of or resembling glass.
Vitrifaction, the process of vitrifying.
Vitrify, to change into glass; to become glass.
Vitriol, a name given to sulphuric acid.
Vitu'perate, to censure; to rail at abusively.
Vitu'perative, angry; abusive.
Vivacious, lively, gay, sprightly.
Vivacity, liveliness, cheerfulness.
Vivandière, a woman attached to continental regiments who sells spirits, etc.
Vivâ voce, by word of mouth.
Viva rex, long live the king.
Vivid, lively; striking.
Vivify, to animate; to endue with life.
Vivisection, the act of making experiments on living animals in the interests of science.
Vixen, a she-fox; a bad-tempered woman.
Vizier, a minister of state in Mohammedan countries.
Vocabulary, a dictionary; a person's stock of words.
Vocal, relating to or uttered by the voice.
Vocalist, a singer.
Vocation, a call to any work, etc.; occupation.
Vocif'erate, to clamour; to cry out noisily.
Vocif'erous, clamorous, noisy.
Vodka, a Russian intoxicant.
Vogue, fashion, mode.
Void, empty; vacant; ineffectual; null.
Voidance, the state of being void; ejection.
Voilà, there is; there are; behold!
Volapük, a universal language invented by Johann Schleyer in 1879.
Volatile, having the power to pass off by rapid evaporation; flying; fickle; lively.
Volat'ilize, to make volatile.
Volcanic, relating to a volcano.
Volcano (*pl.* volcanoes), a burning mountain.
Volition, the act or power of willing.
Volt, a turning round; a fencing term; a unit of electro-motive power.
Voltameter, an instrument for measuring an electric current.
Volubility, the state of being voluble.
Voluble, having a ready flow of words.
Volume, something rolled; a book; bulk.
Voluminous, consisting of many complications; consisting of many volumes; bulky.
Voluntary, acting without compulsion; an organ solo in church.
Voluntary-school, an elementary school built and partly supported by voluntary contributions.
Volunteer, a soldier not in the regular army; to offer one's services.
Voluptuary, a man devoted to pleasure and luxury.
Voluptuous, given to excess of pleasure; sensual.
Vomit, to throw up from the stomach; to emit with violence.
Voracious, greedy; rapacious.
Voracity, the quality of being voracious.
Vortex (*pl.* vortices), a whirlpool; a whirlwind.
Votaress, a female votary.
Votary, one devoted as by a vow to any service, study, etc.
Voter, one who has the right to vote.
Vouch, to maintain; to bear witness.
Voucher, one who bears witness; written evidence of the truth of a fact.
Vouchsafe, to deign, to condescend.
Vowel, a letter that can be sounded by itself.
Voyager, one who travels by water, a traveller.
Vulcanite, the hard kind of vulcanised india-rubber.
Vulgar, belonging to the common people; mean, low.
Vulgarity, the state of being vulgar; a vulgar act.
Vulgate, a noted ancient Latin version of the Bible.
Vul'nerable, capable of receiving injury.
Vulture, a large bird of prey.
Vying, attempting to equal or excel.

Wad, a piece of tow or soft material used as a pad; the pad which keeps the charge in a gun.
Waddy, a stout club used by the natives of Australia.
Wafer, a thin sweet biscuit; a thin cake of unleavened bread used for sacramental purposes in the Roman Church.
Waft, to bear onward through sky or sea; a breath, a whiff, a puff.
Wage, to carry on (war); stipulated payment for work done, wages.
Wager, to stake, to bet.
Waggish, full of playful mischief or mischievous humour.
Waggle, to sway from side to side.
Wagon or Waggon, a strongly built four-wheeled cart for carrying goods.
Wagonage, payment for conveyance by wagon.
Wagonette, a light four-wheeled vehicle for carrying passengers.
Waif, a homeless wanderer, a vagabond.
Wailing, lamentation.
Wain, a waggon.
Wainscot, the wooden skirting or panelling round a room.
Waist, the narrowest part of the human body just above the hips.
Waist-band, a band, belt or ribbon for the waist.
Waiting-maid, a female attendant in domestic service.
Waitress, a female waiter.
Waive, to forego, not to press a claim.
Wake, to awake; to keep vigil; a night watch over a corpse held by the friends of the deceased the night before the funeral.
Wake, the trail of a ship in the water; hence the track, the rear.
Wakeful, sleepless; on the alert, watchful.
Waldenses, a sect of French Protestants of the 12th century named after their leader Waldo.
Walhalla, the name in Norse mythology of the abode of heroes slain in battle.
Walk, to travel on foot, to promenade.
Wallaby, a kind of kangaroo.
Wall-eye, a horse's eye with an iris light grey or nearly white.
Walloon, the native language of the Flemish.
Wallowing, rolling in mire or mud.
Walnut, a tree valuable both for its wood and its rich nuts.
Walpurgis-night, the night of the witches' revel, supposed to take place on the eve of May 1st.
Walrus, a large tusked amphibious mammal found in Arctic seas.
Waltz or Valse, a graceful dance for two persons.
Wampum, shells or beads used by North American Indians as money, and as ornaments.
Wan, pale and weary.
Wand, a rod, a slender stick.
Wanderer, one who roams from place to place, a homeless person.
Wanderoo, an Indian baboon.
Wane, to gradually decrease or diminish.
Wanton, unrestrained, licentious.
Wantonness, idle sport, levity, licentiousness.
Wapentake, an ancient term still retained in Yorkshire for the divisions of the county corresponding to the hundreds in other counties.
Warble, a small tumour on the backs of cattle containing the maggot of the warble-fly.
Warbler, a singing bird.
War-cry, a battle-cry.
Ward, a minor entrusted to the care of a guardian; a division of a city or town; a room for several patients in a hospital; part of a lock; to guard.
War-dance, a dance which among certain savage tribes is a prelude to war.
Warden, the title of the head of a college; one who keeps ward or guard.
Wardrobe, a piece of furniture resembling a cupboard for the safe keeping of dresses and other wearing apparel.
Ward-room, the officers' mess room on board a man-of-war.
Wardship, guardianship, the functions of a guardian.
Warehouseman, one who keeps a wholesale warehouse or serves in one.
Warfare, armed strife, fighting.
Warily, in a wary or cautious manner.
Warm-blooded, having warm blood; fiery, impulsive.
Warming-pan, a covered pan to hold live coals used in olden times for warming beds.
Warning, an admonition, a caution; a notice of impending danger; a notice of dismissal.
War office, the department under the Secretary of State for War controlling military matters.
War-path, the path of hostility.
Warrant, a guarantee, an assurance; a justification, authorization; a writ.
Warrantable, justifiable.
Warrant-officer, a non-commissioned officer of the highest grade in the army or navy.
Warranty, authority, a guarantee, a deed of security.
Warren, a place where rabbits burrow and breed.
Warrior, a poetical term for a soldier.
War-ship, a man-of-war.
Wash-board, a wooden plank placed so as to prevent the sea from washing over a ship's gunwale.
Wash-leather, soft leather used for household purposes; leather from which regimental belts are made.
Waspish, fiery-tempered, irritable.
Wassail, "the wish of health," a liquor compounded of spiced ale and roasted apples in which healths were drunk on festive occasions.

Wassail-bowl, the bowl in which the wassail used to be mixed.
Wastage, gradual waste due to time and use.
Waste-pipe, a pipe for carrying off waste water.
Watchman, one who patrols the streets of a town or guards buildings by night.
Watch-spring, the main-spring of a watch.
Watch-word, a pass-word; the motto of a party.
Water-bailiff, a custom-house official who inspects vessels on their arrival in port or on their departure; one appointed to prevent poaching in preserved waters.
Water-bed, an india-rubber case filled with water used as a bed for the sick to prevent bed-sores.
Water-cart, a cart for watering roads.
Water-colour, colour mixed with water as distinct from oil-colour; a picture in water-colours.
Water-course, a channel hollowed out by a stream of water; a running stream.
Water-fall, a cascade, a fall in a water-course.
Water-fowl, amphibious birds that frequent lakes and rivers.
Water-gauge, an instrument for measuring the height or amount of water.
Watering-place, a health resort by the sea-side or where there are mineral springs; a place where horses and cattle are watered.
Water-line, the line made by the water on the side of a ship marking the depth to which she sinks in the water.
Water-logged, filled with water and so unable to move.
Water-meter, an instrument constructed to record the amount of water which passes through it.
Water-mill, a mill worked by water-power.
Water-parting, a ridge of high land separating river-basins.
Water-power, water applied as motive power to work machinery.
Waterproof, impervious to water; an outer covering made of rain-proof material.
Watershed, the line of separation between two river-basins.
Water-spout, a hollow moving column of water produced by a whirlwind.
Water-tight, closely fitted so as to be impervious to water.
Water-way, a water-highway, a canal or navigable river.
Water-works, the means and appliances by which water is stored, filtered, and supplied for public use.
Water-worn, worn or fretted by the action of water.
Wattle, a pliant twig, withy or osier; the pink fleshy appendage below the throat of a cock or turkey.
Wavering, faltering, hesitating; tottering.
Waxend, thread stiffened with cobbler's wax.
Waxwork, a figure modelled in wax.
Wayfaring, journeying on foot.
Waylay, to intercept, to lie in wait for.
Wayward, headstrong, wilful.
Weald, a wold or open tract of wooded country.
Wealth, riches, abundance.
Wean, to cease to suckle; gradually to accustom to the loss of something.
Weanling, a young animal just weaned.
Weapon, an instrument of defence or attack.
Weariness, fatigue.
Wearisome, causing weariness, tiresome.
Weary, tired, fatigued.
Weasel, a small fierce carnivorous animal which preys on birds, moles, rats, etc.
Weather-beaten, marked by exposure to wind and weather.
Weather-cock, a weather-vane which shows the direction of the wind.
Weaver, one who weaves cloth in a loom.
Webbed, having the toes connected by a strong membrane, web-footed.
Wedding, a marriage; a silver wedding is the 25th anniversary of the wedding day, a golden or diamond are the 50th or 60th anniversaries respectively.
Wedlock, the state of marriage, matrimony.
Ween, to think, deem.
Weevil, a kind of beetle destructive to plant-life.
Weight, heaviness, pressure; a metal counterpoise of fixed standard used in weighing.
Weir, a dam across a stream to raise the level of the water for the purpose of working a mill; a row of stakes across a stream to prevent fish from passing through.
Weird, strange, uncanny.
Welcome, a hearty reception.
Weld, to hammer metals together after they have been softened by heat; to unite closely.
Welfare, well-being.
Welkin, an obselete term for the sky, the clouds.
Well-appointed, having good appointments, well-equipped
Well-informed, possessed of general information.
Wellington, a high riding-boot named after the great Duke.
Well-meaning, with good intentions.
Well-proportioned, having its parts in proper proportion.
Welsh, belonging to Wales.
Welt, a border of leather round the edge of a boot or shoe above the sole.
Welter, to roll about in mire or gore.
Wench, a girl; a bold immodest girl.
Wend, to go; a member of a Slavonian race formerly dwelling on the south shore of the Baltic.
Wergeld or **wergild**, an Anglo-Saxon fine for murder.
Wesleyan, a follower of John Wesley, a member of the sect of Arminian Methodists.
Westering, travelling westward.
Westerly, blowing from the west; situated towards the west.
Wether, a castrated ram.
Wet-nurse, a nurse who suckles the child of another woman.
Whalebone, a tough flexible substance obtained from the upper jaw of a whale.
Whaler, a ship that goes on a whaling expedition.
Wharf (*pl.* wharves), a quay or landing place built on the bank of a river.
Wharfage, the fee charged by the owners of a wharf for the right to make use of it.
Wharfinger, one who owns or has the manage-ment of a wharf.
Whatsoever, of any kind whatever.
Wheal, a mine.
Wheaten, made of wheat.
Wheedling, coaxing, cajoling.
Wheel-wright, a wheel-maker, a carriage-builder.
Wheeze, to breathe noisily or huskily.
Whelm, to engulf, to utterly destroy.
Whelp, a puppy, a cub.
Whence, from what place or source?
Whereat, whereupon, upon which.
Wherry (*pl.* wherries), a light swift boat.
Whet, to sharpen, make keen; to stimulate, incite.
Whetstone, a stone upon which knives and edged tools are sharpened.
Whey, the watery liquid which separates from the curd when milk is curdled.
Whiggism, adherence to the political tenets of the Whigs.
Whilst, during the time that, at the same time as.
Whim, an odd caprice.
Whimperer, one who whimpers or whines.
Whimsical, full of whims, odd, eccentric.
Whimsy (*pl.* whimsies), a foolish whim; an odd idea.
Whining, whimpering.
Whinnying, neighing.
Whip-cord, cord used for making whip-lashes.
Whipper-in, one who whips in hounds to prevent their wandering from the scent.
Whipping-post, a post to which criminals were tied to be whipped.
Whipster, a contemptuous term for a young upstart, a whipper-snapper.
Whir, to make a whizzing noise.
Whirligig, a merry-go-round.
Whirlpool, a whirling eddy of water.
Whirlwind, a swift circular current of air.
Whirring, a whizzing sound.
Whisker, the hair on the side of the face.
Whisky or **whiskey**, a spirit distilled from barley and other cereals.
Whispering, speaking below the breath.
Whist, a game of cards played by four persons, two on each side.
Whistle, a shrill sound made by blowing; an instrument to make this sound.
White-flag, a flag used in war as a token of surrender or desire for a parley.
White lie, a slight and well-meant deviation from truth.
Whitechapel cart, a light spring cart.
Whitlow, a painful gathering near the finger nail.
Whitsunday, the seventh Sunday after Easter; the feast of Pentecost.
Wholesale, the sale of goods in large quantities as opposed to retail; extensive, on a large scale.
Wholesome, good for health, salutary; fresh, fit to eat.
Whooping cough, an infectious disease, usually confined to childhood, characterized by paroxysms of coughing attended by whooping.
Whore, a prostitute.
Wickedness, sinfulness, evil conduct, crime.
Wicket, the stumps at which the bowler aims in cricket; a small door set in a larger one; a small gate.
Widower, a man whose wife is dead.
Widowhood, the state of being a widow.
Wieldy, able to be wielded, not cumbersome.
Wigwam, the hut of a Red Indian.
Wilderness, a barren waste.
Wildfire, a highly inflammable compound hard to be extinguished when once ignited.
Willness, guile, cunning.
Will o' the wisp, a Jack o' lanthorn, a deceptive phosphorescent flame which hovers over morasses.
Willowy, like a willow, pliant, graceful.
Willy-nilly, willing or not willing.
Wily, guileful, cunning.
Wimble, a kind of gimlet; a carpenter's brace.
Wimple, a white linen covering for the head and shoulders worn by nuns.
Wince, to shrink back from sudden pain or shock.
Winch, a crank or handle attached to the axis of a wheel by which it may be turned; a machine for hoisting weights.
Windegg, an egg imperfectly developed.
Windfall, unripe fruit blown down by the wind; an unexpected access of good fortune.
Wind-gauge, an instrument for measuring the force with which the wind is blowing.
Windlass, a revolving cylinder used for hoisting weights.
Windmill, a mill with arms or sails set in motion by the wind.
Window-sash, the wooden framework in which the panes of glass are set.
Windward, in the direction of the quarter from which the wind is blowing, against the wind.
Wine-press, a press in which the juice is pressed out of the grapes in the process of wine-making.
Winnow, to separate the chaff from the grain with a winnowing fan; to sift.
Winsome, winning, engaging.
Winter-quarters, a place where soldiers are quartered during the winter.
Wire-gauze, gauze made of fine woven wire.
Wire-puller, one who works behind the scenes to gain his own ends.
Wiry, like wire, tough.
Wisdom-tooth, a double tooth not cut until the time of manhood or womanhood.
Wiseacre, a foolish person who assumes airs of wisdom.
Wisp, a small bundle, especially of straw or hay.
Wistful, full of sad longing.
Witless, without wits, dull, stupid.
Witchcraft, sorcery, magic.
Wit'enagemot", "the council of wise men"—the legislative council of England in Anglo-Saxon times.
Withdrawal, the act of withdrawing.
Withers, the part below a horse's neck between the shoulder-bones.
Withstand, to resist, oppose, gainsay.
Witnesser, one who witnesses, one who signs a document as witness.
Witticism, a witty saying.
Wittingly, knowingly, consciously.
Wizard, a sorcerer, a magician.
Wizened, dried-up, shrivelled.
Woad, a plant from which a blue dye is obtained.
Woebegone, melancholy, overcome with woe.
Wold, an open tract of wooded country.
Woman (*pl.* women), a human female.
Womanish, effeminate.
Womanly, like a woman.
Womb, the uterus; any large dark cavity.
Wonder, a marvel; astonishment, surprise.
Wondrous, marvellous, wonderful.
Won't, a contracted form of "will not."
Wont, accustomed.
Woo, to court, make love to.
Woodbine, honeysuckle.
Wood-cut, a picture produced from an engraving on wood.
Wood-cutter, a woodman, one who fells trees.
Wood-engraving, the art of engraving on wood.
Woodland, belonging to the woods, sylvan.
Wood-nymph, a tree-nymph, a dryad.
Wooer, one who woos, a suitor, a lover.
Woof, the weft, the threads that cross the warp in the loom.
Wool-combing, the process of combing wool to straighten the fibres.
Wool-gathering, vaguely dreaming.
Woollen, made of wool.
Woolsack, the seat of the Lord Chancellor in the House of Lords.
Wool-stapler, a dealer in wool.
Wordiness, verbosity, prolixity.
Word-picture, a scene described in words.
Workable, practicable, feasible.
Workhouse, a poor-house.
Workmanship, the skill with which a work is wrought, the execution.
Worldliness, worldly-mindedness, love of this world.
Worldling, one who is worldly-minded, one who loves the things of this world.
Wormwood, a plant with a very bitter taste possessing medicinal properties; bitterness.
Worn, weary, exhausted, worn out.
Worrying, harassing, annoying; inclined to worry, over-anxious.
Worse, inferior; more wicked; less healthy.
Worship, to adore.
Worshipful, worthy of honour.
Worshipper, one who worships or adores.
Worsted, woollen yarn; defeated.

Worthily, in a worthy manner; adequately.
Wot, to know.
Would-be, pretentious, vainly aspiring.
Wound, to injure, to pain; a cut or injury.
Wound, the past tense and past participle of the verb to wind.
Wrack, seaweed cast up by the waves; destruction, ruin.
Wraith, a ghost, a spirit.
Wrangle, to bicker, to quarrel about trifles.
Wrangler, one who disputes about trifles; one who has obtained a first-class in the mathematical tripos at the Cambridge University.
Wrap, a shawl; to enfold, to enclose.
Wrapper, an outer covering for enclosing a newspaper; a wrap, a shawl.
Wrath, fierce anger.
Wreak, to inflict, to visit.
Wreath, a chaplet, a garland.
Wreathe, to adorn with a wreath, to encircle.
Wreckage, the act of wrecking; the débris cast ashore after a wreck.
Wrecker, one who wrecks vessels for the sake of plunder.
Wrench, to violently wring or twist off or asunder.
Wrest, to seize from or to pluck away by violence; to attach a forced meaning to anything to suit one's own ends.
Wrestler, one who wrestles with another in order to throw him.
Wretched, extremely miserable; deplorable; depraved.
Wriggle, to turn and twist about.
Wright, a maker, fabricator.
Wring, to twist violently or forcibly.
Wrinkle, a slight fold or furrow on the surface.
Wrist, the narrowest part where the hand and arm join.
Wristband, the band of a sleeve at the wrist.
Writ, a legal document containing a summons or other judicial command.
Write, to set down in writing; to be an author.
Writership, the functions or position of a writer.
Writhe, to turn and twist about from uneasiness or pain.
Wrong, wicked, not right; incorrect; mistaken.
Wrongheaded, misguided, headstrong, perverse.
Wroth, extremely angry.
Wrought, worked, made.
Wrought-iron, cast-iron rendered malleable by puddling.
Yacht, a light decked vessel built for racing purposes or for pleasure excursions.
Yahoo, a degraded brutal person (see Swift's "Gulliver's Travels").
Yak, a species of ox with long silky hair found in Central Asia, especially in Tibet.
Yam, the large edible root of a plant of the genus Dioscorea which grows in tropical climates.
Yankee, a colloquial term for a citizen of the United States.
Yard, three feet in lineal measure; a cross-beam attached to a mast to enable a sail to be spread; a court or enclosed place.
Yard-arm, one arm of the yard or cross-beam attached to a ship's mast.
Yataghan, a long, curved, Turkish dagger.
Yawl, a fishing smack, a small sailing boat with a deck and two masts; a small ship's boat.
Yawn, to gape.
Yeanling, a lamb just yeaned.
Year-book, a book published annually containing a record of the notable events and achievements of the year.
Yearning, a craving, an earnest longing.
Yeast, a leavening substance obtained from malt-liquor in the process of fermentation.
Yellow-fever, a deadly, contagious fever prevalent in tropical climates.
Yellow-hammer, a small song-bird with yellow feathers.
Yellow-jack, yellow-fever.
Yeoman (*pl.* yeomen), the owner of a small landed estate.
Yeomanry, a British volunteer cavalry force who provide their own horses and uniform.
Yesterevе, yesterday evening, last evening.
Yield, to submit, surrender; give up.
Yo'del, the musical call of the Swiss mountaineers to one another.
Yoke, to couple or join; a wooden framework under which two oxen draw together; a wooden framework for the shoulders used by milkmen.
Yokel, a dull rustic; a boorish peasant.
Yolk, the yellow part of an egg.
Yore, (of) yore, (of) old.
Young-eyed, having the bright lustrous eyes characteristic of youth.
Youth, the period of adolescence or early life; the young collectively; a young man, a stripling.
Yule-log, the Christmas log.
Yule-tide, Christmas time.
Zeal, fiery enthusiasm, passionate ardour.
Zealot, a fiery enthusiast, a fanatic.
Zealous, full of zeal or ardour.
Zebu, a hump-backed ox common in India.
Zemindar', a native landholder in India paying taxes direct to the Government.
Zena'na, the women's apartments in a native Indian household.
Zend, the old language of Persia.
Zenith, the point in the sky immediately overhead; the culminating or highest point.
Zephyr, a poetical name for the west wind; a thin cotton fabric for summer wear.
Zero, a cipher; the point, indicated by the figure 0, from which thermometers and barometers are graduated.
Zest, ardour, zeal, eagerness.
Zeugma, a grammatical figure by which a term which belongs to one word or clause is made to apply also to another.
Zigzag, going from side to side in a slanting direction, thus forming a series of acute angles.
Zinc, a metallic element of a bright bluish-white colour.
Zinc-blende, native sulphide of zinc, blende.
Zincog'raphy, the art of etching on zinc.
Zither, a musical instrument with a flat sounding-board and several strings.
Zodiac, a zone in the heavens containing the twelve constellations whose symbols are known as the signs of the zodiac.
Zodi'acal, belonging to the zodiac.
Zoetrope, a mechanical optical toy.
Zone, a belt or region.
Zoochem'istry, that branch of chemistry which deals with the chemical constituents of the animal body.
Zoog'raphy, an account of the appearance, nature, and habits of animals.
Zoolite, a fossil animal, a petrified animal organism.
Zoology, that branch of biology which deals with animal life.
Zooph'agous, a carnivorous or flesh-eating animal.
Zoophyte, a name applied to certain animal organisms which closely resemble plant-life.
Zoot'omy, the science of comparative anatomy, the dissection of the lower animals.
Zoroastrianism, the doctrines of Zoroaster as embodied in the sacred writings of the Parsees; fire-worship.

ABBREVIATIONS AND CONTRACTIONS.

A1	First class (of ships).
A.A.G.	Assistant Adjutant General.
A.A.I.	Associate of Auctioneers' Institute.
A.B.	(L. *Artium Baccalaureus*). Bachelor of Arts. (Also *B.A.*)
A.B.	Able-bodied seaman.
Abp.	Archbishop.
A.C.	(L. *Ante Christum*). Before Christ.
a/c.	Account.
A.C.A.	Associate of Chartered Accountants.
A.C.P.	Associate of the College of Preceptors.
A.C.S.	Additional Curates' Society.
A.C.S.	Anglo-Continental Society.
A.D.	(L. *Anno Domini*). In the year of our Lord.
A.D.C.	Aide-de-camp.
Ad lib.	(L. *ad libitum*). At pleasure.
Adm.	Admiral.
Æt.	(L. *Ætatis*). In the year of his age.
A.F.A.	Associate of the Faculty of Actuaries.
A.G.	Adjutant General.
Ag.	(L. *Argentum*). Silver.
A.H.	(L. *Anno Hegirae*). In the year of the Hegira. (The Mohammedan era).
A.I.A.	Associate of the Institute of Actuaries.
A.I.C.	Associate of the Institute of Chemistry.
Assoc.Inst.C.E.	Associate of the Institute of Civil Engineers.
A.K.C.	Associate of King's College (London).
A.L.S.	Associate of the Linnæan Society.
A.M.	(L. *Anno Mundi*). In the year of the world.
A.M.	(L. *Ante Meridiem*). Before noon.
A.M.	(L. *Artium Magister*) Master of Arts. (Also *M.A.*).
A.M.Inst.C.E.	Associate-member of the Institution of Civil Engineers.
A.M.S.	Army Medical Staff.
An.	(L. *Anno*). In a year.
Anon.	Anonymous.
A.O.D.	Ancient Order of Druids.
A.O.F.	Ancient Order of Foresters.
App.	Appendix.
A.P.S.	Aborigines Protection Society.
A.P.U.C.	Association for the Promotion of the Unity of Christendom.
Aq.	(L. *Aqua*). Water.
A.Q.M.G.	Assistant Quarter Master General.
A.R.	(L. *Anno Regni*). In the year of the reign.
A.R.A.	Associate of the Royal Academy.
A.R.A.M.	Associate of the Royal Academy of Music.
A.R.C.A.	Associate of Royal College of Art.
A.R.C.E.	Academical rank of Civil Engineers.
Arch.	Archdeacon.
A.R.C.S.	Associate of the Royal College of Science.
A.R.H.A.	Associate of the Royal Hibernian Academy.
A.R.I.B.A.	Associate of the Royal Institute of British Architects.
A.R.S.A.	Associate of the Royal Scottish Academy.
A.R.S.M.	Associate of the Royal School of Mines.
A.S.	Anglo-Saxon.
A.S.	In the year of our salvation. (Ecclesiastical).
A.S.C.	Army Service Corps.
A.S.R.S.	Army Scripture Readers' Society.
Atty. Gen.	Attorney General.
Au.	(L. *Aurum*). Gold.
A.U.C.	(L. *Ab Urbe Condita*). From the building of Rome.
A.V.	Authorized Version of the Bible.
A.V.D.	Army Veterinary Department.
B.A.	Bachelor of Arts. (Also *A.B.*)
B.A.O.	Bachelor of the Art of Obstetrics.
B.C.	Before Christ.
B. Ch.	Bachelor of Surgery.
B.Ch.D.	Bachelor of Dental Surgery.
B.C.L.	Bachelor of Civil Law.
B.C.S.	Bengal Civil Service.
B.D.	Bachelor of Divinity.
B.D.S.	Bachelor of Dental Surgery.
B.Eng.	Bachelor of Engineering.
B.LL.	Bachelor of Laws. (Also *LL.B.*)
B/l.	Bill of lading.
B.M.	Bachelor of Medicine.
B.Met.	Bachelor of Metallurgy.
B.Mus.	Bachelor of Music. (Also *Mus. Bac.*)
B.P.	British Public.
Bp.	Bishop.
Brig. Gen.	Brigadier-General.
Brit.	Britain, Britannia, Briton, British.
B.S.	Bachelor in Surgery.
B.Sc.	Bachelor of Science.
B.S.L.	Botanical Society, London.
Bt.	Baronet.
B.Th.	Bachelor of Theology.
B.Th.U.	British Thermal Unit.
B.T.U.	Board of Trade Unit.
B.V.	Blessed Virgin.
B.V.M.	(L. *Beata Virgo Maria*). Blessed Virgin Mary.
C.	Cent, Centigrade, Centime.
C.	(L. *Circa*) about.
C.A.	Chartered Accountant.
Cal.	California.
Cantab.	(L. *Cantabrigiensis*). Of Cambridge.
Cantuar.	(L. *Cantuariensis*). Of Canterbury. (The Primate uses *Cantuar* as his surname).
C.Ass.	Church Association.
C.Aug.F.	Curates' Augmentation Fund.
C.B.	Companion of the Bath.
C.B.F.	Colonial Bishopric's Fund.
C.C.	County Councillor. County Council.
C.C.C.	Corpus Christi College.
C.D.I.	Church Defence Institution.
C.D.V.	Carte-de-visite.
C.E.	Civil Engineer.
Cel.	Celsius (Thermometer).
Cent.	(L. *centum*). A hundred.
C.E.T.S.	Church of England Temperance Society.
C.E.W.H.S.	Church of England Women's Help Society.
C.E.W.M.S.	Church of England Working Men's Society.
C.E.Z.M.S.	Church of England Zenana Missionary Society.
Cf.	(L. *confer*). Compare.
C.F	Chaplain of the Forces.
C.G.	Coast-guard.
C.G.	Commissary-general.
C.G.S	The units of length, mass and time (centimetre, gramme, second) used in modern scientific calculations.
C.G.U.	Church Guild's Union.
C.H.B.	Bachelor of Surgery.
C.H.M.	Master of Surgery.
C.I.	Order of the Crown of India.

C.I.E. Companion of the Order of the Indian Empire.
C.I.V. City Imperial Volunteers.
C.J. Chief Justice.
C.L.B. Church Lads' Brigade.
C.L.C.R. Cheshire Lines Committee Railway.
C.L.R. Central London Railway.
cm. Centimetres.
C.M. Certificated Master.
C.M. (L. *Chirurgiæ Magister*). Master in Surgery.
C.M. Common metre.
C.M.G. Companion of the Order of St. Michael and St. George.
C.M.S. Church Missionary Society.
Co. Company.
Co. County.
C.O. Commanding Officer.
C.O. Colonial Office.
c/o. Care of.
C.O.D. Cash on delivery.
Col. Colonel.
Coll. College.
Com. Commander.
Com. Commissioner.
Com. Commodore.
Con. (L. *contra*). Against.
Conn. Connecticut.
C.O.P. Clergy Orphan Corporation.
Cor.Mem. Corresponding Member.
Cor.Sec. Corresponding Secretary.
C.O.S. Charity Organisation Society.
C.P. Clerk of the Peace.
C.P. Common Pleas.
C.P.A.S. Church Pastoral Aid Society.
C.P.C. Clerk of the Privy Council.
C.P.R. Canadian Pacific Railway.
C.P.S. (L. *Custos Privati Sigilli*). Keeper of the Privy Seal.
Cr. Credit, Creditor.
C.R. (L. *Custos Rotulorum*). Keeper of the Rolls.
C.R. Caledonian Railway.
C.R. Cambrian Railway.
Cres. Crescendo. (Musical).
C.S. Chemical Society.
C.S. Civil Service.
C.S. Clerk to the Signet.
C.S. Court of Session.
C.S.I. Companion of the Star of India.
C.S.L.R. City and South London Railway.
C.S.U. Christian Social Union.
C.T. Certificated Teacher.
C.T.C. Cyclists' Touring Club.
Cu. (L. *cuprum*). Copper.
Curt. Current; the present month.
C.V.O. Commander of the Royal Victorian Order.
Cwt. (c-L. *centum*; and wt.-Eng. *weight*). A hundredweight.

d. (L. *denarius*). A penny.
D.C. (It. *Da Capo*). From the beginning; again. (Musical).
D.C.L. Doctor of Civil Law.
D.D. (L. *Divinitatis Doctor*). Doctor of Divinity.
D.D.D. (L. *Dat, donat. dicatque*). "He—the donor—gives this, presents and dedicates it." Letters often written after the name of a donor, on a fly-leaf.
Deft. Defendant.
Del. Delaware.
Del. (L. *delineavit*). He (or she) drew it.
D.Eng. Doctor of Engineering.
D.F. Dean of the Faculty.
D.F. Defender of the Faith. (Also *F.D.*).
D.G. (L. *Dei Gratia*). By the Grace of God.
D.Hy. Doctor of Hygiene.
Dim. Diminuendo. (Musical).
Dis. Discount.
D.L. Deputy Lieutenant.
D.Lit. Doctor of Literature.
D.L.O. Dead Letter Office.
D.M. (L. *Dis Manibus*). "To the Divine Manes." Letters at the head of a Roman tombstone.
D.Met. Doctor of Metallurgy.
D.Mus. Doctor of music. (See *Mus. D.*)
Do. (It. *Ditto*). The same.
D.O. District-office. (Postal).
Dols. Dollars.
D.O.M. (L. *Deo optimo Maximo*). To God the best and Greatest.
Doz. Dozen.
D.P.H. Diploma of Public Health.
Dr. Debtor.
Dr. Doctor.
dr. Dram.
D.S. (It. *Dal Segno*). From the sign.
D.Sc. Doctor of Science.
D.S.C. Companion of the Distinguished Service Order.
D.S.Sc. Diplomate in Sanitary Science.
D.T. (L. *Doctor Theologiæ*). Doctor of Theology.
Dunelm. (L. *Dunelmensis*). Of Durham.
D.V. (L. *Deo volente*). God willing.
D.V.H. Diploma in Veterinary Hygiene.
dwt. (d—L. *denarius*, and wt.—Eng. *weight*). A penny weight.

E. Earl.
Eblan. (L. *Eblanensis*). Of Dublin.
Ebor. (L. *Eboracensis*). Of York. (The Archbishop of York uses *Ebor* as his surname).
E.C. Established Church.
E.C.U. English Church Union.
Ed. Editor.
E.D.S. English Dialect Society.
E.E. Errors excepted.
E.E.T.S. Early English Text Society.
e.g. (L. *exempli gratia*). For example.
E.L.R. East London Railway.
Eng. England or English.
Env.Ext. Envoy Extraordinary.
Eq. Equal.
E.R. (L. *Edvardus Rex*). King Edward.
Esq. Esquire.
E.T. English Translation.
Et al. (L. *et alibi*). And elsewhere.
Et al. (L. *et alii*). And others.
etc. (L. *et cæteri, cætera*, or *cætera*). And others; and so on.
Et seq. (L. *et sequentes*). And the following.
Ex.div. Exclusive of dividend.
Exec. Executor.
Execx. Executrix.
Exon. (L. *Exoniensis*). Of Exeter. (The Bishop of Exeter uses *Exon* as his surname).
E.&O.E. Errors and Omissions excepted.

F. Fahrenheit.
f. Franc.
F.A. Football Association.
Fahr. Fahrenheit. (Thermometer).
F.A.M. Free and Accepted Mason.
F.A.S. Fellow of the Antiquarian Society.
F.A.S.E. Fellow of the Antiquarian Society (Edinburgh).
F.A.S.L. Fellow of the Antiquarian Society (London.)
F.B.S. Fellow of the Botanical Society.
F.B.S.E. Fellow of the Botanical Society (Edinburgh).
F.C. (L. *Fieri curavit*). "He directed this to be done." Letters put at the end of a monumental inscription, after the donor's name.
F.C.A. Fellow of Chartered Accountants.
Fcp. Foolscap.
F.C.P. Fellow of the College of Preceptors.
F.C.P.S. Fellow of the Cambridge Philosophical Society.
F.C.S. Fellow of the Chemical Society.
F.D. (L. *Fidei Defensor.*) Defender of the Faith. (Also *D.F.*).
Fec. (L. *fecit*). He (or she) did it.
F.E.I.S. Fellow of the Educational Institute of Scotland.
F.F.A. Fellow of the Faculty of Actuaries.
F.F.P.S. Fellow of the Faculty of Physicians and Surgeons (Glasgow).
F.G.S. Fellow of the Geological Society.
F.H.S. Fellow of the Horticultural Society.
F.I.A. Fellow of the Institute of Actuaries.
F.I.C. Fellow of the Institute of Chemistry.
F.I.Inst. Fellow of the Imperial Institute.
F.J.I. Fellow of the Institute of Journalists.
F.K.Q.C.P.I. Fellow of King's and Queen's College of Physicians, Ireland.
Fla. Florida.
F.L.S. Fellow of the Linnæan Society.
F.M. Field-Marshal.
F.O. Foreign-office.
F.O. Field-Officer.
fo. Folio.
f.o.b. Goods bought (or sold) to be delivered "free on board."
F.P.S. Fellow of the Philological Society.
F.R.A.S. Fellow of the Royal Astronomical Society.
F.R.C.I. Fellow of the Royal Colonial Institute.
F.R.C.P. Fellow of the Royal College of Physicians.
F.R.C.P.E. Fellow of the Royal College of Physicians (Edinburgh).
F.R.C.S. Fellow of the Royal College of Surgeons.
F.R.C.S.Eng. Fellow of the Royal College of Surgeons (England).
F.R.C.S.E. Fellow of the Royal College of Surgeons (Edinburgh).
F.R.C.S.I. Fellow of the Royal College of Surgeons (Ireland).
F.R.C.V.S. Fellow of the Royal College of Veterinary Surgeons.
F.R.G.S. Fellow of the Royal Geographical Society.
F.R.H.S. Fellow of the Royal Horticultural Society.
F.R.Hist.S. Fellow of the Royal Historical Society.
F.R.I.B.A. Fellow of the Royal Institute of British Architects.
F.R.M.S. Fellow of the Royal Microscopical Society.
F.R.Met.Soc. Fellow of the Royal Meteorological Society.
F.R.P.S. Fellow of the Royal Photographic Society.
F.R.S. Fellow of the Royal Society.
F.R.S.E. Fellow of the Royal Society (Edinburgh).
F.R.S.L. Fellow of the Royal Society of Literature.
F.S.A. Fellow of the Society of Antiquaries.
F.S.A.Scot. Fellow of the Society of Antiquaries (Scotland).
F.S.I. Fellow of the Surveyors' Institution.
F.S.S. Fellow of the Statistical Society.
F.T.C.D. Fellow of Trinity College, Dublin.
F.Z.S. Fellow of the Zoological Society.

Ga. Georgia (United States).
G.A. General Assembly.
G.B. Great Britain.
G.B&I. Great Britain and Ireland.
G.C.B. Grand Cross of the Bath.
G.C.H. Grand Cross of the Guelphs of Hanover.
G.C.I.E. Knight Grand Commander of the Indian Empire.
G.C.L.H. Grand Cross of the Legion of Honour.
G.C.M.G. Grand Cross of St. Michael and St. George.
G.C.R. Great Central Railway.
G.C.S.I. Grand Commander of the Star of India.
G.C.V.O. Knight Grand Cross of the Royal Victorian Order.
G.D. Grand Duke (or Duchess).
Gdns. Gardens.
G.E.R. Great Eastern Railway.
G.F.S. Girls Friendly Society.
G.L. Grand Lodge.
gm. Grammes.
G.M. Grand Master.
G.M.K.P. Grand Master of the Knights of St. Patrick.
G.N.R. Great Northern Railway.
G.N.R. Great Northern Railway. (Ireland).
G.N.S.R. Great North of Scotland Railway.
Gov.Gen. Governor-General.
G.P.O. General Post-office.
gr. Grain.
Gr. Greek.
G.S.W.R. Glasgow and South Western Railway.
G.S.W.R. Great Southern and Western Railway. (Ireland).
G.W.R. Great Western Railway.

H.A.C. Honourable Artillery Company.
H.B.M. His (or Her) Britannic Majesty.
H.C. House of Commons.
H.C. Herald's College.
h.e. (L. *hæc est*). That (or this) is.
H.E. His Eminence.
H.E. His Excellency.
Heb. Hebrew.
H.G. Horse Guards.
H.H. His (or Her) Highness.
H.H. His Holiness (the Pope).
hhd. Hogshead.
H.I.H. His (or Her) Imperial Highness.
Hil. Hilary.
H.I.M. His Imperial Majesty.
H.J. (L. *Hic Jacet*). Here lies.
H.J.S. (L. *Hic Jacet Sepultus*). Here lies buried.
H.L. House of Lords.
h.l. (L. *hoc loco*). In this place.
H.L.I. Highland Light Infantry.
H.M. His (or Her) Majesty.
H.M.C. His (or Her) Majesty's Customs.
H.M.I.S. His Majesty's Inspector of Schools.
H.M.S. His Majesty's Service.
H.M.S. His Majesty's Ship.
H.P. Half-pay.
H.P. Horse-power.
H.R.H. His (or Her) Royal Highness.
H.R.I.P. (L. *hic requiescit in pace*). Here rests in peace.
H.S. (L. *hic situs*). Here lies.
H.S.H. His (or Her) Serene Highness.
H.S.S. (L. *Historiæ Societatis Socius*). Fellow of the Historical Society.
H.W.M. High water mark.

Ia. Iowa.
Ib. or Ibid. L. *Ibidem*). In the same place.
I.C.S. Indian Civil Service.
Id. (L. *idem*). The same.
i.e. (L. *id est*). That is.
I.H.S. (more properly IHS or IHC). The first three letters of the name Jesus in Greek.
Ill. Illinois.
I.L.P. Independent Labour Party.
I.M. Isle of Man.
I.M.D. Indian Medical Department.
Imp. (L. *Imperator*). Emperor: Imperial.

I.M.S. Indian Medical Service.
in. Inch.
Incog. (It. *incognito, incognita*). Unknown.
Ind. Indiana.
Inst. (L. *instante*). Instant; of the present month.
Inst. Institute; Institution.
Int. Interest.
In trans. (L. *in transitu*). On the way.
Inv. (L. *invenit*). He designed.
I.O.C.I. The Imperial Order of the Crown of India.
I.O.G.T. Independent Order of Good Templars.
I.O.O.F. Independent Order of Oddfellow
I.O.U. I owe you.
I.P.D. (L. *In præsentia Dominorum*). In presence of the Lords (of Session), Edinburgh.
I.q. (L. *idem quod*). The same as.
I.R.O. Inland Revenue Office.
I.R.R. Irish Royal Rifles.
I.S.O. Imperial Service Order
It. Italian.
I.W. Isle of Wight.
I.Y. Imperial Yeomanry.

J.A. Judge-Advocate.
J.C. Jesus Christ.
J.C.D. (L. *Juris Civilis Doctor*). Doctor of Civil Law.
J.D. (L. *Jurum Doctor*). Doctor of Laws.
J.G.W. Junior Grand Warden.
J.P. Justice of the Peace.
Jr. Junior.
J.U.D. (L. *Juris Utriusque Doctor*). Doctor of both Civil and of Canon Law.
J.W. Junior Warden.

K. King.
Kan. Kansas.
K.B. Knight of the Bath.
K.B. King's Bench.
K.C. King's Counsel.
K.C.B. Knight Commander of the Bath.
K.C.H. Knight Commander of the Guelphs of Hanover.
K.C.I.E. Knight Commander of the Indian Empire.
K.C.M.G. Knight Commander of St. Michael and St. George.
K.C.S. Knight of the Order of Charles III. (Spain).
K.C.S.I. Knight Commander of the Star of India.
K.C.V.O. Knight Commander of the Victorian Order.
K.D.G. King's Dragoon Guards.
K.E. Knight of the Eagle (Prussia).
Ken. Kentucky.
K.G. Knight of the Garter.
K.G.C. Knight of the Grand Cross.
K.G.C.B. Knight of the Grand Cross of the Bath.
K.G.C.M.G. Knight of the Grand Cross of St. Michael and St. George.
K.G.F. Knight of the Golden Fleece (Spain).
K.G.H. Knight of the Guelphs of Hanover.
K.H. Knight of Hanover.
kilog. Kilogramme.
kilom. Kilometre.
K.L.H. Knight of the Legion of Honour.
K.L.B. Knight of Leopold of Belgium.
K.M Knight of Malta.
K. Mess. King's Messenger.
K.N.S. Knight of the Royal Northern Star (Sweden).
K.O.S.B. King's Own Scottish Borderers.
K.P. Knight of St. Patrick.
K.R.R. King's Royal Rifles.
K.S. Knight of the Sword (Sweden).
K.T. Knight of the Thistle.
K.T. Knight Templar.

L. Lord or Lady.
L. Latin.
L. (L. *libra*). Pound (Sterling).
L.A. Legislative Assembly.
L.A. Law Agent.
L.A. Literate in Arts.
La. Louisiana.
L.A.H. Licentiate of Apothecaries' Hall (Ireland.)
L.A.S. Licentiate of the Apothecaries' Society. (Also *L.S.A.*).
Lat. Latitude.
Lb. (L. *Libra*). Pound.
L.B.S.C.R. London Brighton and South Coast Railway.
L.C. Lord Chamberlain.
L.C. Lord Chancellor.
l.c. Lower case (type).
L.C.C. London County Council.
L.Ch. Licentiate in Surgery.
L.C.J. Lord Chief Justice.
L.C.P. Licentiate of the College of Preceptors.
L.D. Lady Day.
L.D.S. Licentiate of Dental Surgery.
L.F.P.S. Licentiate of the Faculty of Physicians and Surgeons.
L.G. Life Guards.
L.I. Long Island.
L.I. Light Infantry.
Lib. (L. *Liber*). Book.
Lic. Med. Licentiate in Medicine.
Lieut. Lieutenant.
Lieut. Col. Lieutenant-Colonel.
Lieut. Gen. Lieutenant-General.
Lieut. Gov. Lieutenant-Governor.
Linn. Linnæan.
L.L.A. Lady-literate in Arts.
LL.B. (L. *Legum Baccalaurus.*) Bachelor of Laws (the double letter L is used to denote the plural). (Also *B.L.*)
LL.D. (L. *Legum Doctor*). Doctor of Laws
LL.M. (L. *Legum Magister*). Master of Laws.
L.L.I. Lord-Lieutenant of Ireland.
L.M. Long Metre.
L.M. Licentiate in Midwifery.
L.N.W.R. London and North Western Railway.
loc. cit. (L. *loco citato.*) In the place quoted.
Lon. Longitude.
loq. (L. *loquitur*). Speaks.
L.O.S. Licentiate of the Obstetrical Society.
L.P. Lord Provost.
L.R.C. Labour Representative Committee.
L.R.C.P. Licentiate of the Royal College of Physicians.
L.R.C.P.E. Licentiate of the Royal College of Physicians (Edinburgh).
L.R.C.S. Licentiate of the Royal College of Surgeons.
L.S. Linnæan Society.
L.S. (L. *locus sigilli.*) The place of the seal.
L.S.A. Licentiate of the Society of Apothecaries (Also *L.A.S.*).
L.S.D. (L. *Libræ, Solidi, Denarii*). Pounds, shillings, pence.
L.S.Sc. Licentiate in Sanitary Science.
L.S.W.R. London and South Western Railway.
L.T.S.R. London, Tilbury, and Southend Railway.
L.W.M. Low water mark.
LXX. (70) Septuagint version.

M. Marquis.
M. Monsieur.
M. (L. *meridies*). Noon.
M.A. Master of Arts. (Also *A.M.*)
Maj. Gen. Major-General.
M.A.O. Master of the Art of Obstetrics.
Mass. Massachusetts.
M. Ast. S. Member of the Astronomical Society.
M.B. (L. *Medecinæ Baccalaureus*). Bachelor of Medicine. (Also *B.M.*)
M.C. Master in surgery. (Also *C.M.*)
M.C. Master of Ceremonies.
M.C. Member of Congress.
M.C.C. Marylebone Cricket Club.
M.Ch.D. Master of Dental Surgery.
M.C.P. Member of the College of Preceptors.
M.D. (L. *Medicinæ Doctor.*) Doctor of Medicine.
Md. Maryland.
Mdlle. Mademoiselle.
Mdme. Madame.
M.D.R. Metropolitan District Railway.
M.D.S. Master of Dental Surgery.
M.E. Mechanical, Military, or Mining Engineer.
M.E. Methodist Episcopal.
Me. Maine.
Mem. Memorandum.
M.Eng. Master of Engineering.
Messrs. Messieurs, Gentlemen.
M.F.H. Master of Foxhounds.
M.G.W.R. Midland Great Western Railway.
M.Hon. Most Honourable.
M.H.S. Member of the Historical Society.
M.Inst.C.E. Member of the Institution of Civil Engineers.
Mich. Michigan.
M.I.E.E. Member of the Institute of Electrical Engineers.
M.I.Mech.E. Member of the Institution of Mechanical Engineers.
M.Inst.M.E. Member of Institution of Mining Engineers.
Mid. Midshipman.
Minn. Minnesota.
Min. Plen. Minister Plenipotentiary.
Miss. Mississippi.
M.L.A. Member of the Legislative Assembly.
M.L.C. Member of the Legislative Council.
MM. Their Majesties.
MM. Messieurs.
mm. Millimetres.
M.Met. Master of Metallurgy.
M.N.S. Member of the Numismatical Society.
Mo. Missouri.
M.O. Money Order. (Postal).
Mod. (L. *moderato*). Moderately. (Musical).
M.O.H. Medical Officer of Health.
M.O.O. Money Order Office.
M.P. Member of Parliament.
M.P.S. Member of the Pharmaceutical Society.
M.P.S. Member of the Philological Society.
Mr. (L. *Magister*). Mister.
M.R. Master of the Rolls.
M.R. Midland Railway.
M.R. Metropolitan Railway.
M.R.A.S. Member of the Royal Academy of Science.
M.R.A.S. Member of the Royal Asiatic Society.
M.R.C.P. Member of the Royal College of Physicians.
M.R.C.S. Member of the Royal College of Surgeons.
M.R.C.V.S. Member of the Royal College of Veterinary Surgeons.
M.R.G.S. Member of the Royal Geographical Society.
M.R.I. Member of the Royal Institution.
M.R.I.A. Member of the Royal Irish Academy.
Mrs. Mistress.
M.R.S.L. Member of the Royal Society of Literature.
M.S. Master in Surgery.
M.S. (L. *memoriæ sacrum*). Sacred to the memory.
M.S.H. Master of Staghounds.
MSS. Manuscripts.
M.S.S. Member of the Statistical Society.
Mus. B. (L. *Musicæ Baccalaureus*). Bachelor of Music. (Also *B. Mus.*).
Mus. D. (L. *Musicæ Doctor*). Doctor of Music. (Also *D. Mus.*).
M.V.O. Member of the Victorian Order.
M.W.G.M. Most Worthy Grand Master.

N.B. North Britain.
N.B. (L. *nota bene*). Note well.
N.B.R. North British Railway.
N.C. North Carolina.
N.C.U. National Cyclists' Union.
N.D. No Date.
N.Dak. North Dakota.
N.E. New England.
N.E.R. North Eastern Railway.
Neb. Nebraska.
nem. con. (L. *nemine contradicente*). No one contradicting.
nem. dis. (L. *nemine dissentiente*). No one dissenting.
net. (It. *netto*) Lowest. (Used in the Commercial World, to denote a price that is subject to no deduction whatever).
Nev. Nevada.
N.F. Newfoundland.
N.G. New Granada.
N.H. New Hampshire.
N.J. New Jersey.
N.L. North Latitude.
N.L.R. North London Railway.
N.M. New Mexico.
N.O. New Orleans.
No. (L. *numero*). Number
Non obst. (L. *non obstante*). Notwithstanding.
Non pros. (L. *non prosequitur.*) He does not prosecute.
Non seq. (L. *non sequitur*). It does not follow.
N.P. Notary-public.
N.P. New Providence.
N.R.A. National Rifle Association.
N.S. New Style.
N.S. Nova Scotia.
N.S.A. National Skating Association.
N.S.E.P. National Society for the Education of the Poor.
N.S.R. North Staffordshire Railway.
N.S.W. New South Wales.
N.U.T. National Union of Teachers.
N.Y.M. Nativity of the Virgin Mary.
N.W.P. North West Passage.
N.W.T. North West Territories.
N.Y. New York.
N.Z. New Zealand.
M.Z.C. New Zealand Cross.

O. Ohio.
o/a. On account of.
Ob. (L. *obiit.*) Died.
O.F. Oddfellows.
O.H.G. Old High German.
O.H.M.S. On His Majesty's Service.
O.M. Old measurement.
O.M. Order of Merit.
On. Oregon.
O.C.O. Stand for the three anthems; *O sapientia, O radix, O Adonai*, sung in the Roman Catholic Church for nine days before Christmas.
O.P. Order of Preachers.
O.P. Out of print.
O.P. Opposite Prompter.
Op. cit. (L. *opere citato*). In the work referred to.
O.S. Old style
O.S. Out of stock.
O.S. Ordinary Seaman.
O.S.B. Order of St. Benedict.
O.T. Old Testament.
Oxon. (L. *Oxoniensis*). Of Oxford. (The Bishop of Oxford uses *Oxon* as his surname).

P. Princeps. (Attached to the signature of the Prince of Wales).
P. President.
P.A.S.I. Professional Associate of the Surveyors' Institution.
P.B. (L. *Philosophiæ Baccalaureus*). Bachelor of Philosophy. (Also *Ph. B.*)
P.C. Privy Council, Privy Councillor.
P.C. Perpetual Curate.
P.C. Police Constable.
p.c. Post-Card.
P.D. (L. *Post diluvium*). After the flood.
P.D. (L. *Philosophiæ Doctor*). Doctor of Philosophy. (Also *Ph. D.*)

pd. Paid.
P.E. Protestant Episcopal.
P.E.I. Prince Edward Island.
Penn. Pennsylvania.
per an. (L. *per annum*). Yearly.
per cent. (L. *per centum*). By the hundred.
P.G.M. Past Grand Master.
Ph.B. See *P.B.*
Ph.D. See *P. D.*
Pinx. (L. *Pinxit*). He (or she) did it. (Put with the Artist's name or initials on a Painting).
Pl. Place.
P.L. Poet Laureate.
P.M. (L. *post meridiem*). After noon.
P.M. Past Master.
P.M. Post-Master.
P.M.G. Postmaster-General.
P.O. Post-office.
P.O. Postal order.
P.&O. Peninsular & Oriental.
P.O.O. Post-office Order.
Pop. Population.
P.O.S.B. Post-office Savings Bank.
p.p. Pages.
p.p. Past participle.
P.P. Parish Priest.
P.P. Parcels Post.
P.P.C. (Fr. *pour prendre congé*). To take leave.
P.P.S. Additional Postscript.
p.pr. Participle present.
Pr. Prince, Priest.
P.R. Prize Ring.
P.R.A. President of the Royal Academy.
P.R.C. (L. *Post Romam Conditam*). After the building of Rome.
Preb. Prebend.
pref. Prefix.
P.R.I.B.A. President of the Royal Institute of British Architects.
Prof. Professor.
pro tem. (L. *pro tempore*). For the time being.
prox. (L. *proximo*). In the next month.
P.R.S. President of the Royal Society.
P.R.S.A. President of the Royal Scottish Academy.
P.S. (L. *post scriptum*). Postscript.
P.S. Privy Seal.
Ps. Psalms.
P.T. Pupil Teacher.
P.T.C. Pupil Teachers' Centre.
P.T.O. Please turn over.
Pub. Published, Publisher, Publication.
Pub. Doc. Public Documents.

Q. Query or question.
Q.A.B. Queen Anne's Bounty.
Q.C. Queen's College.
q.d. (L. *quasi dicat*). As if he should say.
q.e. (L. *quod est*). Which is.
Q.E.D. (L. *quod erat demonstrandum*). Which was to be demonstrated.
Q.E.F. (L. *quod erat faciendum*). Which was to be done.
Q.E.I. (L. *quod erat inveniendum*). Which was to be found out.
q.l. (L. *quantum libet*). As much as you please.
Q.M. Quarter-master.
Q.M.G. Quartermaster General.
q.p. L. *quantum placet*). As much as you please.
qr. Quire.
Q.S. Quarter Sessions.
q.s. (L. *quantum sufficit*). Enough.
qt. Quart.
q.v. (L. *quod vide*). Which see.
Q.V.C.S.F. Queen Victoria's Clergy Sustentation Fund.

R. (L. *Rex*). King; (L. *Regina*). Queen.
R. Réaumur.
R.A. Royal Academy; Royal Academician.
R.A. Rear-Admiral.
R.A. Royal Arch.
R.A. Royal Artillery.
R.A.M. Royal Academy of Music.
R.A.M.C. Royal Army Medical Corps.
R.A.S. Royal Asiatic Society.
R.A.S. Royal Astronomical Society.
R.B.A. Royal Society of British Artists.
R.B.R.I. Royal British Radium Institute.
R.C. Roman Catholic.
R.C.P. Royal College of Physicians.
R.C.S. Royal College of Surgeons.
R.D. Rural Dean.
R.D. Royal Dragoons.
R.D. Rural District (Postal).
R.D.C. Rural District Council.
R.E. Royal Exchange.
R.E. Royal Engineers.
Ref. Ch. Reformed Church.
Reg. Registrar.
Reg. Prof. Regius Professor.
Reg. Regent.
Rep. Report.
Rep. Representative.
Rep. Republic.
R. et I. King and Emperor of India.
Rev. Reverend.
R.F.A. Royal Field Artillery.
R.G.G. Royal Grenadier Guards.
R.G.R. Royal Garrison Regiment.
R.G.S. Royal Geographical Society.
R.H. Royal Highlanders. (Black Watch).
R.H.A. Royal Horse Artillery.
R.H.A. Royal Hibernian Academy.
R.H.S. Royal Horticultural Society.
R.H.S. Royal Humane Society.
R.I. Rhode Island.
R.I.B.A. Royal Institute of British Architects.
R.I.C. Royal Irish Constabulary.
R.I.M. Royal Indian Marine.
R.I.P. (L. *Requiescat in pace*). May he rest in peace.
R.L.O. Returned letter office. (Postal).
R.M. Royal Mail.
R.M. Royal Marines.
R.M.A. Royal Marine Artillery.
R.M.A. Royal Military Asylum.
R.M.L.I. Royal Marine Light Infantry.
R.M.S. Royal Mail Steamer.
R.N. Royal Navy.
R.N.R. Royal Naval Reserve.
R.R.C. Royal Red Cross. (For zeal and devotion in nursing sick and wounded soldiers and sailors).
Rs. Rupees.
R.S. Royal Society.
R.S.A. Royal Scottish Academy.
R.S.E. Royal Society of Edinburgh.
R.S.L. Royal Society of London.
R.S.M. Royal School of Mines.
R.S.N.A. Royal Society of Northern Antiquities.
R.S.O. Railway Sub-office. (For letters).
R.S.S. (L. *Regiæ Societatis Socius*). Member of the Royal Society.
R.S.V.P. (Fr. *Répondez s'il vous plait*). Please reply.
Rt. Hon. Right Honourable.
Rt. Rev. Right Reverend.
R.T.S. Religious Tract Society.
Rt. Wp. Right Worshipful.
R.U.I. Royal University, Ireland.
R.V. Revised Version.
R.V. Rifle Volunteers.
R.W.D.G.M. Right Worshipful Deputy Grand Master.
R.W.G.M. Right Worshipful Grand Master.
R.W.G.R. Right Worthy Grand Representative.
R.W.G.S. Right Worthy Grand Secretary.
R.W.G.T. Right Worthy Grand Treasurer.
R.W.G.T. Right Worthy Grand Templar.
R.W.G.W. Right Worshipful Grand Warden.
R.W.S. Royal Society of Painters in Water Colours.
R.W.S.G.W. Right Worshipful Senior Grand Warden.
R.Y.S. Royal Yacht Squadron.
Rx. 10 rupees.

S. Saint.
S. Sunday.
s. Shilling.
S.A. South Africa.
S.A. South America.
S.A. South Australia.
Salop. Shropshire.
S.A.M.C. South American Missionary Society.
S.B. South Britain.
S.B.A. Society of Biblical Archæology.
S.C. South Carolina.
S.C. (L. *Senatus Consultum*). A decree of the Senate.
Sc. (L. *Sculpsit*). He engraved it.
sc. (L. *scilicet*). That is to say.
Sc.B. (L. *Scientiæ Baccalaureus*). Bachelor of Science. (Also *B. Sc.*).
Sc.D. (L. *Scientiæ Doctor*). Doctor of Science. (Also *D. Sc.*)
S.C.L. Student in Civil Law.
scr. Scruple.
S. Dak. South Dakota.
S.D.F. Social Democratic Federation.
S.D.R. Somerset and Dorset Railway.
S.D.R. Sheffield District Railway.
S.D.U.K. Society for the diffusion of useful knowledge.
Sec. Secretary.
Sec. Leg. Secretary of Legation.
Sen. Senate, Senator.
seq. (L. *sequentia*). The following.
S.E.C.R. South Eastern and Chatham Railway.
s.f. (L. *sub fine*). Towards the end.
S.F.T.C.D. Senior Fellow of Trinity College, Dublin.
S.G. Solicitor-General.
s. in. (L. *sub initio*). Towards the beginning.
S.J. Society of Jesus. (Order of the Jesuits.)
Skr. Sanskrit.
S.L. Solicitor at Law.
S.M. Sergeant-Major.
Sm. Caps. Small Capitals.
S.M.R. Sheffield and Midland Railway.
S.O. Sub-office (Postal).
Sp. Spain, Spanish.
S.P. (L. *Sine prole*). Without Offspring.
S.P.C.A. Society for the Prevention of Cruelty to Animals.
S.P.C.C. Society for the Prevention of Cruelty to Children.
S.P.C.K. Society for the Promotion of Christian Knowledge.
S.P.G. Society for the Propagation of the Gospel.
S.P.Q.R. (L. *Senatus Populusque Romanus*). The Roman Senate and People.
Sq. (L. *Sequens*). The following.
sq. Square.—*sq. ft.*, square foot, &c., &c.
S.R.S. (L. *Societatis Regiæ Socius*). Member of the Royal Society.
SS. Saints.
S.S. Sunday School.
S.S.C. Solicitor before the Supreme Courts (Scotland).
St. Saint.
S.T.D. (L. *Sacræ Theologiæ Doctor*). Doctor of Theology.
S.T.P. (L. *Sacræ Theologiæ Professor*). Professor of Theology.
Sub. Substitute.
Suff. Suffix.
Supt. Superintendent.
Sup. (L. *Supra*). Above.
Sur. Gen. Surgeon-General.
Surv. Gen. Surveyor-General.
s.v. (L. *sub voce*). Under the word or heading.
S.W. South Wales.
S.W. Senior Warden.
Sw. Sweden, Swedish.
Swit. Switzerland.
Syn. Synonym, Synonymous.
S.Y.R. South Yorkshire Railway.

T.C.D. Trinity College Dublin.
Temp. (L. *tempore*). In the time of (Musical).
Tenn. Tennessee.
Teut. Teutonic.
Tex. Texas.
T.M.O. Telegraph Money Order, (Postal).
T.O. Turn over.
T.O. Telegraph-office.
tonn. Tonnage.
Tr. Translator, Translation.
tr. Transpose. (Used in correcting Printers' Proofs).
Tr. Treasurer
Tr. Trustee.
T.R.H. Their Royal Highnesses.
T.T.L. To take leave.
Typo. Typographer.

U.C. (L. *urbis conditæ*). From the building of the city of Rome.
U.D.C. Urban District Council.
U.F.C United Free Church.
U.K. United Kingdom.
U.K.A. Ulster King-at-arms.
ult. (L. *ultimo*). In the last month.
Unit. Unitarian.
Up. Upper.
U.P. United Presbyterian.
U.S. United States.
U.S. (L. *ut supra*). As above.
U.S.A. United States of America.
U.S.A. United States Army.
U.S.M. United States Mail.
U.S.N. United States Navy.
U.S.S. United States Senate.
U.S.S. United States Ship.
Ut. Utah.

V. Victoria.
v. (L. *versus*). Against.
v. (L. *vide*). See.
V.A. Vicar Apostolic.
V.A. Vice-Admiral.
V.A. Royal Order of Victoria and Albert.
Va. Virginia.
Vat. Vatican.
V.C. Vice-Chancellor.
V.C. Victoria Cross.
V.D. Volunteer Decoration.
V.D.L. Van Diemen's Land
V.D.M. (L. *Verbi Dei Minister* Minister of the Word God.
Ven. Venerable.
V.G. Vicar-General.
v.g. (L. *verbi gratia*). For example.
V.I. Vancouver's Island.
Vis. Viscount.
viz. (L. *videlicet*) Namely.
Vol. Volume.
V.P. Vice-President.
V.P. (L. *Vita patris*). In his father's lifetime.
V.Rev. Very Reverend.
V.S. Veterinary Surgeon.

W. Wales, Welsh.
W.C.L. White Cross League.
W.C.R. Waterloo and City Railway.
w.f. Wrong fount. (Used in correcting Printers Proofs).
W.I. West Indies.
W.Lon. West Longitude.
W.L.R. West London Railway.
W.M. Worshipful Master.
W.M.A. Women's Mission Association
W.O. War Office.
W.S. Writer to the Signet.
W.S.P.U. Women's Social and Political Union
W.T. Washington Territory.
W.T.R. Waterford and Tramore Railway.
wt. Weight.
W.Va. West Virginia.

X. Christ (The X is the same as the Greek letter X-Chi the first letter of Christ's name).
Xmas. Christmas.
Xn. Christian.

Y.M.C.A. Young Men's Christian Association.
Y.W.C.A. Young Women's Christian Association.

Zoo. Zoological Gardens.
Z.S. Zoological Society.

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